



NNSA-SRSO  
TEN-YEAR SITE PLAN  
FY 2009 - FY 2018

AUGUST 2008



# NNSA-SRSO TEN-YEAR SITE PLAN FY 2009-2018

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# ACRONYMS

AC	Acceptance Criteria	MFFF	Mixed Oxide Fuel Fabrication Facility
ACREM	Accountable Classified Removable Electronic Media	MOX	Mixed Oxide
ARMS	Automated Reservoir Management System	NN	Nuclear Nonproliferation
CCB	Change Control Board	NNSA	National Nuclear Security Administration
CE/GPP	Capital Equipment / General Plant Project	NNSA-HQ	National Nuclear Security Administration – Headquarters
CMAS	Classified Material Accountability System	NNSA-SRSO	National Nuclear Security Administration – Savannah River Site Office
DBT	Design Basis Threat	NTS	Nevada Test Site
DM	Deferred Maintenance	NWC	Nuclear Weapons Complex
DOE	Department of Energy	P&PD	Production & Planning Directive
DP	Defense Programs	PDCF	Pit Disassembly and Conversion Facility
DSW	Directed Stockpile Work	PX	Pantex
EM	Environmental Management	R&D	Research and Development
ESN	Enterprise Secure Network	RAMP	Reservoir Age Management Program
FCI	Facility Condition Index	RPV	Replacement Plant Value
FIRP	Facilities and Infrastructure Recapitalization Program	RTBF	Readiness in Technical Base and Facilities
FY	Fiscal Year	SNL	Sandia National Laboratory
FYNSP	Future Years Nuclear Security Program	SPEIS	Draft Complex Transformation Supplemental Programmatic Environmental Impact Statement
GSF	Gross Square Feet	SRNL	Savannah River National Laboratory
HANM	H-Area New Manufacturing Building	SRS	Savannah River Site
HAOM	H-Area Old Manufacturing Building	SRSO	Savannah River Site Office
HEPA	High-Efficiency Particulate Air	TEF	Tritium Extraction Facility
IT	Information Technology	TL	Threat Level
KCP	Kansas City Plant	TYSP	Ten-Year Site Plan
LANL	Los Alamos National Laboratory	WSRC	Washington Savannah River Company
LEP	Life Extension Program		
LLNL	Lawrence Livermore National Laboratory		



## 1.0 Executive Summary/ Future State

### Vision

The Savannah River Site (SRS) Tritium Facilities' vision is to ensure safe, secure, and reliable delivery of tritium services in a manner that meets Defense Program (DP) Stockpile Stewardship Program requirements and proactively implements the Complex Transformation strategies.

### Missions

Four missions are currently assigned to the SRS Tritium Facilities. The *Tritium Supply* mission is to extract tritium from irradiated target rods, supply tritium for the Nuclear Stockpile Maintenance mission and other Nuclear Weapons Complex (NWC) users, and manage the stockpile tritium inventory. The *Nuclear Stockpile Maintenance* mission involves loading tritium and non-tritium reservoirs to meet requirements of the Nuclear Weapons Stockpile Plan. Reservoir surveillance operations and gas transfer system testing are conducted to meet the *Nuclear Stockpile Evaluation* mission. The *Helium-3 Recovery* mission is to recover Helium-3 and manage the inventory.

Complex Transformation per the National Nuclear Security Administration (NNSA) Preferred Alternative would reassign the *Tritium Research and Development (R&D)* mission to the SRS Tritium Facilities from LANL. This mission is to establish the Tritium Center of Excellence for Tritium R&D to support production and processing, and design, function, and surveillance of gas transfer systems. Other programs, such as Inertial Confinement Fusion, Test Readiness, and Nuclear Nonproliferation will also be supported in the future as necessary.

### Complex Transformation in the SRS Tritium Facility

This year's Ten-Year Site Plan (TYSP) focuses on plans to ensure continual, safe execution of assigned



Figure 1-1: Celebrating 20 Million Man-Hours with No Tritium Assimilations

missions while implementing the anticipated Complex Transformation objectives.<sup>1</sup> The following is a summary of the SRS Tritium Facilities' planned Complex Transformation activities:

- Tritium R&D Consolidation per the NNSA Preferred Alternative<sup>2</sup>
- Receipt of tritium to support de-inventory at Los Alamos National Laboratory (LANL)
- Application of packaging-technology expertise to support consolidation of nuclear materials at fewer sites
- Cost-effective enhancements of the Information Technology (IT) infrastructure to improve integration and responsiveness

In addition to the overall Complex Transformation efforts, a study is being conducted on the relocation of existing processes from older facilities into more modern facilities, thereby reducing active facility footprint and gaining efficiency from co-located process functions (see Figure 1-3). This study is henceforth referred to as "Tritium Facility Transformation."

### Future State

This section addresses how the vision and Complex Transformation will be accomplished over the next 10 years to achieve a healthy future state that aligns with long-term Complex Transformation strategy 2:

<sup>1</sup> Pending the Record of Decision on the Draft Complex Transformation Supplemental Programmatic Environmental Impact Statement (SPEIS).

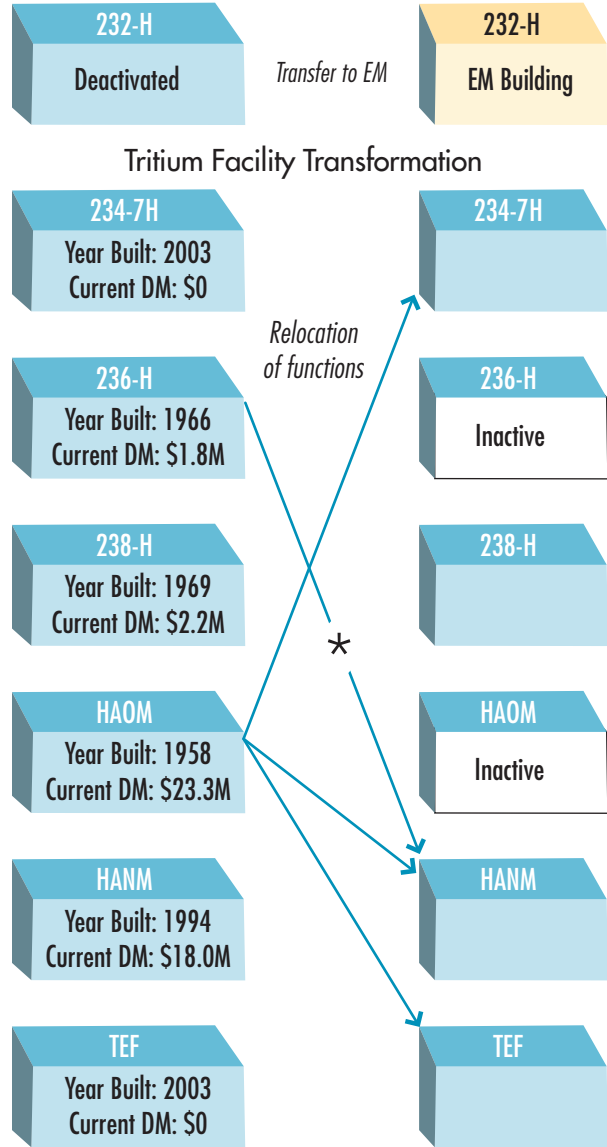
<sup>2</sup> Of the four "Complex Transformation" activities in the list, only Tritium R&D Consolidation is formally tied to the Record of Decision. The others support Complex Transformation objectives, but are discretionary.



Figure 1-2: Steve Goodrum of NNSA-HQ congratulates SRS Tritium Facilities personnel for delivering First Production Unit (FPU) reservoirs for the W76-1 Life Extension Program (LEP) and W88 weapon systems

“Transform to a modernized, cost-effective NWC.”

- Plans that will impact real property include the following:
  - Consolidate NWC Tritium R&D activities within the existing SRS footprint
  - Execute Tritium Facility Transformation to relocate and right-size functions currently performed in the 50-year-old H Area Old Manufacturing Building (HAOM) and the 42-year-old Building 236-H in the more modern facilities (see Figure 1-3), then disposition the inactive facilities appropriately
  - Transfer the deactivated Building 232-H to Environmental Management (EM) – a 72,000 gross square feet (GSF) footprint reduction
  - Replace 51-year-old Building 232-1H with a new facility that addresses needs for Construction warehouse space and office space
- Implement Tritium Extraction Facility (TEF) “Responsive Operations” in fiscal year (FY) 2009 through FY 2013 – a cost-effective strategy that optimizes staff utilization by platooning a multi-skilled workforce to operate TEF and the H Area New Manufacturing Building (HANM)
- Right-size the workforce to changing production requirements while reducing the cost of operations. Improve utilization by expanding the Responsive Operations concept to the rest of the workforce



\*Plan includes interim refurbishment of Building 236-H in FY 2009.

### Benefits

#### Footprint Reduction

- From Weapons Activities account: 72,000 GSF
- Additional inactivated footprint: 62,800 GSF

#### Modernization

Eliminates two Mission Critical process buildings with a total of:

- 92 years of service
- \$25.1 million of deferred maintenance

#### Cost Effectiveness

Co-locating related functions improves efficiency and enables staff reduction

Figure 1-3: Process Buildings, Current and Future States

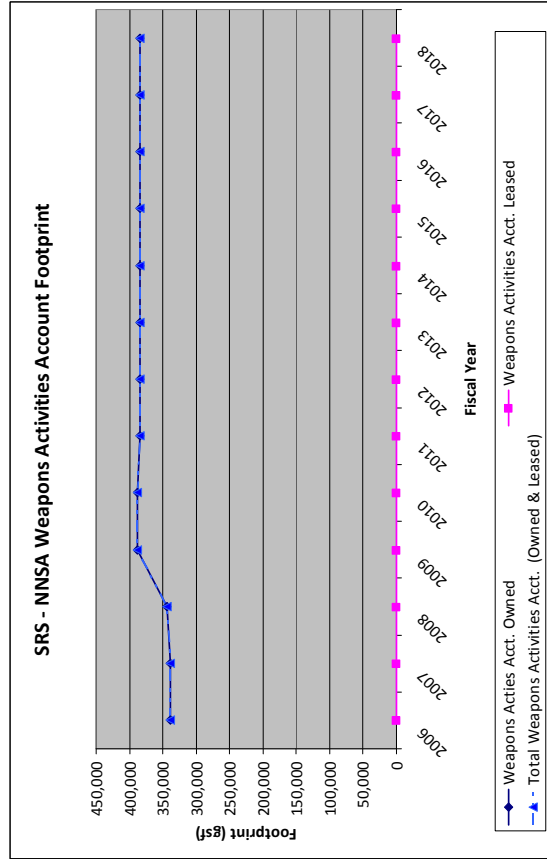
# ADDENDUM – SRS Footprint Summary

The following table and graph summarize footprint information associated with the NNSA-SRSO Ten-Year Site Plan for FY 2009 - FY 2018:

	Site GSF Baseline (gsf) - Based on FIMS Snap-shot taken at end of FY2005	Net Change in GSF from FY06 through FY07 - Based on FIMS Snap-shot at end of FY2007	Cumulative Changes from Start FY2008 to End FY2018		Projected Footprint at end of FY2018 (gsf)	Change from Start of FY2006 to End of FY2018 (gsf)
			Cumulative Additions (Construction, New Leases, Transfers) (gsf)	Cumulative Reductions (Disposition, Sale, Transfer, Lease Termination) (gsf)		
<b>OWNED GROSS SQUARE FOOTAGE</b>						
Weapons Activities Account Owned	338,379	5,335	51,832	-11,662	383,884	45,505
Other NNSA Owned (NA-20)	0	0	774,000	0	774,000	774,000
Other DOE Owned	8,644,784	-712,066	108,000	-432,000	7,608,718	-1,036,066
Non-DOE Owned	8,983,163	-706,731	933,832	-443,662	8,766,602	-216,561
<b>LEASED GROSS SQUARE FOOTAGE</b>						
Weapons Activities Account Leased	0	0	0	0	0	0
Other NNSA Leased (NA-20)	0	0	0	0	0	0
Other DOE Leased	90,010	-36,368	0	-53,642	0	-90,010
Non-DOE Leased	90,010	-36,368	0	-53,642	0	-90,010
<b>OWNED &amp; LEASED GROSS SQUARE FOOTAGE</b>						
Weapons Activities Account Owned & Leased	338,379	5,335	51,832	-11,662	383,884	45,505
Other NNSA Owned & Leased (NA-20)	0	0	774,000	0	774,000	774,000
Other DOE Owned & Leased	8,734,794	-748,434	108,000	-485,642	7,608,718	-1,126,076
Non-DOE Owned & Leased	9,073,173	-743,099	933,832	-497,304	8,766,602	-306,571

**NOTES:**

1. "Other NNSA Owned (NA-20)" includes MOX, PDCF, and WSB.
2. Numbers cited in this table are consistent with FIMS, which includes "grandfathered footprint," i.e., facilities that were funded before the Congressional excess facility offset disposition requirement was established. The SRS Tritium Facilities (Weapons Activities Account Owned) have 60,575 gsf of grandfathered footprint (52,183 gsf in TEF buildings and 8,392 gsf in 234-7H).
3. Because SRS is a multi-program site, the DOE/NNSA implementation of the Congressional excess facility offset disposition requirement allows the site process to combine all programs at the site when addressing footprint reduction and new construction. Since the Congressional requirement was established in FY 2002, SRS has accumulated a footprint reduction of approximately 1.4 million gsf.





## Challenges

Implementing Tritium R&D Consolidation and Tritium Facility Transformation, while continuing uninterrupted execution of missions, is a challenge that will be met by careful planning and a continuing focus on disciplined operations. Some technology gaps will need to be closed to enable smaller, more streamlined processes in the newer facilities, and future Readiness Campaign project proposals will reflect this priority. (For example, the current calorimeters used for tritium fill validation are large, slow, and obsolete.) SRS Tritium Facilities' personnel will continue to support NNSA's challenge to transform the stockpile by participating in Transformation task teams and adapting facilities and infrastructure as required.

## 2.0 Assumptions

The following represents the key programmatic, budget, and planning assumptions/constraints used in developing the FY 2009 TYSP.

- This TYSP assumes the level of funding in the FY 2009 President's Budget and the FY 2010-2014 Out Year Future Years Nuclear Security Program (FYNSP) Funding Targets.
- The SRS Tritium Facilities will be selected for consolidation of Tritium R&D.
- Tritium R&D Consolidation and Tritium Facility Transformation can be accomplished via Capital Equipment/General Plant Projects (CE/GPPs).
- Workload for the Tritium Supply and Nuclear Stockpile Maintenance missions is based on the requirements of the Master Nuclear Schedule, Volume III, Issue 78, which supports Production and Planning Directive 2007-0.
- Workload for the Nuclear Stockpile Evaluation mission is based on the requirements of the Five-Year Function Test Matrix.
- The Helium-3 Recovery mission will continue to be funded via the Department of Energy (DOE) Isotope Production and Distribution Program during the planning period.
- This TYSP assumes no impacts or costs resulting from a potential change of contract for managing and operating SRS or the SRS Tritium Facilities.
- Potential contract changes will not reduce availability of Savannah River National Laboratory

(SRNL) facilities and Critical Skills personnel.

- EM will accept the proposed transfer of Building 232-H from DP.
- The SRS site boundaries will remain unchanged, and the land will remain under the ownership of the federal government with institutional controls in place. Land use will be non-residential.
- Currently, the SRS Tritium Facilities are a Limited Area, with some Exclusion Area build-ings. This TYSP assumes any changes of security requirements will not necessitate higher Security Area designations.

## 3.0 Mission Needs and Program Descriptions

### Future NNSA Missions, Programs, and Workload

#### *Tritium Facilities Mission*

The SRS Tritium Facilities' current NNSA missions are expected to continue throughout the 10-year planning period. Future mission includes the receipt of the Tritium R&D mission per the Complex Transformation Preferred Alternative. The planned implementation timeframe for Tritium R&D is shown in Table 3-1.

It should be noted that the scope of Table 3-1 includes only those Tritium R&D capabilities that do not currently exist at SRS. SRS already has over 75 percent of the required Tritium R&D capabilities. These existing capabilities are supporting SRS tritium process R&D, tritium production R&D, the Life Storage Program, and Gas Transfer System (GTS) surveillance. Once a Record of Decision is issued

Fiscal Year	Implementation Activities
2009	<ul style="list-style-type: none"> <li>• Finish establishing requirements</li> <li>• Complete Conceptual Design</li> </ul>
2010	<ul style="list-style-type: none"> <li>• Complete Title II Design</li> <li>• Execute long-lead procurements</li> <li>• Disassemble and remove legacy equipment</li> </ul>
2011	<ul style="list-style-type: none"> <li>• Procure remaining materials</li> <li>• Start Construction</li> </ul>
2012	<ul style="list-style-type: none"> <li>• Complete Construction</li> <li>• Perform Start-up Testing</li> </ul>

**Table 3-1: Tritium R&D Implementation Timeframe**



Figure 3-1. SRNL's expertise is well-suited for the Tritium R&D mission.

transferring this mission to SRS, all Tritium R&D activities that do not require establishment of new capabilities could begin immediately.

Locations within the existing facilities have been identified for each new capability. The new capabilities and estimated funding requirements are shown in Attachment B. Facilities and infrastructure will be modified via CE/GPPs to accommodate the new equipment. Receipt of the Tritium R&D mission is expected to have minimal impact on ancillary support functions such as maintenance, security, and other site services.

Tritium R&D Consolidation is currently unfunded, so a preliminary cost profile was included in the FY 2010 – FY 2014 budget submittal.

### ***Plutonium Disposition Mission***

The Plutonium Disposition Mission is described in Section 7.0.

### **Future Non-NNSA Missions, Programs, and Workload**

The SRS Tritium Facilities currently have no non-NNSA missions, programs, or workload, and none are forecasted in the 10 year planning period.

### **Other Work**

Although the EM landlord continues to execute its SRS closure mission, a continual supply of utilities and support services required for DP missions in the SRS Tritium Facilities is projected throughout the 10 year planning period and beyond. No other non-NNSA or NNSA non-weapons work is expected to impact successful accomplishment of the SRS Tritium Facilities' missions.

### **Information Technology**

IT advancements are continually evaluated to determine potential cost-effective, secure applications of technologies that will improve responsiveness, and to identify the resulting impacts to supporting facilities and infrastructure.

Several ongoing initiatives are enhancing the IT infrastructure to better support Complex Transformation objectives:

- The obsolete Automated Reservoir Management System (ARMS) is being replaced. ARMS provides tracking, history, calculations, trending, inventory, planning, and workflow functions for Limited Life Component Exchange components. Figure 3-2 illustrates that the new ARMS will greatly improve integration.
- "Islands of control" located throughout the various facilities are being eliminated by tying them to a single interface or establishing a paperless means of transferring data between systems. These include programmable logic controllers, utility systems, data acquisition systems, control room alarms and monitoring stations, mass spectrometers, ARMS, and the Red Desktop system.
- A comprehensive lifecycle plan for information systems is being developed to improve execution of mission tasks and maintenance activities. This plan will address integration, migration, and update/conversion activities for most of the process control and reporting systems in the SRS Tritium Facilities. The plan will include significant lifecycle upgrades and/or replacements to keep pace with improved technologies and to ensure that systems stay in line with site standardized systems to minimize operating, maintenance, and repair costs and inventories.



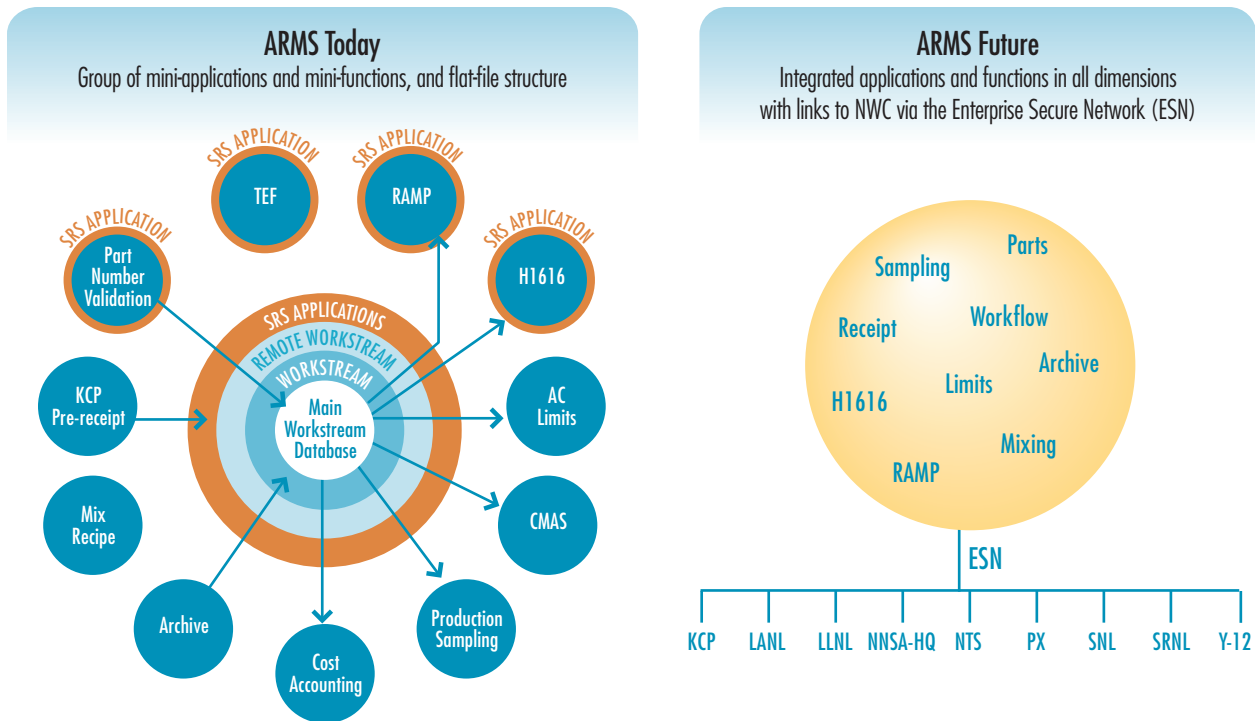


Figure 3-2. Transformation of the Automated Reservoir Management System

- Other infrastructure upgrades are enabling classified networking and integrated communications with other NWC sites, improving information storage, data management, and access, and extending red networks into process and support buildings.

No current or planned IT initiative will require construction of new buildings. Some of the older fiber optic cable used in the classified and unclassified networks is expected to require replacement. Also, replacement of the Distributed Control Systems in TEF and HANM may be necessary due to obsolescence. No other significant impacts to supporting facilities and infrastructure are expected during the 10-year planning period.

## 4.0 Real Property Asset Management

### Site Footprint Management

As a site, SRS meets and exceeds the Congressional requirement for footprint reduction for current operations and for all projected new construction in the out years. SRS has reduced the site footprint

significantly since the inception of the Congressional footprint reduction requirement in FY 2002, and through FY 2008 has approximately 1.4 million GSF “in the bank,” primarily due to the EM program. The remaining SRS footprint of approximate 8.3 million GSF is comprised of EM and NNSA facilities (Reference: Draft Savannah River Site Ten-Year Site Plan, March 28, 2008, Section 4.3, Real Property Asset Management). SRS is well situated to offset any new GSF footprint requirements for NNSA new-construction priorities.

Congressional guidelines do not allow footprint-reduction credit in the Facility Information Management System banking database for facility deactivation without demolition, but it should be noted that the SRS Tritium Facilities have completed a significant “active” footprint reduction. Hazard Category 2 Building 232-H was deactivated with existing staff, thereby reducing the active footprint by 72,000 GSF. Building 232-H is currently maintained in long-term surveillance and maintenance, and will be transferred to EM upon acceptance.

Similar to Building 232-H, HAOM and Building 236-H will become inactive when Tritium Facility Transformation is complete. HAOM will be placed in a cost-effective state of long-term surveillance and

NNSA Performance Goal	Analysis
By 2008, annually maintain the NNSA Facility Condition Index (FCI) for Mission Critical facilities at 5 percent. (Joint Readiness in Technical Base and Facilities and Infrastructure Recapitalization Program [RTBF/FIRP] goal)	The current FCI of Mission Critical facilities is 4.3 percent, and is projected to remain stable for the next 10 years (minor growth to 4.7 percent in FY 2011, with a decrease to 2.6 percent by FY 2018). See Attachment F-2.
By 2013, improve Mission Dependent, Not Critical facilities and infrastructure to a FCI level of 7 percent. (Joint RTBF/FIRP goal)	The current FCI of Mission Dependent, Not Critical facilities is 2.6 percent, and is projected to remain stable for the next 10 years. Projected FCI for FY 2013 is 2.7 percent. See Attachment F-2.
Eliminate \$900 million of NNSA's legacy deferred maintenance backlog by 2013. (FIRP goal)	The SRS Tritium Facilities expect to eliminate \$12.6 million of legacy deferred maintenance by FY 2013. See Attachment F-1.

**Table 4-1: Deferred Maintenance–reduction Analysis**

maintenance. A study has been conducted for Building 236-H, evaluating near term demolition versus long-term surveillance and maintenance. HAOM and Building 236-H would also become candidates for transfer to EM.

No increase in footprint is currently expected from Tritium R&D Consolidation or Tritium Facility Transformation. Design is not yet complete for the facility that will replace Building 232 1H, but no footprint reduction is expected after Building 232-1H is demolished.

## Future Space Needs

### Office Space

Permanent office space is currently full, and a substantial number of people are being housed in substandard office space (e.g., in Buildings 233-22H and HAOM) and temporary office trailers. This will be addressed in two ways:

- WSRC direct staff supporting the SRS Tritium Facilities' DP missions has been reduced by 13 percent since FY 2005 to reduce the cost of operations, and further staffing reductions are planned for the next few years. This action will reduce the office shortage.
- In FY 2009, a replacement for the 51-year-old Tritium Construction Support Building (232-1H) will be constructed. Along with shop space, new offices will be included in this facility.

Remaining office space needs will be assessed following these actions to determine if an additional administrative building will be required. When adequate office space is established, temporary office trailers will be removed.

### Warehouse Space

The replacement for Building 232-1H will have less warehouse space. To compensate for this reduction, Building 233-22H will be restored to its original warehouse function after adequate office space has been established.

### Laboratory Space

Building 234-7H laboratory space is adequate for existing missions, and the anticipated Tritium R&D mission will be accommodated within existing facilities. No new building footprint for laboratory space is planned.

### Deferred Maintenance Reduction and Facility Condition

Table 4-1 provides an analysis of the SRS Tritium Facilities' ability to reduce deferred maintenance to acceptable levels in accordance with NNSA's performance goals. The FYNSP funding is required to achieve the projected Facility Condition Index (FCI) improvements.

Significant facilities management decisions will need to be made to prudently prioritize funding that is available for recapitalization and improvements. In general, this funding will be 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 Complex Transformation plans (this will include unrelated cost-savings projects that free up seed money for Complex Transformation)

4. Projects associated with facilities other than Mission Critical facilities, unrelated to Complex Transformation

## Maintenance

### *Annual Requirements*

Because TEF is a new facility, it should require less maintenance than the older SRS Tritium Facilities for the next few years. Therefore, separate sustainment models are used to determine annual maintenance requirements.

### **Older SRS Tritium Facilities**

Annual required maintenance for the older SRS Tritium Facilities is determined based on historical maintenance cost data:

- *Routine Maintenance:* 2 percent of the older SRS Tritium Facilities' Replacement Plant Value (RPV)<sup>3</sup> is needed for direct-funded, routine maintenance. Scope includes preventive maintenance, predictive maintenance, and other maintenance and repair activity (under \$50,000) required for which the current fiscal year is the optimum period of accomplishment. Routine maintenance costs consist of Tritium Maintenance Organization labor, material, and support services. Support services are maintenance activities that are performed more effectively by the site's central Infrastructure and Services Department or subcontracted maintenance services. Support services include specialized maintenance, such as standby power generator maintenance, High-Efficiency Particulate Air (HEPA) filter testing, electrical breaker calibration, hoisting and rigging load tests, and pressure relief valve testing. The Support Services budget also pays for Davis-Bacon maintenance activities performed by site Construction forces.
- *Recapitalization:* An additional 0.5 percent of the older SRS Tritium Facilities' RPV is needed for direct-funded capital replacements and repairs over \$50,000.

In total, 2.5 percent of the older SRS Tritium Facilities' RPV is needed for direct-funded, annual required maintenance that stabilizes the level of deferred maintenance. Additional maintenance funding beyond 2.5



Figure 4-1. Tritium Extraction Facility

percent is required to reduce deferred maintenance.

This method of determining annual required maintenance is consistent with the benchmark sustainment model (2 to 4 percent of RPV) described in the National Research Council's *Stewardship of Federal Facilities*.

### **Tritium Extraction Facility**

Annual required maintenance for the new TEF facilities is all routine maintenance because no recapitalization is required at this point. Routine maintenance is assumed to require 1 percent of the TEF RPV until the start of full operations in FY 2014, at which time TEF will employ the same sustainment model as the older SRS Tritium Facilities for routine maintenance and recapitalization. One of the first recapitalization projects expected is an upgrade of the Distributed Control System due to obsolescence.

### **Indirect Maintenance**

Indirect maintenance is excluded from the sustainment models of annual required maintenance because it is funded through site overheads. NNSA Programs pay for SRS-DP's share of maintaining EM-owned site infrastructure, such as roads, bridges, and utilities.

### **Adequacy of Funding**

The FYNISP provides adequate funding in RTBF for annual required maintenance of all SRS Tritium Facilities, with the exception of TEF, which is funded by the Tritium Readiness Program.

### **Security and Security Infrastructure**

Safeguards and security technology and strategies are used to ensure that NNSA assets are efficiently

<sup>3</sup> Building 232-H is excluded from the percentage calculation because it has been deactivated and is in long-term surveillance and maintenance. It requires minimal maintenance, and deferred maintenance has been reduced to zero dollars.

and effectively protected. The overall mission of the SRS Tritium Facilities includes the protection of NNSA interests from theft, diversion, unauthorized access, loss, compromise, inadvertent release, and other hostile or negligent acts that may unacceptably and adversely impact national security, the environment, or the health and safety of employee and the public. Additional attention is being placed on cyber security, to include reducing the inventory of Accountable Classified Removable Electronic Media (ACREM). Proactive security self-assessments are conducted in all topical areas by site and facility personnel to ensure compliance with all security requirements.

No increased security measures are planned that would impact facilities and infrastructure. The SRS Tritium Facilities are designated as Threat Level 4 (TL4) under current Design Basis Threat (DBT) guidance. As a TL4, the SRS Tritium Facilities are required only to maintain Order compliance. Therefore, changes in the DBT requirements would not impact the facilities.

Security-related facilities and infrastructure requirements are shown in Attachments A-6(a) and A 6(b). These FS-20 projects will replace obsolete, end-of-life equipment (chillers, fire systems, and heating/ventilation/air conditioning (HVAC) systems) associated with the Entry Control Facility (Building 701-3H) and the Central Alarm Station (Building 720-H) and replace degraded sections of the perimeter fence. This will ensure continual compliance with physical security requirements for the DP Limited and Exclusion Areas, as described in the Site Safeguards and Security Plan, Tritium Security Plan, and the DBT Implementation Plan. No projects are DBT-related.

The security baseline for SRS Tritium Facilities is shown in Attachment D.

## 5.0 Overview of Site Project Prioritization and Cost Profile

The SRS Tritium Facilities' Change Control Board (CCB) meets regularly to manage the changing necessities required by ongoing facility operations and emergent NNSA needs. The CCB membership includes functional and facility management.

An ongoing, prioritized, multi-year list of CE/GPPs, approved by the CCB, is maintained for the RTBF, Directed Stockpile Work (DSW), and

Campaigns programs. As funding becomes available through completed project underruns, cost-savings initiatives, or supplemental funding, the CCB recommends initiation of new projects based on the priority listing and emergent needs. Once a new project is approved by the CCB, a formal Project Authorization and associated Baseline Change Proposal are prepared and routed for approval.

No significant challenges are anticipated with specific current and planned CE/GPPs, but there is one general concern. Qualified Design and Construction personnel, with specialized knowledge of Tritium materials and installation methods, are essential to successful project execution in the SRS Tritium Facilities. Line item projects over the past 20 years have helped to assure retention of this core competency. With no line item projects for the SRS Tritium Facilities in the 10-year planning period, it will be essential to have steady funding for CE/GPPs to ensure these people are available when needed. Historically, variability of funding and Continuing Resolutions have produced temporary funding gaps that, if perpetuated, would entail much higher risk over the next 10 years.

## 6.0 Changes from Prior-Year TYSP

This section provides a summary of key changes from the NNSA-SRSO Ten Year Site Plan, FY 2008 – FY 2017, issued March 2007.

This TYSP was written in accordance with the FY 2009-2018 Ten-Year Site Plan (TYSP) Guidance, January 2008. In general, changes in TYSP format and content reflect changes in the guidance. For example, much narrative was eliminated because the new guidance is greatly streamlined, and the attachments correspond to those required by the new guidance.

This TYSP focuses on Complex Transformation. It cites specific SRS Tritium Facilities activities that will be performed to support Complex Transformation. Planning for the anticipated Tritium R&D mission has significantly matured. Tritium Facility Transformation is a new plan this year. A new prioritization protocol has been established for investing funding that is available for recapitalization and improvements.

This TYSP includes a new plan to transfer Building 232-H to EM. HAOM and Building 236-H are also candidates for transfer to EM when functions have been relocated out of them.

This TYSP describes sustainment models that are used to determine annual maintenance requirements.

This TYSP establishes baseline requirements and square footage for security-related facilities and infrastructure.

This TYSP includes a new section on Plutonium Disposition Mission.

## 7.0 Nuclear Nonproliferation Missions

SRS has been selected as the preferred location for plutonium disposition. The mixed oxide fuel mission falls within the Nuclear Nonproliferation Program. The pit disassembly missions falls within DP

Three new facilities will be required to accomplish the plutonium disposition mission (see Attachment A-1). The Mixed Oxide (MOX) Fuel Fabrication Facility (MFFF) will receive plutonium feedstock as plutonium oxide. The Pit Disassembly and Conversion Facility (PDCF) 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 be utilized as MFFF feedstock (alternative feedstock).

The MFFF will blend uranium dioxide and plutonium dioxide, form the mixture into pellets, and load the pellets into fuel rods for use in commercial nuclear power plants. The facility will operate for the disposition of surplus U.S. surplus weapons grade plutonium, and be licensed by the Nuclear Regulatory Commission. The ultimate disposition for the MOX fuel, after its use in power plants, will be a geologic repository.

The third facility is the Waste Solidification Building, which will treat the liquid waste streams from both PDCF and MFFF.

Current plans are to construct the new plutonium disposition facilities near the center of the site in F Area. The program to disposition up to 34 metric tons of surplus plutonium is estimated to require approximately 13 years of operation, but it will be licensed for 20 years.

Implementation of the new plutonium missions will result in additional waste generation onsite. The new plutonium missions constitute a small percentage of increase in waste volumes over the existing waste management obligations.



# APPENDIX

<b>Attachments A-1 through A-6</b>	<b>Facilities and Infrastructure Cost Projection Spreadsheets</b>
Attachment A-1	Facilities and Infrastructure Cost Projection Spreadsheet, Line Item Projects for DP Tritium Facilities, Savannah River Site
Attachment A-3	NNSA Facilities and Infrastructure Cost Projection Spreadsheet, RTBF/ Operations of Facilities for DP Tritium Facilities, Savannah River Site
Attachment A-4(a)	NNSA Facilities and Infrastructure Cost Projection Spreadsheet, Facilities and Infrastructure Recapitalization Program (FIRP) for DP Tritium Facilities, Savannah River Site
Attachment A-5	Other Facilities and Infrastructure Cost Projection Spreadsheet for DP Tritium Facilities, Savannah River Site
Attachment A-6(a)	FY 2008 – FY 2010 NNSA Facilities and Infrastructure Cost Projection Spreadsheet, Currently Funded Security Infrastructure Projects for DP Tritium Facilities, Savannah River Site
Attachment A-6(b)	FY09 and FY10 Unfunded, NNSA Facilities and Infrastructure Cost Projection Spreadsheet, Security Infrastructure Projects for DP Tritium Facilities, Savannah River Site
<b>Attachment B</b>	<b>NNSA Potential Facilities and Infrastructure Impacts of Future Nuclear Weapons Complex Planning for DP Tritium Facilities, Savannah River Site</b>
<b>Attachment C</b>	<b>DOE New Building and Major Renovation Projects Seeking or Registered for Leadership in Energy and Environmental Design (LEED) Certification, DP Tritium Facilities, Savannah River Site – No Projects to Report</b>
<b>Attachment D</b>	<b>Establishment of Security Baseline for DP Tritium Facilities, Savannah River Site</b>
<b>Attachments E-1 through E-4</b>	<b>Facilities Disposition, New Construction, Leased Space, and Footprint Tracking Spreadsheets</b>
Attachment E-1	Facilities Disposition Plan, DP Tritium Facilities, Savannah River Site (Within FYNSP/Outyear Planning Targets) – <i>No Facilities to Report</i>
Attachment E-1a	Facilities Disposition Plan, DP Tritium Facilities, Savannah River Site (Above FYNSP/Funding is “TBD”)

Attachment E-2	New Construction Footprint Added, DP Tritium Facilities, Savannah River Site
Attachment E-3	FY 2008 Leased Space, DP Tritium Facilities, Savannah River Site – <i>No Leased Space to Report</i>
Attachment E-4(a)	Footprint Tracking Summary Spreadsheet, DP Tritium Facilities, Savannah River Site
Attachment E-4(a)	DP Tritium Facilities, Savannah River Site Space Tracking Summary (Chart)
Attachment E-4(b)	Footprint Summary Spreadsheet, Savannah River Site Tracking Summary – Site Wide (Multi-Program)
Attachment E-4(b)	Savannah River Site Footprint Tracking Summary – Site Wide (Multi-Program) (Chart)
<b>Attachments F-1, F-2</b>	<b>Legacy Deferred Maintenance Baseline and Projected Deferred Maintenance</b>
Attachment F-1	FIRP FY 2003 Legacy Deferred Maintenance Baseline and Projected Deferred Maintenance Reduction from Baseline, DP Tritium Facilities, Savannah River Site
Attachment F-2	DP Tritium Facilities, Savannah River Site Total Deferred Maintenance and Projected Deferred Maintenance Reduction



**Attachment A-1  
Facilities and Infrastructure Cost Projection Spreadsheet  
Line Item Projects for NNSA, Savannah River Site**

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 2007 (10)	FY 2008 (11)	FY 2009 (12)	FY 2010 (13)	FY 2011 (14)	FY 2012 (15)	FY 2013 (16)	FY 2014 (17)	FY 2015 (18)	FY 2016 (19)	FY 2017 (20)	FY 2018 (21)
<b>A. Readiness in Technical Base and Facilities (RTBF) Line Items</b>																						
	There are no RTBF Line Items for DP Tritium Facilities, Savannah River Site.																					
<b>B. Facilities and Infrastructure Recapitalization Program (FIRP) Line Items</b>																						
	There are no FIRP Line Items for DP Tritium Facilities, Savannah River Site.																					
<b>C. Safeguards &amp; Security (SSS) Line Items</b>																						
	There are no S&S Line Items for DP Tritium Facilities, Savannah River Site.																					
<b>D. Other Defense Programs Line Items</b>																						
	Waste Solidification Building	96-D-141	None	MC	Fissile Material Disposition	None	28,000	OPC	82,718	5,421	5,060	5,000	5,400	14,731	31,647	10,459						
								PE&D	36,102	10,649	15,500	9,953										
								LI	159,367	23,647	40,000	54,000	38,100	3,620								
								<b>Total (TPC)</b>	<b>278,187</b>	<b>16,070</b>	<b>20,560</b>	<b>39,600</b>	<b>45,000</b>	<b>52,831</b>	<b>35,267</b>	<b>10,459</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	PH Disassembly and Conversion Facility							OPC	312,700	192,039	32,789	22,447	26,880	19,503	49,603	36,145	39,710	TBD	TBD	TBD	TBD	TBD
								PE&D	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
								LI	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
								<b>Total (TPC)</b>	<b>TBD</b>	<b>428,776</b>	<b>54,789</b>	<b>30,111</b>	<b>59,408</b>	<b>151,003</b>	<b>244,603</b>	<b>261,145</b>	<b>264,670</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
								SubTotal	TBD	444,846	75,349	68,711	104,408	210,403	297,434	296,412	275,129	0	0	0	0	0
<b>E. Nuclear Nonproliferation (NN) Line Items</b>																						
	Mixed Oxide Fuel Fabrication Facility							OPC	3,938,628	935,097	262,500	345,194	417,808	395,674	308,722	301,938	382,802	158,325	125,611	300,967		
								PE&D														
								LI	875,701	67,949	7,792	47,088	50,000	55,000	87,036	180,269	136,669	149,192	85,771	8,955		
								<b>Total (TPC)</b>	<b>4,814,329</b>	<b>1,005,046</b>	<b>270,292</b>	<b>393,232</b>	<b>467,808</b>	<b>450,674</b>	<b>395,758</b>	<b>482,207</b>	<b>519,471</b>	<b>307,517</b>	<b>211,382</b>	<b>309,922</b>	<b>0</b>	<b>0</b>
								<b>Total</b>	<b>TBD</b>	<b>1,450,892</b>	<b>345,641</b>	<b>461,963</b>	<b>572,216</b>	<b>661,077</b>	<b>693,192</b>	<b>778,619</b>	<b>794,600</b>	<b>307,517</b>	<b>211,382</b>	<b>309,922</b>	<b>0</b>	<b>0</b>
<b>F. Non-NNSA Line Items Program A</b>																						
	None							OPC														
								PE&D														
								LI														
								<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>G. Non-NNSA Line Items Program B</b>																						
	None							OPC														
								PE&D														
								LI														
								<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
								<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
								<b>Site Costs</b>	<b>TBD</b>	<b>1,450,892</b>	<b>345,641</b>	<b>461,963</b>	<b>572,216</b>	<b>661,077</b>	<b>693,192</b>	<b>778,619</b>	<b>794,600</b>	<b>307,517</b>	<b>211,382</b>	<b>309,922</b>	<b>0</b>	<b>0</b>

\*Mixed Oxide Fuel Fabrication Facility is an Office of Nuclear Energy (NE) project managed by NN.



**Attachment A-4(a)**  
**NNSA Facilities and Infrastructure Cost Projection Spreadsheet**  
**Facilities and Infrastructure Recapitalization Program (FIRP) for DP Tritium Facilities, Savannah River Site**

FIRRS Priority (1)	Project Name (2)	FIRRS Score (2a)	Project Number (3)	Deferred Maintenance Identifier (3a)	Mission Dependency (4)	Mission Dependency Program (4a)	FY03 Baseline Deferred Maintenance Reduction (5)	GSF Added or Eliminated (6)	Funding Type (7)	Total (8)	Prior Years' Funding (9)	FY 2007 (10)	FY 2008 (11)	FY 2009 (12)	FY 2010 (13)	FY 2011 (14)	FY 2012 (15)	FY 2013 (16)	
<b>REQUIREMENTS OVER TARGET</b>																			
1	Replace UPS, HANM			SR-DM-XX-10	MC	DSW	500	0	GPP	700				700					
2	Supply Fan Control Replacement, HANM			SR-DM-XX-11	MC	DSW	700	0	GPP	2,500				2,500					
3	Breathing Air System Replacements			SR-DM-XX-12	MC	DSW	350	0	GPP	1,400				1,400					
4	Fire Protection Replacements			SR-DM-XX-8	MC/MD	DSW	1,150	0	GPP	3,400					1,600	600	1,200		
5	AHU Replacement, Offices 238-H			SR-DM-XX-15	MC	DSW	200	0	GPP	800						800			
6	AHU Replacement Process Area 238-H			SR-DM-XX-15	MC	DSW	1,100	0	GPP	2,500						1,500	1,000		
7	Cooling Tower Replacement, HANM			SR-DM-XX-16	MC	DSW	1,660	0	GPP	4,000							1,000	3,000	
<b>TOTAL (FIRP)</b>										15,300	0	0	0	0	3,200	3,000	2,900	3,200	3,000
<b>FYNSP for FIRP</b>										0	0	0	0	0	0	0	0	0	0

[NOTE: All projects are needed, and are candidates for FIRP funding. These are also shown on Attachment A-3, RTBF Ops of Facilities, because SRS is not currently funded by FIRP.]

Attachment A-5 Other Facilities and Infrastructure Cost Projection Spreadsheet for DP Tritium Facilities, Savannah River Site																						
Priority (1)	Project Name (2)	Project Number (3)	Mission Dependency (4)	Mission Dependency Program (4a)	Deferred Maintenance Reduction (5)	GSP Added or Eliminated (6)	Funding Type (7)	Total (8)	Prior Years Funding (9)	FY 2007 (10)	FY 2008 (11)	FY 2009 FYNSP (12)	FY 2010 FYNSP (13)	FY 2011 FYNSP (14)	FY 2012 FYNSP (15)	FY 2013 FYNSP (16)	FY 2014 (17)	FY 2015 (18)	FY 2016 (19)	FY 2017 (20)	FY 2018 (21)	
<b>MNSA Facilities and Infrastructure Cost Projection Spreadsheet (Directed Stockpile Work)</b>																						
<b>REQUIREMENTS OVER TARGET</b>																						
1	Consolidate Tritium R&D at SR*		MC	DSW		0	GPP	9,500					5,800	3,300	400							
								<b>TOTAL</b>	9,500				5,800	3,300	400	0	0	0	0	0	0	0

\*Also shown in Attachment B. Estimated Tritium R&D Consolidation costs are only for facilities and infrastructure (F&I)-related projects and do not reflect other costs for Safety Basis revision and Tritium R&D activities unrelated to F&I.

Attachment A-6(a) - FY 2008 - FY 2010 NNSA Facilities and Infrastructure Cost Projection Spreadsheet Currently Funded Security Infrastructure Projects for DP Tritium Facilities, 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)	Line Item A-1,2	RTBF A-3	FIRP A-4	Other A-5	DBT Related? Y or N
	<b>FY 2008 Projects</b>									
	NONE									
	<b>FY 2009 Projects</b>									
1	Replace Outside 720-H Chiller		MD	DSW	260				FS-20	N
2	Replace Inside 720-H Chiller / Condenser		MD	DSW	280				FS-20	N
	<b>FY 2010 Projects</b>									
1	Replace 720-H Fire Systems		MD	DSW	100				FS-20	N
2	Replace 701-3H Fire Systems		MD	DSW	90				FS-20	N
3	Replace Perimeter Fence Sections		MD	DSW	110				FS-20	N
4	Replace CAS HVAC		MD	DSW	250				FS-20	N

Note: Prioritize for each Fiscal Year (FY08, FY09 and FY10) in sequential order site Security Infrastructure projects/activities.

Attachment A-6(b) - FY09 and FY10 Unfunded NNSA Facilities and Infrastructure Cost Projection Spreadsheet Security Infrastructure Projects for DP Tritium Facilities, Savannah River Site (\$000s)								
Priority (1)	Prioritization Score (2a)	Project Name (2)	Site Specific Project Number (3)	Mission Dependency (4)	Mission Dependency Program (4a)	Total (8)	Proposed for either FY09 or FY10 funding	DBT Related? Y or N
1	60	701-3H General Renovation		MD		75	FY09	N
2	50	720-H General Renovation		MD		75	FY10	N
3	40	Relocate Power Feed for CCTV		MD		50	FY10	N
4	30	Remove PIDAS Junction Boxes		MD		100	FY10	N
<b>TOTAL</b>						<b>300</b>		

Attachment B NNSA Potential Facilities and Infrastructure Impacts of Future Nuclear Weapons Complex Planning for DP Tritium Facilities, Savannah River Site												
Mission Area (1)	Mission Dependency Program (2)	Site Impact <sup>1</sup> (3)	Potential Facility Impact <sup>2</sup> (4)	Project or Facility Number (5)	Project or Facility Name (6)	GSF Eliminated (7)	GSF Added (8)	Within FYNSP? <sup>3</sup> (9)	Start/Needed Date (10)	Estimated Completion Date (11)	Total Estimated Funding (\$K) (12)	Notes (13)
<b>Tritium R&amp;D Consolidation*</b>												
Tritium R&D	DSW	Receiver	Add R&D Capability	234-7H	Establish Electron Spectroscopy for Chemical Analysis	0	0	No	N/A	FY12	3,000	
Tritium R&D	DSW	Receiver	Add R&D Capability	234-7H	Establish Nuclear Magnetic Resonance	0	0	No	N/A	FY12	900	
Tritium R&D	DSW	Receiver	Add R&D Capability	HANM	Establish Real-Time Mass Spectroscopy for Sample Assay System	0	0	No	N/A	FY12	2,900	
Tritium R&D	DSW	Receiver	Add R&D Capability	SRNL	Establish Hydrogen Glovebox	0	0	No	N/A	FY12	2,700	
<b>Tritium Facility Transformation</b>												
Other	DSW	Ongoing Operations	Shutdown	HAOM 236-H	Multiple projects to effect phased relocation of functions from HAOM and Building 236-H to more modern facilities	0	0	Yes	N/A	FY18	TBD	Scope to be developed.
*Also shown in Attachment A-5. Estimated Tritium R&D Consolidation costs are only for facilities and infrastructure (F&I)-related projects, and do not reflect other costs for Safety Basis revision and Tritium R&D activities unrelated to F&I.												
<sup>1</sup> Site impacts include: (1) Donor; (2) Receiver; (3) Ongoing Operations; (4) Discontinue Operations.												
<sup>2</sup> Potential Facility impacts include: (1) Demolition; (2) Shutdown; (3) Sale; (4) Transfer; (5) Lease (New or Termination); (6) Renovation; (7) New Construction.												
<sup>3</sup> Existing or planned project identified in TYSP Attachment A or E (within Site FYNSP constraints).												

Attachment C DOE New Building and Major Renovation Projects Seeking or Registered for Leadership in Energy and Environmental Design (LEED) Certification DP Tritium Facilities, Savannah River Site														
Program (1)	Site (2)	Project Title (3)	USGBC or Equivalent Project ID (4)	FIMS Property ID Critical Decision 4 and Higher (5)	FIMS Property Description Critical Decision 4 and Higher (6)	LEED or Equivalent Rating System (7)	Critical Decision Level (8)	Gross Sqft (9)	Building Construction Cost (10)	USGBC or Equivalent Registration Date (11)	Estimated Occupancy Date (12)	Planned LEED or Equivalent Certification Level (13)	LEED or Equivalent Certification Level Met and Date (14)	Notes (15)
There are no new building or major renovation projects seeking or registered for LEED Certification in the DP Tritium Facilities, Savannah River Site.														



Attachment D: Establishment of Security Baseline for DP Tritium Facilities, Savannah River Site				
Facility/System Type (1)	Number of Security Areas (2)	Gross Square Feet of Security Areas (3)	Acres (4)	Linear Feet (5)
(1) PIDAS Protected Area	0	N/A	0	0
(2) Other Protected Areas (excluding PIDAS Protected Area)	0	0	N/A	N/A
(3) Limited Areas	1	1,143,513	N/A	N/A
(4) Exclusion Areas	6	151,673	N/A	N/A
(5) Material Access Areas	0	0	N/A	N/A
(6) Vital Areas	0	0	N/A	N/A
(7) Functionally Specialized Security Areas (i.e., SCIF, classified computer facilities, secure communication facilities)	1	475	N/A	N/A
(8) Vault Type Rooms	7	5,162	N/A	N/A

Attachment E-1 Facilities Disposition Plan DP Tritium Facilities, Savannah River Site (Within FYNSP/Outyear Planning Targets)												
Funding Source (1)	Facility Identification Number (FIMS) (2)	Facility Name (3)	Mission Dependency Program (4)	Priority Score (5)	Priority Rank (6)	Gross Square Footage (gsf) (7)	Excess Year (8)	Estimated Disposition Year (9)	TEC to Disposition (\$000s) (10)	Yearly S&M Costs (\$000s) (11)	Contaminated (Yes or No) (13)	Notes (14)
The DP Tritium Facilities, Savannah River Site, currently have no facilities that are funded for disposition within FYNSP out-year planning targets.												
<b>Total</b>						<b>0</b>			<b>0</b>	<b>0</b>		

Note: Sum/total the applicable Mission Dependency Program categories (associated with Weapons Activity appropriation) listed in Attachment E-1 for each of fiscal years FY 2006-2018 and report in Attachment E4a NNSA Footprint Summary (column 11).

Attachment E-1a Facilities Disposition Plan DP Tritium Facilities, Savannah River Site (Above FYNSP/Funding is "TBD")													
HQ Program Office (1)	Facility Identification Number (FIMS) (2)	Facility Name (3)	Mission Dependency Program (4)	Gross Square Footage (gsf) (7)	Excess Year (8)	Estimated Disposition Year (9)	TEC to Disposition (\$000s) (10)	Yearly S&M Costs (\$000s) (11)	Candidate for Transfer (12)	Contaminated (Yes or No) (13)	Notes (14)		
TBD	232-1H	Shop and Storage Building	RTBF	11,622	2010	2010	\$900	\$50K	No	No			
TBD	232-H	Manufacturing Building	RTBF	71,966	2008	TBD	TBD	\$100K	Yes	Yes	Proposed for transfer to EM		
TBD	236-H	Pressure Test Facility	RTBF	1,622	2012	TBD	TBD	\$50K	Yes	Yes	Candidate for transfer to EM		
TBD	HAOM	Old Manufacturing Building	RTBF	61,195	2018	TBD	TBD	TBD	Yes	Yes	Candidate for transfer to EM		
<b>Total</b>				<b>146,405</b>									

Attachment E-2 New Construction Footprint Added DP Tritium Facilities, Savannah River Site							
Funding Source (1)	Project Number (2)	Facility Name (3)	Mission Dependency Program (4)	Funding Type (LI, GPP, IGPP) (5)	Project Area (GSF) (6)	Year of Beneficial Occupancy (7)	Notes (8)
RTBF (ISS)	TBD	Shop and Support Facility	RTBF	GPP	8,000 (Estimated)	2010	Replacement for 232-1H
<b>Total</b>					<b>8,000</b>		

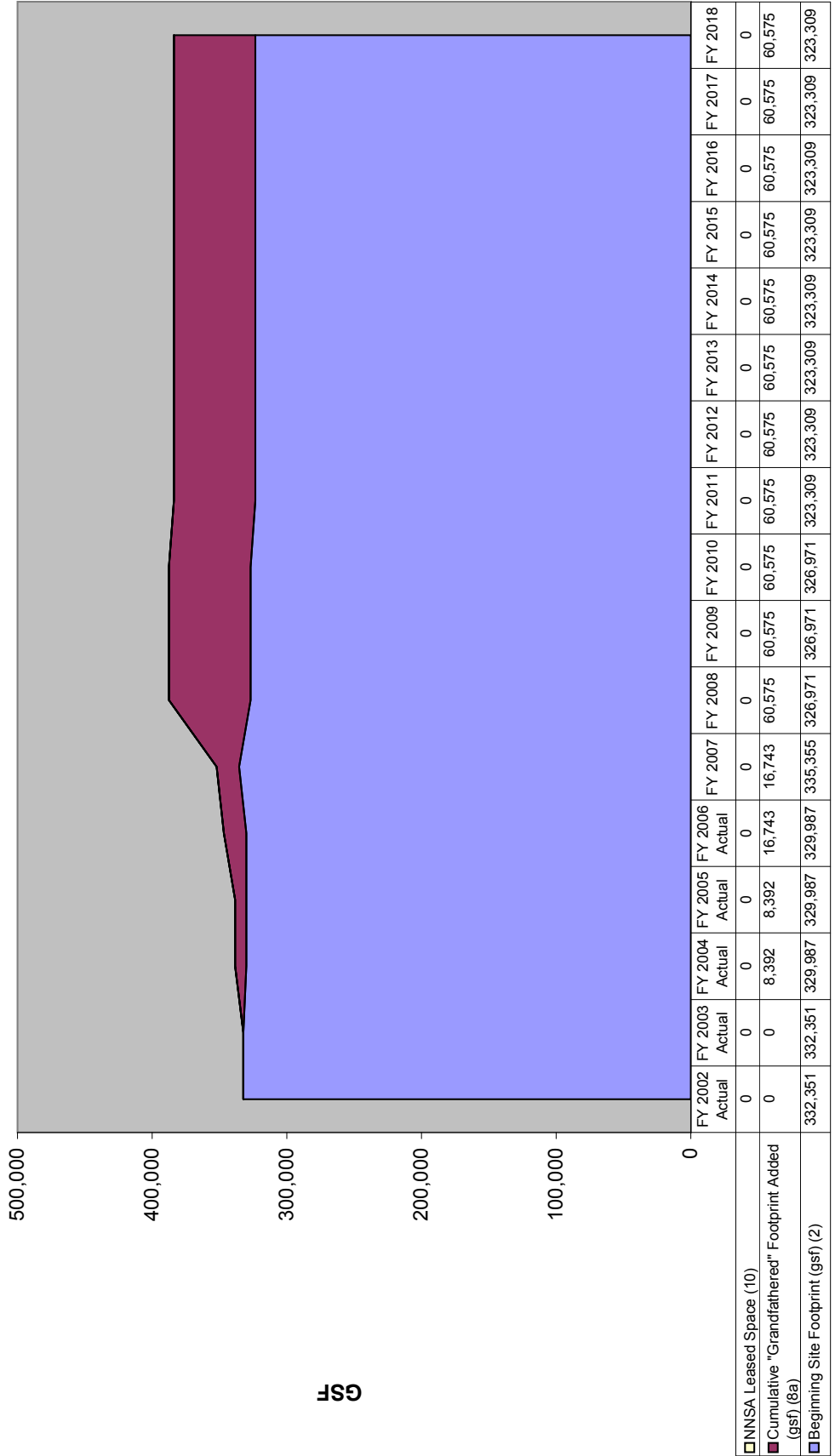
**Attachment E-3**  
**FY 2008 Leased Space**  
**DP Tritium Facilities, Savannah River Site**

#	FIMS # (2)	Property Name (3)	Mission Dependency Program (4)	Mission Dependency (5)	# Occupants (6)	Gross Square Feet (7)	Rental Rate per Rentable s.f. (8)	Annual Cost (9)	Lease Type (10)	Lease Term - yrs. (11)	Exp. Month / Year (12)	Renewal Options (13)
<b>There is no leased space in the DP Tritium Facilities, Savannah River Site.</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	332,351	0	
FY 2003 Actual	332,351	-2,364	0	329,987	-2,364			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	338,379	0	
FY 2006 Actual	329,987	0	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	387,546	0	
FY 2010	326,971	-11,662	8,000	323,309	-9,042			0	383,884	0	RTBF
FY 2011	323,309	0	0	323,309	-9,042			0	383,884	0	
FY 2012	323,309	0	0	323,309	-9,042			0	383,884	0	
FY 2013	323,309	0	0	323,309	-9,042			0	383,884	0	
FY 2014	323,309	0	0	323,309	-9,042			0	383,884	0	
FY 2015	323,309	0	0	323,309	-9,042			0	383,884	0	
FY 2016	323,309	0	0	323,309	-9,042			0	383,884	0	
FY 2017	323,309	0	0	323,309	-9,042			0	383,884	0	
FY 2018	323,309	0	0	323,309	-9,042			0	383,884	0	
					*Cumulative, non-grandfathered site footprint at the end of each fiscal year.						
Note :	DP Tritium Facilities FY 2008 Total Footprint includes the following:										
		Mission Critical Facilities			160,215						
		Mission Dependent Real Property			145,096						
		<b>Total Active Real Property</b>			<b>305,311</b>						
		Inactive Real Property, 232-H			71,966						
		<b>Total Real Property</b>			<b>377,277</b>						
		Modular Office Space			10,269						
		<b>NNSA Tritium Facilities Total Footprint</b>			<b>387,546</b>						

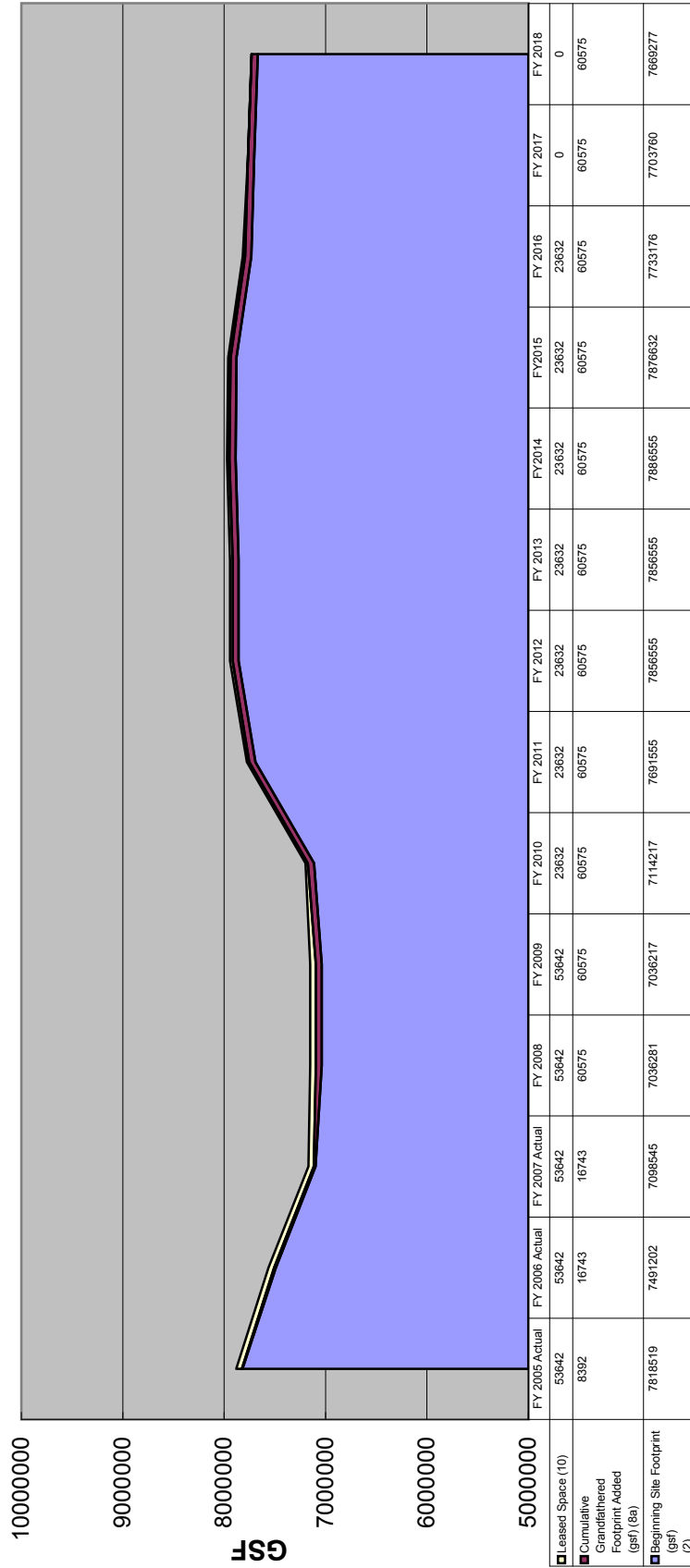
**ATTACHMENT E-4(a)  
DP Tritium Facilities, Savannah River Site Space Tracking Summary**



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)
FY 2005 Actual	7,818,519	-327,317	0	7,491,202	-954,930	0	8,392	8,392	7,499,594	53,642
FY 2006 Actual	7,491,202	-402,557	9,900	7,098,545	-1,347,587	50,000	8,351	16,743	7,115,288	53,642
FY 2007 Actual	7,098,545	-133,624	71,360	7,036,281	-1,409,851	0	0	16,743	7,053,024	53,642
FY 2008	7,036,281	-64	0	7,036,217	-1,409,915	0	43,832	60,575	7,096,792	53,642
FY 2009	7,036,217	0	78,000	7,114,217	-1,331,915	0	0	60,575	7,174,792	53,642
FY 2010	7,114,217	-11,662	589,000	7,691,555	-754,577	0	0	60,575	7,752,130	23,632
FY 2011	7,691,555	0	165,000	7,856,555	-589,577	0	0	60,575	7,917,130	23,632
FY 2012	7,856,555	0	0	7,856,555	-589,577	0	0	60,575	7,917,130	23,632
FY 2013	7,856,555	0	30,000	7,886,555	-559,577	0	0	60,575	7,947,130	23,632
FY2014	7,886,555	-9,923	0	7,876,632	-569,500	0	0	60,575	7,937,207	23,632
FY2015	7,876,632	-143,456	0	7,733,176	-712,966	0	0	60,575	7,793,751	23,632
FY 2016	7,733,176	-29,416	0	7,703,760	-742,372	0	0	60,575	7,764,335	23,632
FY 2017	7,703,760	-34,483	0	7,669,277	-776,855	0	0	60,575	7,729,852	0
FY 2018	7,669,277	-115,547	0	7,553,730	-892,402	0	0	60,575	7,614,305	0



**ATTACHMENT E-4(b)  
SAMPLE RIVER GRAPH ONLY  
Savannah River 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**  
**DP Tritium Facilities, Savannah River Site**  
**(\$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
<b>1. FIRP DEFERRED MAINTENANCE (DM) BASELINE</b> <b>(Excludes Programmatic Real Property or Equipment)</b>	52,038	45,504	35,072	31,672	31,622	30,099	28,219	25,919	23,419	20,469	17,419	13,369	10,869	8,369	5,869	3,369
<b>2. DEFERRED MAINTENANCE BASELINE (DM)</b>	8,459	6,534	10,432	3,400	50	1,523	1,880	2,300	2,500	2,950	3,050	4,050	2,500	2,500	2,500	2,500
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	-	-	-	-	-	-	-	-	-	-
i. Reduction in DM for Mission-Critical F&I (due to FIRP ONLY)				1,500	-	1,523	-	-	-	-	-	-	-	-	-	-
ii. Reduction in DM for Mission-Dependent, Not-Critical F&I (due to FIRP ONLY)				-	50	-	-	-	-	-	-	-	-	-	-	-
iii. Reduction in DM for Not Mission-Dependent F&I (due to FIRP ONLY)				-	-	-	-	-	-	-	-	-	-	-	-	-
<b>3. REPLACEMENT PLANT VALUE (RPV) FOR NNSA FACILITIES &amp; INFRASTRUCTURE</b>	735,600															

**Attachment F-2  
DP Tritium Facilities, Savannah River Site Total Deferred Maintenance and Projected Deferred Maintenance Reduction**

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
<b>1. ANNUAL REQUIRED MAINTENANCE (for F&amp;I)</b>					28,334	29,083	29,823	30,450	29,390	30,056	31,765	34,844	37,928	38,935	39,803	40,628
<b>2. ANNUAL PLANNED MAINTENANCE TOTAL</b>	19,022	20,678	18,971	22,132	27,736	28,694	30,458	27,960	29,366	36,702	37,069	36,568	37,372	38,195	39,035	39,894
a. Direct (Includes TEF Maint., FY07 and beyond)	16,980	17,805	17,676	19,645	26,118	27,047	28,757	26,203	27,551	34,827	35,132	34,465	35,213	35,977	36,757	38,894
b. Indirect	2,942	2,873	1,294	2,487	1,618	1,594	1,647	1,701	1,757	1,815	1,875	1,937	2,103	2,160	2,218	2,278
<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	55,591	56,718	58,967	61,558	59,288	56,762	52,246	49,492	46,549	43,408	40,062
i. Backlog Inflation Rate (%)		0.0%	4.9%	2.0%	2.2%	2.6%	2.5%	2.3%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
ii. DM Inflation			1,729	736	1,006	1,306	1,380	1,305	1,297	1,354	1,304	1,249	1,149	1,089	1,024	955
iii. DM NEW				11,844	3,500	5,750	1,900	3,650	4,300							
A. DM, Mission-Critical F&I ONLY				40,896	45,289	50,508	51,508	53,637	56,112	53,721	51,073	46,431	43,550	40,476	37,201	33,719
B. DM, Mission-Dependent, Not Critical F&I ONLY				4,847	4,954	5,083	5,210	5,330	5,447	5,567	5,689	5,814	5,942	6,073	6,207	6,343
C. DM, Not Mission-Dependent F&I ONLY																
<b>4. DEFERRED MAINTENANCE (DM) REDUCTION TOTAL</b>	8,459	6,534	10,432	3,638	55	1,709	2,162	2,706	3,006	3,625	3,830	5,765	3,903	4,032	4,165	4,301
i. Reduction Total attributed to FRP ONLY	7,077	5,460	6,432	1,605		1,709										
A. Reduction in DM for Mission-Critical F&I				3,638	55	1,709	2,162	2,706	3,006	3,625	3,830	5,765	3,903	4,032	4,165	4,301
1. Reduction attributed to FRP ONLY				1,605		1,709										
B. Reduction in DM for Mission-Dependent, Not Critical F&I																
1. Reduction attributed to FRP ONLY																
C. Reduction in DM for Not Mission-Dependent F&I																
1. Reduction attributed to FRP ONLY																
<b>5. REPLACEMENT PLANT VALUE (RPV)</b> for Facilities and Infrastructure (F&I) = Inflation of FY RPV + Increase or Decrease due to other Causes	735,604	867,805	942,376	837,348	1,337,922	1,372,708	1,407,026	1,436,387	1,397,988	1,428,744	1,460,176	1,492,300	1,525,130	1,468,683	1,500,984	1,534,016
A. RPV for Mission-Critical F&I ONLY				672,769	1,148,255	1,178,110	1,207,562	1,235,336	1,192,514	1,218,749	1,245,561	1,272,964	1,300,969	1,239,590	1,266,861	1,294,732
B. RPV for Mission-Dependent, Not Critical F&I				164,559	189,667	194,598	199,463	201,051	205,474	209,895	214,614	219,336	224,161	229,093	234,133	239,284
C. RPV for Not Mission-Dependent F&I				63,100	53,400	34,786	34,318	32,362	31,601	30,756	31,432	32,124	32,831	33,553	32,311	33,022
D. RPV Increase from prior year attributed to inflation																
E. RPV Increase / decrease attributed to causes other than inflation (See Notes below)				(168,128)	447,174			(3,000)	(70,000)				(90,000)			

Note 1: FY 2006, Decrease from exclusion of the 232-H facility (which is shutdown) and an increase due to addition of TEF Service Building (\$3M).  
 Note 2: FY 2007, Addition of the balance of the Tritium Note 3: FY 2010, Net RPV change upon completion of Replacement 232-H.  
 Note 4: FY 2011 and FY 2016, Deactivate and Excess Note 5: Office trailer deferred maintenance (\$196,496) and RPV (\$461,320) are not included in the information above.

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
<b>FCI TOTAL</b>	7.1%	5.2%	3.9%	5.5%	3.8%	4.0%	4.0%	4.1%	4.4%	4.1%	3.9%	3.5%	3.2%	3.2%	2.9%	2.6%
<b>FCI Mission Critical</b>				6.1%	3.9%	4.3%	4.3%	4.3%	4.7%	4.4%	4.1%	3.6%	3.3%	3.3%	2.9%	2.6%
<b>FCI Mission Dependent, Not Critical</b>				2.9%	2.6%	2.6%	2.5%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%
<b>FCI Not Mission Dependent</b>																
<b>Asset Condition Index (ACI)</b>																
<b>ACI TOTAL</b>	0.93	0.95	0.96	0.95	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.97	0.97	0.97	0.97
<b>ACI Mission Critical</b>				0.94	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.97	0.97	0.97	0.97
<b>ACI Mission Dependent, Not Critical</b>				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
<b>ACI Not Mission Dependent</b>																





