

U.S. Department of Energy
Savannah River Site
Strategic Plan

May 2009



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Message from the Manager...



Our nation faces tremendous challenges today on many fronts: increasing energy demands, the global war on terrorism and economic distress. These are indeed challenging times. The Department of Energy (DOE) will play a vital role in addressing these national issues. For nearly sixty years the Savannah River Site (SRS) has proudly served the nation and will continue to serve well into the future.

During the first phase of service, spanning more than forty years, SRS successfully built and operated vital nuclear facilities in support of national defense during the Cold War era. SRS then embarked in another great challenge of national priority - cleanup of the environmental legacy of the nation's nuclear weapons program, while continuing to support other DOE missions.

Performance of the DOE Environmental Management (EM) program at SRS has been equally impressive in this second phase of service to the nation. SRS constructed, and has safely operated for more than twelve years, the United State's only large scale radioactive waste vitrification facility, producing over 2,700 canisters of stabilized waste to date. In addition, over 27,000 drums of legacy transuranic waste out of a total of 29,000 drums, have been safely shipped to DOE's Waste Isolation Pilot Plant in New Mexico. Great strides have been made in remediation of contaminated soil, groundwater, and excess facilities.

In addition to the aggressive environmental cleanup program, SRS is also supporting the National Nuclear Security Administration (NNSA) missions for Defense Programs and Nuclear Nonproliferation. The Savannah River National Laboratory (SRNL) is providing technical solutions in support of EM and NNSA missions, other federal agencies, and is addressing national energy issues through the Center of Hydrogen Research and other scientific research efforts.

Building on past and current mission performance, SRS will continue to support DOE as new missions evolve. The highly trained and experienced contractor and federal employees at SRS provide a flexible and adaptable workforce capable of meeting new assignments. With more than 310 square miles of secure land area, excellent transportation links, and a highly developed infrastructure, SRS provides the foundation to accommodate a wide range of federal initiatives and new missions for both DOE and other national organizations. SRS enjoys strong support from its Citizens Advisory Board and public, as well as a strong working relationship with its regulators.

SRS has a bright future in which it will expand its capabilities by developing world-class facilities in new areas while staying committed to environmental cleanup. SRS is poised to become DOE's premier Site for new initiatives in the areas of energy independence, innovative technology, nuclear security and nonproliferation, and environmental stewardship. SRS is also poised to rapidly accelerate legacy environmental cleanup in support of the 2009 Recovery Act. Already a gateway for the disposition of nuclear materials, SRS will continue to serve as a model for the DOE Complex by integrating existing and future facilities and operations. The planned collaboration of EM and NNSA capabilities will enable SRS to expand its ability to convert weapons grade nuclear materials to usable commercial nuclear fuel.

This plan was commissioned by EM, the SRS landlord, in order to clearly articulate the Site vision and missions in support of the DOE, and provide transitional direction for SRS to continue successful execution of current missions while welcoming and preparing for new opportunities.

Jeffrey M. Allison, Manager

Savannah River Operations Office

May 2009

Page 2 of 47

Table of Contents

I. Introduction

1. SRS Strategic Plan Purposes and Assumptions..... 4
2. Alignment with the DOE Strategic Plan..... 6
3. Site Description and Past Achievements..... 7
4. Current SRS Missions..... 9
5. Vision for SRS..... 10

II. Alignment with DOE Strategic Themes

1. Energy Security..... 12
2. Nuclear Security..... 14
3. Scientific Discovery and Innovation..... 17
4. Environmental Responsibility..... 19
5. Management Excellence..... 22

III. Alignment with the Environmental Management Program

1. Overall SRS EM Mission and Strategic Approach..... 25
2. Waste Disposition..... 29
3. Nuclear Material Disposition..... 32
4. Area Completion..... 34
5. Savannah River National Laboratory..... 36
6. Site Services and Infrastructure..... 38

IV. Alignment with the National Nuclear Security Administration Program

1. NNSA Defense Programs..... 39
2. NNSA Nuclear Nonproliferation Programs..... 42

V. Plan Implementation Process..... 45

Appendix 1: Acronym List..... 47



I. Introduction

1. SRS Strategic Plan Purposes and Assumptions

The *SRS Strategic Plan* has several purposes. The first is to establish the connection between the *DOE Strategic Plan* and *SRS vision* through provision of specific direction to SRS to support the mission and vision of DOE. The second function is to communicate the vision for the future of SRS. The final major purpose is to supply the link that communicates these requirements to all lower level Site plans and identifies the responsibilities each Site organization has in accomplishing DOE's vision.

Department of Energy Overarching Mission

Advance the national, economic and energy security of the United States; promote scientific and technological innovation in support of that mission; and ensure the environmental cleanup of the national nuclear weapons complex.

SRS Vision

The Savannah River Site is recognized as a long-term national asset in the areas of national security, energy independence, innovative technology and environmental stewardship, and there is sustained public confidence in its people and capabilities.

In practical terms, this plan clearly presents the courses of action necessary to continue SRS' 50-year tradition of protecting the nation and executing expedited cleanup. To meet changing national needs, a new element of Site revitalization has also been added to this plan. Site revitalization is communicated by identifiable strategies for an orderly transition to future new missions, which demonstrates SRS' readiness to assume new roles and provide vital services to America.

Basis for Strategic Planning

- SRS is a national asset and will endure beyond current EM and NNSA missions
- SRS will maintain its current physical boundary of 310 square miles
- Infrastructure assets and crosscutting support functions will be maintained and upgraded to support current and future missions
- SRS will maintain its leadership role in safety, security and protection of people, facilities and the environment
- SRS will maintain its current unique core capabilities: cleanup expertise, safe and secure storage capability, nuclear material stabilization processing, large-scale vitrification processing, and tritium extraction and processing
- SRS will continue to support its designation as a National Environmental Research Park (NERP)

Planning Assumptions

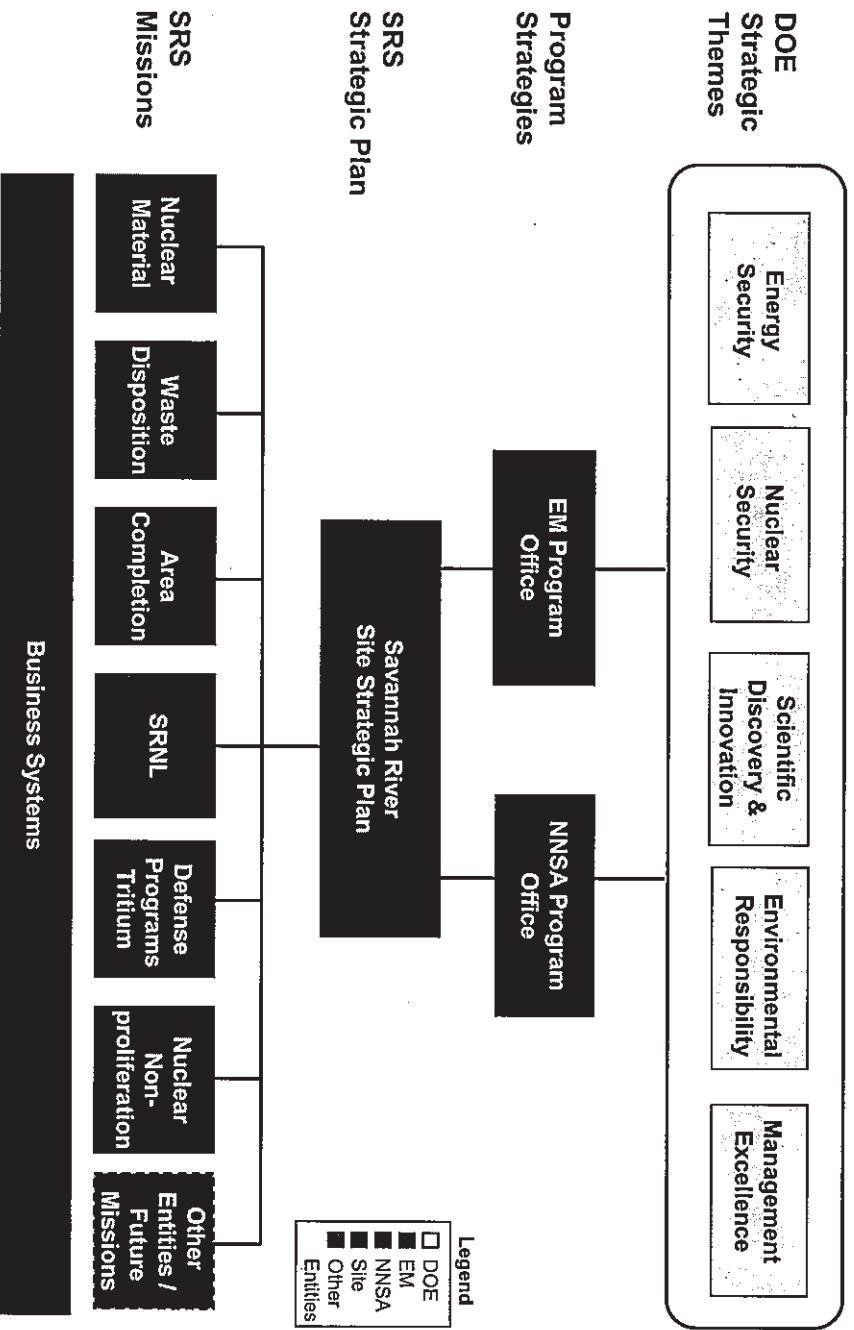
- SRS will complete construction of: Salt Waste Processing Facility, Mixed Oxide Fuel Fabrication Facility, Waste Solidification Building, Pit Disassembly and Conversion Facility, and Plutonium Preparation Facility
- SRS will process and convert significant amounts of weapons-grade plutonium into commercial nuclear fuel
- The SRS Federal landlord responsibilities will remain with EM until its missions are complete
- SRNL will continue to support current EM and NNSA missions and will expand to support future missions as they arise
- SRS will continue to have excellent community, political and regulatory support
- SRS will accelerate legacy environmental cleanup through the 2009 Recovery Act

2. Alignment with the DOE Strategic Plan

The *DOE Strategic Plan* is organized around five basic themes which define and address the missions of DOE. Correlated with these themes are major goals which provide direction to the various departmental organizations for accomplishing the mission functions. In line with the *DOE Strategic Plan*, each of the major DOE program offices develop organizational plans or guidance documents to further define how they will implement their particular mission assignments. The *DOE Strategic Plan* and these organizational sub-plans provide guidance for specific SRS actions.

SRS has designed its strategic plan to form a linkage with each of the DOE Strategic Themes. SRS has also identified each of the DOE Strategic Goals which have specific applicability to SRS. The SRS Strategic Plan addresses each of these goals to serve as the foundation that guides SRS activities.

SRS Strategic Plan Linkage to DOE Strategic Themes

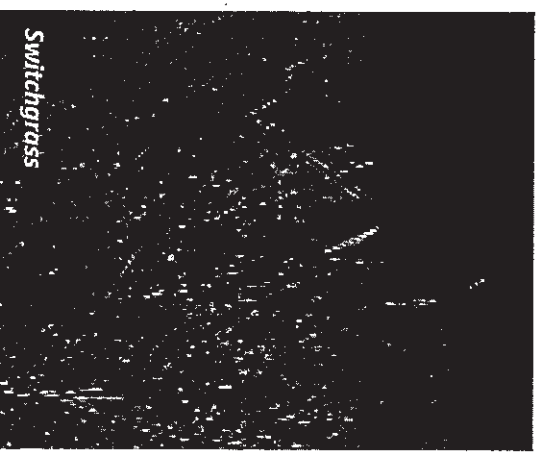
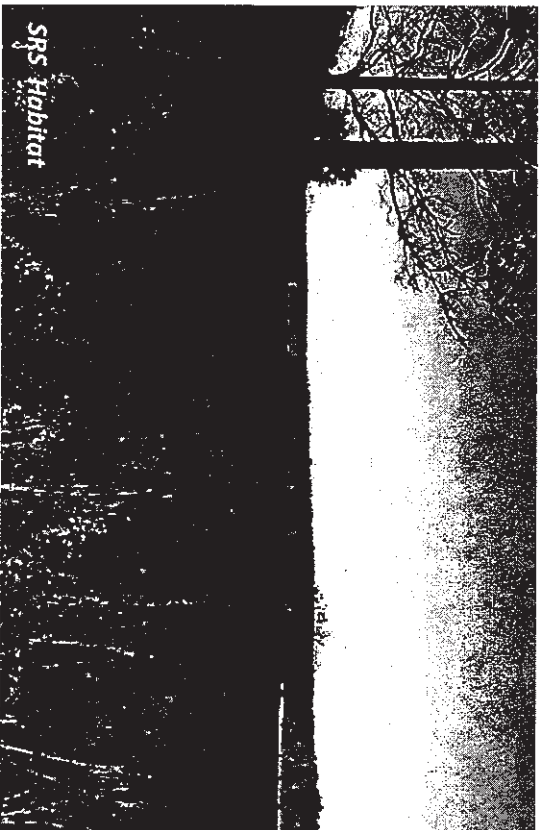
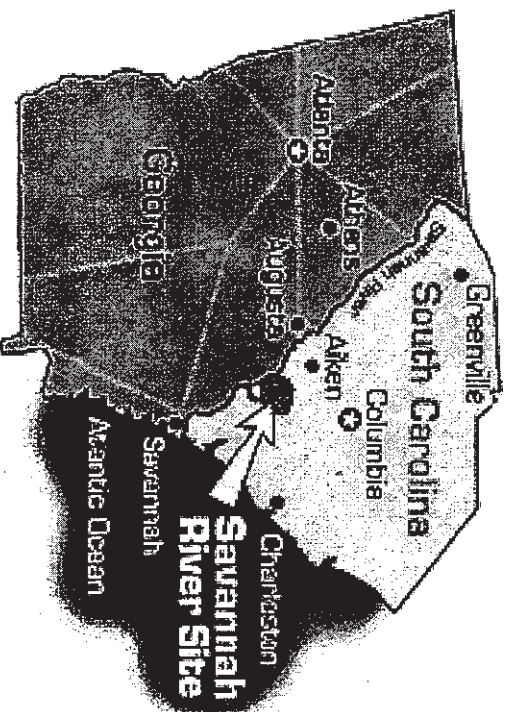


3. Site Description and Past Achievements

SRS has over fifty years of operating experience and human resources with exceptional technical knowledge. The “can do” culture of the workforce has produced a legacy of achievement with unmatched safety and mission performance, resulting in a positive relationship with regulators, stakeholders, including the 25-member Citizens Advisory Board (CAB), and regional elected officials. This combination of attributes makes SRS a prime location for supporting a wide range of DOE and other national interests. SRS has many attributes, the sum of which make it a valuable and irreplaceable national asset. It has immense land resources, thousands of buildings, some with unique capabilities not available at any other location in the world, and a large supporting infrastructure. It is located on a 310 square mile parcel in South Carolina, bordered to the west by the Savannah River and Georgia.

EM is assigned as the Site’s landlord, with specific responsibilities that include Site-wide integration and planning, and implementation of projects in the areas of waste disposition, nuclear materials, and area completion. NNSA is one of the primary SRS tenants, and its missions include support for the Defense Program and Nuclear Nonproliferation project. SRNL, also located on SRS, provides support for SRS and DOE Complex-wide missions. It also performs work-for-others, including support for federal agencies such as the Department of Defense and Department of Homeland Security, as well as initiatives for organizations like the Center for Hydrogen Research.

Contractors operating at SRS include: Savannah River Nuclear Solutions, LLC (SRNS); Savannah River Remediation (SRR); Parsons Corporation; University of Georgia; Savannah River Ecology Laboratory (SREL); Wackenhut Services, Inc. (WSI); Shaw AREVA MOX Services, LLC; and numerous subcontractors. The USDA Forest Service – Savannah River (USFS-SR) maintains an interagency agreement with SRS for management of the Site’s forests and wildlife.



III. Alignment with the Environmental Management Program

The information in this section reflects the strategic planning effort for the Savannah River EM Program. Specifically included is the EM Mission, which supports the SRS vision, and the following EM Mission components: Waste Disposition, Nuclear Materials Management, Area Completion, and the Savannah River National Laboratory (SRNL). The specific mission of each EM component, along with strategies to accomplish that mission and critical results, are addressed. Site Services and Infrastructure, EM landlord functions, are also included.

1. Overall SRS EM Mission & Strategic Approach

SRS EM Mission Statement
Safely and efficiently cleanup the environmental legacy of our nation's nuclear weapons program at the Savannah River Site to protect public health and the environment and transform the Site for the future.

EM Mission

The EM Program provides a responsible resolution to the legacy of nuclear weapons production in order to protect public health and the environment. The EM work at SRS supports missions of national importance and is clearing the way for future DOE missions at SRS. The SRS EM Program is delivering reliable progress, meaningful near-term results, and significant reductions in cost and schedule on the massive challenges of processing and shipping radioactive waste, removing excess nuclear material, decommissioning contaminated facilities, and remediating contaminated soils and groundwater. While meeting all regulatory agreements, the SRS EM Program places special emphasis on the preservation of human health, safety, and the environment.

SRS is the third largest, and arguably the most complex, of the DOE facilities nationwide (310 square miles, 11,000 employees, \$2 billion annual budget). As a result of its long history as a vital component of the nation's nuclear weapons complex, SRS faces a tremendous legacy of waste, excess nuclear materials, and environmental challenges.

- Over 800 contaminated facilities
- 37 million gallons of radioactive liquid waste in 49 underground tanks (2 tanks already closed)
- Tons of excess enriched uranium and plutonium
- Hundreds of acres of contaminated soils and groundwater
- Massive quantities of hazardous and radioactive solid waste

SRNL is the "corporate laboratory" for the DOE EM Program, supporting DOE cleanup missions nationwide. It anticipates a long future as a leader in new energy technology supporting US energy independence through organizations like the Center for Hydrogen Research. SRNL is expected to continue to grow and develop into a premier applied technology laboratory and long-term asset for our nation.

In recognition of the important missions underway at SRS and long-term value of SRS to our nation, the EM Program Mission addresses the urgent need to resolve the significant threats to public health and the environment posed by the legacy of nuclear weapons production. SRS' unique facilities and capabilities enable it to support consolidation and processing of nuclear materials from other locations (other DOE facilities, as well as other U.S. and foreign sources). This is important for reducing terrorist and proliferation threats, avoiding the additional costs of protecting materials at multiple Sites (security costs and the expense of new facilities), and enabling other facilities to close.

Unique Achievements at SRS

- Leads the DOE Complex in maintaining “Best in Class” safety record
- Construction and operation of only large scale radioactive waste vitrification facility in the nation (more than 2,700 canisters of vitrified waste produced)
- Completed the nation’s first operational closures of radioactive liquid waste tanks (two tanks closed to date)
- Development of innovative cleanup environmental strategies that have saved taxpayers over \$240 million since 2000
- Accomplished safe, efficient shipment of over 27,000 drums of transuranic waste to DOE’s Waste Isolation Pilot Plant in New Mexico
- Achievement of all regulatory compliance milestones on or ahead of schedule since inception of cleanup project in 2000
- Consolidated surplus nuclear materials from other DOE sites to reduce terrorist threats, allowing for the closure of Rocky Flats and Mound Sites
- Successfully converted highly enriched uranium to low-enriched uranium for commercial power reactor use, providing potential equivalent quantity of electricity to power every home in South Carolina for 11 years
- Provide tritium delivery to support the nation’s weapons needs
- Home of the Savannah River National Laboratory, the nation’s newest national laboratory
- SRS Citizens Advisory Board received EPA award for Citizens Excellence in Community Involvement in 2007
- Site tours for the public reinstated
- SRS Area Completion Strategy was recognized by EPA as a National Notable Achievement in 2004
- Began construction of the nation’s first Mixed Oxide Fuel Fabrication Facility

4. Current SRS Missions

There are presently three primary missions at SRS; EM responsibilities for cleaning up the Cold War legacy and preparing the Legacy Sites for turnover to the DOE Office of Legacy Management for long-term stewardship, NNSA Defense programs, and NNSA Nuclear Nonproliferation. Based on current funding, the EM mission comprises the largest effort at SRS. As EM successfully accomplishes its mission requirements, it will likely have a decreasing presence at SRS, and other missions, including the Legacy Management mission, will increase in significance. Nevertheless, because of the size of the Site and the magnitude of the tasks, EM will continue to play a significant role long into the future.

Environmental Management Mission

Safely and efficiently cleanup the environmental legacy of our nation's nuclear weapons program at the Savannah River Site to protect public health and the environment and transform the Site for the future.

- Treat and dispose of wastes
- Disposition surplus nuclear materials, decommission contaminated facilities, cleanup soil and groundwater, and monitor groundwater
- Support national security and national energy independence
- Expand capabilities of the Savannah River National Laboratory
- Make more of the Site available for new missions and ensure infrastructure needs are met
- Prepare residual waste for long-term stewardship

Defense Programs Mission

Ensure safe, secure, and reliable delivery of tritium services in a manner that meets Defense Program Stockpile Stewardship requirements and proactively implements the Complex Transformation strategies.

- Extract tritium from irradiated target rods
- Load tritium and non-tritium reservoirs
- Conduct reservoir surveillance operations and gas transfer system testing
- Establish the Tritium Research and Development Center of Excellence
- Construct and operate the Pit Disassembly and Conversion Facility

Nuclear Nonproliferation Mission

Enhance national security through the detection, prevention, and reversal of proliferation of weapons of mass destruction worldwide.

- Design, build, and operate facilities to convert nuclear weapons components to commercial nuclear mixed oxide fuel
- Work with agencies worldwide to secure spent fuel and other nuclear materials sources
- Deploy nuclear detection, inspection, and monitoring equipment worldwide

5. Vision for SRS

SRS Vision

The Savannah River Site is recognized as a long-term national asset in the areas of national security, energy independence, innovative technology and environmental stewardship, and there is sustained public confidence in its people and capabilities.

The foundational concept of the vision recognizes SRS has multiple missions and unique capabilities which will endure long into the future. Transitioning to the future is not without challenges. With these challenges, however, are many opportunities to maximize benefits and minimize adverse impacts, not only locally, but nationally, and even internationally. Some of these opportunities include exploiting technology opportunities, utilizing SRS material consolidation capabilities, expanding the role for SRNL, devising innovative approaches for combining facility requirements between mission areas to eliminate unneeded facilities, implementing new performance based contracts to increase efficiencies, and increasing partnerships in the nation's energy initiatives. The courses of action necessary to achieve the Site vision have been articulated in the five DOE Strategic Themes. The following provides an overview of the vision.

SRS will be a key player in the nation's **Energy Security**. It will strive to achieve energy independence in its operations. It will leverage its talent and resources to be a major contributor to support the Department's efforts to develop solutions for achieving energy independence for the nation through reliable, clean, and affordable sources.

Nuclear Security will be a driving force at SRS. Not only will the Defense and Nuclear Nonproliferation Programs on the Site conduct their missions in an exemplary manner, they will also explore opportunities to contribute to the nation's **Energy Security** efforts through shared facility use and alternative disposition methods for nuclear materials.

SRS envisions an expanding role for SRNL in supporting **Scientific Discovery and Innovation**. The emphasis will be to leverage SRNL strengths to better support ongoing Site missions and increase future opportunities in order to further the interest of DOE and the nation in scientific discovery, economic competitiveness, and improving quality of life.

SRS will set the example for **Environmental Responsibility**. SRS is a keystone in the Department's successful resolution to the environmental legacy of fifty years of nuclear weapons production. As the EM mission moves to completion, however, it will have a decreasing role in the Site's future. Although EM's mission focus is in the areas of cleanup and closure, SRS is designated as an enduring Site available for long-term missions, including the long-term stewardship requirement of the residual waste remaining after cleanup. Without compromise, cleanup activities will accommodate future missions and assure the Site remains a viable national asset by focusing on protecting the environment, stewardship of natural resources, and eliminating or reducing all health, safety and environmental risks to an acceptable level.



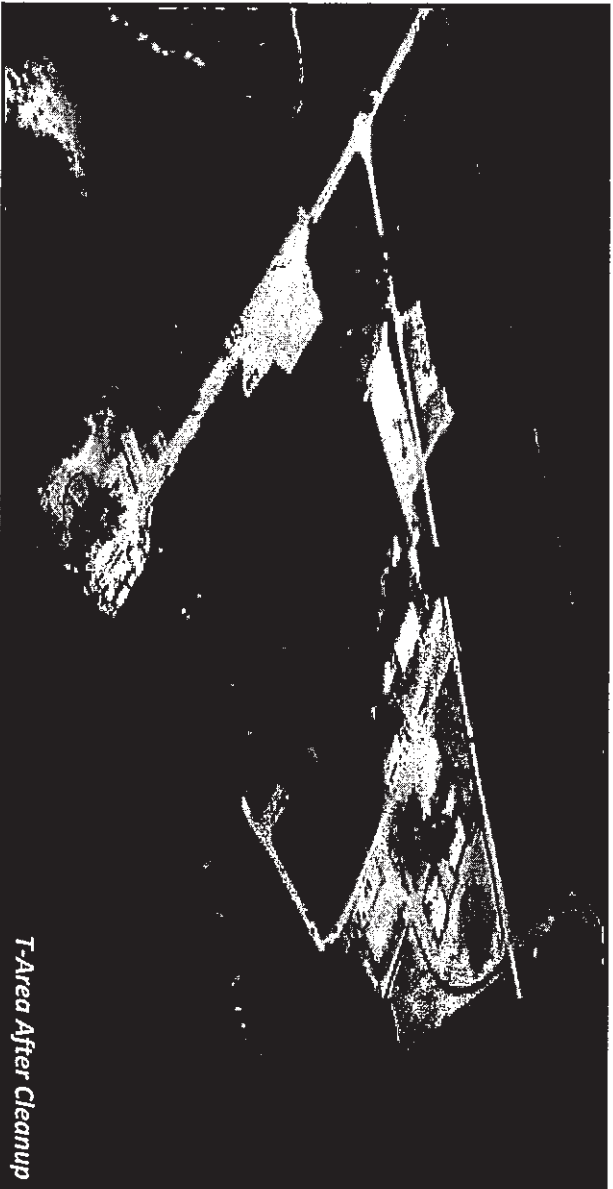
Building on SRS' past achievements, SRS managers recognize if the Site is not moving forward, it becomes stagnant. To move forward, SRS will exemplify **Management Excellence**. This means constantly addressing and improving SRS business practices and approaches for greater efficiency and cost effectiveness. EM will accomplish its landlord responsibilities by joining with the NNSA Defense and Nuclear Nonproliferation Programs for a unified team effort, working together for solutions to the formidable challenges of the future. SRS must also ensure workforce planning and execution facilitates the new Site vision. This process will be instituted in a way that retains and grows the skills necessary for present and future Site missions, while seeking to mitigate negative economic and social impacts to individuals and the community.



T-Area Before Cleanup

While various actions are described for accomplishment according to central concepts in the various themes, many are interrelated and support each other. For example, the collaboration of EM and NNSA capabilities will enable SRS to convert significant amounts of weapon grade nuclear material to reusable nuclear fuel. It is estimated the amount of weapons grade material converted at SRS from both highly enriched uranium (HEU) and plutonium could generate enough electricity to power all South Carolina households for up to 20 years. This action supports **Environmental Responsibility** and **Nuclear Security** by providing a disposition path for the material; it also supports **Energy Security** by providing a significant energy source that helps reduce the nation's dependence on foreign oil supplies. In order for the project to unfold efficiently, **Management Excellence** will develop and adapt the performance metrics that transition SRS to the nation's premier Site for new missions

The five DOE Strategic Themes outlined above will be elaborated further in the pages that follow to portray SRS' strategy to insure their accomplishment.



T-Area After Cleanup

II. Alignment with DOE Strategic Themes

1. Energy Security

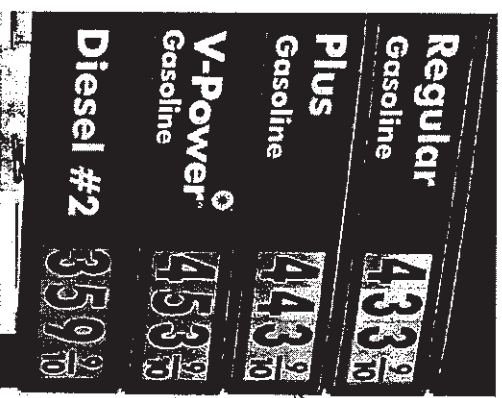
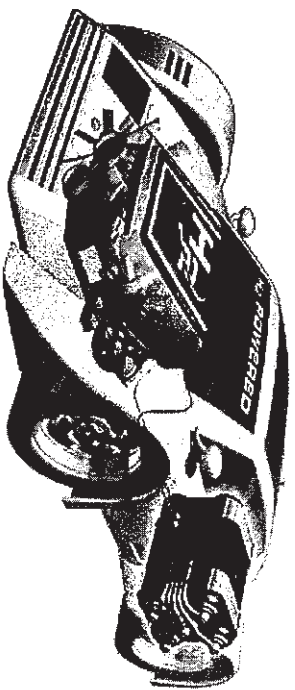
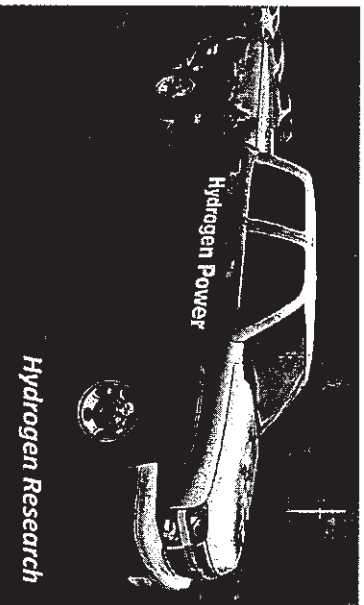
Promoting America's energy security through reliable, clean, and affordable energy

Instability of world oil markets poses a serious threat to the United States. Carbon emissions from fossil fuels are also seen as a serious issue. These challenges provide SRS with opportunities to provide exemplary leadership in their resolution as we transition to the future.

SRS will contribute to Energy Security in two areas. The first area is to reduce the Site's carbon footprint through aggressive energy conservation and efficiency programs for buildings, motor vehicles and utilities.

The second area of focus is to encourage and support initiatives that will address national energy issues. This will include such things as research for hydrogen fuel production and developing innovative approaches to use excess plutonium for a commercial fuel source.

The application of unique Site resources positions SRS to help close the global nuclear and carbon fuel cycles and make a major contribution to the nation's energy independence. As such, the objectives and strategies below will begin to accomplish the two goals concurrently.



DOE Goal 1.1: Energy Diversity

Increase our energy options and reduce dependence on oil, thereby reducing vulnerability to disruption and increasing the flexibility of the market to meet U.S. needs.

DOE Goal 1.2: Environmental Impacts of Energy

Improve the quality of the environment by reducing greenhouse gas emissions and environmental impacts to land, water, and air from energy production and use.

SRS Objectives

SRS Strategies

Reduce energy consumption and strive to become energy self-sufficient

- Increase the use of electric, hybrid and alternative fuel vehicles onsite and for employee travel
- Reduce energy consumption of SRS buildings
- Support technical development and demonstrate the capability to grow and sustain bio-energy crops
- Expand the A-Area biomass steam production demonstration project to a greater, Site-wide application and continue to utilize the Site's forest resources in this effort

Contribute to solutions on national energy issues

- Establish an energy research park at SRS
- Expand SRNL development of hydrogen fuel cell technology
- Enhance SRNL's ability to participate and partner with others to develop and apply technological solutions to national energy initiatives
- Leverage EM and NNSA capabilities in nuclear energy to increase our ability to convert excess nuclear materials to commercial nuclear fuel
- Develop mixed oxide (MOX) fuel capabilities by completing construction of the MOX Fuel Fabrication Facility

Transform operations to a more carbon-neutral state in order to reduce greenhouse gas emissions

- Reduce the amount of municipal solid waste going into the Three Rivers Landfill and find other constructive uses for the waste material
- Research local and regional hydrogen refueling capabilities and training for commercial and industrial vehicle testing and demonstrations
- Continue to support SRNL as it forms partnerships to develop South Carolina's offshore wind field
- Provide a unique user facility working with utility companies, equipment manufacturers, and consumers to develop and test alternative power solutions for various renewable and backup power applications
- Establish Site-wide carbon accounting estimates and utilize information to guide effective carbon-neutral tactics

2. Nuclear Security

Ensuring America's nuclear security

SRS plays a key role in DOE's nuclear security goals as it supports the nation's commitment to maintain nuclear deterrence capabilities in the United States; limit the spread of materials, technology, and expertise related to weapons of mass destruction; advance technologies to detect the proliferation of weapons of mass destruction worldwide; and eliminate and secure inventories of surplus materials and infrastructure usable for nuclear weapons.

The SRS tritium facilities will continue to ensure safe, secure and reliable recycling of tritium in a manner that meets Defense Program requirements to maintain the existing nuclear arsenal. Tritium production will build on its record of 100% on-time delivery to meet national security needs.

Building on unmatched mission performance and secure management and processing facilities, SRS is logically becoming the catalyst for final disposition for excess nuclear materials for the DOE Complex. Nuclear materials are consolidated from other sites, allowing those sites to de-inventory and shut down, saving billions of dollars in storage and security costs. A key resource in this effort is use of the K-Area Material Storage Area at SRS that provides safe and highly secure storage and processing of excess nuclear materials. The K Reactor Building has been upgraded to DOE's highest level of security in order to provide safe interim storage for excess plutonium. SRS plays a critical role in meeting national security objectives and international agreements to reduce inventories of fissile materials which could be used for making nuclear weapons or dirty bombs.

In 1994, the National Academy of Sciences (NAS) performed a study of the management and disposition options for surplus weapon-usable plutonium from the dismantlement of nuclear weapons resulting from United States and Russian nonproliferation treaties. They found that potential theft of these surplus nuclear materials created a "clear and present danger." Spent fuel processed in a reactor results in a form of plutonium that is as difficult to recover for weapons use as the plutonium in commercial spent fuel, which is not a desirable theft or acquisition target.

In support of nuclear nonproliferation and to provide the pathway for ultimate disposition of nuclear materials, three facilities are being built at SRS to convert surplus weapons grade plutonium to commercial fuel. These are the Pit Disassembly and Conversion Facility (PDCF), Mixed Oxide (MOX) Fuel Fabrication Facility (MFFF), and the Waste Solidification Building. These facilities, with support from the SRS nuclear infrastructure, will transform weapon grade plutonium to commercial grade nuclear fuel for carbon-free electricity production.

The table entitled *EM and NNSA Operations at SRS* on Page 16 shows the interaction of SRS facilities to convert surplus nuclear materials to commercial nuclear use.

SRS will ensure the safe return of U.S.-origin spent nuclear fuel from around the world to minimize worldwide availability of nuclear materials. It also will provide management support of the US-Russian agreement to return and dispose of weapon-grade highly enriched uranium (HEU) from various countries to the United States and Russia. SRNL maintains an active role in developing nuclear detection and monitoring equipment capabilities for deployment around the world to limit the unregulated spread of nuclear materials.

DOE Goal 2.1: Nuclear Deterrent

Transform the Nation's nuclear weapons stockpile and supporting infrastructure to be more responsive to the threats of the 21st Century.

DOE Goal 2.2: Weapons of Mass Destruction

Prevent the acquisition of nuclear and radiological materials for use in weapons of mass destruction and in other acts of terrorism.



Defense Waste Processing Facility

SRS Objectives

Safely and securely receive and store nuclear material from both domestic and foreign sources

SRS Strategies

- Consolidate excess plutonium from other Sites throughout the DOE Complex at SRS and utilize advanced technologies to safeguard its storage
- Receive, store, and provide surveillance at SRS for spent nuclear fuel from domestic and foreign research reactors
- Explore processing of SNF as an alternate energy source and to minimize nuclear waste disposal



Plutonium "Button"

Process excess highly enriched uranium (HEU) and plutonium for use as commercial nuclear fuel

- Utilize existing radiochemical stabilization processes located at SRS to convert HEU to low enriched uranium (LEU) for commercial nuclear power reactor use
- Build and operate SRS Plutonium Preparation (PUP), and Pit Disassembly and Conversion Facility (PDCF) to provide feedstock for the MOX Fuel Fabrication Facility (MFFF)
- Build and operate MFFF at SRS to disposition 3.5 metric tons (MT) of weapon grade plutonium per year

Process and stabilize non-reusable nuclear materials for final disposition out of South Carolina

- Utilize SRS' world class vitrification facility, the Defense Waste Processing Facility (DWPF), to stabilize non-reusable nuclear material and prepare for final disposition

Continually replenish the nation's tritium supply

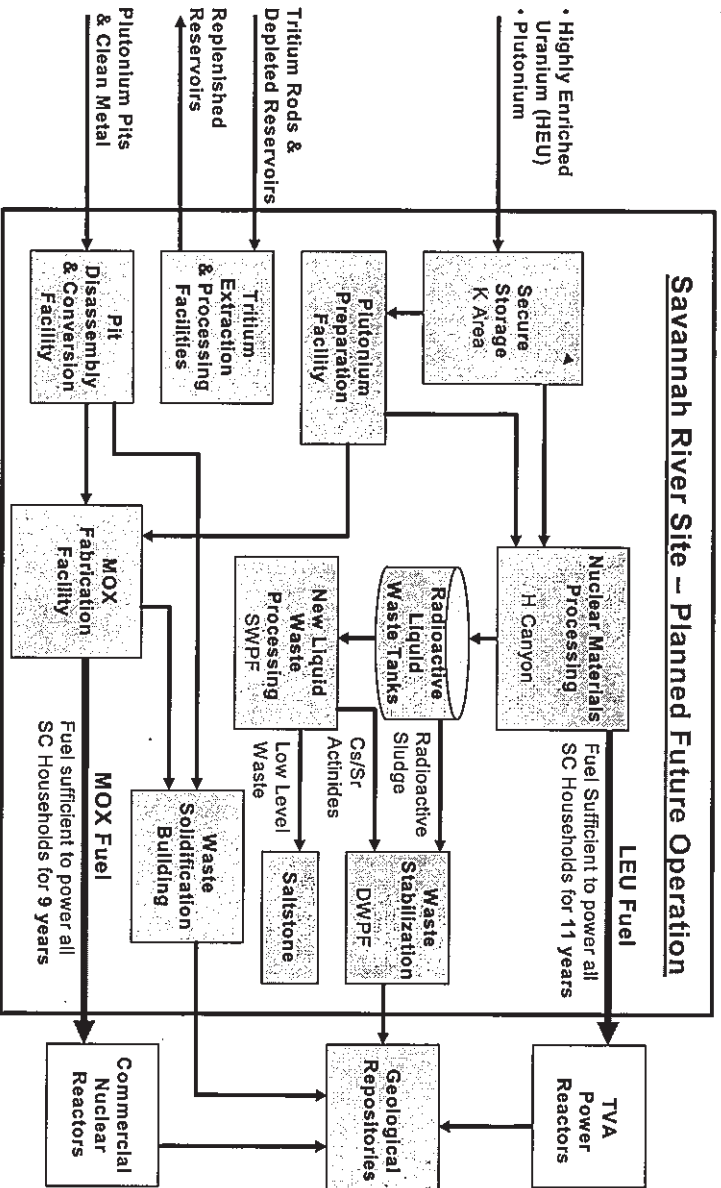
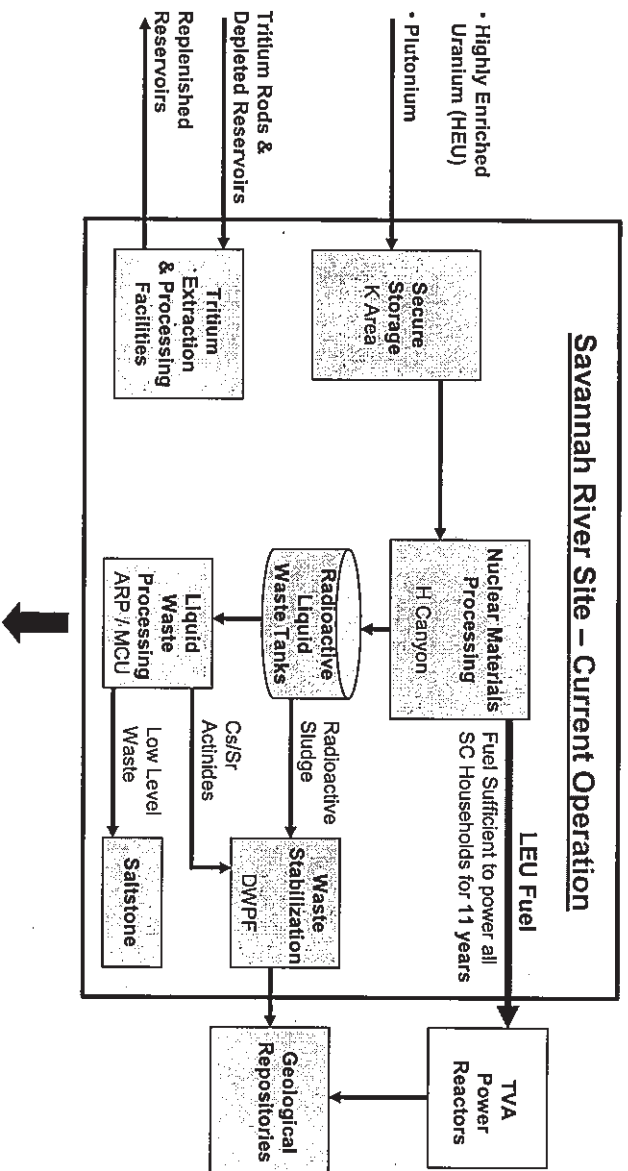
- Recycle tritium from existing weapons
- Extract tritium from irradiated rods

Provide research and development of technologies and management support to meet nuclear non-proliferation agreement goals

- Work with agencies worldwide to secure SNF and other nuclear material sources
- Develop and deploy nuclear detection, inspection, and monitoring equipment

2. Nuclear Security

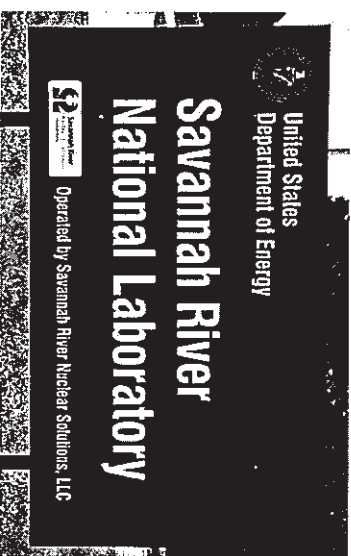
EM and NNSA Operations at SRS



3. Scientific Discovery and Innovation

Strengthening U.S. scientific discovery, economic competitiveness, and improving quality of life through innovations in science and technology

The Savannah River National Laboratory (SRNL) has a long history of providing innovative technical solutions to challenges presented in the accomplishment of EM and NNSA missions at SRS and is nationally recognized for its expertise in the field of applied research. Applications of SRNL's research efforts may be seen at SRS through the nuclear materials separations processes, the Defense Waste Processing Facility, and the Saltstone Processing and Disposal Facility. Each of these projects utilizes key technologies, which SRNL played a lead role in designing. Likewise, future SRS projects such as the Salt Waste Processing Facility (SWPF) to replace the interim ARP/MCU liquid waste processing facilities will continue to rely on SRNL's expertise to provide new technical innovations and practical solutions to ensure their success.



Historically, SRNL has primarily focused on providing support for Site programs. Though it has achieved great successes with its applied research focus, an emphasis on more comprehensive scientific discovery and economic competitiveness is needed. There are several programs being designed or currently underway to achieve this end. These include establishment of the Complex Tritium Center of Excellence for tritium research and development, expansion of the Center of Hydrogen Research to become a broader Center of Alternative Energy research and development, and expansion of the Laboratory Directed Research and Development (LDRD) Program. Each of these programs will foster new discoveries in support of the Site's energy, environmental and national security missions, and may lead to new inventions which will enhance the nation's economic competitiveness.

To achieve more comprehensive technological research and innovations, the Site must have a robust technical infrastructure and strong management, as well as a highly skilled workforce. Infrastructure improvements will help in accomplishing both of these goals by providing SRS with the tools needed to achieve greater technological advancements and attract new talent.

The objectives and strategies listed below will outline how SRS plans to address these challenges and capitalize on its strengths in Scientific Discovery and Innovation.

DOE Goal 3.1: Scientific Breakthroughs

Achieve the major scientific discoveries that will drive U.S. competitiveness; inspire America; and revolutionize approaches to the nation's energy, national security, and environmental challenges.

DOE Goal 3.2: Foundations of Science

Deliver the scientific facilities, train the next generation of scientists and engineers, and provide the laboratory capabilities and infrastructure required for U.S. scientific primacy.

DOE Goal 3.3: Research Integration

Integrate basic and applied research to accelerate innovation and to create transformational solutions for energy and other U.S. needs.



SRS Objectives

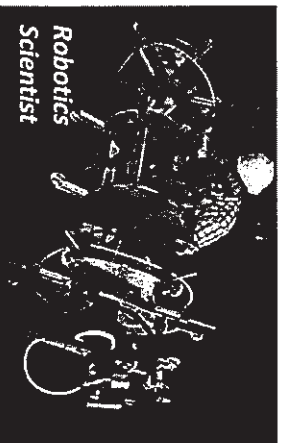
Support applied research in EM, NNSA, and other agency missions, such as the Department of Homeland Security initiatives

Establish the Complex Tritium Center of Excellence for tritium research and development at SRS

Expand SRNL's Center of Hydrogen Research to become a Center of Alternative Energy research and development in support of energy independence

Expand SRNL's Laboratory Directed Research and Development (LDRD) program

Aggressively retain and recruit Best-in-Class scientists



Position SRNL for transition into a financially distinct business unit in order to utilize its capabilities

SRS Strategies

- Provide leadership for enhanced technologies to resolve nuclear waste management issues
- Develop new technologies for environmental cleanup
- Consolidate tritium responsibilities from other NNSA Sites to SRNL at SRS
- Develop a business case justifying the establishment of an SRS Center for Alternative Energy research and development
- Pursue strategic public-private partnerships that leverage SRNL capabilities to address critical technical issues in developing economically viable alternative energy sources
- Develop and demonstrate new hydrogen fuel cell technologies
- Expand support of the LDRD Program to the level of other national laboratories
- Modify Site contracting procedures to remove barriers that prevent Site organizations from more effectively contributing to economic competitiveness
- Implement regional initiatives that promote the availability of a technically capable workforce and system of management
- Upgrade and modernize aging SRNL facilities
- Actively recruit and provide work study opportunities and cooperative internships for college students
- Expand and grow the role of SRNL as EM's corporate national laboratory, including involvement in national energy independence initiatives
- Develop stand alone business and marketing systems for technology development

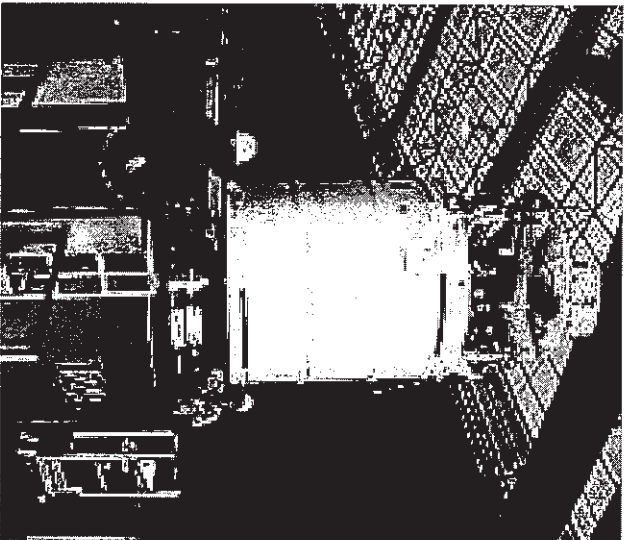
4. Environmental Responsibility

Providing a responsible resolution to the environmental legacy of nuclear weapons production

Over fifty years of nuclear weapons production generated millions of gallons of radioactive waste; thousands of tons of spent nuclear fuel; and huge quantities of contaminated facilities, soil, and groundwater. While progress has been made in cleaning up these legacy wastes, much remains to be done. As SRS continues its cleanup efforts, it is committed to assuring the Site remains a valuable national asset prepared for future missions and national challenges. This work will be accomplished through aggressively delivering reliable cleanup with meaningful near-term results. The cleanup effort will reduce the most serious risks to worker safety, human health and the environment.



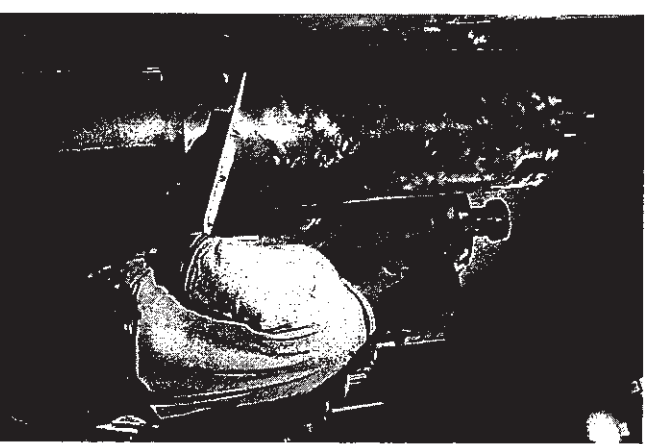
The cleanup actions, addressed in DOE Goal 4.1, have three major components. These are removing and treating radioactive liquid and solid waste; consolidating and processing special nuclear materials; and cleaning up groundwater, soil, and facilities. In some cases, after cleanup activities have been completed, residual but manageable risks will remain for significant periods of time. The actions to address monitoring any remaining residual risks are covered in DOE Goal 4.2.



TRUPACT Shipment of Transuranic Waste to Waste Isolation Pilot Plant (WIPP)

DOE Goal 4.1: Environmental Cleanup
Complete Cleanup of the contaminated nuclear weapons manufacturing and testing Sites across the United States.

DOE Goal 4.2: Managing the Legacy
Manage the Department's post-closure environmental responsibilities and ensure the future protection of human health and the environment.



Defense Waste Processing Facility Vitrification Canister

SRS Objectives

Treat and dispose of 37 million gallons of radioactive liquid waste and close 49 additional large underground radioactive waste storage tanks (2 tanks already closed)

- Continue to operate the Defense Waste Processing Facility (DWPF) to vitrify high activity radioactive tank waste
- Continue interim salt processing
- Initiate Salt Waste Processing Facility (SWPF) operations in 2013 to process 6 million gallons of salt waste per year
- Close all non-compliant radioactive waste tanks by 2022
- Close all remaining tanks by 2028

Support H-Canyon Nuclear Material Stabilization Operations

- Support H-Canyon and other SRS operations by receiving and safely storing radioactive waste in the tank farms

Complete the disposition of legacy transuranic (TRU), hazardous (HW), mixed low-level (MLLW), and low level (LLW) waste and prevent the generation of new legacy solid waste

- Complete near-term disposition of the remaining legacy TRU waste and treat and/or dispose of all new TRU, LLW, MLLW and HW when generated
- By 2012, complete consolidation of RCRA wastes for treatment processing into new storage facilities

Accelerate environmental cleanup

- Achieve 40% EM industrial footprint reduction by 2011 through funding under the 2009 Recovery Act
- Dispose of 16,000 drums of depleted uranium oxide

Store and process excess nuclear material for disposition, or develop and implement beneficial reuses for the material



K Area Material Storage (KAMS)

- By 2022, complete processing of 13 MT of EM's surplus, non-pit plutonium and solids which exist throughout the Complex
- By 2022, complete processing of 7.5 MT of excess highly enriched uranium (HEU) in solid form which exists throughout the Complex
- By 2022, complete onsite processing of 18 MT of heavy metal (MTHM) aluminum-clad, and transfer off-site 20 MTHM of stainless steel zirconium-clad spent nuclear fuel
- By 2022, complete disposition of 10,000 drums of heavy water
- Continually review ongoing projects to identify opportunities for improved performance and identify disposition alternatives for excess nuclear materials
- Construct the Waste Solidification Building to process MFFF and PDCF liquid radioactive waste streams by 2016

SRS Objectives

Safely decontaminate and decommission contaminated facilities, and remediate soils and groundwater to complete cleanup for large areas of SRS

SRS Strategies

- Reduce risk by completing cleanup of 515 waste sites
- Seek additional funding to allow cleanup at an accelerated rate
- Maintain the integrated regulatory strategy (i.e. the Site-wide integrated effort to maintain effective relationships with regulators and stakeholders)

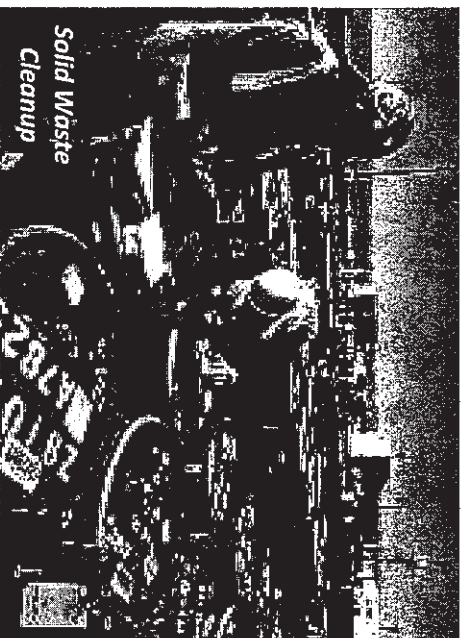
Continue support for SRS' National Environmental Research Park (NERP)



- Maintain integrity of research set-aside areas
- Provide infrastructure support for NERP activities
- Utilize Savannah River Ecology Laboratory (SREL) capabilities to enhance NERP status
- Document and consider the environmental and ecological value of the entire SRS

Ensure all long-term stewardship (LTS) SRS activities under regulatory requirements and DOE Orders are incorporated into future planning

- Identify LTS support requirements in all facility and utility planning, and determine LTS mission responsibilities
- Include LTS requirements in the Long Range Comprehensive Plan, and include cost projections in budget formulations



5. Management Excellence

Enabling the mission through sound management

Transitioning to the future and attaining our vision is not without its challenges. Of the five themes listed in the *DOE Strategic Plan*, four are focused on the work to be done. Management Excellence focuses on how to assure the processes and resources are available so work will be successfully accomplished in a safe, efficient, and cost effective manner, delivering the best value to tax payers.

Some of the issues that must be addressed include replacing aging infrastructure and equipment, maintaining support and focus on cleanup over the length of time required to achieve cleanup objectives, communicating the SRS story to maintain support, addressing the magnitude of deferred work, changing the demographics of the aging workforce, replacing and retaining specialized skills, streamlining cumbersome procedures and requirements, and following through on strategic plans and initiatives. Management excellence will address these challenges.

The focus and values established in the Management Excellence section apply to all organizations and individuals.

DOE Goal 5.1: Integrated Management

Institute an integrated business management approach throughout SRS with clear roles and responsibilities and accountability to include effective line management oversight by both Federal and contractor organizations.

SRS Objectives

Foster a corporate perspective and a teamwork culture through communication of a common vision

- Effectively communicate the Site vision to the federal workforce, contractors, stakeholders, and local communities
- Establish Site-wide processes, procedures, and lines of communication to foster and maintain a corporate perspective

SRS Strategies

- Champion the Human Performance Improvement Initiative among SRS federal employees and SRS contractors, ensuring integration with the Integrated Safety Management System, Voluntary Protection Program and Behavior-Based Safety activities
- Maintain active relationships with the Citizens Advisory Board (CAB), Governor's Nuclear Advisory Board, and local stakeholder groups

Integrate safety and security into every element of mission accomplishment, and enhance the "safety first" culture to safeguard employees and assets



SRS Objectives

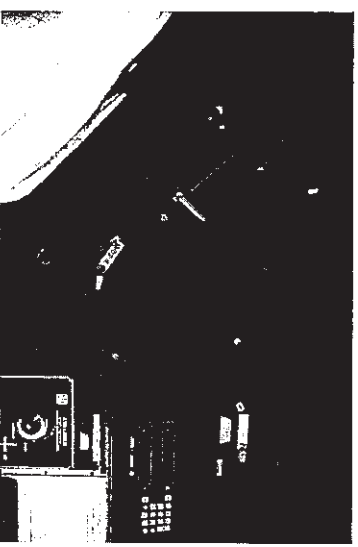
Establish and utilize an integrated, Site-wide Executive or Corporate Board to ensure efficiency and functionality among tenants, contractors, and federal agencies

SRS Strategies

- Define scope of responsibility and associated methods of operation
- Implement effective readiness reviews of DOE and contractor documentation for functions such as baseline change proposals, SRS real property assets, and Site-wide integration efficiencies

DOE Goal 5.2: Human Capital

Ensure that DOE's workforce is capable of meeting the challenges of the 21st Century by attracting, motivating, and retaining a highly skilled and diverse workforce to do the best job.



SRS Objectives

Ensure the SRS workforce is appropriately sized and aligned to achieve the Site vision

SRS Strategies

- Develop and implement effective workforce planning
- Recruit and retain a qualified, diverse, Best-in-Class workforce
- Develop a diverse workforce capacity that can deliver the right skill sets to the right work at the right time
- Work with colleges and universities to establish active recruiting programs
- Institute performance-based leadership development programs to identify, prepare, and sustain the next generation of SRS leadership
- Maintain comprehensive training and certification programs designed to improve competence
- Assure mandatory training and qualification standards are completed as required within the required time frames
- Develop an environment and culture that fosters employee retention, promotes achievement in public service, and encourages the pursuit of personal excellence through continual learning

Enhance SRS leadership, administrative and technical skill base

Ensure a professional work environment

DOE Goal 5.3: Infrastructure

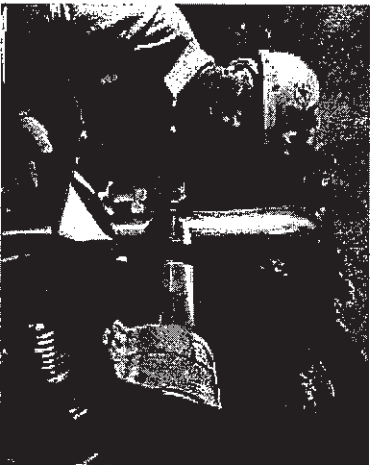
Build, modernize, and maintain facilities and infrastructure to achieve mission goals and ensure a safe and secure workplace.

SRS Objectives

Establish a corporate, holistic, and performance-based approach to real property life-cycle management that links real property asset planning, programming, budgeting, and evaluation to program mission projections and performance outcomes

SRS Strategies

- Utilize the Real Property Asset Management (RPAM) process to assure a holistic, long-term approach to infrastructure and land use planning, natural resource planning, and cultural resource planning
- Utilize a central Site planning process to develop integrated plans that include all Site organizations
- Implement a condition assessment program for all Site facilities to support and assure proper long-term maintenance requirements



DOE Goal 5.4: Resources

Institutionalize a fully integrated resource management strategy that supports mission needs and postures the Department for continuous business process improvement.

SRS Objectives

Implement solid financial and performance based management systems with metrics that help management to improve efficiency and sustainability

SRS Strategies

- Integrate contracts, performance baseline, and budgets to effectively accomplish mission work scope
- Develop and implement transparent, unified financial and business standards, systems, and processes across SRS programs focused on meeting cost, schedule, and quality standards expected by SRS stakeholders

The SRS EM Program is the Site landlord responsible for Site Services, Infrastructure, and support for all DOE missions at SRS. The SRS EM Mission recognizes the Site is a long-term national asset and will continue to be the home to future missions of national importance.

In recognition of these facts, the SR EM Program's mission is to cleanup and transform the Site for the future.

Key Elements of the SR EM Mission:

- Treat and dispose of wastes
- Remove contaminated facilities
- Cleanup soils and groundwater
- Dispose surplus nuclear materials
- Support national security and our nation's energy independence

As part of our mission we:

- Perform reliably and responsibly
- Expand capabilities of the Savannah River National Laboratory
- Make more of the Site available for new missions
- Maintain needed infrastructure for existing and future Site missions
- Work to reduce costs to provide a better value for taxpayers

EM Strategic Approach

The strategic approach describes the thought process that EM is employing to address its mission. The key tenets of the strategic approach are listed below:

1. EM is resolving the high-risk, long-term challenges of tank waste and surplus nuclear materials that represent the Office's greatest threat to safety and security, and the greatest cost to taxpayers
 - SRS is leading the Complex with progress and innovation on tank waste disposal
 - Unique capabilities at SRS allow other Sites to close facilities, enable reuse of materials for commercial power, and improve national security
2. In parallel, EM is accelerating the Area Completion strategy to complete cleanup for large areas of the Site in large scale, cost effective actions, to make more of the Site available for new missions and deliver substantial savings and return on investment for taxpayers
3. EM is deploying alternative approaches that improve performance and reduce cost, driving operational efficiencies, and striving for management excellence
4. EM is the landlord at SRS and supports all Site programs to ensure work is performed efficiently
5. The EM Program supports SRNL and works to strengthen the nation's security and energy future, including its energy independence.

These efforts are resolving the environmental legacy of weapons production at SRS, protecting public health and the environment, and transforming the Site for a long-term future to support missions of national importance.

EM Strategic Critical Results

Critical results are those tasks that must be accomplished or put in place to enable the EM Program to deliver the desired performance (that is to carryout the mission and achieve the vision). The current set of critical results for the program is:

- Complete processing of radioactive liquid waste and tank farm closure, eliminating the greatest risk to health and the environment. Millions of gallons of radioactive liquids and sludge are the environmental legacy of the nation's nuclear weapons program. SRS is one of three DOE Sites with such waste, and is the only Site operating full-scale waste treatment systems.
 - Highly radioactive liquid waste stored in large underground tanks is the primary threat to human health and the environment at SRS. For the past 12 years, waste has been removed from waste tanks and treated (converted to a glass waste form) for disposition.
 - 2 of the 51 tanks have been closed and several other tanks are empty and being prepared for closure.
 - Innovative technologies are being deployed to remove waste from tanks and reduce the amount of final waste product produced. This reduces the time required to complete our mission and reduces cost to taxpayers.
 - The non-radioactive chemical constituents of the waste stream are being converted to a salt waste form in interim facilities. The full-scale Salt Waste Processing Facility will enable tanks to be closed.
 - These efforts are closing the circle (completing the nuclear fuel cycle) by treating the legacy waste of nuclear fuel processing for final disposal.
- Utilize unique facilities and capabilities at SRS, enabling the Nuclear Materials Management Program to consolidate, treat, and disposition surplus nuclear materials from the DOE Complex and elsewhere.
 - Temporarily use SRS facilities to secure nuclear materials and enable de-inventory and shutdown of other DOE Sites.
 - SRS serves as a gateway for the consolidation, treatment, and disposition of surplus nuclear materials. This component of the SRS mission supports nonproliferation, improves national security, and avoids the cost of storing materials at multiple locations. Working together, these activities help to reduce the DOE nationwide nuclear footprint.
 - Unique facilities, such as H-Canyon, and distinct capabilities allow the processing of nuclear materials for reuse (e.g., in commercial power reactors), or disposal.
- Complete disposition of solid radioactive legacy waste to reduce environmental risks and free precious resources for application to other SRS cleanup needs.
- Close large areas of the Site with large-scale, integrated actions for contaminated facilities, soils, and groundwater to provide rapid and cost effective progress. Performing these cleanup actions as a single effort and under a single regulatory authority greatly reduces the cost and enables more efficient solutions. The Area Completion actions cut off sources of contamination, and are coupled with deployment of innovative technologies to cleanup contaminated groundwater. Through funding from the 2009 Recovery Act, environmental protection and cleanup will be accelerated and the EM footprint at SRS will be reduced by approximately 40% by 2011.
- Implement a Site-wide integrated regulatory strategy to promote efficient and effective implementation of the EM mission strategy. Open and transparent collaboration with regulators in the development of cleanup plans

is central to this strategy, allowing a logical and consistent approach in addressing the broad array of environmental and regulatory challenges at SRS. The result is cost effective actions that deliver meaningful cleanup progress.

Management Approach

Effective management is essential to the safe, secure, and reliable execution of the missions at SRS. The management focus at SRS stresses cost effective performance and high quality results for taxpayers, with a goal of continuous improvement. To this end, the SRS EM management approach strives for management excellence: strong program leadership, and effective and efficient management systems and practices that result in superior performance supporting the SRS Mission and Site vision.

The SRS EM Program goal is to achieve superior performance by safely and reliably delivering significant progress and efficiencies. The mission plan capitalizes on existing facilities and unique capabilities at SRS to avoid the need for new and redundant cleanup and processing facilities. In addition to enabling SRS cleanup, SRS supports the efficient and accelerated de-inventory and cleanup of other Sites. Cleanup strategies deployed at SRS offer a model approach that could potentially save billions of dollars in security, nuclear material storage and disposition, and cleanup costs across the DOE Complex, while transitioning SRS for continuing and new missions of national importance.

2. Waste Disposition

Liquid Waste:

Liquid Waste Disposition Mission

Resolve the major legacy of nuclear weapons production at SRS by treating and disposing of radioactive liquid waste and closing tanks.

- Safely treat and disposition 37 million gallons of radioactive liquid waste and close 49 additional underground storage tanks in which the waste now resides by 2028 to reduce risk and meet regulatory commitments
- Resolve the primary source of risk to public health and the environment
- Continually improve efficiency to reduce schedule and reduce cost for taxpayers
- Enable transformation of the Site for future missions

Liquid Waste Strategies

Highly radioactive liquid waste stored in large underground tanks is the primary threat to human health and the environment at SRS. SRS is implementing an integrated liquid waste disposition strategy that is enabling timely progress in meeting DOE commitments by removing waste from tanks, preparing tanks for closure, and operationally closing tanks. The liquid waste strategic approach includes the following:

- Remove 99% of the radioactivity from high level waste for final disposal out-of-state and place chemical constituents in grout in Saltstone Facility onsite
- Implement new technologies for tank cleaning
- Close high level waste tanks to meet regulatory commitments
- Support nuclear materials disposition
- Seek operational efficiencies to reduce lifecycle cost and schedule

37 million gallons of highly radioactive liquid waste are stored in large, aging underground tanks at SRS. This radioactive waste was generated at SRS as a byproduct of processing nuclear materials for national defense. The insoluble sludge solids from the tank waste are being vitrified at the Defense Waste Processing Facility (DWPF) and converted into a solid glass form. The stabilized glass is safely stored in stainless steel canisters onsite until they will be finally disposed in the future national repository.

Thus far, over 2,700 canisters of vitrified waste have been produced. Design is nearing completion and construction has begun on a high capacity Salt Waste Processing Facility (SWPF) that will remove almost all the radioactivity from salt waste in SRS tanks. The radioactive material will be vitrified at DWPF for disposition off-site. This will enable the cost effective conversion of the remaining decontaminated liquids from the tank waste to "saltstone" for safe onsite disposal.

- The nominal capacity of the SWPF is 6 million gallons per year, enabling rapid reduction in salt waste volumes stored in the SRS tank farms.
- This rapid treatment and processing of salt waste will enable completion of liquid waste disposition by 2028.

- The SWPF project baseline was approved by the Deputy Secretary of Energy in September 2007. Construction is underway, and startup is anticipated by November 2013.

While SWPF is being constructed, SRS will continue to operate the interim Salt Processing at the ARP/MCU (Actinide Removal Process / Modular Caustic Side Solvent Extraction Unit) facility.

SRS' goal is to reliably complete liquid waste treatment, safely dispose of the treated waste and meet DOE commitments to close the liquid waste tanks, building in innovation and efficiency as we go. In so doing, EM is closing the circle on a legacy of high level nuclear waste.

SRS is implementing an integrated liquid waste disposition strategy, enabling timely progress in meeting DOE commitments by removing waste from tanks and preparing tanks for closure. The integrated strategy for liquid waste treatment and disposition was approved by the Secretary of Energy as part of the Waste Determination for Salt Waste Disposal at Saltstone in January 2006. This integrated strategy has been incorporated into the Liquid Waste System Plan, Revision 14, which was published in October 2007 and is now being implemented.

Liquid Waste Critical Results

- Process salt waste and reclaim tank space
- Reduce lifecycle cost and schedule for sludge processing
- Operationally close tanks
- Support H-Canyon nuclear materials stabilization operations
- Remove and treat waste through interim processes
- Recover tank space to support salt disposition
- Start up and operate SWPF
- Operate DWPf efficiently
- Reduce sludge mass
- Develop and deploy technologies for tank cleaning
- Gain regulator and stakeholder approval for tank closure through implementation of State law and Section 3116 of the Ronald W. Reagan National Defense Authorization Act (NDAA) for Fiscal Year 2005 and by working with: the U.S. Nuclear Regulatory Commission (NRC), South Carolina Department of Health and Environmental Control (SC-DHEC), and U.S. Environmental Protection Agency (EPA)
- Receive up to 1.7 MT of plutonium discards from H-Canyon into DWPf sludge batches to support National Plutonium Disposition Strategy
- Maintain Tank 39 and receive 300,000 gallons per year of high level waste from H-Canyon to support current missions through 2022
- Continue to integrate with Assistant Manager for Nuclear Materials Stabilization Project regarding potential future canyon missions

Solid Waste Disposition:

Solid Waste Disposition Mission

Treat, store, transport, and dispose of transuranic (TRU), hazardous (HW), mixed low-level (MLLW), low-level (LLW), and sanitary wastes generated at SRS to reduce risk to human health and the environment, support on-going missions, and enable footprint reduction

Solid Waste Strategies

- Complete disposition of remaining legacy waste by shipment for off-site disposal
- Avoid accumulation of newly generated EM and NNSA waste to prevent creation of a new legacy waste problem
- Consolidate footprint of the waste management facilities to reduce future operating costs

Solid Waste Critical Results

- Shipment of legacy contact-handled (CH) TRU waste to the Waste Isolation Pilot Plant (WIPP)
- Dispose of approximately 75 cubic meters of remote-handled (RH) TRU waste
- Treat and/or dispose of all newly generated SRS TRU waste (LLW, MLLW, and HW) to prevent future legacy issues
- Reduce the footprint of the Solid Waste Management Facilities to reduce life-cycle operational costs
- Complete CH TRU drum characterization and shipment to WIPP during Fiscal Year (FY) 2009
- Complete characterization and shipment of CH TRU boxed waste and disposition waste on TRU Pad 1
- Characterize and ship containers not requiring remediation or repackaging starting in FY 2009
- Utilize existing SRS facilities for repackaging and/or remediation of non-compliant containers
- Expeditiously treat and/or dispose of all SRS newly generated TRU, LLW, MLLW and HW when generated
- At minimum, maintain compliance with the one-year storage requirement specified in the Resource Conservation and Recovery Act (RCRA) and DOE Manual 435.1
- Reduce waste management storage capacity by consolidating all waste management activities within the E-Area Solid Waste Management Facility
- Consolidate permitted RCRA storage and treatment capacity from current facilities in N and B-Areas to E-Area

3. Nuclear Material Disposition

Nuclear Materials Management Mission

Safely, securely, and efficiently store and process excess nuclear material to improve our security posture, protect public health and the environment, and to allow either beneficial reuse or disposal of these materials thereby supporting transformation of the Savannah River Site for the future and other national priorities.

Nuclear Material Strategies

- Use the unique capabilities at SRS to safely store, process, and disposition surplus nuclear material for beneficial reuse or disposal

There is a significant inventory of surplus nuclear materials at SRS (plutonium, enriched uranium, other special nuclear materials, and spent nuclear fuel) that must be processed for beneficial reuse or disposal off Site to meet commitments to the State of South Carolina and to ensure long-term safety and security. SRS has unique capabilities to safely store these surplus nuclear materials and to process much of these materials. H-Canyon will be utilized to disposition the remainder of the surplus non-pit plutonium.

Through collaboration of EM and NNSA, facilities are being designed and constructed to convert significant amounts of weapons grade plutonium to a reusable commercial nuclear fuel (MOX fuel). H-Canyon will continue chemical separation operations to stabilize and disposition the remaining inventory of highly enriched uranium (HEU) materials located at SRS or to be shipped to SRS. The HEU is being blended with natural uranium to form low-enriched uranium (LEU) and is being transported to an off-site facility where it is used to make fuel for commercial nuclear power reactors. The "downblended" uranium has been sold to commercial utilities returning millions of dollars to the U.S. Treasury. The recycled uranium (HEU) will provide enough electricity to power every home in South Carolina for 11 years.

- Use unique capabilities at SRS to consolidate surplus nuclear materials from other DOE Sites to avoid the cost of new storage and processing facilities at multiple locations, and to avoid the cost of safeguards and security at their locations.

DOE has inventories of surplus nuclear materials at other Sites around the country. Rather than build new storage and processing facilities at multiple Sites, inventories of surplus nuclear materials from several other Sites are being consolidated at SRS to avoid these additional costs, and to allow other facilities to de-inventory and shutdown in order to meet their regulatory commitments. Nuclear Materials Management (NMM) operations in K-Area provide an interim safe storage location for much of the DOE's excess plutonium.

Projects are underway in K-Area to ensure the plutonium is safely and securely stored until the Mixed Oxide Fuel Fabrication Facility, currently under construction at SRS, is operational. Eventually, the plutonium will be converted to mixed oxide fuel for beneficial reuse or disposition at a national repository. The unique storage and processing capabilities at SRS are allowing DOE to consolidate special nuclear materials and reduce the "nuclear footprint" of the DOE Complex. SRS is positioned to safely store and

process these materials for beneficial reuse or disposal off Site, and is committed to do so to meet its commitments to the State of South Carolina. Based on its unique capabilities, SRS is functioning as a "gateway for surplus nuclear materials disposition" for the DOE Complex.

- Use unique capabilities at SRS to consolidate surplus nuclear materials from research and other sources in the US and abroad to improve security and support nonproliferation (i.e. to avoid having these materials fall into the wrong hands).

Recent security upgrades at SRS allow the safe and highly secure storage and monitoring of Nuclear Materials. SRS supports Nuclear Nonproliferation and Homeland Security by consolidating and storing nuclear materials from foreign and domestic research reactors. Consolidation and safe storage at SRS helps to protect national security.

- Work with NNSA to develop and implement comprehensive and long-term plans for the consolidation, safe storage, and disposition of surplus nuclear materials.

SRS can safely store the surplus nuclear material at SRS and the material planned for transfer to SRS. Existing facilities and facilities now under construction will enable the processing of surplus nuclear material at SRS for beneficial reuse or disposal. There are other surplus nuclear materials not currently at SRS that will have to be consolidated, safely stored and dispositioned. Accurate inventories, coupled with comprehensive plans for consolidation, storage, processing, and disposition will enable DOE to complete plans for the safe and efficient management of surplus nuclear materials. EM and NNSA are working with other agencies to complete these plans.

The scope of Nuclear Material Disposition includes the following:

- Plutonium (Pu) – 12.8 MT of EM's surplus, non-pit plutonium
 - Solid Form – Approximately 5,300 55-gallon drums
 - Material exists throughout the EM Complex
- Highly Enriched Uranium (HEU) – 7.5 MT of excess HEU
 - Solid Form – Approximately 3,000 55-gallon drums
 - Material exists throughout EM and NNSA Complex
- Spent Nuclear Fuel (SNF)
 - 18 MTHM Aluminum-Clad SNF and 20 MTHM Stainless Steel/Zirconium-Clad SNF
- Miscellaneous Nuclear Materials
 - Depleted Uranium Oxide (11,000 MT, ~16,000 55-gallon drums)
 - Heavy Water (~500,000 gallons, 10,000 55-gallon drums)

Nuclear Material Critical Results

1. Integrate EM and NNSA Nuclear Material disposition capabilities to optimize strategic effectiveness (Develop Nuclear Materials System Plan to promote strategic alignment and effective decisions).
2. Continue aggressive plutonium and HEU stabilization and disposition processing.
3. Conduct operational reviews to identify opportunities for improved performance (reduce cost, reduce waste, increase throughput, and identify disposition alternatives).
4. Develop basis for increasing canister plutonium loading.

4. Area Completion

Area Completion Mission

The Area Completion Project will safely deactivate and decommission contaminated facilities and remediate soils and groundwater to complete cleanup for large areas of SRS, to protect human health and the environment, and to make significant areas of the Site available for new missions.

The Office of Environmental Management has been given an opportunity to accelerate completion of existing environmental protection and Site cleanup goals by funding through the 2009 Recovery Act. Specifically, the EM footprint at SRS will be reduced by approximately 40% by 2011.

Innovation is driving the progress and efficiency of actions for contaminated groundwater, soils, and excess facilities: cleanup of multiple waste units (contaminated soils) and facilities in a geographic area is conducted as one integrated action to implement regulatory agreements and cost effectively complete cleanup of entire areas (Area Completion Strategy). Closing large structures in-situ as part of the Area Completion Strategy will dramatically reduce cost of cleanup, and shorten the schedule (reducing surveillance and maintenance costs).

SRS' Area Completion Strategy integrates actions for contaminated facilities and associated soils into a single cleanup action to meet regulatory requirements and make areas available for other uses.

- One comprehensive action replaces many separate efforts to prevent recontamination and greatly reduce cost.
- EPA recognized the SRS Area Completion Strategy in 2004 as a National Notable Achievement.

Building on the momentum of the Area Completion Strategy (regulator and community support), Area Completion is preparing to close large structures in place (following the removal of contaminant sources).

- Reactor buildings will be closed in place (i.e. in situ) following the removal of nuclear fuel and highly contaminated components much more safely and at a fraction of the cost than other methods such as complete teardown for burial elsewhere.

Investing in Area Closure has an outstanding return on investment and provides the model for cleanup completion for other DOE Sites.

Area Completion Strategies

The Area Completion Project achieves its mission by:

- Achieving 40% EM industrial footprint reduction by 2011 under the 2009 Recovery Act and freeing up large portions of the Site for future missions
 - Identifying large areas of the Site for cleanup through a single integrated regulatory action for contaminated facilities, soils and groundwater
 - Sequencing areas geographically to enable footprint reduction

- Reaching consensus with regulators for cleanup decisions and future land use to enable large completion actions
- Optimizing cleanup processes to promote cost effectiveness
- Gaining approval for safe, in-place closure of large, hardened facilities
- Implementing a Site-wide integrated regulatory strategy by maintaining an effective relationship with the regulators and stakeholders
- Maintaining credibility for the strategy through a steady pace of cleanup

Area Completion Critical Results

- Maintain Regulator and Stakeholder relationships to facilitate streamlining and innovation:
 - Maintain continual interaction with regulators to achieve end state vision and to implement an integrated regulatory strategy
 - Maintain early community and Citizens Advisory Board (CAB) involvement
- Continue Cleanup Performance:
 - Make progress consistent with commitments by maintaining a steady pace of cleanup
 - Soil and Groundwater
 - Deactivation and Decommissioning
 - Attain Area end states to reduce the spread of contamination
 - Achieve key near term cleanup and land use decisions
 - Reach agreement on reactor end states and other hardened facilities' end states
- Develop and deploy cost effective cleanup technologies
- Optimize processes to reduce cost such as groundwater monitoring, documentation, investigation, remediation, post remediation, early actions

5. Savannah River National Laboratory

SRNL Vision

To be the nation's premier applied science laboratory in Environmental Management, National and Homeland Security, and Energy Security by delivering world class innovative performance in national defense and homeland security technologies, energy independence, hydrogen technology, and environmental cleanup.

- Address the challenges of cleaning up the environmental legacy of the nation's weapons program and provide key support for national security, homeland security, and energy security objectives
- Utilize technical expertise to provide vital national and regional support in promoting U.S. energy independence and the broader goals of DOE
- Assist U.S. industry with global competitiveness
- Support the safe and efficient cleanup of the Savannah River Site and transformation of SRS for the future
- Provide technical leadership for future Site missions

Savannah River National Laboratory (SRNL) "puts science to work" to create and deploy practical, high-value, cost effective technology solutions. As the applied research and development laboratory at the U.S. Department of Energy's Savannah River Site, SRNL serves DOE and the nation by helping to complete missions at SRS, throughout DOE, in other federal agencies, across the country, and around the world.

In 2006, SRNL was designated as the DOE Office of Environmental Management's "corporate laboratory," applying its unique expertise and applied technology capabilities to reduce technical uncertainties in order to assist DOE Sites across the nation in meeting cleanup requirements.

SRNL Strategies

- Expand and grow the role of SRNL as EM's corporate national laboratory, including involvement in national energy independence initiatives
- Develop SRNL as a center for alternative energy research and development (R&D) with the Center for Hydrogen Research, the nuclear hydrogen initiative, advances in civilian hydrogen storage, and other means of alternative energy
- Enhance SRNL capabilities as the Center of Excellence for Tritium R&D supporting national and international initiatives in defense, science and energy
- Provide key technologies for global nuclear nonproliferation and international safeguards
- Provide leadership for technologies to advance the nuclear fuels cycle, resolve spent fuel and nuclear waste management issues, and support our nation's energy independence
- Diversify SRNL's customer base and funding sources to reduce overhead costs for all users and to provide a robust foundation for growth
- Position SRNL for transition into a financially distinct business unit

SRNL Critical Results

- Deliver technological solutions for EM cleanup challenges
- Enhance tritium applied research capabilities
- Deliver key technologies for nonproliferation and international safeguards
- Secure additional sponsors, missions, and funding
- Deliver effective, efficient and responsive business systems and resources that enable the successful achievement of laboratory missions and position SRNL as a financially distinct business unit
- Enhance the client base, sustain excellence in safe operations, reduce operating cost, and enhance the facility and infrastructure portfolio to meet laboratory needs for future growth

6. Site Services and Infrastructure

Site Services and Infrastructure

Mission

To manage infrastructure capacities and resources to meet current and future mission needs.

- Support ongoing federal missions
- Ensure the Site's capacity will accommodate growth and new missions
- Continue effective management, providing infrastructure that meets critical needs with available funds
- Uphold the safety of the environment, workers,

Site Services and Infrastructure Strategies

Enable EM Cleanup by managing and identifying key infrastructure functions important to meet the evolving demands for additional or improved infrastructure needs onsite

- Define infrastructure needs and technical challenges
- Identify infrastructure gaps
- Maintain sustainable infrastructure management practices
- Balance available funding based on ranked needs and technical challenges

Site Services and Infrastructure Critical Results

1. SR EM infrastructure function is prioritized and managed as a fundamental element of the Site, having the capacity (people, systems, plans) required to perform diverse services for successful SRS missions
 - Be able to transform infrastructure functions and operations to adjust to the changing needs onsite by defining operations and functions
2. Technical challenges of aging systems and failing equipment are managed to avoid risk of outages and mission upsets
3. Identify and implement infrastructure management practices
 - Infrastructure will be maintained in a good state of repair
 - Infrastructure gaps are identified, prioritized, and resources and efforts are directed toward those most beneficial to the Site
 - Reduce dependency on off-site fuel and become more self-sufficient, reducing costs and energy use while supporting EM's Transformational Energy Action Management (TEAM) initiative
4. Implement Site-wide Drought Contingency Plan

IV. Alignment with the National Nuclear Security Administration Program

NNSA Missions Supported at SRS

NNSA has the responsibility to promote national security by applying advanced science and nuclear technology to the nation's defense. Two of DOE's long-term general goals are supported by NNSA missions at SRS: Defense Program Nuclear Weapon Stewardship and Nuclear Nonproliferation. The first goal ensures the nation's nuclear weapons continue to serve their essential deterrence role by maintaining and enhancing the safety, security and reliability of the U.S. nuclear weapons stockpile. The second goal provides technical leadership to limit or prevent the spread of materials, technology and expertise relating to weapons of mass destruction, advance the technologies to detect the proliferation of weapons of mass destruction worldwide, and eliminate or secure inventories of surplus materials and infrastructure usable for nuclear weapons.

1. NNSA Defense Programs

Defense Programs Mission at SRS

Ensure safe, secure, and reliable delivery of tritium services in a manner that meets Defense Program Stockpile Stewardship requirements and proactively implements the Complex Transformation strategies.

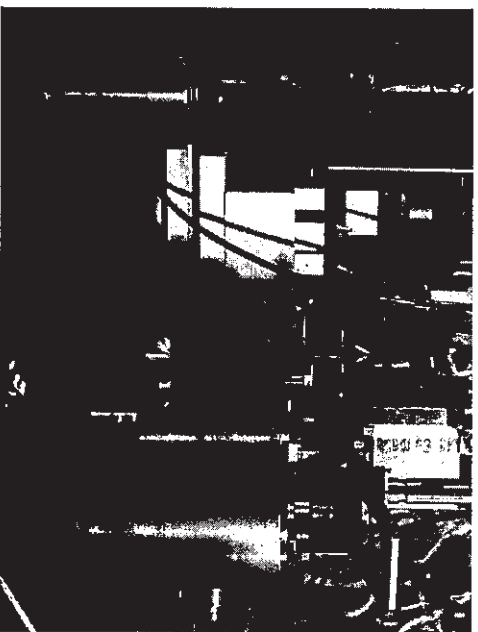
The Savannah River Site's Tritium Facilities are designed and operated to supply and process tritium, a radioactive form of hydrogen gas that is a vital component of nuclear weapons. These facilities are part of the National Nuclear Security Administration's Defense Programs operations at SRS.



Tritium processing involves a number of key operations, including reclamation of previously used tritium reservoirs; receipt, packaging and shipping of reservoirs; recycling, extraction, and enrichment of tritium gas; and laboratory operations. The SRS tritium facilities consist of two primary active process buildings. The H-Area New Manufacturing Facility (HANNM), which served to consolidate tritium processing and handling activities, improve safety, and reduce both cost and environmental releases, began operations in 1994 and received an upgrade in 2004. The second and newest process building – the Tritium Extraction Facility (TEF) – incorporates new tritium extraction technology to the process. It became fully operational in early 2007.

Reestablishment of Tritium Supply

The nation's tritium production capability was lost when the last heavy water reactor at SRS shut down in 1988. Interim stockpile requirements were met through recycling, which involved recovering and purifying the gas from dismantled nuclear weapons and from routine tritium reservoir exchanges from the existing nuclear stockpile. In December 1998, the Department of Energy announced that Tennessee Valley Authority (TVA) commercial reactors would be the source for new tritium production by irradiating DOE-supplied Tritium Producing Burnable Absorber Rods (TPBARs). After irradiation, the TPBARs are transported to SRS, where the tritium is safely and efficiently extracted in the Tritium Extraction Facility (TEF). The first tritium was extracted from TPBARs in January 2007.



Tritium Extraction

As noted above, the Tritium Extraction Facility (TEF) provides the means to extract tritium from tritium-bearing targets irradiated in commercial TVA reactors, and is located at SRS in H-Area. The facility has an operations staff of approximately 100 permanent employees. There are three major structures: the Remote Handling Building (RHB), Tritium Processing Building (TPB) and Tritium Support Building (TSB).

In the RHB, the TPBARs are unloaded and tritium gas is extracted. The RHB is approximately 60 feet high, 86 feet wide and 215 feet long. It has designated areas for truck receiving, cask decontamination, TPBAR and waste preparation, furnaces, and hot maintenance, along with the associated gloveboxes for extraction pumps and tanks. It also includes an overhead crane and remote handling equipment.

The TPB provides preliminary purification of the extracted gases. It is a single-story facility, approximately 125 feet wide by 155 feet long, and is built above ground. The TPB houses the main control room, crane control room, and miscellaneous rooms for gas analysis and radiation control activities.

The TSB houses management and support staff, as well as change rooms, maintenance support areas, and a loading dock. The second extraction run in TEF was successfully completed in December 2007. Irradiation of TPBARs is continuing in the Watts Bar Unit #1 reactor and the design of the TPBAR is undergoing a minor revision to improve its performance. Shipments of irradiated TPBARs are being received at TEF, and additional extractions are planned for 2009 and beyond. In addition, NNSA is currently evaluating the optimum mode of operations for the TEF, based on the most efficient use of SRS resources and the changing demands for new tritium to support the nuclear weapons stockpile.

Tritium Processing

The H-Area New Manufacturing Facility (HANM), which became operational in 1994, consolidated tritium processing capabilities into a more centralized location while providing improved safety. Tritium processing involves the following procedures:

- Removal of three gases (deuterium, helium-3, remaining tritium) from reservoirs received from the Department of Defense (DOD)
- Separation of helium-3 (gas that results from tritium decay) from hydrogen isotopes of tritium and deuterium
- Reloading enriched tritium and deuterium into reservoirs and return to DOD



As part of the nuclear weapons stockpile surveillance program, select gas transfer systems (including reservoirs) are removed from the active stockpile and sent to SRS for testing. The tests ensure that the tritium gas delivery system will function properly should the weapon be used. In addition to functional testing, some reservoirs are subjected to one or more conditioning steps that simulate forces that could be experienced during use. These tests, which include vibration, acceleration, and dynamic shock, are important to ensure reliability of the weapons systems.

Future Defense Program Missions

Tritium Research and Development Center of Excellence

As part of the Complex Transformation Record of Decision, NNSA announced that SRS is the preferred Site for the consolidation of tritium research and development. In support of this mission transfer, a Tritium Research and Development Center of Excellence is planned to support production, processing, design, function, and surveillance of gas transfer systems.

2. NNSA Nuclear Nonproliferation Programs

Nuclear Nonproliferation Mission at SRS

Enhance national security through the detection, prevention, and reversal of proliferation of weapons of mass destruction worldwide.

NNSA Nuclear Nonproliferation Programs supported at SRS by the NNSA Office of Site Engineering and Construction Management and the Savannah River National Laboratory include:

- Fissile Materials Disposition
- Nonproliferation and Verification Research and Development (R&D)
- Nonproliferation and International Security
- International Nuclear Materials Protection and Cooperation
- Global Threat Reduction Initiative

The objectives of these programs are to:

- Design, build, and operate facilities to convert nuclear weapons components to commercial nuclear mixed oxide (MOX) fuel
- Provide R&D and management support for the US-Russia nuclear nonproliferation agreement that provides for the safe, secure return and disposition of weapon grade nuclear material from various countries to the United States and Russia
- Work with agencies worldwide to secure spent fuel and other nuclear materials
- Deploy nuclear detection, inspection, and monitoring equipment worldwide

Fissile Materials Disposition Strategies – Plutonium Disposition

One goal of the Fissile Materials Disposition Program is to dispose of 34 MT of surplus, weapon grade plutonium. The principal driver for this goal is the *Agreement between the Government of the United States of America and the Government of the Russian Federation Concerning the Management and Disposition of Plutonium Designated as No Longer Required for Defense Purposes and Related Cooperation* signed in September 2000. This goal is contained in the U.S. Department of Energy Strategic Plan for 2006. The program strategy is to dispose of surplus plutonium by converting it into MOX commercial nuclear reactor fuel, irradiating it in commercial power reactors to produce energy, and then disposing of the spent fuel in accordance with the National Waste Policy Act.

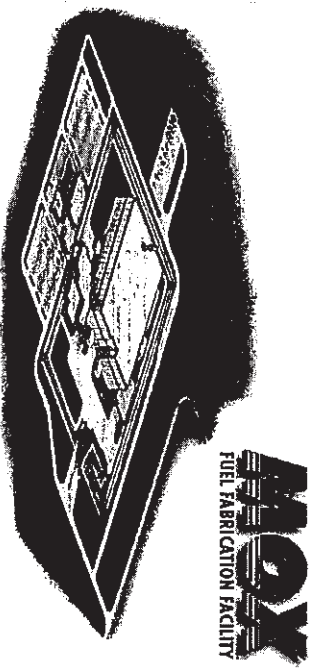
NNSA will construct three facilities at the SRS to implement this program:

- Pit Disassembly and Conversion Facility (PDCF) – is being designed to disassemble nuclear weapons pits and convert plutonium metal to unclassified oxide material suitable for MOX fuel. The weapons, which were declared surplus through international treaties, were dismantled at the DOE's Pantex facility. Design and construction of the PDCF is managed through the Savannah River Site Office.

- MOX Fuel Fabrication Facility (MFFF) – is being constructed to chemically purify the plutonium oxide feed, mix plutonium oxide with depleted uranium oxide, and manufacture fuel assemblies.
- Waste Solidification Building (WSB) – is being constructed to solidify the MFFF and PDCF liquid waste streams and ship a solid waste form to a geologic repository.

The MFFF and WSB projects are currently under construction and are expected to be ready to receive their first radiological materials in FY 2016, three years before plutonium is introduced into the PDCF. During that period, an alternate source of plutonium oxide feed will be required for operation of the MFFF.

25 MT of plutonium in the form of surplus weapon pits, clean metal, and oxide has been declared surplus to defense needs. Additional surplus, non-pit plutonium feed for the MFFF is labeled Alternate Feedstock and is planned to supply the MFFF with feed until the PDCF begins producing plutonium oxide. NNSA is also currently evaluating sending additional, weapon grade plutonium materials to MFFF, beyond the current mission quantity of 34 MT, in order to assure a disposition path for these legacy materials and any future declarations of surplus pits.



The production of MOX fuel for use in commercial power reactors is not a new technology. The MFFF design is based on French facilities that have been producing MOX fuel for more than 25 years. Currently, about 30 reactors in Europe (Belgium, Switzerland, Germany, and France) are using MOX fuel. Japan also plans to use MOX fuel in up to 20 of its reactors.

Critical Results

- Transform 34 MT of weapons usable plutonium to spent fuel, which is not an attractive terrorist theft target
- Convert weapons plutonium to enough carbon-free electricity to power all South Carolina households for 9 years
- Honor international nonproliferation treaties
- Honor commitments to South Carolina to provide a disposition pathway for plutonium stored at SRS

Fissile Materials Disposition Strategies – Highly Enriched Uranium Disposition

NNSA is working with SRS EM to dispose of U.S. highly enriched uranium (HEU) that has been declared surplus to defense needs primarily by down-blending it into low enriched uranium (LEU). Once down-blended, the material can no longer be used for nuclear weapons. To the extent practical, the program seeks to recover the economic value of the material by using the resulting LEU as nuclear reactor fuel. Five separate disposition activities (H-Canyon EU Disposition Project, Off-Specification HEU Blend-Down, the 12 MT HEU Blend-Down Project, Reliable Fuel Supply, and Research Reactor Fuel) are currently being implemented and additional projects are being planned.

Critical Results

- HEU disposition projects are expected to result in eventual payments to the Treasury Department of over one billion dollars for LEU purchases, based on current uranium market prices
- Conversion of weapons usable nuclear material into spent fuel, which is not an attractive terrorist theft target

Nuclear Nonproliferation Strategies

Another goal of the Nuclear Nonproliferation Program is to work with agencies worldwide to secure spent fuel and other nuclear materials sources. The U.S. Foreign Research Reactor Spent Nuclear Fuel Program is part of the Global Threat Reduction Initiative (GTRI). The mission is to reduce and protect vulnerable nuclear and radiological material located at civilian sites worldwide. The goal is preventing terrorists from gaining access to nuclear or radiological material that could be used in weapons of mass destruction or other acts of terrorism. The primary materials of concern for GTRI are nuclear materials that could be used to fabricate a crude nuclear bomb or radiological materials that could be used in a dirty bomb.

Nuclear material in the form of HEU and plutonium is located at hundreds of facilities in dozens of countries. The most likely route for a terrorist to acquire a crude nuclear device is to purchase or steal this material. Millions of radioactive sealed sources are used around the world for legitimate and beneficial commercial applications such as cancer treatment, food and blood sterilization, oil exploration, remote electricity generation, radiography, and scientific research. Many of these sources are no longer needed and have been abandoned, orphaned, or are lightly guarded, making the threat of theft or sabotage significant.

At SRS, the focus of the program is removal and disposal of U.S. origin HEU and LEU from research reactors around the world. The program oversees the packaging and shipping of spent fuel to SRS and to the Idaho Falls DOE Site for safe storage. Metrics for this highly effective program have shown that the program is on track to achieve safe return of 1,372 kilograms of U.S.-origin HEU by 2013, with receipts from 16 countries.

Spent Nuclear Fuel is loaded and shipped from foreign ports into Charleston, South Carolina where it is scanned, and shipped by land to SRS and the DOE Idaho Falls Site.



Through several international programs, SRS is also helping to develop and deploy nuclear detection, inspection, and monitoring equipment worldwide. SRS assists in removal and disposal of excess or abandoned radiological materials in other countries where they may not be appropriately safeguarded.

Critical Results

- Permanent threat reduction by eliminating nuclear and radiological materials that terrorists could acquire and use
- Controlling the unregulated spread of vulnerable nuclear materials around the world

V. Plan Implementation Process

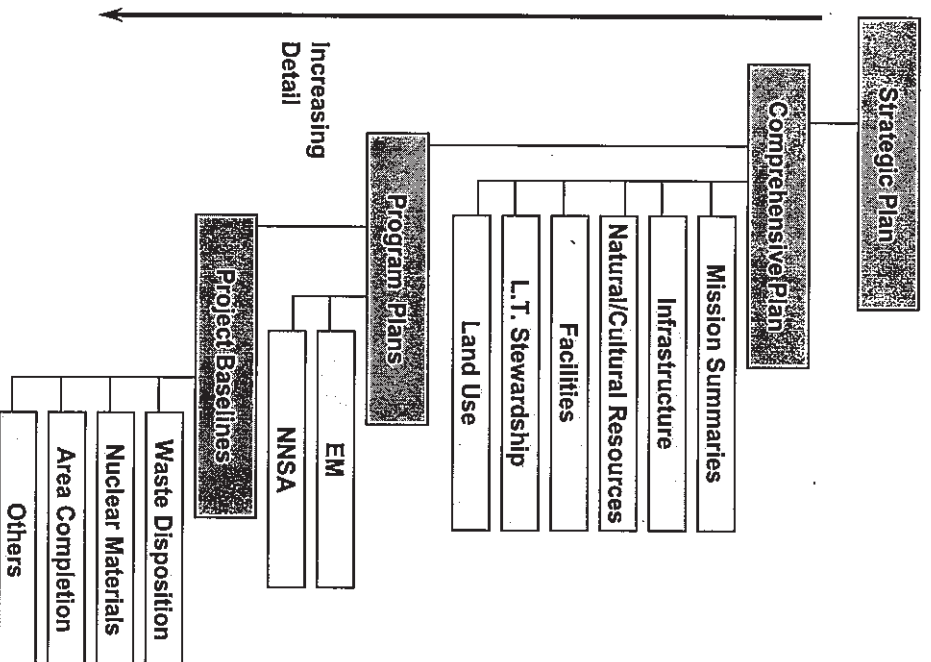
The *SRS Strategic Plan* is an integral part of a systematic process that includes development, approval, revision, and integration of SRS plans with budget formulation, budget execution, and program evaluation. The process includes customer input and stakeholder involvement.

The organizational framework used to implement the process includes an Executive Leadership Team consisting of senior managers from all major DOE organizations; a Site Integration Planning Team comprised of professional level staff representing all major DOE organizations; and a Site Integrated Planning Team consisting of professional level staff representing all major DOE and contracting organizations. The Executive Leadership Team develops the Site's vision for the future, which is articulated in the *SRS Site Strategic Plan* with specific goals, objectives and strategies to accomplish this vision. These strategies are integrated in the Site's long range comprehensive planning processes and addressed in lower level operational and tactical plans for implementation by individual Site programs. Direction for and approval of this plan ultimately is the responsibility of the Site Manager. However, the manager receives guidance from high-level management groups such as the Executive Leadership Team, the Site Integration Team, and other Site senior managers.

The *SRS Site Strategic Plan* is based on the premise that planning drives budget development. SRS is continuing the refinement of a formal and disciplined process with which to link the planning process with budgeting. It will define the specific processes and data flow used to manage all the Site's work activities and is structured to align with the DOE Headquarters Strategic Management System, linking planning, budget formulation, budget execution, and evaluation processes. This linkage is required by the Government Performance and Results Act (GPRA) and general management practices. All related business processes and initiatives are integrated into and subsequently executed within this overall Site process.

The hierarchy of SRS plans depicted in the figure to the right shows the various levels of planning documents. The top-level planning document for the Site is the *SRS Strategic Plan*. It will be used to communicate management's vision for the Site, serve as a unifying tool for all Site functions, guide the direction and completion of all other Site plans, and serve to link all Site activities to the *DOE Strategic Plan*. All lower level plans at SRS are related to the *SRS Strategic Plan* and should be directed toward its accomplishment.

At the next level below the *SRS Strategic Plan* is the *Long Range Comprehensive Plan*. It provides more detail than the *SRS Strategic Plan*, but not as much detail as program plans and baselines. The comprehensive plan integrates all of the aspects of Site planning and addresses the physical configuration and development of the Site. With the *SRS Long Range Comprehensive Plan* providing the overall



planning boundaries, the next level includes program and mission plans, which are tactical, and life-cycle plans written for various Site programs. These describe, in detail, plans for the various missions and programs at SRS. At the most detailed level of planning, the project baselines describe the necessary projects to accomplish the missions for the DOE programs.

Federal programs at SRS are managed through the EM and NNSA Field Offices. The *SRS Long Range Comprehensive Plan* is not organized by DOE programs, but instead views the Site as one land unit and provides the integrated planning to meet the real property assets to meet all mission requirements, both existing and future. While the hierarchy of plans depicts how the plans are linked and integrated, GPRA requires actual tracking and measuring accomplishment of the goals of the *SRS Strategic Plan*. This part of the process is accomplished annually through the development of specific, outcome-oriented milestones that are executed in the coming year.

To assure this implementation, each major Site organization, including tenant and contractor organizations, should develop and update annually, strategic implementation plans. The purpose of strategic implementation plans is to more specifically define, and assign responsibility for, the courses of action during the coming year to accomplish the DOE goals through implementation of the objectives and strategies provided in the *SRS Strategic Plan*. These organizational plans should include performance measures which are tracked to monitor progress and success.

The organizational elements within each Site organization will utilize these strategic implementation plans and, as necessary, develop implementation plans to further specify how they will contribute to the accomplishment of assigned actions for which they have responsibility. The goals in the strategic plan will cascade down to the individual worker within each organization, providing a clear link as to how individual work assignments contribute to accomplishing the Site missions and vision in the *DOE Strategic Plan*.

