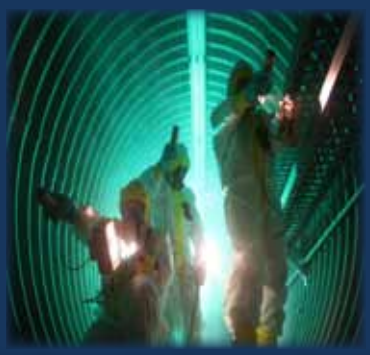
FY 2013

25-Year Site Plan

Defense Experimentation and Stockpile Stewardship

RSL Helicopter Flying over Las Vegas Strip Produces an Aerial Radiation Plot

Grand Opening of Fire Station No. 2



First Responders Trained to Respond to Radiological/Nuclear Weapons of Mass Destruction

Imaging Experiments and Analysis

Device Assembly Facility

BEEF Test

National Security Technologies LLC
Vision • Service • Partnership

NNSA
National Nuclear Security Administration

July 2012

Disclaimer

FY 2013 NNSA/NSO Twenty-Five Year Site Plan

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Acronyms

ARRA	American Recovery and Reinvestment Act
BEEF	Big Explosives Experimental Facility
CAIS	Condition Assessment Information System
DAF	Device Assembly Facility
DM	Deferred Maintenance
DOE	U.S. Department of Energy
ECN	Emergency Communications Network
FCI	Facility Condition Index
FY	fiscal year
FYNSP	Future Years Nuclear Security Program
gsf	gross square feet
GSP	Graded Security Protection
JASPER	Joint Actinide Shock Physics Experimental Research
M	million
MC	Mission Critical
NCERC	National Criticality Experiments Research Center
NCNS	National Center for Nuclear Security
NNSA	National Nuclear Security Administration
NNSS	Nevada National Security Site
NSO	Nevada Site Office
NSTec	National Security Technologies, LLC
NvE	Nevada Enterprise
RPV	Replacement Plant Value
RSL	Remote Sensing Laboratory
RWMS	Radioactive Waste Management Site
TYSP	Twenty-Five Year Site Plan
U1a	U1a Underground Complex
VERB	Visualization Examination and Repackaging Building

1.0 Executive Summary

1.1 The Current State

The Nevada National Security Site (NNSS) had one of its most successful years in FY 2011. The National Nuclear Security Administration (NNSA) Nevada Site Office (NSO) and its Contractors (National Security Technologies (NSTec), Navarro-Intera, WSI-Nevada, and the Joint Laboratory Office – Nevada) formed a partnership known as the Nevada Enterprise (NvE). Together, the NvE carries out the NNSS mission to support Stockpile Stewardship, Nuclear Nonproliferation, Nuclear Emergency Response, Environmental Management, and Work for Others. To support our Nation's nuclear weapons, energy, defense, and homeland security efforts, the NvE continues to utilize the inherent capabilities and remote location of the NNSS. The NvE aids our Nation in remaining safe and ready for any challenges.

The following outlines current capabilities and missions at the NNSS:

- **Stockpile Stewardship and Stockpile Management:** The NNSS's primary mission is to support the NNSA in sustaining the safety, reliability, and performance of the nuclear stockpile by providing facilities and infrastructure in which the National Weapons Laboratories or other organizations can conduct nuclear and non-nuclear experiments essential to maintaining the stockpile. These facilities include the Device Assembly Facility (DAF), which also houses the National Criticality Experiments Research Center (NCERC); U1a Underground Complex (U1a); Joint Actinide Shock Physics Experimental Research (JASPER) Facility; Big Explosive Experimental Facility (BEEF); and Baker Site.

  The NNSS is the only location within the NNSA complex of sites suitable for conducting high hazard experiments with any chance of dispersal involving special nuclear material or other hazardous materials that might pose a risk to employees, the public, or the environment.

  Significant investment is needed to modernize, restore, and improve the program facilities in order to maintain this mission. The needed investment level is beyond the level of funding included in the annual site maintenance budget. These investments will enable the NNSS facilities to be ready to meet operational requirements to support program and project tasks.

- **Defense Nuclear Nonproliferation:** The NNSS provides large scale, high-hazard experimentation, testing and evaluation venues for non-stockpile weapons performance experiments; arms control verification research and development; advanced radiation sensors; research and development in proliferation detection technologies, fielded in more representative environments and configurations; treaty verification techniques and training; and on-site arms control activities. Additional Defense Nonproliferation mission for the NNSS will be utilizing many of the existing facilities and infrastructure in proliferation detection and treaty verification research and development.

- **Nuclear Emergency Response:** The NNSA assets located at the Remote Sensing Laboratory (RSL) in Nevada and Maryland play a critical role in responding to nuclear emergencies nationally and internationally. Responses include the Aerial Measuring System, Consequence Management, Emergency Communications Network, and Crisis Response. The NNSS plays a critical and unique role in the safe recovery and disposition of damaged nuclear weapons.

- **Environmental Management:** Environmental Management at the NNSS provides integrated services for the conceptualization, research and development, testing, and demonstration of initiatives in the areas of environmental restoration, science and technology development, and waste management.

- **Work for Others:** The NNSS supports other federal agency activities. Those activities include first responder training and exercise for weapons of mass destruction; training and exercise support to the U.S. Department of Defense and other agencies; counterterrorism and nonproliferation technologies; unmanned aerial systems test and evaluation; treaty and verification activities; and situational awareness and tracking software development. Work for Others projects complement NNSA activities by supporting repurposing existing facilities and new construction that provides support to the NNSA as well as the Work for Others customers.

1.2 FY 2011 Accomplishments

Fiscal Year (FY) 2011 was marked by numerous major accomplishments that were critical to meeting many of the goals of the NNSA and for those federal agencies who rely on the NNSS. Below is a brief

review of some of the major accomplishments in FY 2011 for NNSA (Stockpile Stewardship and Nuclear Nonproliferation), Counterterrorism, Counterproliferation, Nuclear Emergency Response, Environmental Management, and Work for Others.

Stockpile Stewardship and Stockpile Management

Major national level milestones were completed at the NNSS during FY 2011 in support of Defense Programs Stockpile Stewardship mission.

The JASPER facility received approval for nuclear operations in FY 2011 and achieved its goal of being certified as a Hazard Category-3 Nonreactor Nuclear Facility. Key deliverables completed in FY 2011 included the following:

- Conducted a successful 7-pin experiment.
- Received authorization for DAF glove-box operations to receive JASPER target material and prepare target assemblies.
- Executed surrogate experiments in preparation for plutonium “hot shot” operations.
- Executed a successful plutonium experiment three months ahead of schedule, which was recognized as a significant achievement by senior management.

The NCERC achieved operability on its machines and initiated experiments on both the Planet and Comet machines in FY 2011. Experiments with machines such as Planet and Comet provide important data regarding the behavior of nuclear material assemblies which are used to validate computer models in support of new reactor designs and nuclear criticality safety.

NSTec successfully completed the Barolo series of subcritical experiments in FY 2011. These experiments are vital to the Stockpile Stewardship Program in order to maintain the safety and reliability of the stockpile without underground nuclear testing. The Barolo experiments were conducted at the U1a underground facility at the NNSS.

Also, the following projects and Research and Development activities were successfully executed in FY 2011 at the NNSS:

- Shock wave related diagnostics.
- Radiographic and neutron source development.
- High energy density physics diagnostics.
- Detectors and instrumentation development.
- Nuclear event analysis.
- Stockpile stewardship data analysis.
- Improved the structure and support for the Nuclear Material Management Program consistent with the significant material inventory at DAF.
- Execution of stockpile supported experiments successful at DAF and U1a.

Defense Nuclear Nonproliferation

The National Center for Nuclear Security (NCNS) located at the NNSS was established to focus on arms control verification, nonproliferation technologies, and technical nuclear forensics in support of the expanded nuclear security mission at the NNSS. The NCNS reaches across disciplines to provide a realistic setting for treaty verification and nonproliferation technologies. The NCNS was successful in initiating, planning and conducting its first set of experiments that support both treaty verification and nonproliferation research and development.

The first experiment was conducted in May 2011 and the second in October 2011. Both tests returned excellent data sets. These experiments are significant achievements in the United States’ efforts to enhance verification and detection capabilities.

Counterterrorism and Counterproliferation

In FY 2011, during several experiments at the Port Gaston Facility to demonstrate hand-held sensors capabilities in a realistic environment, the U.S. Department of Homeland Security fielded two sensors.

The Radiological/Nuclear Countermeasures Test and Evaluation Complex provided support to a number of U.S. Department of Homeland Security test and evaluation campaigns for hand-held, backpack, vehicle-mounted, and aerial sensor systems.

Nuclear Emergency Response

The NNSS infrastructure is an essential location used on the war against terrorism for training, test and evaluation, and demonstrations of specialized technologies. Training the nation's first responders in a realistic, operational environment prior to facing a real world Weapons of Mass Destruction event is essential, where minutes and actions are critical. The following major accomplishments were completed in FY 2011.

- RSL-Nellis personnel provided response and support to the Nuclear Power Plant crisis in Japan. RSL continues to support aerial radiological measurements and data analysis for the Government of Japan as part of the recovery operations from the tsunami and reactor crisis in Fukushima.

Environmental Management

The Environmental Management Programs include Waste Management and Environmental Restoration.

Environmental Restoration's key activities completed during FY 2011 included the following projects that were part of the American Recovery and Reinvestment Act (ARRA) additional scope investment:

- Production casing and tubing installation and stemming operations were completed for Well ER-EC-13.
- Access roads, drill pads, and sumps were constructed at the ER-5-5 and ER-11-2 sites in preparation for the FY 2012 drilling campaign.
- Demolition of the Pluto Disassembly Facility in Area 26 and disposal of all resulting waste.
- Completed all field work and achieved regulatory closure of 17 corrective action sites.
- Gained Nevada regulator acceptance of a groundwater model for the first time. This allowed NNSA/NSO to transition from the investigation phase into the closure phase for the Frenchman Flat groundwater contamination area. The corrective action plan was completed and approved by the regulator.

Waste Management's key activities completed during FY 2011 were also part of the ARRA investment and included support to the base programs in the U.S. Department of Energy (DOE) complex. Low-level radioactive waste disposal at the NNSS went into high gear as a result of ARRA funding. Acceleration of cleanup work was sparked throughout the DOE Complex, as well as, the need to expand waste disposal capabilities at the NNSS Area 5 Radioactive Waste Management Site (RWMS).

NvE maintained disposal operations to allow for up to 207,000 cubic feet of low-level and mixed low-level waste per month at the Area 5 RWMS, while absorbing a funding reduction at mid-year.

In FY 2011, almost 1.8 million cubic feet of waste was accepted at the NNSS, which included ARRA total volume of 773,000 cubic feet.

The Waste Management program also completed design and construction of engineered covers over historic disposal locations. The innovative final design resulted in approximately $12 million (M) (75 percent) cost avoidance, while meeting the Nevada Division of Environment Protection requirements.

Work for Others

The U.S. Department of Homeland Security uses the NNSS to train first-responders how to react in the event of an incident involving nuclear materials. The NNSS is also used to test the next generation of radiation detection equipment for ports and border crossings.

The U. S. Department of Defense has long used the NNSS as a location to conduct a wide range of chemical, biological, and nuclear sensor detection work. Support of these and other national security missions is expected to grow as the NNSS continues to transform into a 21st century national security facility.

1.3 The Future State

The focus of the NNSA/NSO for the next twenty-five years is to provide a safe and secure environment and unmatched support for high-risk, high-hazard, complex experimental, and operational activities. The NNSA/NSO is also focused on consolidating, modernizing, and moving all technical infrastructure from North Las Vegas to the NNSS to enable more efficient and effective support of technical programs, and consolidating the remaining administrative footprint in Las Vegas. Recapitalization efforts will aid in configuring and changing items within enduring buildings to become more energy efficient. The NNSS will remain the center for high-hazard testing.

As new missions develop, the NNSA/NSO will focus on repurposing and/or expanding current facilities to accommodate user demands. The NNSA/NSO will also focus on developing additional realistic environments to support research and development, equipment test and evaluation, individual and team training, comprehensive exercised, and intelligence support activities.

The growth of the nuclear power industry in both domestic and foreign markets will create an increasing demand for radiological emergency response capabilities. The RSL will continue to be the international leader in site background measurements (pre-event operations), emergency response operations (event characterization), and consequence management/recovery (post-event operations), both domestically and internationally.

The NCNS will play a pivotal role in supporting nuclear nonproliferation objectives through research and capabilities development and demonstration. Over the next five years, the NCNS will, on behalf of the NNSA, conduct experiments designed to enhance research and development associated with geophysical characterization, modeling and simulation, infrasound, explosive performance, noble gas migration, onsite inspection, and data preservation.

The Environmental Management Program is focusing on a new initiative to dispose of classified components. This project will allow DOE sites to dispose of classified components at Area 5, where no disposal path previously existed. The intent is to assist other sites with the characterization and shipping for direct disposal at the NNSS. The infrastructure cost savings of direct disposal are still being evaluated; however, any cost savings to the government could be re-directed towards higher mission priorities. Incremental funding is available now to support this project, and the business case has been developed and approved for distribution.

A Final Site-Wide Environmental Impact Statement is scheduled for issuance in October of 2012 followed by a Record of Decision in December 2012. This Record of Decision will further clarify goals and objectives for the NNSS over the next twenty-five years and beyond.

1.4 Mission Risks

The NNSA/NSO leased, owned, and permitted 462 buildings and trailers totaling 3,248,496 square feet.

The NvE is innovative in the adaptive reuse of buildings; however, many of these buildings have now reached the end of their useful lives, both structurally and technologically. Despite the vigorous program to excess aged unusable buildings under the Facilities and Infrastructure Recapitalization Program, the Facilities and Infrastructure Management System indicates 77 percent of the NNSS building square footage is over 30 years old. This situation is exacerbated by a large number of temporary buildings that have been kept in operation for decades beyond their expected life.

Facility Infrastructure Surveys revealed that 44 percent of the utilities' infrastructure elements need major rehabilitation or replacement. Many elements in the electrical, water, and communications areas were rated as poor.

Most of the NNSS power system is over 30 years old. The transmission line and substation facilities are between 35 and 45 years old. Power transformers that are a critical component of the transmission and distribution systems have reached the end of their useful life. Outsourcing the repair of the power system is being proposed and the impact of the outsourcing is not clear.

A significant portion of the NNSS road system is substandard. The estimated 640 miles of roadways at the NNSS represent the entire spectrum of rural roadway construction. Most of the paved roadways were initially constructed prior to 1965 and to multiple criteria. In order to maintain a basic infrastructure network, approximately 195 miles of the roads are identified as mission critical.

The telecommunications/information technology infrastructure supporting NNSA/NSO is technologically outdated. It also has become seriously degraded due to age, weather, maintenance issues, and the inability to keep pace with rapidly evolving technological changes.

The water systems currently serving the NNSS are functional but have major equipment, facilities, and distribution functions that are less than adequate with limited life expectancy and minimal backup capability. Projects have been completed to extend the life expectancy of the NNSS water systems.

The Sanitary Waste Disposal System is in fair to adequate condition. A full investigation and video analysis to determine the actual condition of buried lines revealed that some of the lines were blocked.

The North Las Vegas Facility consists of 33 buildings, totaling 678,310 square feet, which provides support for NNSS activities. Four of these buildings are designated as mission-critical.

If regularly maintained, these facilities and buildings should remain fully functional to support current missions. Due to the age of some facilities and buildings, major system replacements will be required during the plan period out year.

2.0 Site Overview and Snapshot (Appendix G)

Location: Las Vegas, Nevada
Type: Multi-Program Site
Web site: https://nv.energy.gov

Contractor Operator: National Security Technologies, LLC
Responsible Site Office: NNSA/NSO
Site Manager: Stephen A. Mellington

The NNSS and its auxiliary sites (Livermore Operations; Los Alamos Operations; Sandia Operations; North Las Vegas Facility; RSL-Andrews; RSL-Nellis; and Special Technologies Laboratory) offer a diverse collection of unique facilities, equipment, and expertise making the NNSS an unequaled resource for many of the nation's key scientific and security projects. Work scope includes: designing, high explosives research and development, and implementing the technological support required for experiments and tests of national defense customers. Activities at the NNSS continue to be diverse, with the primary role being to help ensure that the existing United States weapons stockpile remains safe and reliable.

The NNSS has a long and proven history which has involved the safety and security of the nation. The remoteness and expanse of the NNSS has enabled it to serve as the host of extremely hazardous operations and research and development activities for 60 years.

These activities support the National Weapons Laboratories, U.S. Department of Defense, and various Work for Others customers.

The Core Capabilities of the NvE as identified by the NNSA are (C1) Design, Certification, Testing, Experiments, Surveillance, and Science, Testing and Engineering (ST&E) Base; (C2) Plutonium; (C5) High Explosives; (C6) Non-nuclear; (C7) Weapons Assembly and Disassembly; (C9) Special Nuclear Material Accountability, Storage, Protection, Handling and Disposition; (C10) Enabling Infrastructure; (C11) Counterterrorism and Counterproliferation; (C12) Support of Other Mission/Program Capability; and (C13) Federal Management and Oversight.

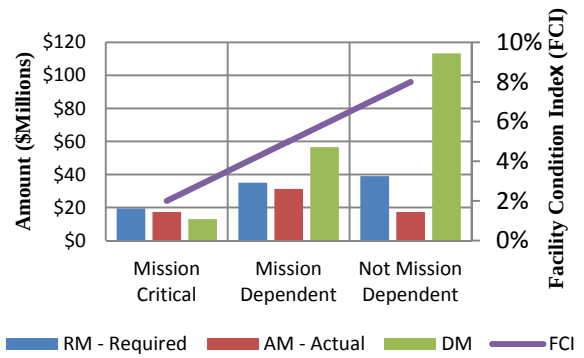
NSTec is organized under a President and Chief Operating Officer with five staff Organizations and four line Directorates. The current workforce consists of 2,579 employees specializing in scientific, technical, engineering, and administrative employee activities.

The template below provides FY 2011 Real Property Asset information pertaining to gross square footage and condition of assets, as well as, funding by source and total site operating cost.

Real Property:

- 860,389 Acres: (Leased/Owned)
- 462 Buildings/Trailers: (Leased/Owned/Permit)
  - 2,588,738 gsf Active and Operational
  - 480,390 gsf Non-Operational
  - 179,368 gsf Leased
- Replacement Plant Value: $3,210,522,113 (total assets)
- Deferred Maintenance: $ 182,848,500 (total assets)
- Facility Condition Index:
  - Mission Critical: 2.0 %
  - Mission Dependent: 5.0 %
  - Asset Utilization Index (Overall): 81 %

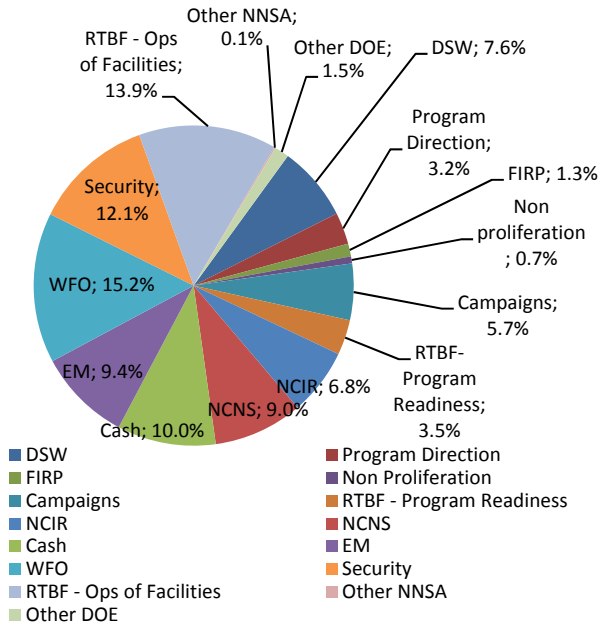
Maintenance and FCI by Mission Dependency



RM - Required Maintenance
AM - Actual Maintenance
DM - Deferred Maintenance

FY 2011 Funding Source and Cost

- FY 2011 Total Site Operating Cost: $ 669 M
- FY 2011 Total NNSA/DOE Funding: $ 516 M
- FY 2011 Total Non-NNSA Work: $ 75 M
- FY 2011 Total Other Funding: $ 173 M



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3.0 Assumptions

The out-year planning and projected programs are based on a number of assumptions regarding site operations, research and development, test and evaluation programs, customers, and facility needs. These assumptions anticipate site use, policies, regulations, and agency mandates that may affect operation over the next twenty-five years.

The following key programmatic, budget, and planning assumptions guide NNSA/NSO planning activities and were used to develop this Twenty-Five Year Site Plan (TYSP).

3.1 Programmatic Assumptions

- Public proximity to some National Weapons Laboratories and defense facilities could result in the transfer of additional high-hazard experiments and activities to the NNSS.
- Counterterrorism, Counterproliferation, Nonproliferation, and Arms Control and Treaty Verification missions will continue to be growth areas for both NNSA and other agencies to address emerging national security concerns. As new requirements/programs are initiated at the NNSS and supporting operations, facilities will be repurposed, expanded, or new infrastructure constructed to accommodate the new activities.
- Nuclear Emergency Response will continue to be an important mission for the NNSS and the nation. As additional programs emerge or current programs are expanded, existing facilities may be refurbished.
- The NNSS will maintain the capabilities (technologies, staff, skills, equipment, and infrastructure) to resume underground testing in support of the Stockpile Stewardship Program.
- The Readiness in Technical Base and Facilities Program and the NNSS workforce will continue to provide the essential physical and operational infrastructure required to conduct scientific, engineering, and other technical activities of the Stockpile Stewardship Program.
    - There will be a sustained need for continuous operations at NNSS mission-critical facilities.

3.2 Budget Assumptions

The projects presented in this TYSP will be performed within the budget constraints of the Future Years Nuclear Security Program (FYNSP). According to the TYSP guidance, the FYNSP has identified $6.58 million (M) in Facilities and Infrastructure Recapitalization Program funding for FY 2012. The proposed Capabilities Based Facilities and Infrastructure sub-program is being evaluated to begin in FY 2013.

The Environmental Management Program will be funded at a level consistent with the approved work scope.

Facilities and infrastructure data were extracted from the year end FY 2011 Facility Information Management System.

3.3 Planning Assumptions

Annual planning will be conducted following a comprehensive approach that integrates all NNSS user requirements to ensure a balance between mission support and overall infrastructure sustainability.

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4.0 Changes from Prior Year TYSP

This year's TYSP will focus entirely on the implementation of the Program of Record. The strategic planning horizon will be extended to twenty-five years to align with other NNSA planning documents. This year's TYSP will convey how attainment of the Program of Record's infrastructure goals sustains core capabilities and meets mission commitments.

A "capability based" responsive infrastructure is required for any future stockpile scenario and will be linked to NNSA Mission, Program, Core Capabilities, and Special Interest. The Capabilities Based Facilities and Infrastructure is a facility investment subprogram of the Readiness in Technical Base and Facilities program. The core mission of this subprogram is management of the infrastructure risk to mission through life extensions of enduring facilities and infrastructure essential to core capabilities.

Spreadsheets previously associated with the TYSP were eliminated, and graphics, pictures, and tables are included within the storyboards to easily convey key points.

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5.0 Future Vision and Core Capabilities

The focus of the NvE is to provide a safe and secure environment and unmatched support for high-risk, high-hazard, and complex experimental and operational activities.

The NvE will accommodate an increase in user demands for realistic environments in support of research and development, equipment test and evaluation, individual and team training, comprehensive exercises, and intelligence support activities. The NvE will focus on maintaining and modernizing experiment facilities, enabling infrastructure, and essential programmatic equipment.

The NvE will continue to increase its role in contributing to national and international security priorities as the Department of Defense and intelligence communities recognize the unique attributes of the NNSS (e.g., geology and remoteness) and the NvE (e.g., technical capabilities).

The Core Capabilities of the NvE as identified by the NNSA are listed below.

- (C1) Design, Certification, Testing, Experiments, Surveillance, and ST&E Base
- (C2) Plutonium
- (C5) High Explosives
- (C6) Non-nuclear
- (C7) Weapons Assembly/Disassembly
- (C9) Special Nuclear Material Accountability, Storage, Protection, Handling and Disposition
- (C10) Enabling Infrastructure
- (C11) Counterterrorism and Counterproliferation
- (C12) Support of Other Mission/Program Capability
- (C13) Federal Management and Oversight

A discussion of the Tactical and Strategic Planning Horizons of the NvE for each core capability follows and storyboards for each capability are located at the end of the chapter.

5.1 Design, Certification, Testing, Experiments, Surveillance, and ST&E Base (C1)

The NvE maintains this core capability, consisting of unique nuclear and other high-hazard experiment facilities, essential skills, and a remote location, in support of NNSA Stockpile Stewardship efforts to determine hydrodynamics of special nuclear material properties which may affect the safety, reliability, and performance of the enduring nuclear weapons stockpile. NNSS facilities supporting these efforts include DAF, NCERC, the U1a, JASPER, and other special test facilities/infrastructure. Activities in these facilities include the conduct of subcritical experiments, radiographic and neutron source development, and detector/diagnostic system development. Additional NNSS facilities, including off-site research and development assets and support facilities, also contribute to this capability. The NvE also maintains the capability to resume testing of nuclear weapons, if deemed necessary by the President.

Significant investments are needed to restore and/or modernize this capability. Expenditures beyond the level of funding included in the annual site maintenance budget are needed. Such projects will ensure the readiness of NNSS facilities to meet current and projected operational requirements.

Tactical Planning Horizon (FY 2013 - 2023)

The near-term vision to sustain this capability is to ensure the availability, usability, and reliability of the identified facilities. Attainment of the infrastructure goals will ensure that this core capability is sustained and the NNSS continues to meet mission commitments.

DAF: The NvE will implement projects to assure a stable, fully-functional, reliable, and efficient facility as funding becomes available.

U1a: The current and anticipated future U1a mission is to provide a fully-functional, cost-effective, and safe location for subcritical experiments. Subcritical experiments have been proposed through the next several years at the U1a. To support continued operations, the U1a will begin an expansion of underground structures in FY 2015 (mining operations and expanded footprint) and the installation of the Large-Bore Powder Gun capability. Implementing various projects will enable the U1a to continue to support mission requirements.

JASPER: The current and anticipated future JASPER mission is to conduct shock physics experiments on special nuclear material and other actinide materials to provide key physics data necessary to meet NNSA/Defense Programs campaign milestones for primary classification, dynamic materials properties, and material lifetimes. At this time, there are no projects identified as necessary to support the sustainment of JASPER.

Strategic Planning Horizon (FY 2023-2039)

The long-term vision of this capability is to continue to execute the programmatic plans that other NNSA Sites and non-NNSA organizations have for the NNSS. Attainment of the following infrastructure goals will ensure that this core capability is sustained and that the NNSS continues to meet mission commitments.

Development of an enhanced radiography capability is critical to ensuring the continued assurance in the stockpile. The NvE is cooperating with NNSA and the National Laboratories to develop a compilation of proposed technical options for implementation at the NNSS. This capability could include both the radiography and experiment portions of a new facility, the radiography system, and the necessary modifications to enabling infrastructure at the NNSS.

5.2 Plutonium (C2)

The NvE maintains this core capability, consisting of unique nuclear facilities, essential skills, and a remote location, in support of the NNSA Stockpile Stewardship (C1) and Stockpile Management (C7) efforts. The NNSS facilities supporting these efforts include DAF, NCERC, U1a, and JASPER. Activities in these nuclear facilities include the assembly and conduct of subcritical experiments. The NvE also maintains this capability to resume testing of nuclear weapons, if deemed necessary by the President.

Tactical Planning Horizon (FY 2013 - 2023)

The near-term vision for this capability is to ensure the availability and capacity of required facilities. Significant investments are needed to improve and/or modernize this capability at DAF, as discussed in Section 5.1 (C1). Such projects will ensure the readiness of the DAF to meet current and projected operational requirements. Attainment of the tactical infrastructure goals described in Section 5.1 (C1) will ensure that the plutonium capability to meet near-term mission commitments is sustained at the NNSS nuclear facilities.

Strategic Planning Horizon (FY 2024-2039)

The long-term vision for this capability is to ensure a safe, secure, and cost-effective environment necessary to meet future mission requirements through infrastructure modernization. This will facilitate this capability having the capacity and agility needed to continue this mission into the future.

5.3 High Explosives (C5)

The NvE maintains this core capability, consisting of unique facilities, essential skills, and a remote location, in support of the NNSA missions (Stockpile Stewardship, Counterterrorism, Counterproliferation, and the Explosive Ordnance Disposal Unit) and similar national/international missions within other government agencies. The NNSS facilities supporting these efforts include the BEEF, Baker site, and Port Gaston, which provide a safe, secure, and controlled environment for high-explosives experiments. High-hazard industrial and classified, large-scale explosive activities at the NNSS include staging, assembly, disassembly, detonation, and storage.

Tactical Planning Horizon (FY 2013 - 2023)

The near-term vision for this capability is to ensure the availability and capability of high-explosive facilities. Attainment of the following infrastructure goals will ensure that this core capability is sustained and that NvE continues to meet mission commitments.

- Firing Site Capability Improvement: Provide additional firing table to support increased workload.
- Rehab and Repair Bunkers: Support the storage and assembly of high explosives for multiple customers.

Strategic Planning Horizon (FY 2024 - 2039)

The long-term vision for this capability is to ensure the availability and capability of the high-explosive facilities. These facilities will be required throughout the life of high explosive research and development programs for national security. Attainment of the following infrastructure goals will ensure that this core capability is sustained and that NvE continues to meet mission commitments.

- Modernized Detonation Locations: The construction of additional and modernized detonation locations with roads, power, and diagnostic links will enable the BEEF Site to support multiple projects at the same time.
- BEEF Site Control Building: A new building will house the engineering and project staff, as well as, provide modern office space for project sponsors.

5.4 Non-Nuclear (C6)

The NvE maintains this capability to support non-nuclear component research and development and to supplement the production of classified components. In addition, NvE has the capability to dismantle and dispose of components that currently have no other disposal path in the NNSA complex.

A-01 Machine Shop:
The A-01 Machine Shop supports numerous NNSA and non-NNSA projects with the fabrication of precision parts from a variety of materials.

Tactical Planning Horizon (FY 2013 - 2023)

The near-term vision of the A-01 Machine Shop is to ensure the availability and capability for continued operations without significant new investments. Infrastructure improvements to modernize, restore, and improve the facility and equipment will occur when their declining condition impacts their ability to support mission requirements.

Strategic Planning Horizon (FY 2024 - 2039)

The long-term vision of the A-01 Machine Shop is to ensure the availability and capability for continued operations. Infrastructure improvements to modernize, restore, and improve the facility and equipment will occur when their declining condition impacts their capability to support mission requirements.

Component Dismantlement and Disposition:
The NNSS currently accepts items for disposition from other DOE sites. The NNSS can accept many types of materials/assemblies as long as they are characterized and in compliance with the NNSS Waste Acceptance Criteria.

Tactical Planning Horizon (FY 2013 - 2023)

Dismantlement (trainer and/or subassembly) could potentially be done at the Visualization Examination and Repackaging Building (VERB). Other locations could be used as well, i.e., Baker Site or DAF, depending on complexity and materials/assemblies within system.

Strategic Planning Horizon (FY 2024 - 2039)

The VERB can be further utilized for component disassembly, training for Chain of Custody, and Beryllium projects. The VERB is in cold standby; therefore, start-up costs would have to be included in the project cost of operations.

Arming, Fusing, and Firing/Detonator Work:
The NvE can perform Arming, Fusing, and Firing activities in the instrumentation lab in North Las Vegas. Tactical: These Arming, Fusing, and Firing activities could include testing and refurbishment. Detonator activities for the NNSS could include disassembly and disposition.

Tactical Planning Horizon (FY 2013 - 2023)

Arming, Fusing, and Firing could be broken down to sub components from assemblies. Items are usually sent back to Sandia National Laboratories for evaluation/study. Detonator work/disposition could potentially be performed at Baker Site/BEEF and/or DAF. The NNSS can dispose of components containing explosives at Baker Site/BEEF.

Strategic Planning Horizon (FY 2024 - 2039)

The long-term vision for Arming, Fusing, and Firing is to perform detonator testing as part of a surveillance activity.

5.5 Weapons Assembly/Disassembly (C7)

The DAF provides capability for the assembly and disassembly of damaged nuclear weapons. The DAF was designed and built to consolidate all nuclear explosive assembly activities at NNSS, to provide safe structures for high explosives and nuclear explosive assembly operations, and to provide a state-of-the-art safeguard and security environment.

Tactical Planning Horizon: (FY 2013 - 2023)

The near-term vision for the DAF is to ensure the availability and capability to safely and securely receive damaged nuclear weapons and conduct necessary inspections, and assembly and disassembly operations. A number of repairs/upgrades are required to "stand-up" the DAF capability for assembly/disassembly operations. Attainment of the following infrastructure goals will ensure that this core capability is available to support NvE mission needs when required.

NvE could support limited weapons assembly and disassembly activities at the DAF depending on the system. NvE could provide the necessary support personnel and facilities to safely and securely conduct nuclear explosive operations in support of NNSA's Stockpile Management mission. NvE would provide a highly skilled and trained core staff supplemented by subject matter experts knowledgeable in nuclear explosive operations.

Strategic Planning Horizon: (FY 2024 - 2039)

The long-term vision for the DAF is to ensure the availability and capability to safely and securely receive damaged nuclear weapons and conduct necessary inspection, assembly, and disassembly operations. Infrastructure improvements to modernize, restore, and improve the existing facilities will occur when their declining condition impacts their capability to support mission requirements.

5.6 Special Nuclear Material Accountability, Storage, Protection, Handling and Disposition (C9)

The NvE maintains this capability to provide for the staging of special nuclear material prior to the conduct of experiments (including nuclear material handling and measurement capabilities) and for staging in support of special nuclear material de-inventory at other NNSA sites. The NvE continues to play an active role within the complex to support efforts for special nuclear material accountability. The NvE currently is a member of the Nuclear Materials Management Team sponsored through NNSA/Headquarters.

The NvE has accepted special nuclear material from National Laboratories and others within the complex.

Tactical Planning Horizon: (FY 2013 - 2023)

The near-term vision is to ensure the availability and capability to safely and securely handle special nuclear material at the NNSS. The current capability is limited by space and equipment but will be expanded to support additional staging requirements. Significant investments are needed to restore and/or modernize this capability expenditures beyond the level of funding included in the annual site maintenance budget. Such investments will ensure the readiness of the NNSS facilities to meet current and projected operational requirements.

Attainment of the infrastructure goals described for the DAF and U1a in Section 5.1 (C1) will ensure that this core capability is sustained and that the NvE continues to meet mission commitments.

Strategic Planning Horizon: (FY 2023 - 2039)

The NvE is also planning on acquiring some legacy components which could be used for various project(s).

The long-term vision is to ensure the availability and capability to safely and securely handle special nuclear material at NNSS.

5.7 Enabling Infrastructure (C10)

The NNSS is a multi-program site and the infrastructure support facilities (i.e., roads, utility systems, support buildings) must be maintained and/or upgraded as appropriate to effectively support and accommodate all current and anticipated program activities in a safe and reliable manner.

Tactical Planning Horizon (FY 2013 - 2023)

The near-term vision for Facilities and Infrastructure (i.e., roads, utility systems, support buildings) is to upgrade and maintain existing infrastructure support facilities to meet mission needs.

In addition to maintaining and upgrading existing infrastructure support facilities, requirements of the Capabilities Based Facilities and Infrastructure subprogram have been reviewed, and proposed projects have been identified and submitted for Capabilities Based Facilities and Infrastructure consideration.

Projects submitted to Capabilities Based Facilities and Infrastructure will enhance the NvE availability to be ready to meet operational requirements to support program and project tasks.

The facilities supporting the national emergency response, non-proliferation, and counterterrorism, including the remote locations, will require updates and upgrades in the information technology infrastructure to support the increasing data speed rates and technology options and upgrades to networks.

- RSL is critically dependent on DOE aircraft to support the NNSA domestic mission. The current aircrafts are due for replacement within the next five years.
- As current missions expand and new missions are added, additional office and laboratory space will be needed to accommodate missions. At RSL, the current building is nearly 15 years old, but can accommodate an addition. Construction of a second adjacent facility is also possible.

Laboratories will require life cycle and technology upgrades to keep up with the rapidly evolving technology needs of their customers. These laboratories need persistent investment in conventional and emerging laboratory equipment (electrical, optical, chemical, nuclear detection). Examples would include digital oscilloscopes, network analyzers, high-powered lasers, advanced cameras, etc.

Mercury Revitalization:
Modern facilities and infrastructure to support testing, training as well as advanced experimentation and production at the NNSS will be required. The mission needs for this revitalization to be accomplished are as follows:

- Demolish facilities and infrastructure that are no longer economically salvageable.
- Identify a land-use concept of Mercury that will create functional zones to facilitate groupings of similar activities. Replacement and new facilities will be located to the appropriately designated land-use group.
- Replace facilities that are obsolete, but functionally necessary.
- Recapitalize selected facilities and infrastructure to extend useful life to accommodate existing and future support requirements.

Strategic Planning Horizon (FY 2024 - 2039)

The long-term vision for Infrastructure Support Facilities consists of providing a fully-functional, cost effective, and safe location for the conduct of all work conducted at the NNSS. Due to the nature of missions conducted by the NvE, new requirements beyond ten years are more difficult to predict with any degree of certainty. However, the NNSS enabling infrastructure will be maintained and modernized in a manner that will support NNSA's Program of Record for the NNSS.

The long-term vision for NvE missions will include continued lifecycle maintenance of both the NNSS and remote location infrastructure, which will help maintain capabilities and enable NSTec to keep up with technological advances in the core infrastructure of the laboratories.

5.8 Counterterrorism and Counterproliferation (C11)

Tactical Planning Horizon (FY 2013 – 2023)

Counterterrorism programs encompass non-proliferation technologies, non-stockpile related test and evaluation, and counterterrorism activities with the following near-term visions:

- Provide emergency communications systems, capabilities, and databases to additional national and international agencies.
- Provide and expand services and support for non-proliferation technology.
- Provide facilities and capabilities to test and evaluate technology in support of national security technology-related development.
- Provide facilities and capabilities for training and exercises to support national security issues and first responders.
- Provide an active program to maintain and expand NNSS infrastructure to support counterterrorism activities.
- Design, fabricate, and field rapid/rugged prototype capabilities to support nuclear emergency response in counterterrorism.

Key facilities are utilized to meet these objectives. These facilities make possible a rapid increase in the capability to provide the comprehensive testing, training, and exercise platforms required by the national security community needs.

RSL-Nellis and RSL-Andrews provide Nuclear Emergency Response Teams and support, both nationally and internationally, that drives facility and infrastructure needs to support rapid response, secure operations, reach back support, laboratory demonstrations, and secure communications.

Personnel perform work for a variety of customers pertaining to Counterterrorism, Counterproliferation, and Nonproliferation. This work requires specialized laboratories and ranges to handle analog and digital electronics and signal processing, radiofrequency measurements, and rapid prototype development, for specialized testing and evaluation facilities.

Strategic Planning Horizon (FY 2024 - 2039)

Counterterrorism/Counterproliferation long-term vision is NA-80 specific and includes the following:

- Utilize components for various training exercises.
- Leverage personnel having early and enduring stockpile weapon experience to support exercises/projects.
- Provide the NNSS facilities which could support an expanded mission for both training and instrumentation development for characterization.
- Use the NvE to developed facilities, available materials, surrogate materials, experienced personnel, etc., to assist in developing scenarios, building test objects, and establishing measurement protocols which focus on countering nuclear devices.

The NNSS will continue to play a vital role in addressing current and national security needs as emerging threats are identified and technical solutions need to be tested and evaluated in a controlled and secure location. Future activities will be defined by the NNSA, U.S. Department of Defense, other federal agencies, and the intelligence community as they require test beds and capabilities unique to the NNSS and its remote locations. As current mission expand and new missions are added, additional capabilities will need to be identified and developed. Infrastructure and technology assets will need to evolve to match those emerging requirements.

5.9 Support of Other Mission/Program Capability (C12)

Other missions supported at the NNSS encompass Global Security, the Environmental Management program, and Work for Others.

The NNSS is expanding its mission to include Global Security, Counterterrorism, Nonproliferation Technologies, non-stockpile related tests and evaluations, treaty verification, and arms control activities.

Environmental Management has long been and continues to be focused on environmental restoration and waste disposal operations at NNSS.

The NNSS continues to strengthen national security through the execution of:

- Technical and operational solutions in remote sensing, nuclear emergency response, nonproliferation, and security systems technologies.
- Quick turnaround science-based technical and operational solutions focused on National Security needs.
- High-hazard high-fidelity testing and evaluation to counter the threat of chemical, biological, radiological/nuclear, and explosives attacks.
- Development and delivery of the most realistic and highest quality training using the unique assets of NNSS and NSTec's extensive radiological expertise.

Similar work is performed for various other organizations. The development, testing, and deployment of unique technologies and assets in the domestic and global war on terrorism and nuclear proliferation have made the NNSS and its associated laboratories an important and recognized member of the nuclear and intelligence communities.

International Center for Arms Control Technology:
The proposed International Center for Arms Control and Verification Technology will consist of a complex of new facilities outside the town of Mercury, but within the security perimeter of the NNSS and near its main entrance. The Center will contain laboratories, offices, teaching and conference facilities, a data center with advanced computational tools, and a communications hub. The Center's primary mission will be to integrate the development, testing, and validation of technologies applied to control the spread of weapons of mass destruction. It will be a platform for collaboration among a diverse group of U.S. government agencies and their partners, including allied and other foreign nations, international organizations for arms control, and non-governmental or industrial organizations as appropriate. The Center and associated facilities within and around the NNSS will also support partnerships in counterterrorism and nuclear forensics. The Center will be designed for versatility, to adapt to changing technology requirements and evolving global security conditions. The Center is critical to NNSS meeting the current and future National Security challenges and supports President Obama's vision for a US gate-way for international arms control participation. It is proposed to include an on-site inspection exercise area, joint field training area, International Atomic Energy Agency inspector institute, and Comprehensive Nuclear Test Ban Treaty verification training facility.

Tactical Planning Horizon (FY 2013 – 2023)

The near-term vision for the NvE is to continue to develop additional collaborations various other governmental agencies in meeting the immediate and evolving national security challenges.

The near-term vision for Environmental Management includes maintaining capabilities for environmental remediation and safe, secure, disposal of low-level and low-level mixed waste at the NNSS. A new initiative to dispose of classified components at the NNSS will reduce infrastructure costs across the DOE Complex.

The near-term vision for Global Security is to continue to utilize the capabilities and assets developed under Work for Others, to leverage activities with the NNSA activities, to create a synergistic environment. Both the NNSA and Work for Others customers benefit from this relationship. Facilities will be repurposed and upgraded by Work for Others customers. Expanded and new technologies are utilized to create technological solutions to national security challenges.

Both the NNSA and Work for Others customers are requesting expanded chemical release activities. Upgrades to chemical/biological release equipment and new test stand structures will be required to continue to meet these mission needs.

New near-term missions are emerging for NNSS:

- Unmanned Aerial Systems Research and Development and Test and Evaluation.
- Situational awareness software and program.
- Augmented vision and detection technologies.

Strategic Planning Horizon (FY 2024 - 2039)

The long-term vision for the NvE is to meet the ever-increasing complexity of treaty verification, proliferation detection, and post-detonation nuclear forensics challenges through a continuous advancement and application of detection technologies.

The long-term vision for Environmental Management is to perform environmental restoration and waste disposal operations in a cost-effective and safe manner. Environmental restoration activities in support of closure of the past Underground Test Area will continue to define the site-specific hydrologic boundaries. This data analysis is comprised of drilling, groundwater sampling, and modeling support. The Underground Test Area Project is scheduled to continue through approximately FY 2030.

The Soils Sites project, which characterizes and closes sites with near-surface soil contamination, will continue through approximately FY 2026.

Waste disposal operations will continue to support on-site waste generators and the DOE complex waste generators. This is accomplished through the maintenance of a compliant Nevada National Security Site Waste Acceptance Criteria through generator coordination and supervision. The Radioactive Waste Acceptance Program will continue to perform facility evaluations that are required in order for waste generators to ship waste to the NNSS. The NNSS is the only facility capable of accepting low-level, mixed low-level and non-radiological, non-hazardous, and hazardous waste. This program is scheduled to continue operations through 2030.

The Radioactive Waste Program will continue to grow the "work for others" by assisting other sites across the complex in disposing of their low-level waste to the NNSS. The Waste Generator Services organization has been very effective in certifying offsite shipments to the NNSS, when it is cost prohibitive for a small site to become certified to the Nevada National Security Site Waste Acceptance Criteria.

The long-term vision for Global Security is to enhance and expand capabilities. As emerging threats are identified, NNSS and its associated laboratories will continue to play a vital role in developing technical solutions and in providing unique secure and controlled environments to test and evaluate technologies and technical solutions developed by Work for Others customers. Activities defined by other federal agencies will continue to require test beds and capabilities unique to NNSS and its remote locations. As current mission expands and new missions are added, additional capabilities will need to be identified and developed. Infrastructure and technology assets will need to evolve to match those emerging requirements.

5.10 Federal Management and Oversight (C13)

NNSA/Headquarters (NA-1) has directed each NNSA Site Office to streamline business operations and reduce operations costs to maximize mission accomplishment. Achieving this vision has been codified in NAP-21, *Transformational Governance and Oversight*, which further states that the NNSA shall leverage scientific and technical capabilities of the workforce by leveraging upon a strong Federal and Contractor Assurance System for improved performance and accountability. In order to execute this process, a Line Oversight/Contractor Assurance System Affirmation Review is being performed at each NNSA Site Office.

Current initiatives:

- NSO is leading long term improvements and striving for efficiency gains in many line oversight areas including: issues management consolidation, consistent issues screening across all contractors, development of federal metrics, and oversight of contractor performance plans, metrics, and contractor assurance initiatives. These activities, over multi-year timeframes, will ensure streamlined and effective use of federal oversight techniques and will demonstrate integration between NSO's contractors to all for better tracking and trending of issues or concerns.
- NSO and NSTec are fully integrating a streamlined issues management system whereby this allows both federal staff and contractors to view and analyze all issues over every functional and mission area for greater transparency.
- NSO is developing and standing up federal metrics to help senior management understand and track potential areas that need improvement on federal programs and oversight.

Tactical Planning Horizon (FY 2013 – 2023)

NNSA/NSO begun preparing for and demonstrating it adheres to the principles and guidance of NAP-21 through a series of preparatory assessments, both internal and external to NSO. In parallel, NSO's Management and Operating Contractor (NSTec) also provided input, reviewed processes, and validated that tools and systems are in place to demonstrate overall performance assurance is in place for maintaining and continuously improving nuclear safety and oversight. As part of an enhanced working relationship, NSO and NSTec completed a joint Line Oversight/Contractor Assurance System Affirmation Self Assessment using the criteria of NAP-21. Corrective actions for deficiencies and weaknesses were reviewed by management and processes were adjusted to demonstrate improvements, where warranted.

- NSO is leading the push to fully integrate all 13 NSO contractors in performance of oversight by developing strategies to allow for transparent review of assessments, assessment results, and tracking and trending mechanisms through multi-year Project Execution Plan initiatives.
- NSO is transitioning to the contractor's issues management system to demonstrate better engagement and seamless entry and tracking of issues by federal and contractor staff.
- NSO, through Headquarters' support and direction, will initiate and become fully compliant with the requirements of *International Organization for Standardization* 9001 for federal staff and oversight.

Strategic Planning Horizon (FY 2024 - 2039)

The long-term vision of the NSO is to continue providing the NNSA with a safe, secure, and cost-effective environment in which to accomplish mission objectives. In order to do this, the NSO will continue to work with sponsors and stakeholders to develop the appropriate technologies and supporting facilities and infrastructure. The NSO will anticipate and forecast the future long-term use of NNSS facilities, develop innovative approaches, comply with new regulations, and implement designated projects to improve existing infrastructure.

- NSO will continue to strive for excellence in line oversight by improving processes and tracking federal metrics on a long term basis allowing for consistent and forward looking senior management decisions (i.e., expansion of LOCAS and Affirmation).
- NSO is leading the initiative to fully integrate contractor and federal assessment programs allowing for free flow of information and for better assessment planning thereby reducing the amount of federal overlap with contractor assessment performance.

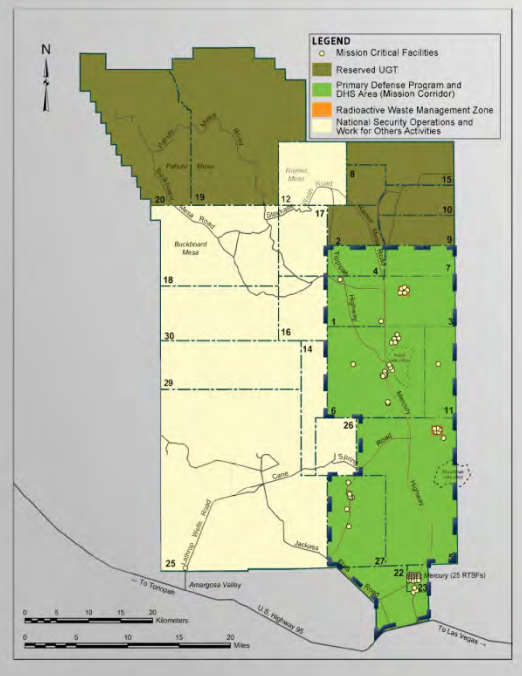
C1 Design, Certification, Testing, Experiments, Surveillance, and Science, Technology and Engineering Base

Linkage to NSE Mission

The NvE maintains this core capability, consisting of unique nuclear and other high-hazard experiment facilities, essential skills, and a remote location, in support of NNSA Stockpile Stewardship efforts to determine various material properties which affect confidence in the nuclear weapons stockpile.

Vision

- The near-term vision to sustain this capability is to ensure the availability, usability, and reliability of the identified facilities.
- The long-term vision of NvE is to continue providing the NNSA with a safe, secure, and cost-effective environment in which to accomplish mission objectives. In order to do this, the NvE will continue to work with sponsors (NNSA, Department of Defense & Intelligence Communities) and stakeholders (other NNSA sites and National Laboratories) to develop the appropriate technologies and supporting facilities.



- DAF- Poised to perform nuclear weapon operations such as alterations, modifications, and dismantlement.
- U1a Complex - Measure properties of plutonium; conduct sub-critical experiments to collect data from plutonium

Current Activities

- Conduct subcritical experiments, radiographic and neutron source development, and detector/diagnostic system development.
- Maintain the capability to resume testing of nuclear weapons, if deemed necessary by the President.

Current

- The NvE will implement projects to assure a stable, fully-functional, reliable, and efficient facility as funding becomes available.
- U1a Complex - Subcritical experiments have been proposed through the next several years at the U1a complex.

Proposed Projects

- 14 DAF Projects
- 6 U1a Projects
- Development of an enhanced radiography capability is critical to ensuring the continued assurance in the stockpile. The NvE is cooperating with NNSA and the National Laboratories to develop a compilation of proposed technical options for implementation at NNSS. This capability could include both the radiography and experiment portions of a new facility, the radiography system, and the necessary modifications to enabling infrastructure at NNSS.

2013 — Tactical Horizon — 2023

Proposed Future Initiatives

- The long-term vision of this capability is to continue to execute the programmatic plans that other NNSA Sites and non-NNSA organizations have for the NNSS. Attainment of the following infrastructure goals will ensure that this core capability is sustained and that the NNSS continues to meet mission commitments.
- Develop an enhanced radiography capability.

2024 — Strategic Horizon — 2039

Mercury Corridor Capability Sites

Nevada National Security Site

Pu R&D C2 Plutonium

Linkage to NSE Mission

NNSA executes plutonium missions in support of U.S. National Security. They are managed as part of the Defense Programs organization (NA-10). The Defense Programs Nuclear Weapons Stewardship mission 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. Plutonium missions included in this plan are:

- Research and Development
- Stockpile Sustainment

Vision

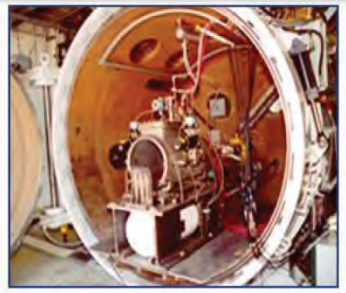
- The near-term vision for the DAF is to serve as a key NNSS mission critical facility to maintain national capabilities for stockpile stewardship criticality safety, nuclear materials management, emergency response, non-proliferation, nuclear materials safeguards, arms control, nuclear technologies, and nuclear weapons safety. This vision includes the support of the National Criticality Experimental Research Center and its associated security Category I and II nuclear material.
- The long-term vision for this capability is for significant investments to restore and/or modernize this capability. Such projects will ensure the readiness of NNSS facilities to meet current and projected operational requirements. Attainment of the infrastructure goals will ensure that this core capability is sustained and NvE continues to meet mission commitments.

Current Activities

- Conduct subcritical experiments
- Radiographic and neutron source development
- Detector/diagnostic system development
- Off-site research and development assets
- Maintain the capability to resume testing of nuclear weapons, if deemed necessary by the President
- Nuclear explosive operations and SNM assemblies
- Underground test readiness
- Testing of plutonium properties for annual assessments and stockpile certification

- Joint Actinide Shock Physics Experimental Research (JASPER) - Two stage light gas gun used to study the behavior of plutonium and other materials under high pressures, temperatures, and strain rates.
- Device Assembly Facility (DAF) - Support of experiments for Stockpile Stewardship and other programs. Perform nuclear weapon operations such as alterations, modifications, and dismantlement. DAF is a secured by a 24 hour guard force and state-of-the-art security alarm systems for this 100,000 square-foot complex.
- U1a Complex - Underground laboratory and tunnel complex, experiments range from measuring the properties of plutonium under weapon-like conditions to state-of-the-art diagnostic development and X-ray radiography.

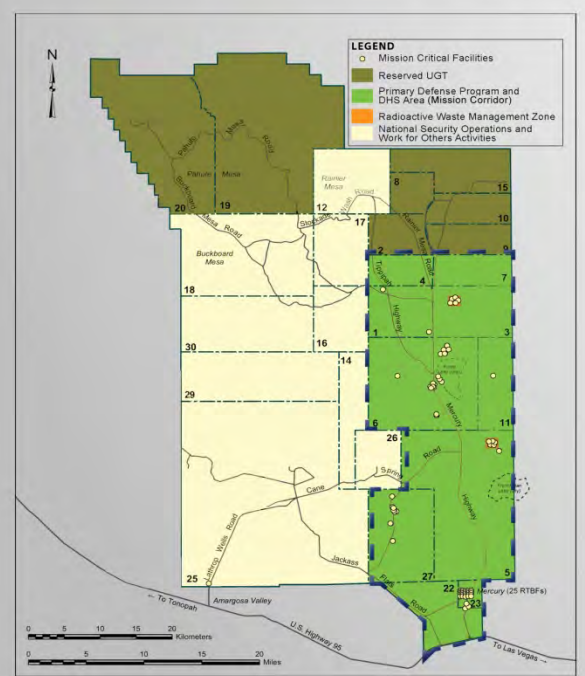
Current



Proposed Projects

- 6 DAF Projects
- 4 U1a Projects

- Upgrade existing systems to required security standards.
- Expand current staging capability to support SNM de-inventory at other NNSA sites.
- Acquire and install power equipment to provide clean and backed-up power.
- Upgrades are designed to address hardware/equipment reaching the end-of-life timeframe, to expand capabilities with new technology, to implement process improvements, or to update the safety basis/management procedures or approaches.



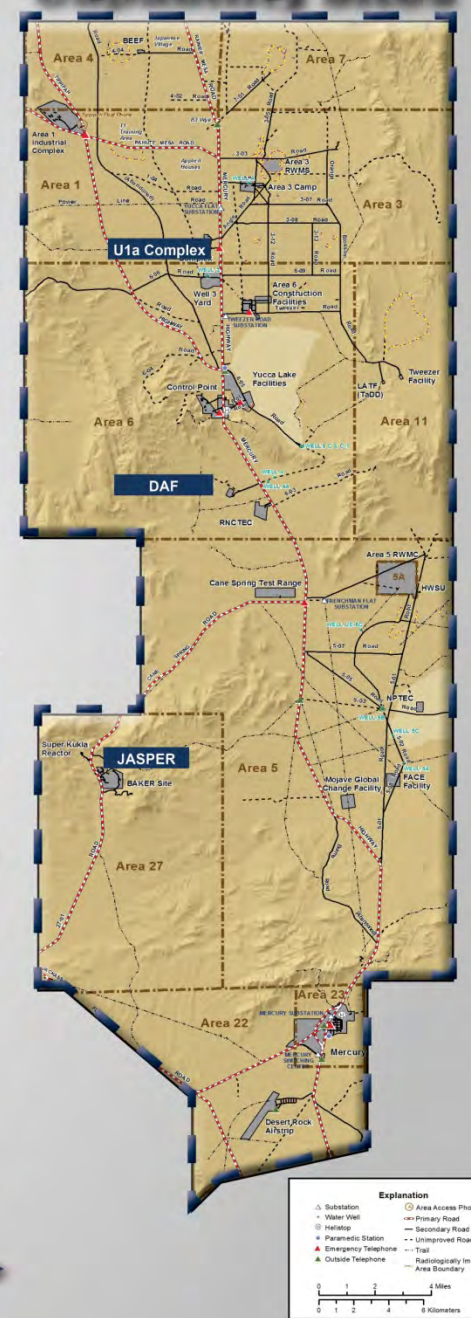
2013 — *Tactical Horizon* — 2023

Proposed Future Initiatives

- Development of an enhanced radiography capability is critical to ensuring the continued assurance in the stockpile. The NvE is cooperating with NNSA and the National Laboratories to develop a compilation of proposed technical options for implementation at NNSS. This capability could include both the radiography and experiment portions of a new facility, the radiography system, and the necessary modifications to enabling infrastructure at NNSS.

2024 — *Strategic Horizon* — 2039

Mercury Corridor Capability Sites



C5 High Explosives

Linkage to NSE Mission

The NNSS High Explosives Facilities (HEF), Big Explosives Experimental Facility [BEEF] and Baker, provides safe, secure and controlled facilities for high explosive experimentation in support of U.S. National Security, NNSA missions, Defense Programs, Intelligence Community missions, National Center for Nuclear Security, and Disposition. The NNSS is the only site to provide an isolated controlled outdoor and underground laboratory to conduct unique and hazardous high explosive experiments.

Vision

- The near-term vision for this capability is to ensure the availability and capability of HEF.
- The long-term vision for this capability is to ensure the availability and capability of HEF. These facilities will be required throughout the life of high explosives research and development programs for national security.

- Experiments were conducted by the Remote Sensing Laboratory for the Department of Homeland Security to test methods for defeating vehicle bombs.
- BEEF – A remote 10 acre fenced compound capable of classified work and is certified for up to 78,000 pounds of high explosives.

Current Activities

- Environment for high explosives experiments
- High-hazard industrial and classified, large-scale explosives activities including staging, assembly, disassembly, detonation, and storage
- Hand-packing or forming of uncased plastic explosives
- Disassembly/disposition of energetic components, test assemblies, and nuclear explosive-like assemblies

Current

- Provide additional firing table to support increased workload
- Support the storage and assembly of HEs for multiple customers
- Provide proper configuration management, generate electrical drawings for BEEF
- Purchase/Install New Camera: The current system is outdated and requires replacement with new equipment
- Provide enhanced safety and communication capabilities for facility occupants. This system is needed for better implementation of any Emergency Response or Alert.

Proposed Projects

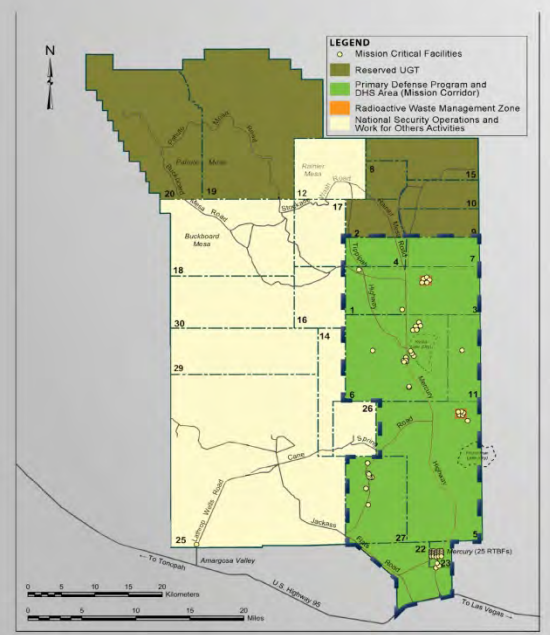
- HEF – Firing Site Capability Improvement: BEEF
- HEF – Rehab and Repair Bunkers: BEEF and Baker
- HEF – BEEF Electrical Schedule, electrical drawings
- HEF – Repair Camera Ports 4-480 BEEF
- HEF – Area 27 Communications, Upgrade PA Baker

2013 — *Tactical Horizon* — 2023

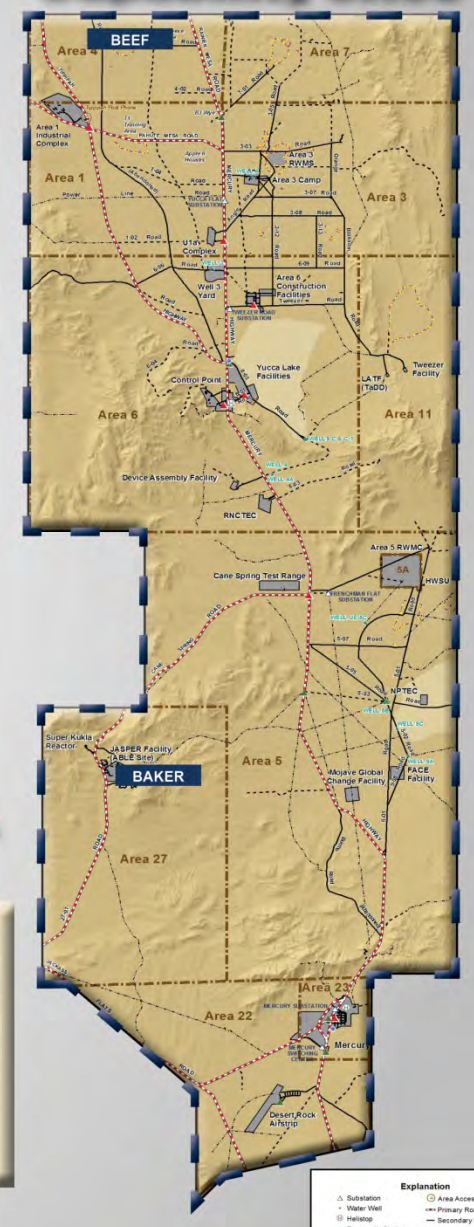
Proposed Future Initiatives

- HEF – The construction of three additional and modernized detonation locations with roads, power, and diagnostic links will enable the BEEF Site to support multiple projects at the same time.
- BEEF Site Control Building: A new building will house the Engineering and Project staff, as well as, provide modern office space for project sponsors. This building will also contain an upgraded control room and communications hub with secure conferencing capabilities linking BEEF Site to the NNSS nonproliferation test bed.

2024 — *Strategic Horizon* — 2039



Mercury Corridor Capability Sites



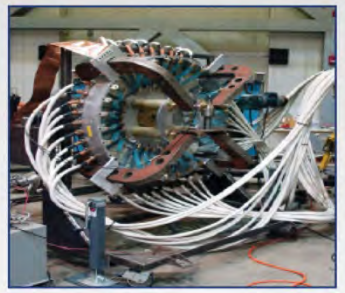
C6 Non-Nuclear

Linkage to NSE Mission

The NvE provides the capability to support non-nuclear component research and development and to supplement the production of classified components. The A-01 Machine Shop supports numerous NNSA and non-NNSA projects with the fabrication of precision parts from a variety of materials.

Vision

- The near-term vision of the NvE is to ensure the availability and capability of the A-01 Machine Shop for continued operations without significant new investments.
- The long-term vision of the NvE is to ensure the availability and capability of the A-01 Machine Shop for continued operations. Infrastructure improvements, to modernize, restore, and improve the facility and equipment will occur when their declining condition impacts their capability to support mission requirements.



Current Activities

- Light/heavy, unclassified/classified part fabrication
- Development, characterization, fielding, and analysis
- Intense Dense Plasma Focus pulsed neutron source (user facility)

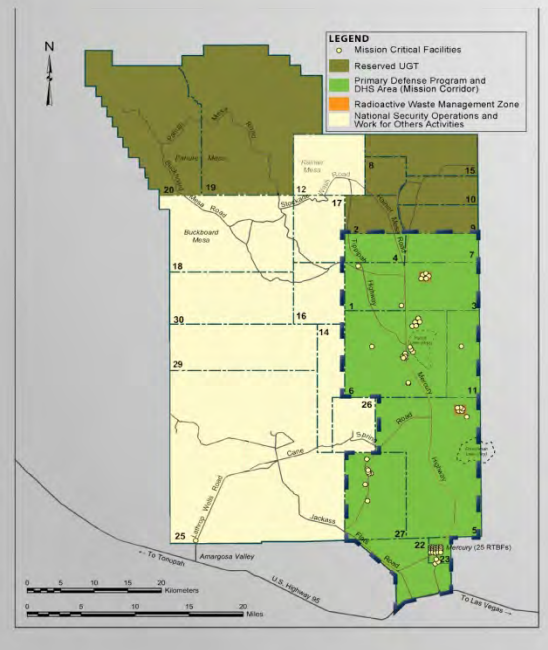
- The A-01 Machine Shop received authorization in 2012 for the A-01 Machine Shop to begin the fabrication of classified hardware and shortly thereafter began the production of classified hardware for an NvE experiments program.

Current

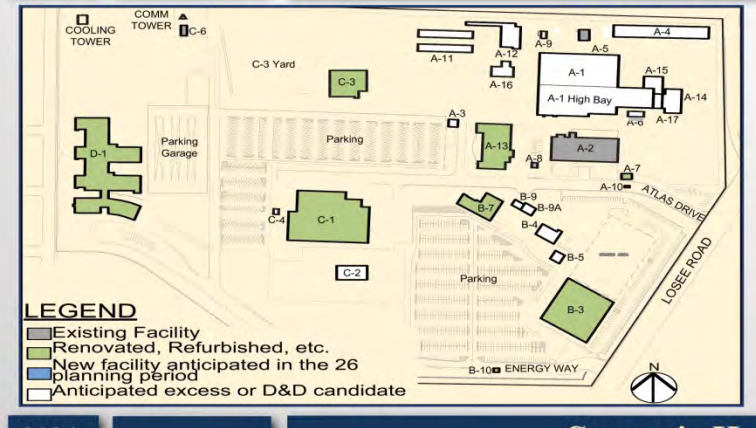
Proposed Projects

- Dismantlement (trainer and/or subassembly) done at the Visualization Examination and repackaging Building (VERB). Other locations could be used as well, i.e., Baker Site or DAF.

- Los Alamos Operations plays a major role supporting projects in fielding diagnostic suites developed by the Labs and NSTec outlying locations.
- The NNSS currently accepts items for disposition from other DOE sites. The NNSS can accept many types of materials/assemblies as long as they are characterized and in compliance with the NNSS Waste Acceptance Criteria.



2013 — **Tactical Horizon** — 2023



Proposed Future Initiatives

- Modernize Nevada Site Office Facilities to enhance the accomplishment of site missions, reduce operating cost, advance stewardship of energy and the environment
- Consolidate and relocate personnel and operations in various facilities at NLVF and NNSS.

2024 — **Strategic Horizon** — 2039

Mercury Corridor Capability Sites

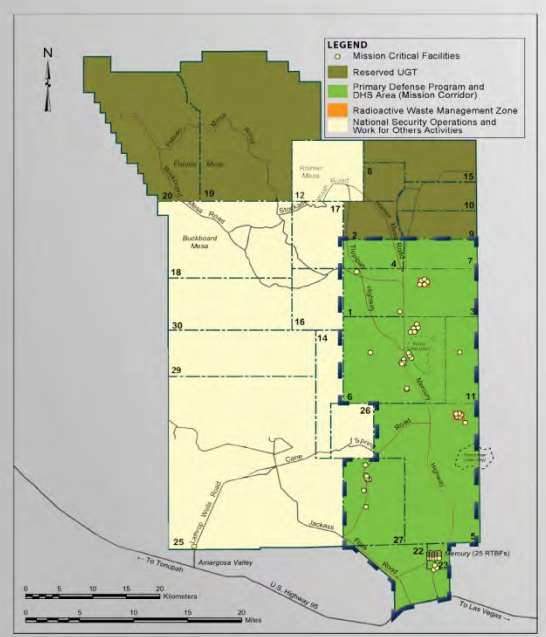
C7 Weapons Assembly/Disassembly

Linkage to NSE Mission

DAF's isolated location on the NNSS provides a safe, secure, and controlled facility in support of U.S. National Security, NNSA Stockpile Stewardship, and missions of the National Weapons Laboratories. The NNSS is the only site to provide an isolated controlled outdoor and underground laboratory to conduct unique high explosives and SNM experiments.

Vision

- The near-term vision for DAF is to ensure the availability and capability to safely and securely receive nuclear weapons and conduct necessary inspection, assembly, and disassembly operations.
- The long-term vision for DAF is to ensure the availability and capability to safely and securely receive nuclear weapons and conduct necessary inspection, assembly, and disassembly operations. Infrastructure improvements to modernize, restore, and improve the existing facilities are needed when their declining condition impacts their capability to support mission requirements.



- Provides capability for the assembly and disassembly of damaged nuclear weapons
- Designed and built to consolidate all nuclear explosive assembly activities at the NNSS
- Provides safe structures for high explosives and nuclear explosive assembly operations
- Provides a state-of-the-art safeguards and security environment

Current Activities

- Scientist work on special nuclear material (SNM), radiation test objects and high-explosives in support in support of experiments for Stockpile Stewardship and other programs.
- Poised to perform nuclear weapon operations such as alterations, modifications, and dismantlement.

Current

Proposed Projects

- 5 DAF Projects
- Complete upgrades to the lightning protection system/ Faraday Cage
- Complete compliance testing on the HEPA filter ventilation system

2013 — *Tactical Horizon* — 2023

Proposed Future Initiatives

- DAF – Critical System Upgrade: Upgrades are designed to address hardware/equipment reaching the end-of-life timeframe, to expand capabilities with new technology, to implement process improvements, or to update the safety basis/management procedures or approaches
- Replacement of existing radiography machine
- A new support building outside Material Access Area

2024 — *Strategic Horizon* — 2039

Mercury Corridor Capability Sites

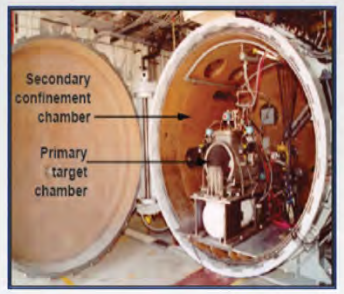
SNM C9 Special Nuclear Material Accountability, Storage, Protection, Handling and Disposition

Linkage to NSE Mission

The NvE maintains this core capability to provide for the staging of SNM prior to the conduct of experiments (including nuclear material handling and measurement capabilities) and for staging in support of SNM de-inventory at other DOE sites. The current capability is currently limited by space and equipment but will be expanded to support additional staging requirements.

Vision

- The near-term vision is to ensure the availability and capability to safely and securely receive, stage, store, and handle SNM at the NNSS. Significant investments are needed to restore and/or modernize this capability, expenditures beyond the level of funding included in the annual site maintenance budget.
- The long-term vision is to ensure the availability and capability to safely and securely receive, stage, store, and handle SNM at NNSS.



Current Activities

- Conduct subcritical experiments
- Radiographic and neutron source development
- Detector/diagnostic system development.
- Off-site research and development assets
- Maintains the capability to resume testing of nuclear weapons, if deemed necessary by the President
- Nuclear explosive operations and SNM assemblies
- Underground test readiness, and subcritical experiment programs
- Testing of plutonium properties for annual assessments and stockpile certification

- DAF- houses the National Criticality Experiment Research Center (NCERC). NCERC conducts research and training in three primary areas: supporting the Stockpile Stewardship Program, Emergency Response to Support Counter-Terrorism, and Arms Control and Non-proliferation.
- NCERC- Conduct research and training using Category I level nuclear materials. DAF stores National Weapons Laboratories special nuclear materials.
- Two assembly bays have been modified to support unique project requirements (Glovebox and Downdraft table).

Current

Proposed Projects

- 6 DAF Projects
- 4 U1a Projects

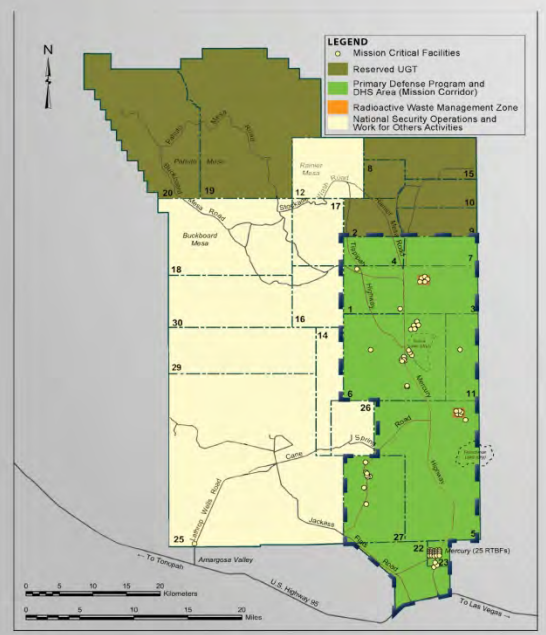
- RNCTEC and Baker provide additional capabilities for the staging and handling of Special Nuclear Material in support of NNSA and Work for Others programs.

2013 — Tactical Horizon — 2023

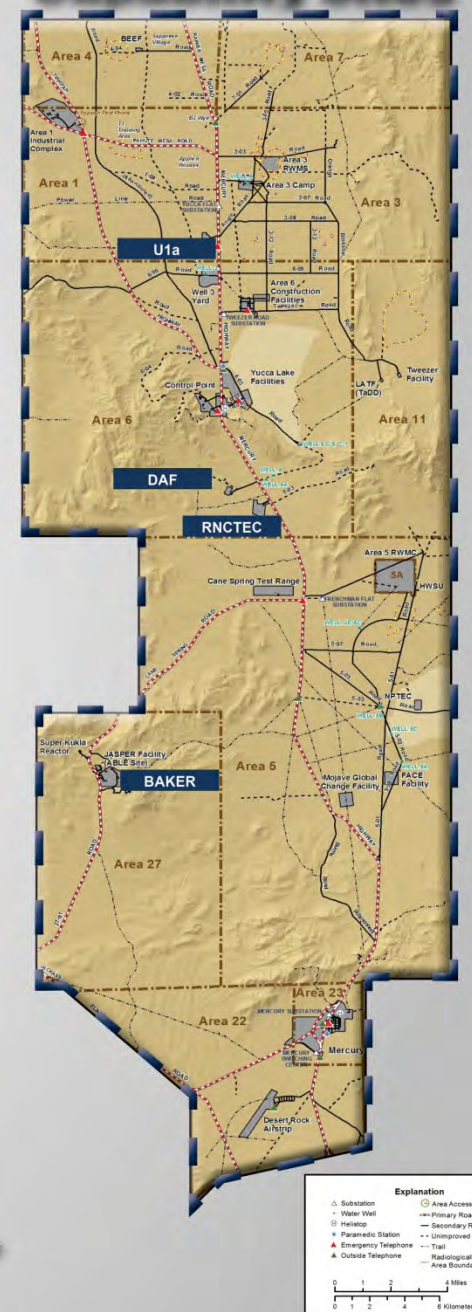
Proposed Future Initiatives

- U1a will provide additional safe and secure capacity for SNM staging and handling in order to balance the priorities on DAF capabilities.

2024 — Strategic Horizon — 2039



Mercury Corridor Capability Sites



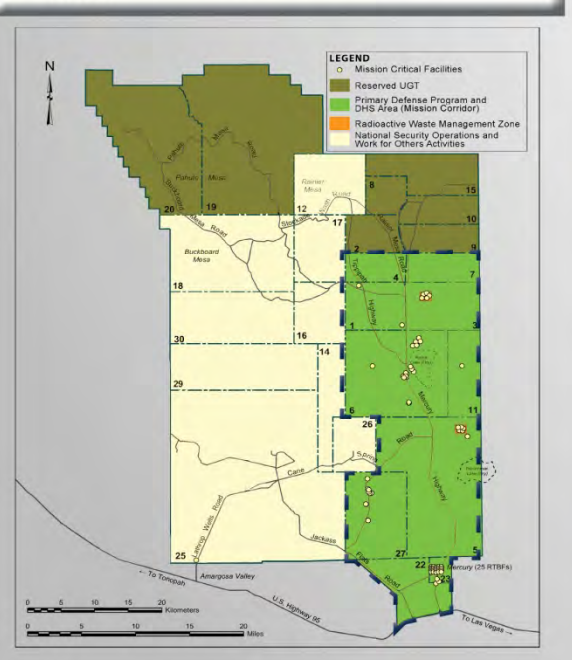
C10 Enabling Infrastructure

Linkage to NSE Mission

The NNSS is a multi-program site and the infrastructure support facilities (i.e., roads, utility systems, support buildings) must be maintained and/or upgraded as appropriate to effectively support and accommodate all current and anticipated program activities in a safe and reliable manner.

Vision

- The near-term vision for infrastructure support facilities (i.e., roads, utility systems, support buildings) is to upgrade and maintain existing infrastructure support facilities to meet mission needs of the NvE.
- The long-term vision for Infrastructure Support Facilities consists of providing a fully-functional, cost effective, and safe location for the conduct of all work conducted at NNSS. Due to the nature of missions conducted by the NvE, new requirements beyond ten years are more difficult to predict with any degree of certainty. However, the NNSS enabling infrastructure will be maintained and modernized in a manner that will support NNSA's Program of Record for the NNSS.



- NNSS-A large, geographically diverse outdoor laboratory, 1,360 square miles
- Access to the site is controlled
- Experimental areas more than 65 miles from the nearest major population center
- Projects submitted to CBFI will enhance the NvE availability to be ready to meet operational requirements to support program and project tasks
- The only place in the country where weapons quantities of nuclear material can be brought outside a facility

Current Activities

- Maintaining and upgrading existing infrastructure support facilities
- Requirements of the Capabilities Based Facilities and Infrastructure (CBFI) subprogram have been reviewed
- Proposed projects have been identified and submitted for CBFI consideration

Current

- Recapitalization is necessary to extend the useful life of facilities and infrastructure while upgrades are essential to ensure continued availability of information technology and communication capabilities.

Proposed Projects

- 5 Facility Projects
- 4 Electrical Projects
- 5 Communications Projects
- 4 Road Projects
- 3 Water Projects

2013 — *Tactical Horizon* — 2023

Proposed Future Initiatives

- The vision for Facilities and Infrastructure (i.e., roads, utility systems, support buildings) is to upgrade and maintain existing infrastructure support facilities to meet mission needs.

2024 — *Strategic Horizon* — 2039

Mercury Corridor Infrastructure

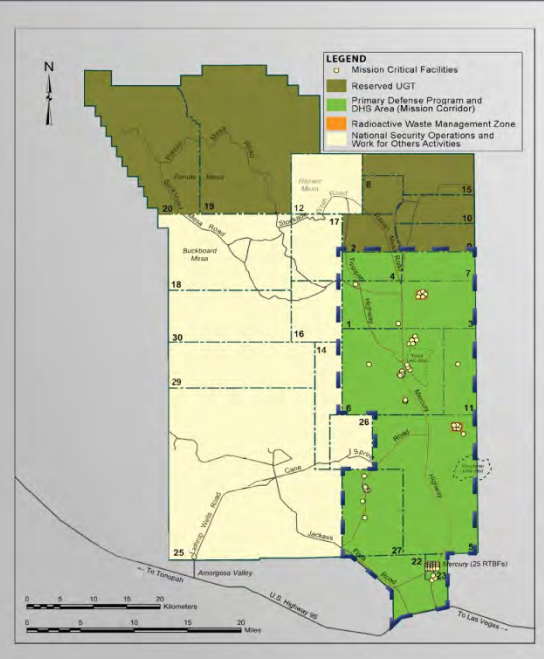
C11 Counterterrorism and Counterproliferation

Linkage to NSE Mission

The NNSS and facilities provide a safe, secure, and controlled environment that provides an isolated controlled outdoor and underground laboratory to conduct unique high explosive and SNM experiments to support of nuclear counterterrorism activities. Nuclear counterterrorism activities support the Department of Homeland Security Domestic Nuclear Detection Office and Science and Technology Directorate, the Department of Energy National Laboratories testing and evaluating detection systems for international global nuclear detection, Customs and Border Protection, U.S. Coast Guard, Transportation Security Administration, and over U.S. government entities.

Vision

- Near-term vision for this capability encompasses non-proliferation technologies, non-stockpile related test and evaluation, and counterterrorism activities.
- Long-term visions for Counterterrorism and Counterproliferation are NA-80 specific. Future activities will be defined by NNSA, DOD, other federal agencies and the intelligence community as they require test beds and capabilities unique to NNSS and its remote locations. As current mission expand and new missions are added, additional capabilities will need to be identified and developed.



The Nevada National Security Site (NNSS) offers the ideal location to support nuclear counterterrorism and counterproliferation activities. The NNSS consists of a 1,375 square mile facility and is approximately 85 miles away from a major populated area. NNSS facilities offer physical buildings, appropriate safety systems, and infrastructure to conduct open-air unique and hazardous (High Explosive and Special Nuclear Material) experiments. The Department of Homeland Security and U.S. Department of Energy National Nuclear Security Administration established the Radiological/Nuclear Countermeasures Test and Evaluation Complex (RNCTEC) at the NNSS. Nuclear counterterrorism activities are also supported by the Nonproliferation Test and Evaluation Complex (NPTEC), Device Assembly Facility (DAF), and G Tunnel located on the NNSS.

Current Activities

- Warfighter Support
- Nonproliferation R&D
- Test & Evaluation Radiological/Nuclear Countermeasures
- International Nonproliferation and Arms Control

Current

Proposed Projects

- 3 T-1 Projects
- 3 NPTEC Projects
- 1 RNCTEC Project
- 1 Port Gaston Project

- Provide emergency communications systems, capabilities, and databases to additional national and international agencies.
- Provide and expand services and support for non-proliferation technology.
- Provide facilities and capabilities to test and evaluate technology in support of national security technology-related development.
- Provide facilities and capabilities for training and exercises to support national security issues and first responders.
- Provide an active program to maintain and expand NNSS infrastructure to support counterterrorism activities.
- Design, fabricate, and field rapid/rugged prototype capabilities to support emergency response in counterterrorism.

2013 — **Tactical Horizon** — 2023

Proposed Future Initiatives

- T-1 Training Complex- Replacement of triple-wide, manufactured classroom (NLT 2035)
- Utilize the dismantled pits for various sensor development and testing.
- Leverage personnel having early and enduring stockpile weapon experience to support exercises/projects.
- Provide the NNSS facilities which could support an expanded mission for both training and instrumentation development for characterization.
- NSTec could provide a venue with materials for staging an exercise using a "lost nuke" scenario(s).
- Use the NSTec developed facilities, available SNM materials, surrogate materials, experienced personnel, etc. to assist in developing scenarios, building test objects, and establishing measurement protocols which focus on improvised nuclear devices.

2024 — **Strategic Horizon** — 2039

Mercury Corridor Capability Sites

C12 Support of Other Mission/Program Capability

Linkage to NSE Mission

Other missions supported at the NNSS encompass the National Center for Nuclear Security (NCNS), the Environmental Management (EM) program, Homeland Security and Defense Applications (HS&DA) and Work for Others.

The NCNS is a new addition to NNSS and is already a leading organization in NNSA's counterterrorism, nonproliferation technologies, non-stockpile related tests and evaluations, treaty verification, and arms control activities.

EM has long been and continues to be focused on environmental restoration and waste disposal operations at NNSS.

Homeland Security and Defense Applications (HS&DA) personnel are the nation's experts in detecting and locating "dirty bombs," "loose nukes," and radiological sources. They train and enable our nation's first responders who would be among the first to confront a radiological or nuclear emergency.

The near-term vision for the NCNS is to develop additional collaborations with the U. S. Department of Defense, U. S. Department of State, and the U. S. Intelligence Community agencies in meeting the immediate and evolving national security challenges.

The near-term vision for EM includes maintaining capabilities for environmental remediation and safe, secure disposal of low-level and low-level mixed waste at the NNSS. A new initiative to dispose of classified components at the NNSS will reduce infrastructure costs across the DOE Complex.

The near-term vision for HSDA is to continue to utilize the capabilities and assets developed under the Work for Others to leverage activities with the NNSA activities to create a synergistic environment. Both NNSA and the Work for Others customers benefit from this relationship.

The long-term vision for the NCNS is to meet the ever-increasing complexity of treaty verification, proliferation detection, and post-detonation nuclear forensics challenges through a continuous advancement and application of detection technologies.

Current Activities

- Technical and operational solutions in remote sensing, nuclear emergency response, nonproliferation, and security systems technologies.
- Quick turnaround science-based technical and operational solutions focused on National Security needs.
- High-hazard high-fidelity testing and evaluation to counter the threat of chemical, biological, radiological/nuclear, and explosives attacks.
- Development and delivery of realistic and high quality training using the unique assets of NNSS and NSTec's extensive radiological expertise.

- HS&DA characterizes the threat environment, produces specialized radiological/nuclear detection equipment, trains personnel, tests and evaluates the equipment, and develops high-tech equipment to defeat terrorists.
- Major customers include the U.S. Department of Defense, the U.S. Department of Homeland Security, the Intelligence Community, and various other government agencies.
- Portal systems undergo testing to find a way to detect radiation without He3 gas.

Current

- Both NNSA and WFO customers are requesting expanded chemical release activities
- Facilities have been repurposed and upgraded by WFO customers
- Equipment has been purchased by WFO customers that can be utilized for all missions
- Expanded and new technologies are utilized to create technological solutions to national security challenges

Proposed Projects

- Upgrades to chemical/bio release equipment and new test stand structures
- Unmanned Aerial Systems R&D and test and evaluation
- Situational awareness software and program
- Augmented vision and detection technologies

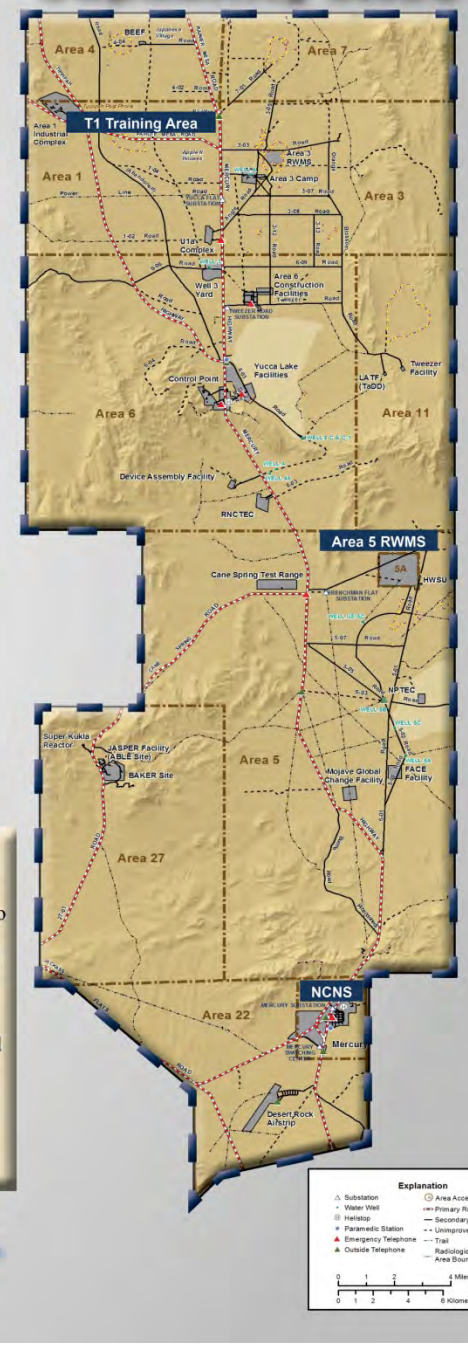
2013 — *Tactical Horizon* — 2023

Proposed Future Initiatives

- Environmental restoration activities in support of closure of the Underground Test Area (UGTA) will continue to define the site-specific hydrologic boundaries. The UGTA Project is scheduled to continue through approximately FY 2030.
- Soils Sites Project will continue through approximately FY 2026.
- Waste disposal operations will continue to support on-site waste generators.
- The Radioactive Waste Acceptance Program will continue to perform facility evaluations that are required in order for waste generators to ship waste to the NNSS. This program is scheduled to continue operations through 2027.
- International Center for Arms Control (ICAC) - Supports President's vision of US gateway for international arms control participation: on-site inspection exercise, joint field training, International Atomic Energy Agency inspector institute and Comprehensive Test Band Treaty.

2024 — *Strategic Horizon* — 2039

Mercury Corridor Capability Sites



C13 Federal Management and Oversight

Linkage to NSE Mission

NNSA/HQ (NA-1) has directed each NNSA Site Office to streamline business operations and reduce operations costs to maximize mission accomplishment. Achieving this vision has been codified in NAP-21, *Transformational Governance and Oversight*, which further states that the NNSA shall leverage scientific and technical capabilities of the workforce by leveraging upon a strong Federal and Contractor Assurance System for improved performance and accountability.

Vision

- The short term vision is to deliver technical solutions to national security challenges.
- The long-term vision of the NSO is to continue providing the NNSA with a safe, secure, and cost-effective environment in which to accomplish mission objectives.

Current

Current Activities

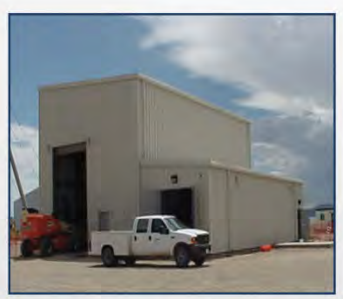
- Upgrade, modernize, and consolidate facilities and infrastructure to ensure mission critical operations are supported
- Continue to strive for long term improvements and efficiency gains in contractor oversight
- Implement a streamlined issues management system

Proposed Projects

- Upgrade facilities and infrastructure and improve capabilities through development and implementation of plans that efficiently and effectively supports critical missions.

- NSO continues to develop strategies to identify, develop and support proposals for facility and infrastructure projects.

2013 — **Tactical Horizon** — 2023



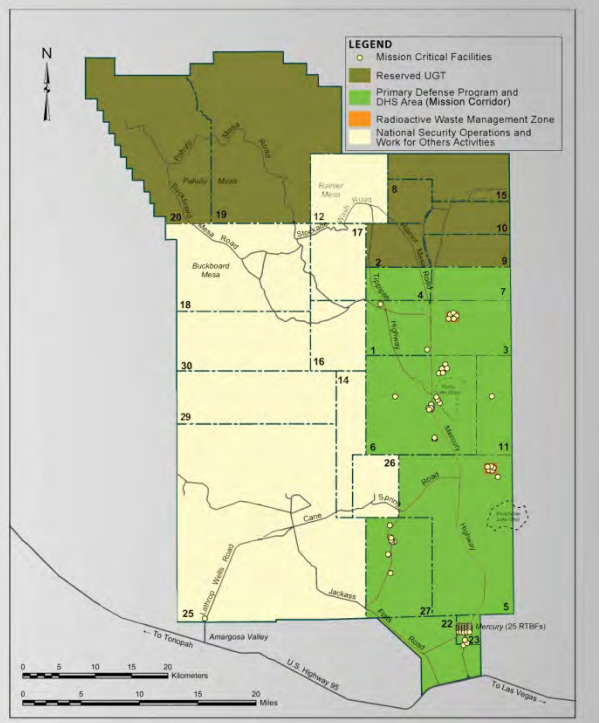
Proposed Future Initiatives

- Continue to work with sponsors and stakeholders to develop the appropriate technologies and supporting facilities.

- NSO will continue to anticipate and forecast the future long-term use of facilities and infrastructure, develop innovative approaches, comply with new regulations, and implement designated projects to improve existing facilities and infrastructure.

2024 — **Strategic Horizon** — 2039

Nevada National Security Site



6.0 Real Property and Asset Management (Appendix H)

The key element in the NvE's ability to meet current and future program needs is ensuring a flexible and reliable facility and infrastructure mix. The facilities must be able to support a return to underground nuclear testing, accept new campaigns and/or missions, and be cost effective. Target conditions for facilities and infrastructure over the next twenty-five years are based on Readiness in Technical Base Facilities requirements, Maintenance Summits, and the resulting DOE NNSA corporate goals to reduce deferred maintenance (DM) on all facilities and infrastructure to industry standards and to reduce DM on all mission-critical facilities and infrastructure to less than 5 percent of replacement plant value.

Despite the vigorous program to excess aged, unusable buildings, the Facilities and Infrastructure Management System indicates 77 percent of the NNSS building square footage is over 30 years old. This situation is exacerbated by a large number of temporary buildings that have been kept in operation for decades beyond their intended life

.

Having a full understanding of the current condition of its facilities and infrastructure enables NvE to direct reinvestment decisions to accomplish the DM goals.

Facility optimization will be realized through a combination of activities, including footprint reduction and consolidation as funding becomes available.

Currently, NvE is meeting all NNSA performance goals as related to Facility Condition Index (FCI). The overall FCI for all mission statuses are:

- Mission Critical (MC): FCI < 5% by 2015
- Mission Dependent (MD): FCI <8% by 2015
- Not Mission Dependent (NMD): Active: FCI <10% by 2015.

The overall sustainment is in line with the NNSA performance goal. If the overall FCI >5%: Maintenance should be 3%-5% of Replacement Plant Value (RPV) or approximately $96 million.

RPV		$3,210	Million		
DM		$ 182	Million		
FCI		5.7%			
		FCI	Asset Utilization Index	# of Assets	GSF Buildings and Trailers (000s)
Mission Dependency	MC	2.0%	86.0	29	372
	MD	4.8%	85.0	447	1,259
	NMD	8.2%	64.0	774	1,248
Facility Use	Office	4.0%	87.0	72	796
	Warehouse	15.3%	84.0	109	396
	Laboratory	2.9%	54.0	41	608
	Hospital	5.6%	96.0	1	30
	Housing	5.4%	67.0	42	219

Data represents FY 2011 Facility and Information System Year-End Snapshot Data (Template A) for five sites: Albuquerque, New Mexico; Mt. Brock, Nevada; North Las Vegas, Nevada; Nevada National Security Site, Nevada; and Santa Barbara, California

6.1 Site Footprint-Current and Future (Appendix I)

NvE does not anticipate any major impacts to office, laboratory, or warehouse space as a result of ongoing transformation. Currently there is minimal planned disposition, but consolidation efforts are planned for FY 2012.

In FY 2012, planned consolidation for the NLVF included closing seven buildings for a total of 16,488 gsf and an operational savings of $85,267. However, mission-related activities in A-12 will preclude closure in FY 2012 so the space reduction is limited to 9,655 gsf and the potential operational savings to $46,866.

There are 413 NNSA/NSO owned buildings and 35 trailers that total more than 2,879,000 gross square feet (gsf) at the NNSS and auxiliary sites listed in the Facilities Information Management System (as of the end of FY 2011 accounting).

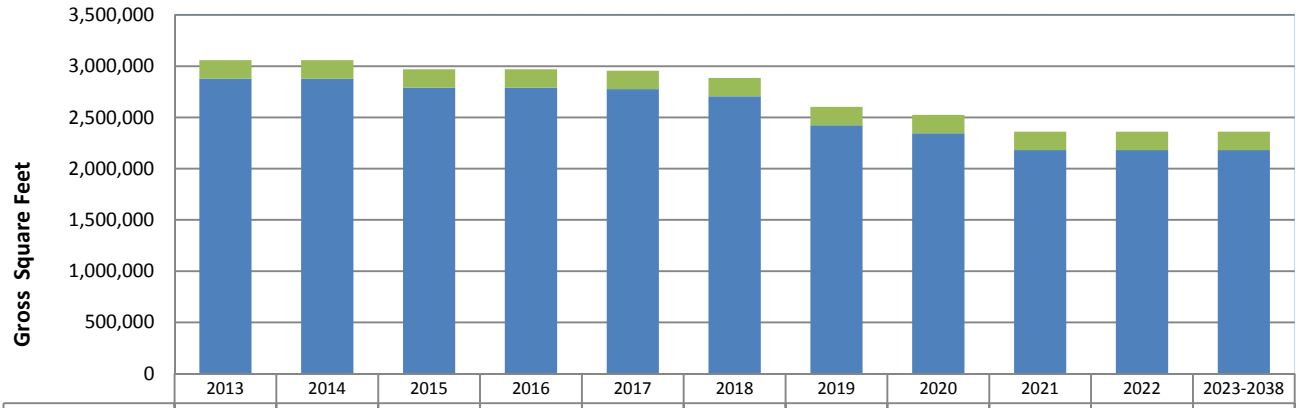
The NNSA/NSO owns or leases buildings at the North Las Vegas Facility, Livermore Operations, Los Alamos Operations, and the Special Technologies Laboratory. The respective owners of the leased facilities at Livermore Operations and Los Alamos Operations are responsible for all facilities and infrastructure repairs. Buildings leased at the Special Technologies Laboratory are maintained by a sub-contractor.

Buildings at the RSL-Nellis and the RSL-Andrews are permitted and total 190,067 gsf. Buildings at RSL-Nellis are maintained by NSTec, and maintenance for buildings at RSL-Andrews is sub-contracted.

NSTec currently has six leases in outlying locations totaling approximately 179,368 gsf of building space. All leases were determined to be cost-effective at the time of execution. Prior to exercising any options for renewal, NSTec completes new market surveys and verifies that the pricing is still fair and reasonable. If a market survey identifies pricing that is not advantageous to the Government, alternative measures, such as a competitive proposal process, are considered with the participation of NSTec and NSO management.

The NNSS footprint is expected to decrease over the next 5 to10 years by approximately 475,000 gsf. There is potential to reduce the footprint by a total of 700,000 gsf over the next 25 years provided funding is received. Currently, NNSA/Headquarters is looking at funding a Disposition Program across the complex.

NNSS Footprint Projection
(Buildings and Trailers)



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023-2038
Outgranted	-	-	-	-	-	-	-	-	-	-	-
Contractor Leased	179,368	179,368	179,368	179,368	179,368	179,368	179,368	179,368	179,368	179,368	179,368
DOE/NNSA Leased	-	-	-	-	-	-	-	-	-	-	-
DOE/NNSA Owned	2,879,061	2,879,061	2,789,884	2,789,884	2,776,009	2,706,069	2,423,762	2,345,690	2,180,872	2,180,872	2,180,872

6.2 Deferred Maintenance and Facility Condition Index (Appendix J)

NSTec performs condition assessments on a five-year schedule. Due to reduced resources, facilities previously assessed on a three-year schedule have had their schedules extended to five years, the minimum requirement of the DOE Order 430.1B, *Real Property Asset Management*. A graded approach is applied according to the mission criticality of buildings to be assessed and the rigor of assessments based on the operational status of the building. NSTec uses the DOE/Headquarters' endorsed process based on the DOE Condition Assessment Survey manuals and the Headquarters-managed Condition Assessment Information System (CAIS) database. By using CAIS, NSTec is compliant by definition.

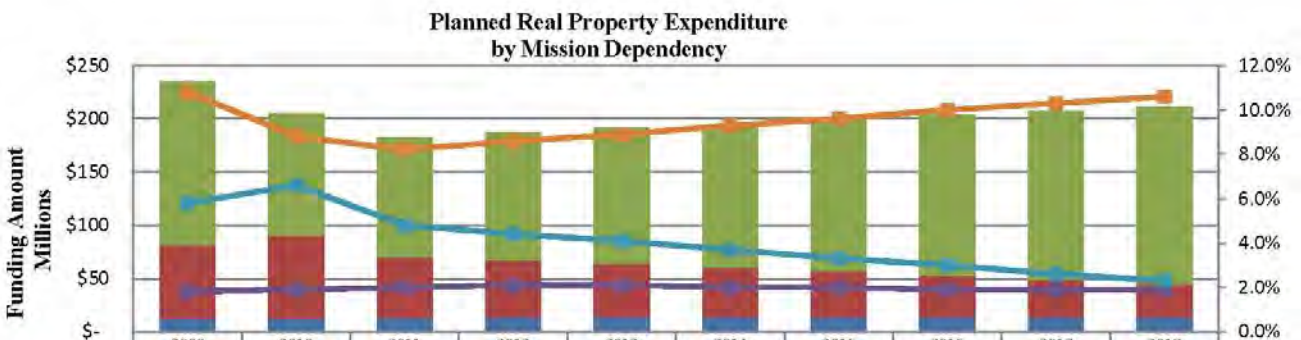
Facilities at North Las Vegas Facility, if regularly maintained, should remain fully functional to support current missions. Eight of the facilities were built in the late 1970s – mid 1980s, 13 in the late 1980s, and three after 1990. Due to the age of some facilities and buildings, major system replacements will be required during the plan period out years.

Many of the facilities at the NNSS have already reached the end of their useful lives both structurally and technologically. Seventy-seven percent of the NNSS buildings square footage is over 30 years old and the average building age is over 32 years.

In FY 2011, the DM reduction was $36 M (approximately $6.4 M buydown was associated with the Facilities and Infrastructure Recapitalization Program). At the end of FY 2011, DM was $182 M.

DM will continue to increase as the Facilities and Infrastructure Recapitalization Program sunsets in 2012 and no demolition funds are received. In the next five to ten years, electrical, heating, ventilation, and air conditioning systems in major facilities will have exceeded their design life and will be classified as failed in the CAIS. These classifications will cause the DM to increase substantially within 10 years. Maintenance funding will remain within the 2 percent performance goal and continue to support operating facilities (MC, MD not critical, and NMD).

The Capabilities Based Facilities and Infrastructure program will have minimal effect on the DM reduction (20 percent) and FCI stabilization. Disposition will have a higher percentage impact on DM reduction and FCI stabilization with over $65 M required for disposition. The reduction of square footage will also contribute to the Sustainability/Energy goals of reducing energy intensity.



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
DM NMD	$153,112,000	$115,259,000	$113,308,000	$120,246,000	$127,405,000	$134,790,000	$142,409,000	$150,266,000	$158,370,000	$166,723,000
DM MD	$69,294,000	$77,480,000	$56,532,000	$53,298,000	$49,913,000	$46,372,000	$42,671,000	$38,806,000	$34,770,000	$30,559,000
DM MC	$12,368,000	$12,421,000	$13,008,000	$13,921,000	$13,947,000	$13,968,000	$13,984,000	$13,995,000	$14,000,000	$14,000,000
FCI MC	1.8%	1.9%	2.0%	2.1%	2.1%	2.0%	2.0%	1.9%	1.9%	1.9%
FCI MD	5.8%	6.6%	4.8%	4.4%	4.1%	3.7%	3.3%	3.0%	2.6%	2.3%
FCI NMD	10.8%	8.8%	8.2%	8.6%	8.9%	9.3%	9.6%	10.0%	10.3%	10.6%

6.3 Space Utilization and Consolidation

NvE is committed to providing a smaller, safer, more secure, and less expensive enterprise that leverages the scientific and technical capabilities of the workforce and meets national security requirements. Over the next twenty-five years, the NNSA Complex will meet current DOE requirements and national security needs and eliminate redundancies and dramatically reduce footprint based on facility disposition funding.

Short-term consolidation recommendations at North Las Vegas Facility include consolidating facilities within the North Las Vegas Facility, closing several buildings, and excessing trailers and equipment.

6.4 Sustainability/Energy

Sustaining facilities and infrastructure is critical to providing the foundation for accomplishing NvE's primary mission to support Stockpile Stewardship and related multi-program activities for the NNSA. Significant progress towards consolidation has been achieved.

NvE is committed to implementing the requirements of the DOE Strategic Sustainability Performance Plan through reducing the use of energy and water in NvE facilities by advancing energy efficiency, water conservation, employee awareness, and the use of solar and other renewable energy sources. The Energy Management Program is performance oriented and strives to ensure continuous life cycle cost-effective improvements to increase energy efficiency and effective management of energy, water, and transportation fleets, while increasing the use of clean energy sources.

Replacing water-thirsty plants with xeric plants outside of Building C-1 earned NSTec NNSA's Pollution Prevention Award for innovative initiatives in achieving "environmental stewardship" in the "Water Resources" category, which recognizes sites that exemplify an integrated approach to water resources management.

Most goals are being met or exceeded. For detailed information pertaining to the Energy Program refer to the FY 2011 NNSA/NSO Site Sustainability Plan.

6.5 Security

As a result of the events of September 11, 2001, several programmatic initiatives were implemented to strengthen the safety and security at all facilities in the NSO complex. They include permanent implementation of an increased security posture and several cumulative increases in defined adversary capabilities as reflected in the revisions to the Design Basis Threat policy and its successor the Graded Security Protection (GSP) policy. The NNSS was certified compliant with the GSP policy in October 2010. In FY 2012, a "Deep Dive" review of the security program, as well as, an update to the GSP was completed. The NvE's implementation of NAP 70.2, *Physical Protection* and NAP 70.4, *Information Security*, is complete. The NvE has been deeply involved in the development of the remaining NAPs that are intended to balance the need for adequate security against the accomplishment of NSO missions.

The NvE has demonstrated a strong commitment in support of Operations Security. Changing missions reduced funding and staffing, as well as, global economic, technological, and terrorist threat calls for new ways of doing business to remain effective in the Operations Security arena. The NvE continues to meet the challenge of protecting national security programs and its personnel. The NSO Operations Security program remains at the forefront of innovation and service and has become a cornerstone of the NNSA and DOE Operations Security programs, and an ardent supporter of the national Operations Security community. The NSO Operations Security program continues to be recognized as a leader in the NNSA, as it has been since 1994.

6.5.1 Security Infrastructure

Three buildings make up a small complex adjacent to the NNSS main entrance. One building serves as the Headquarters for NNSS protective force activities and includes a "muster" room, male and female locker rooms, and logistics support functions. The other two buildings house administrative protective force activities and the NNSS Badge Office. A building located within Mercury is the primary administrative office, training operations coordination center, and general instruction facility for the NNSA/NSO Protective Force Training Academy complex. Other facilities include a shoot house for Special Response Team training, an Elevated Shoot Tower and a Special Response Team obstacle course. Two double-wide trailers previously placed in operation for use as administrative offices have been retired from use, effective FY 2012.

In Area 6, several buildings support security activities in the forward areas. An ongoing project, scheduled for completion in FY 2012, will expand

the DAF Entry Guard Station to support the additional throughput anticipated with the startup of the NCERC. This project will also install four new access control portals that are compatible with the ARGUS alarm and access control system, which is being installed in FY 2012-2013. An upgrade to Building CP-41was completed this year to allow the installation of a Cubic firearms training simulator.

The proposed WSI Facility Consolidation project, which will be designed to be a Leadership in Energy and Environmental Design compliant facility, will provide for the consolidation of security facilities' operations and functions in an effort to ensure strong security and nuclear safety programs.

This project is necessary to integrate security and safety, maximize collaboration of related organizations and functions, reduce the recurring carbon footprint associated with security operations and develop and employ new strategies and technologies for the 21st century.

The project responds to DOE Orders and Federal Codes and Standards, including DOE O 470.4a *Safeguards and Security Program*, DOE O 226.1a *Implementation of Department of Energy Oversight Policy*, and 10 CFR 851 *Worker Safety and Health Program*; Defense Nuclear Security Program; Master Security Plan; DOE Security Strategic Plan; NNSA Defense Nuclear Security Strategic Framework; and Graded Security Protection Policy.

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