

*Pantex FY2012 - FY2021*

# TEN-YEAR SITE PLAN

*May 31, 2011*



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FY2012 - FY2021  
TEN-YEAR SITE PLAN

Approved by:

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## Section 1-Executive Summary

The Pantex Ten-Year Site Plan is aligned with the 2011 Stockpile Stewardship and Management Plan (SSMP), 2010 Nuclear Posture Review (NPR), and the Complex Transformation Supplemental Programmatic Environmental Impact Statement (SPEIS) Record of Decision (ROD). As noted in the SSMP, key elements of the nuclear weapon infrastructure established during the Cold War are now 50-60 years old and are exceeding their original design lifetimes. The infrastructure must be recapitalized to be made more efficient, correctly-sized and able to execute life extension activities, dismantlement of surplus weapons, surplus fissile materials management, and other nuclear security surveillance programs. The identified path forward, with the right investments and priorities, will serve to sustain the physical infrastructure capabilities needed for the long-term.

### Accomplishments

Throughout the fiscal year, Pantex worked diligently to successfully overcome a variety of challenges. These challenges involved technical issues, receipt of components that fell short of their scheduled lead times, and multiple weather events that impacted critical production facilities and operations. Attention to problem resolution and commitment to aggressive recovery schedules resulted in completion of 116% of planned weapon deliverables, including exceeding the baseline delivery schedule for the W76-1 Life Extension Program (LEP).

In support of the President's commitment for nuclear stockpile stewardship, Pantex also achieved a major accomplishment by the early completion of the W62 Dismantlement Program. This success occurred as a result of the dedication and teamwork shared among Pantex and other Nuclear Security Enterprise (NSE) sites.

Pantex achieved a significant National Nuclear Security Administration (NNSA) milestone with authorization for the B53 and

W84 Seamless Safety for the 21st Century Programs (SS-21). As a result, all SS-21 programs are authorized for operations, thus completing the multi-year effort to infuse enhanced safety techniques into weapon programs.

Pantex enhanced pit surveillance effectiveness by qualifying and implementing high-resolution x-ray computed tomography for use on both Los Alamos National Laboratory (LANL) and Lawrence Livermore National Laboratory (LLNL) pit types.

Pantex was commended by the NNSA for creatively resolving near term pit storage capacity challenges in a timely and cost-effective manner.

Pantex continued its drive to enhance operational safety performance and maintain its position as a "best-in-class" safety leader within the NSE. Employees demonstrated their strong safety culture by embracing opportunities to lead various employee-driven safety programs designed to increase operational safety performance, and achievement of the Pantex Voluntary Protection Program (VPP) Star status.

A successful partnership between NNSA and Pantex resulted in the reinstatement of the High Explosive Pressing Facility (HEPF) Project. The project is instrumental in sustaining High Explosives (HE) component manufacturing essential for current and future stockpile stewardship mission requirements.

Pantex received recertification approval of Gold Leadership level participation in the Clean Texas Program and achieved for the 17th consecutive year, no Resource Conservation Recovery Act (RCRA) violations or findings from the Texas Commission on Environmental Quality (TCEQ).

These Pantex accomplishments were the result of the staunch support received from the Pantex Site Office (PXSO) and the Plant's shared philosophy of, "*One Plant, One Mission, One Team-Different Roles, Same Goals*" and our partners at the

national laboratories and other Production Sites working together under the theme “One NNSA, working together”.

### *Pantex-Current State*

The Pantex Plant mission includes: manufacture of specialty HE, fabrication and testing of HE components; assembly, disassembly, maintenance, and surveillance of nuclear weapons and weapon components in the stockpile; dismantlement of retired stockpile nuclear weapons; sanitizing and disposing of components from dismantled weapons; and interim storage of nuclear components from dismantled weapons. Activities are directed through the Production and Planning Directive (P&PD), Program Control Document (PCD), and the Development and Production (D&P) Manual. Pantex supports Stockpile Systems by performing disassembly, inspection and rebuild of weapon evaluation cycle units, assembly of Joint Test Assemblies (JTAs) and post mortem analysis, assembly, disassembly, and analysis of testbed units, Limited Life Component Exchange (LLCE), programmatic alterations (usually defined as Alts or Mods), weapon repairs, weapon and component radiography and non-destructive evaluation, HE testing and explosive component evaluation, pit and non-nuclear evaluations, electrical and mechanical tests, and surveillance/evaluation testing in support of Quality Evaluation Reports (QERs). All B&W Pantex activities ultimately support the core mission of nuclear weapons stockpile stewardship.

### *Pantex-Future State*

This TYSP defines an overall path for modernizing the NNSA Pantex Plant over the 10 and 20 year planning period. Pantex supports NNSA’s long-term commitment to providing the nation a modern infrastructure ready to accomplish the NSE mission. This plan summarizes key infrastructure necessary to implement the strategies delineated in the guiding documents noted above and the P&PD and PCD.

The future end state includes:

The HE Center of Excellence (CoE) is managed and operated in a manner consistent with NNSA and other national needs. Modern infrastructure maximizes productivity while minimizing operating costs. Projected HE production demands are continually assessed and addressed while maintaining essential capabilities in a continuous state of readiness to meet existing needs responsively. Mature productivity modeling ensure available capacities always satisfy manufacturing requirements.

Category I/II Special Nuclear Material (SNM), as well as weapon staging, is consolidated within the production area thus achieving more modern, efficient, and effective operations at a lower overall cost.

Comprehensive non-destructive diagnostics for weapon and weapon components evaluation, as well as reacceptance and refurbishment, are mature and responsive thus minimizing overall Enterprise costs and support increased surveillance demands.

SNM component environmental testing capabilities (relocated from LLNL as directed by the Complex Transformation SPEIS) are fully functional and competently staffed to meet corresponding surveillance and LEP requirements.

An integrated Container Logistics Center is effectively directing Enterprise-wide Type B container packaging, shipping, and related stewardship activities across the NSE from a Pantex hub.

A fully integrated Production Planning & Scheduling system is coordinating Enterprise-wide planning, provisioning, and inventory management from a Pantex Hub, thus optimizing application of critical NSE resources, enhancing Enterprise productivity and minimizing operating costs.

Mature renewable energy systems take advantage of the geographical attributes and incorporation of facility sustainability strategies have institutionalized responsible, enduring Plant environmental and energy management policies that contribute to



long-term viability.

The safety and environmental compliance endeavors have the established maturity and external oversight confidence and status to maintain the NSE benchmark.

Facility reutilization strategies have consolidated function/operations in a manner that sustains a modern infrastructure while minimizing costs and operating footprint.

**Management Concerns/Gaps**

In support of NNSA, B&W Pantex has identified significant facility and infrastructure gaps that require resolution to ensure implementation of NNSA’s Strategic Plan. The gaps will continue to be refined, communicated to NNSA, and collectively resolved to support continued progress and, ultimately, the transformation of Pantex.

**Integrated Funding to Sustain Peak Operations**

Integrated funding of Directed Stockpile Work (DSW), Readiness in Technical Base and Facilities (RTBF) and Safeguards & Security is needed to minimize the impacts of funding shortages in any area on the other funding source work scope. The FY12 President’s budget, as proposed, supported the ramp up in W76 LEP workload with adequate funding in DSW, RTBF, and Safeguards & Security; however, the FY17 budget planning is significantly lower in RTBF and would impact RTBF’s ability to support the increased dismantlement workload. Additionally, anticipated funding of Physical Security does not support the increased DSW mission workload beginning in FY13.

**Mission Operations**

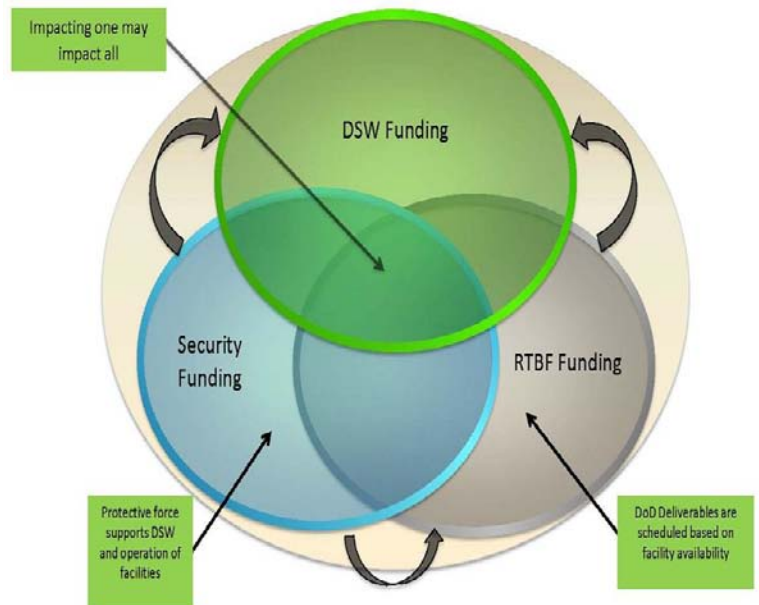
Based on anticipated FY11 funding, B&W Pantex is proceeding in accordance with the workload as defined by NA-12. Future workload projections suggest enhanced testing and corresponding support activities will be necessary to satisfy basic stockpile

stewardship and life extension program activities. Depending on requirements for each program, this would likely include increased non-destructive and destructive evaluation, re-qualified explosive component manufacturing, and pit requalification/reuse processes, as well as CSA surveillance. The increase in surveillance work will be addressed through the construction of a new Weapon Surveillance Facility, existing facility modifications and the installation and qualification of essential diagnostic and support equipment.

**High Explosives Center of Excellence**

The HE CoE has as its cornerstones the HE Pressing, HE Science, Technology & Engineering (ST&E), HE Packaging and Staging (P&S), HE Formulation, Inert Machining, and the HE Component Fabrication and Qualification facilities. These facilities are used to support all elements of the explosives mission

**All Major Funding Sources At Pantex Are Closely Integrated**



including research and development. The HEPF construction contract is currently being bid and is anticipated to be awarded in May 2011. The HE P&S and the HE ST&E facilities were supported by the

Construction Working Group (CWG) and Critical Decision (CD)-0 documents were prepared and submitted for approval. The remaining facilities will require support to fully complete the transformation to a modern CoE capable of reliably producing and performing surveillance activities in support of the Stockpile Stewardship Program (SSP).

**Facilities and Infrastructure Sustainment/Modernization**

The proposed Capability Based Facilities and Infrastructure (CBFI) Program and the Corporate Physical Infrastructure Business Plan (CPIBP) initiatives identified the anticipated near-term, intermediate, and long-term needs of the NSE to sustain and recapitalize the infrastructure required to support NNSA mission. The common theme of the input to these two initiatives is that the infrastructure requires sustainment and recapitalization. Infrastructure includes all real property, installed equipment, and related real property that is supporting multiple program missions at a multiprogram site. Of concern are several systems and pieces of equipment that are reaching the end of their useful life or the manufacturer no longer supports the systems. The table at the right lists a few of the systems and equipment that will require replacement over the planning period to support the mission at Pantex.

Pantex has met mission deliverables within an aging infrastructure; however, risks are increasing due to failing systems and constrained and inconsistent budgets limiting modernization for future program initiatives.

Commercial application of technology is accelerating the need for “technical obsolescence” replacement. Lack of availability of replacement parts and supported software is decreasing system maintainability and reliability. As examples, manufacturers of the Ultraviolet (UV) Flame Detection System, the Radiation Alarm Monitoring (RAM) equipment, and the Lightning Location and Protection Warning

System have notified Pantex that the systems are or soon will be no longer supported.

Systems at “End of Life” or Technologically Obsolete
Flame Detection System
High Pressure Fire Lead-Ins
Radiation Alarm Monitoring System
Building Systems (HVAC/Chillers/Electrical)
Fire Alarm Control Panels
Emergency Vehicles
Lightning Location and Protection System
Boiler Controls
Blast Door Interlocks
Enhanced Thermal Monitoring
Radiation Dosimetry Monitoring
On-site Transportation Trailers
Water Distribution System
Sewer Collection System
Process equipment: LINACS/Manipulators Vacuum Chambers Leak Check Manifolds Computer systems MRP II-(currently being replaced by the Operations Systems Development & Integration Project)

The current Future Years Nuclear Security Profile (FYNSP) is being reviewed to assess the ability to support “end of life” and technical obsolescence replacement of essential support systems and infrastructure.

**Material Staging Facility**

A new underground facility would provide the capability and capacity for safe and secure staging of weapons and weapon components while enhancing the security posture at a reduced infrastructure cost. The facility also supports the consolidation of the Pantex site and reduces the future recapitalization mortgage related to Zone 4 West and the associated Perimeter

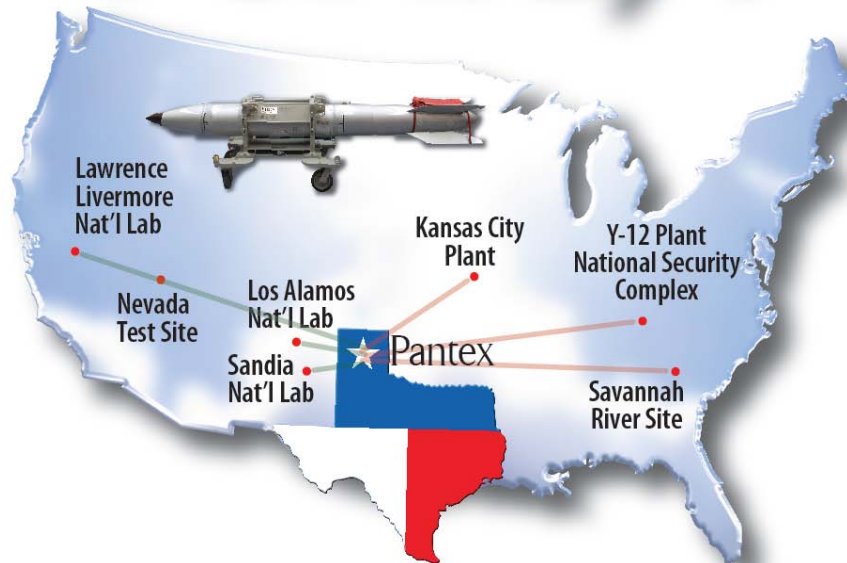
Intrusion Detection and Assessment System (PIDAS). Pantex has performed preliminary investigations of the Department of Defense (DoD) facilities similar to the facility proposed at Pantex and submitted CD-0 documents. As this project is anticipated to be multi-program funded, Program Sponsors are required at headquarters.

**Classified Material Disposition**

There are currently more than 319,200 "scrap" components stored at Pantex and of these approximately 41,500 are classified. The most cost effective disposition of classified nuclear weapon components with radiologic concerns is continued shipment to the Nevada National Security Site (NNSS); however NA-242 has expressed concerns with the proposed agreement with NNSS. Cessation of shipments to NNSS of classified nuclear weapon components with radiologic concerns which have no current

sanitization disposition path would negatively impact Pantex dismantlement mission activities in terms of available type and category of storage facilities. The primary impact is based on available storage relating to radiological limits as opposed to physical storage capacity. For classified weapon components with radiologic concerns for which a sanitization disposition path can be identified or developed, either on-site or off-site, considerable cost would be incurred that is not currently within Pantex funding allocations or baseline requests. B&W Pantex identified potential short-term (FY11-FY12) actions to be implemented to address the potential for storage capacity and production schedule impacts. If shipments are not permitted to NNSS, funding will be required to implement either a subcontractor or on-site disposal.

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**PanTEX**



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## Section 2-Site Overview and Snapshot

The Pantex Plant is operated by the Management and Operating (M&O) contractor, Babcock & Wilcox Technical Services Pantex, LLC (B&W Pantex) under the direction of PXSO. [Appendix G](#) contains the site overview, history, staffing profile, organizational structure, and workforce planning.

As denoted in [Appendix C](#) of this Site Plan, Pantex sustains core capabilities in HE development, synthesis, formulation, pressing, machining, and analytical and performance testing (C5); assembly/disassembly and HE production (C7); category I/II SNM storage (C9); and the key infrastructure supporting these capabilities (C10). Additionally, Pantex is instrumental in supporting other mission/program capabilities including surveillance of weapon components used for certifying weapons and in providing scientific, technical, and engineering basis for HE, as well as surveillance and

requalification capabilities for pits. These supporting capabilities are further defined in [Appendix C](#).

Pantex consists of 52 enduring Mission Critical (MC) facilities, 390 Mission Dependent Not Critical (MDNC) facilities, and 185 Not Mission Dependent (NMD) facilities. Of the 390 MDNC facilities, there are 235 Production Support facilities directly sustaining the capabilities and mission operations in the MC facilities. Over 48% of the MC and 52% of the MDNC facilities are over 40 years old. Charts showing the age of each of these categories are included in [Appendix G](#). These facilities will require some type of refurbishment or replacement in the planning horizon. The initial CPIBP, published March 2011, identified those anticipated recapitalization infrastructure needs over the next 30 years. Red banded projects identified in the CPIBP are addressed as necessary in this TYSP in Attachment A over the period being considered.

FY 2011-2017 Operations of Facilities Budget							
\$ in Millions							
	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
Min Operable Requirement (FY12 incl. \$17.2M for Flood Recovery)	141.3	170.8	158.3	163.6	169.1	174.7	180.5
Flood Mitigation Study (FY12)	0	2.3	13.7	6.6	4	0	0
Maintain HE Press/Addt'l OPC (FY13-16)	0	2.3	13.7	6.6	4	0	0
Target Funding	126	164.8	172	170.2	173.1	172.9	157
Unfunded Requirement	(15.3)	(8.3)	0.0	0.0	0.0	(1.8)	(23.5)

FY10-July 2010 flood event funding required to correct damage (\$28.3M). Received \$8.8M for mass properties equipment, repair of some electrical components impacted by flood, and repair soil wash-out. Remaining balance carried to FY11.

FY11-February 2011 freeze event funding (\$4M not included in the \$ above) required to repair damage from extreme cold.



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## Section 3-Assumptions

This document is based on various assumptions concerning projected budget targets, projected workload, regulatory environment, available facilities, technology, productivity, the work environment, and NNSA's transformation. In some cases, operating basis assumptions are interdependent, and one may affect another.

Noteworthy assumptions include:

- Prioritization will be driven by mission need and ability to continue safe and secure operations in support of the P&PD and PCD
- Budget data for Office of Secure Transportation (OST), DSW, Campaigns, RTBF, and Safeguards & Security are based on the FY12-FY16 President's Budget Request, NA-142 Defense Program Site Splits, and the revised DSW and RTBF budget provided March 2011
- The HEPF, as well as other facilities, are key components of the W76-1 LEP, and future (B61, W80, and W78) LEPs. These facilities have been submitted for NNSA support through the CWG process and captured in the Integrated Construction Alignment Plan (ICAP)
- If the Facilities and Infrastructure Recapitalization Program (FIRP) program terminates prior to completion of the identified projects, the projects will be included as project candidates for the CBFi program and coordinated with the Site for priorities and funding requirements
- For this TYSP, CBFi is assumed to fund the first two facility (12-99 and 12-84E) upgrades for Flame Detection and Radiation Alarm Monitoring System replacement. This will generate the needed spare parts until the Line Item (LI) projects are funded in FY17. The balance of the upgrades to facilities is captured in the Line Item Projects shown in Attachments A-1 and A-2
- Land use is expected to remain constant
- Pantex Plant's ability to meet the goals set forth by Executive Order for Energy Sustainability resides in the implementation of the Pantex Renewable Energy Project (PREP) and construction of the Administrative Support Complex (ASC)
- Maintenance and some recapitalization will continue to be required in facilities until consolidation projects are complete, operational, and the old facilities demolished
- For major LI construction, facility demolition usually occurs after operations are started. In some cases, demolition of some facilities occurs after the ten-year time frame of this TYSP
- Project schedules and funding reflect Pantex Plant needs and may be accelerated from those in the CWG ICAP
- Attachment E, Facility Square Footage Tracking, reflects those facilities that are already approved for disposition in FY12 but a funding source has not been identified. These facilities are reflected in the year where funding will be available under the CBFi Program starting in FY17 (Attachment A-3c)

Planning for the Enterprise of the future and the modernization that will occur over the next several decades will require constant revision to match changing missions, priorities, funding, and implementation impacts at all of the NSE sites.

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## Section 4-Changes from Prior Year TYSP

Major changes from the FY11 TYSP include:

- Attachment A-1 reflects LI projects as shown in the CWG ICAP shown in Appendix M of the FY12 TYSP Guidance
- HE Science and Engineering was renamed HE ST&E to reflect the critical nature technology plays in research and development of HE
- HE Staging Facility was renamed the HE P&S to reflect the need for HE container packaging and staging needs to support a more effective and efficient HE operation
- UV to Infrared (IR) Detector Upgrade was renamed Flame Detector Upgrade
- High Pressure Fire Loop (HPFL)-Material Access Area (MAA) is under construction and anticipated to complete on schedule
- Attachment A-3, cost projections were adjusted to reflect the targets in the TYSP Guidance
- Attachment A-4, FIRP project list changed to match the planning targets provided
- A new program, CBFI, is introduced beginning in FY13. The mission of the CBFI Program is to support capability with the recapitalization, modernization, and refurbishment of facilities and infrastructure, including utility systems; disposition of non-process contaminated facilities excess to the mission; and implementation of energy sustainability projects. The Program consists of four elements:
  - Recapitalization/Life-Extension for Enduring Facilities
  - Infrastructure LIs
  - Disposition
  - Energy Sustainability
- Two buildings have been identified and added to Attachment E, and the associated projects added to Attachment A-5. A new freezer building, approximately 330 ft<sup>2</sup>, is currently planned for the 12-17 B Press Upgrade and 12-62 Extrudable Capability project currently in design. The Office of Secure Transportation – Pantex is preparing to bid a new physical training facility, approximately 8,000 ft<sup>2</sup>, near their current operations in Zone 16. It is anticipated that the square footage associated with this facility will be offset by OST with a transfer of square footage from other locations, as reflected in Attachment E-4.
- An incorrect formula in Attachment E-4(b) was corrected and resulted in the restatement of the FY 2018-2021 “Footprint “Banked” (gsf)” column.
- Square footage associated with the transfer of two EM facilities to NNSA was moved from FY11 to FY10 in Attachments E-4(a) and E-4(b).
- The FY11 RPV was incorrectly input in FY10 in Attachment F-2. This error has been corrected.
- Funding years for projects in Attachment A-3a were changed. All listed projects are on-going or funded by FY12.

The CBFI program would allow Pantex to modernize/recapitalize and sustain the infrastructure for current and future weapon programs, while increasing environmental and energy sustainability. CBFI project planned execution is based on the funding constraints identified in the TYSP guidance. CBFI projects include the planning of a series of facility upgrades to sustain the facilities for planned mission workload. These projects include: modernization of production facilities by replacing “end of life” systems (flame detection, RAM, fire protection lead-in, seismic upgrades, etc.) and recapitalization projects executed over several years to address Pantex needs.

Project completions in FY10 include:

- Repair of 11-55 HPFL
- Repair of 12-130 sewer line
- 12-21 Uninterruptible Power Supply (UPS) replacement
- Installed five additional electrostatic dissipating floors
- Installation of classified wiring in a portion of Zone 11 and identification of additional lines required for Zones 11 and 12
- Demolition of 12-20 and 09-145





## Section 5-Future Vision and Core Capabilities

### Future Vision/Core Capability 5-High Explosives R&D

#### *Future Vision*

Pantex, named as the CoE for explosives production for the NSE, ensures that all essential mission capabilities are sustained, including the ability to support of HE research and development initiatives by the national laboratories. From its roots of conducting significant explosives research and development activities primarily in concert with the national laboratories, to today, where HE development activities focus on manufacturing process improvements and HE safety. In the future, development and research information will be shared via secure media where simulations and actual test data are shared and validated and used to facilitate weapon improvements and maintain a high confidence in the nuclear stockpile. It is anticipated that consolidation of the HE functions will reduce the Plant footprint; however, the newer facilities will reduce maintenance and operating costs as well as substantially improve operating efficiencies.

Key projects needed to realize the HE CoE vision include:

- HEPF
- HE ST&E
- HE P&S
- HE Formulation
- Zone 11 HPFL Replacement
- Flame Detection Upgrade

These projects also support the HE production efforts. Refer to Attachment A for the list of projects and the mission programs supported by each project. Section 7 reflects the nominal schedule of each of these and the other real property projects.

#### *Core Capability*

Explosive production and associated development is concentrated within the elements of the programmatic explosives mission categories of synthesis, formulation, pressing, precision explosives machining and assembly, component fabrication and assembly, mechanical testing, chemical materials characterization and performance testing. Much of this work supports production qualification, stockpile-related surveillance, or process improvement initiatives.

#### *Near-Term (FY12-FY21) Capability/Needs to Achieve NNSA Strategic Goals and Objectives*

- Modernize HE pressing and machining capabilities to maintain War Reserve (WR) production levels and support national laboratory demand for the stockpile stewardship, LEP, and national hydrodynamic programs
- Capitalize on existing Pantex Plant HE core competencies to expand and improve the HE mission work for NNSA, other government agencies, and non-governmental organizations
- Establish project management discipline for explosives operations to ensure all production, project, and research deliverables are on time, safe, secure, and with high quality
- Integrate HE Research and Development (R&D) work with hydrotesting, detonation systems, and surveillance of the legacy stockpile through the updating testing of diagnostics for chemical, physical, and performance testing
- Maintain the capability to function test programmatic HE systems for acceptance and surveillance activities
- Actively pursue replacement of experienced personnel lost to retirement with talented scientists and engineers willing to commit to the NSE. Invest in employees' future through education and training

- Build on Work for Others (WFO) governmental and commercial opportunities to maintain the intellectual vitality of personnel and to exercise HE processes and stockpile stewardship by being the low-cost, high quality provider of materials and services
- Complete the HE CoE transformation with the construction and startup of the HE ST&E, HE P&S, Inert Machining, HE Formulation, and HE Component Fabrication and Qualification facilities. Refer to Appendix E sheets 2 (demolition) and sheet 3 (future)

***Long-Term (FY22-FY31) Capability/Needs to Achieve NNSA Strategic Goals and Objectives***

- HE expertise necessary to support such missions is developed and sustained through a variety of programs. This expertise spans the range of synthesis, formulation, fabrication and production, surveillance, analysis, shock physics, materials characterization, experimentation, modeling, and simulation
- Be the provider of choice for all customers for material and intellectual products through the effective use of scheduled resources as realized by overall reduction in product cycle time and reduced direct costs to the customer
- Provide sufficient HE capacities and capabilities to efficiently support current and proposed NSE demands; thus, ensuring knowledge retention through fabrication, testing, and performance
- Position the Pantex Plant to be the NSE preferred site for HE analytical chemistry and programmatic HE performance testing
- Increase WFO opportunities, performance, contributions to the site budget by maintaining a presence and reputation as HE experts and partners, and to ensure continued support of critical HE mission work
- Establish a responsive infrastructure and work processes that enable quick response to NNSA/DOE mission changes or new developments in the HE manufacturing business environment
- Increase collaboration with Universities, Design Agencies (DA), NNSA plants, and the Atomic Weapon Enterprise (AWE) to leverage technical exchange and research opportunities
- The HE CoE is managed and operated in a manner consistent with NNSA and other national needs. Modern infrastructure maximizes productivity, while minimizing operating costs. Projected HE production demands are continually assessed and addressed while maintaining essential capabilities in a continuous state of readiness to meet existing needs responsively. Mature productivity modeling ensures available capacities always satisfy manufacturing requirements

## Future Vision/Core Capability 7- Assembly/Disassembly

Under the Complex Transformation Supplemental Programmatic Environmental Impact Statement, Pantex will remain the Weapons Assembly/Disassembly CoE. The Complex Transformation SPEIS also recognized the need to build a Zone 4 replacement for weapon staging and SNM storage resulting in more efficient operations and reduced security recapitalization costs.

### Future Vision

Recognizing that the nuclear weapons stockpile is aging beyond its original design life, the NNSA is undertaking new surveillance initiatives that increase the projected Pantex workload. This includes augmented sampling, increased testing, and deployment of new diagnostics to meet revised testing requirements. More diagnostic tests are being conducted on components than ever before. As the Enhanced Surveillance initiative establishes new capabilities and a more predictive approach to stockpile evaluation is applied, new testing techniques are incorporated into the Core Surveillance Program.

In addition, potential options to perform non-destructive surveillance on CSAs at Pantex are currently being considered within the NSE. In cases where CSA disassembly is not required, this approach will yield timelier, less expensive, more logistically efficient data acquisition for stockpile certification purposes.

### Core Capability

Include:

- Performing stockpile surveillance, retrofitting, and repairing weapons in support of both LEPs and certification of weapon systems safety and reliability
- Requalifying/refurbishing pits for use in LEPs
- Dismantling weapons surplus to enduring stockpile needs

- Sanitizing and disposing of components from dismantled weapons

### Near-Term (FY12-FY21) Capability/Needs to Achieve NNSA Strategic Goals and Objectives

Planning is underway with regard to the B61 LEP scheduled for First Production Unit (FPU) at Pantex in FY17. In preparation for this LEP, the site may be required to refurbish/requalify pits used during the primary assembly. This effort will require some degree of process development and formalized process implementation at the site.

Performing CSA reacceptance at Pantex is a topic of consideration within B61 and W78 LEPs planning discussions. When applying non-intrusive processes similar in nature to those used for W76-1 pit requalification the option offers efficient component recovery and essentially eliminates inter-site transport of large quantities of CSAs during the term of the LEP. As planning proceeds, the site stands ready to provide necessary cost and schedule estimates related to such implementations upon request.

- Plan and secure resources and infrastructure required to support the FPU of the B61 LEP and sustain production schedule commitments
- Plan and apply pit pre-screening and refurbishment capabilities to include pit tube modification, as necessary, to support B-61 LEP requirements
- Plan and apply CSA reacceptance capabilities in support of the B61 LEP
- Commence and sustain two-shift operations on all plant Linear Accelerator (LINAC) systems to maintain existing surveillance schedule
- Disposition all backlogged legacy components resulting from dismantlement
- Support NNSA commitments to Congress for dismantling retired warheads
- Apply automated tracking and inventory system (RuBee), as appropriate

- Plan and begin to apply diagnostics required to perform non-destructive CSA surveillance
  - Plan, secure, and apply resources and capabilities required to support the FPU of the W78 LEP and sustain production schedule commitments
  - Plan and apply pit pre-screening and refurbishment capabilities, as necessary, to support W78 LEP requirements
  - Plan and apply CSA reacceptance capabilities in support of the W78 LEP
  - Complete the transformation and modernization with the construction and startup of the Fire Suppression Lead-ins (FSLI), Flame Detection, Facility Installed Continuous Air Monitoring (FICAM), Non-destructive Evaluation Facility, Fire Protection Building Lead-ins, and Material Staging Facility LI projects. Refer to Appendix E sheets 1 (current footprint), 4 (demolition), and sheet 5 (future)
  - Implement the CBFI program and execute the required infrastructure recapitalization, sustainment and demolition of projects identified in Attachments A-3b, c, and d
- Long-Term (FY22-FY31) Capability/Needs to Achieve NNSA Strategic Goals and Objectives***
- Maintain, sustain, and recapitalize the infrastructure to support production commitments related to the W78 LEP
  - Plan and align resources and infrastructure required to support the FPU of the W88 LEP
  - Plan and apply pit pre-screening and refurbishment capabilities, as necessary, to support W88 LEP requirements
  - Maintain, sustain, and recapitalize the infrastructure to support production commitments related to the W88 LEP
  - Plan, secure, and apply resources and capabilities required to support the FPU of the W80 LEP
  - Plan and apply pit pre-screening and refurbishment capabilities, as necessary, to support W80 LEP requirements
  - Apply CSA reacceptance capabilities in support of the W80 LEP
  - Maintain, sustain, and recapitalize the infrastructure to support production commitments related to the W80 LEP
  - Maintain, sustain, and recapitalize the infrastructure required to support the FPU of the W87 LEP
  - Complete the production modernization with the construction and startup of the Weapons Surveillance Facility item project. Refer to Appendix E sheets 1 (current footprint), 4 (demolition), and sheet 5 (future)
  - Continue CBFI program execution by recapitalizing, sustaining, and demolishing projects identified in Attachments A-2, 3b, c, and d



## Future Vision/Core Capability 7- High Explosive Production

### Future Vision

The RoD for the Complex Transformation Supplemental Programmatic Environmental Impact Statement selected Pantex Plant as the CoE for HE production and manufacturing. The HE production mission of Pantex is required to support nuclear weapons stockpile stewardship while continuously improving levels of safety and productivity. Major activities include manufacturing special stockpile explosives, fabricating explosive components, performing comprehensive destructive/non-destructive testing of explosive products, and providing explosives asset stewardship.

When the HE CoE is fully implemented, Pantex will have the sustainable infrastructure in place to support the HE need for the foreseeable future. Production will be performed in modern sustainable

buildings with efficient and effective process to minimize costs and maximize operability. Explosive formulation could be performed in large lots to minimize variations and testing. Pressing will be done with near net-shape precision and machining will be minimal.

The Physics Laboratories will have validated aging models developed through the accumulation of surveillance and testing data that will allow historical materials to be minimized reducing the footprint currently required for long-term storage. Pantex will continuously manage its explosive inventory to ensure sufficient storage space to meet all future stockpile stewardship requirements.

### Core Capability

Pantex HE synthesis operations are performed in an enduring facility. Pantex is currently the only national supplier of WR quality Hexanitrostilbene (HNS), booster and detonator grade High Melting Explosive (HMX), Pentaerythritol Tetranitrate (PETN),





and booster grade ultra-fine Triamino Trinitrobenzene (TATB) and Research Department Explosive (RDX) for LX-07 explosives.

Pantex currently formulates up to 200 lb batches and must blend the batches to reduce inconsistencies and variations. Quality testing is performed on each of the smaller batches. Pantex is the only producer of war reserve qualified extrudable HE XTX 8003 and 8004, LX-16, LX-07, and Mock 900-24 for test flights. Pantex is also backup for Holston for PBX-9501.

Pressing operations are being maintained in the current World War II (WWII) facility until the HEPF is completed in FY16.

Machining operations are performed in an enduring facility. Pantex is the only producer of machine finished parts for nuclear weapons production. Unique machining operations include producing HE surveillance samples to support core and enhanced surveillance, performing required safety inspections on as-pressed HE parts, producing specially-fabricated HE parts for NNSA Labs and other off-schedule customers, and sanitizing HE main charges resulting from weapon disassembly.

Main charge explosive materials recovered from dismantled weapons are either made available to DoD (after sanitization) for use in conventional munitions, transformed into commercially viable products, or destroyed by suitable means on-site.

Key projects needed to support the HE CoE production efforts include:

- HEPF
- HE ST&E
- HE P&S
- HE Inert Machining
- HE Formulation
- Zone 11 HPFL Replacement
- HE Component Fabrication and Qualification Facility
- Flame Detection Upgrade

These same projects support the HE R&D efforts. Refer to Attachment A for the list of projects and the mission programs

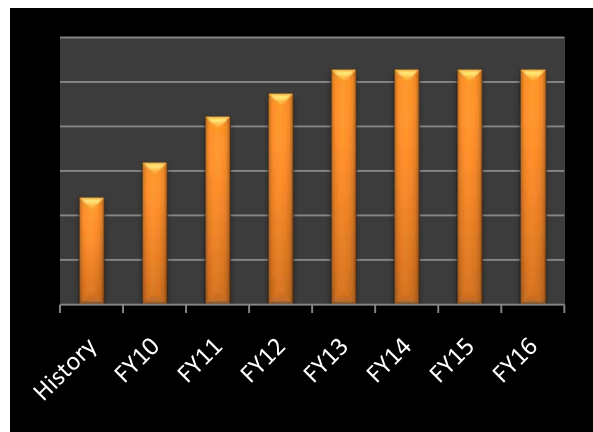
supported by each. Section 7 reflects the nominal schedule of each of these and the other real property projects.

*Near-Term (FY12-FY21) Capability/Needs to Achieve NNSA Strategic Goals and Objectives*

Commence and sustain two-shift operations for main charge fabrication (pressing and machining) to satisfy W76-1 LEP schedule demands.

Planning is also underway with regard to the B61 LEP scheduled for FPU at Pantex in FY17. In preparation for this LEP, the site must establish appropriate Insensitive High Explosives (IHE) main charge fabrication processes. This effort will require some degree of process development and formalized implementation at the site.

- Establish and implement appropriate IHE charge fabrication process for B61 LEP scheduled for FPU at Pantex in FY17
- Implement 900 17/LM Mock HE capability for production setups and Joint Test Assemblies (JTA) applications
- Implement RuBee tracking and inventory system to enhance productivity and to regulate potential HE over-load and incompatibility issues in operations
- Modernize extrudable HE loading and



HE Pressing Workload

testing capability to meet B61 LEP requirements

- Develop and implement virtual training methods
- Implement Design to Manufacture (D2M) explosives fabrication and acceptance processes
- Deploy Non-Destructive Density determination (ND3) production system for main charge HE hemispheres inspections pending completion of prove-in and DA approval
- Complete the HE CoE transformation with the construction and startup of the HE ST&E, HE P&S, Inert Machining, HE Formulation, and HE Component Fabrication and Qualification facilities. Refer to Appendix E sheets 1 (current footprint), 2 (demolition), and sheet 3 (future)

***Long-Term (FY22-FY31) Capability/Needs to Achieve NNSA Strategic Goals and Objectives***

- Sustain and recapitalize the infrastructure to support production commitments related to the W78 LEP
- Align resources and infrastructure required to support the FPU of the W88 LEP
- Sustain and recapitalize the infrastructure to support production commitments related to the W88 LEP
- Sustain and recapitalize the infrastructure to support production commitments related to the W80 LEP
- Sustain and recapitalize the infrastructure required to support the FPU of the W87 LEP
- Launch environmentally contained testing and disposition of explosives



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## Future Vision/Core Capability 7- Campaigns

### Future Vision

Enhanced Surveillance continues to provide new or improved diagnostic techniques for detection and quantification of age-related degradation and other potential defects in the stockpile. Enhanced Surveillance works with DSW to develop and deploy new diagnostic tests that enable evaluations to be more sensitive to these concerns.

Implementation of many of the new diagnostic tools has not required new facilities; however, diagnostic tools such as high-energy x-ray imaging will require new facilities. A new Weapon Surveillance Facility (WSF) will provide the needed infrastructure for these new diagnostic tools.

The Readiness Campaign delivers process improvements to sustain critical capabilities that would otherwise become technologically obsolete. It is also focused on meeting capability demands emerging from system LEPs or other stockpile stewardship requirements. Capabilities that substantially reduce production costs and delivery times within the Enterprise are planned and delivered in an integrated fashion.

PDRD remains an invaluable part of the plant's process improvement effort continuously evaluating new manufacturing-related approaches.

### Core Capability

The Campaigns and the PDRD Program will develop and implement new capabilities for weapon production and surveillance. Specific objectives follow:

### Near-Term (FY12-FY21) Capability/Needs to Achieve NNSA Strategic Goals and Objectives

- Implement improved HE performance diagnostics
- Deploy Non Destructive Evaluation (NDE) diagnostics to obtain the relevant

data on more samples without costly destructive tests

- Implement new and expanded capabilities for thermal performance, sensitivity, and mechanical properties testing of explosive materials and components
- Establish sustainable provisions for TATB and TATB-based insensitive explosives
- Implement enhancements to explosive component fabrication processes that ensure the enduring capability to support B61, W78, W88, and W80 LEP primary design requirements (i.e. Near net-shape pressing, E-fabrication, extrusion processes, etc.)
- Develop additional pit pre-screening and refurbishment capabilities to include pit tube replacement and shell over-cladding in support of B-61 LEP requirements
- Develop and implement prescreening and reacceptance processes for CSAs in support of the B61 LEP
- Develop and implement diagnostics (10) required to perform non-destructive CSA surveillance
- Develop and implement process for Defense Programs Package (DPP)-1 container pit packaging for off-site shipment
- Develop procedures utilizing a DPP-1 container as a breached pit contingency that contains the component locally and facilitates shipment to LANL
- Establish and implement Type B container processes for packaging and shipping Radioisotopic Thermoelectric Generator (RTGs) to accommodate surveillance and disposition activities
- Develop and implement sustainable manufacturing processes for specialty explosive and mock formulations
- Implement D2M explosives fabrication and acceptance processes
- Facilitate enterprise-wide interactive production planning and scheduling system

- Comprehensively implement automated tracking and inventory system (RuBee)
- Develop and implement comprehensive pit and explosives surveillance diagnostics
- Develop and implement additional pit pre-screening and refurbishment capabilities in support of W-78 LEP requirements based on NNSA decisions
- Develop and implement pre-screening and reacceptance processes for CSAs in support of the W78 LEP based on NNSA decisions
- Efficiently administer NSE Type B container logistics system
- Package and transport RTGs off-site for surveillance and disposition

#### *Long-Term (FY22-FY31) Capability/Needs to Achieve NNSA Strategic Goals and Objectives*

- Implement paperless manufacturing, assembly, and acceptance processes
- Launch contained testing and disposition of explosives
- Apply remote sensor technology for weapon/component surveillance based on NNSA decisions
- Deliver virtual training methods site-wide to improve efficiencies and reduce costs
- Develop and implement additional pit pre-screening and refurbishment capabilities in support of W-88 LEP requirements based on NNSA decisions
- Develop and implement pre-screening and reacceptance processes for CSAs in support of the W88 LEP based on NNSA decisions
- Develop and implement additional pit pre-screening and refurbishment capabilities in support of W-80 LEP requirements based on NNSA decisions
- Develop and implement pre-screening and reacceptance processes for CSAs in support of the W80 LEP based on NNSA decisions

#### **Future Vision/Core Capability 9-Category I/II SNM Storage**

This program element provides for receipt, storage, inventory and surveillance of nuclear and non-nuclear material and weapon components from dismantled weapons and disposition of legacy components. Sub-elements funded at Pantex are defined as follows:

**Storage of SNM:** Includes provisions for the directed storage of nuclear components at the site. Activities include planning, design, engineering, and start-up activities related to processing, packaging, and placing components in safe storage. Ancillary activities include thermal monitoring and periodic inventorying of the population. In addition, out-year forecasts of nuclear component storage requirements at the site are provided to NNSA annually.

**Pit Inspection/Surveillance:** Includes the inspection and various measurement activities associated with pits in storage. Activities include weight and leak testing, gas sampling, visual inspections, digital imaging, dimensional inspection, and radiography.

**Disposition of Legacy Material:** Identification of legacy material, identification of currently available disposition processes, development of new disposition processes, and off-site shipment of material to ultimate disposition sites.

#### *Future Vision*

- Develop and implement process for DPP-1 container pit packaging for off-site shipment
- Develop procedures utilizing a DPP-1 container as a breached pit contingency that contains the component locally and facilitates shipment to LANL
- Execute container surveillance programs (Type B and on-site storage containers)
- Establish and implement Type B container processes for packaging and



- shipping RTGs to accommodate surveillance and disposition activities
- Establish a Type B Container logistics depot to provide NSE-wide stewardship capabilities for nuclear shipping containers
- Establish required capability and capacity for dimensional inspection, laser gas sampling, and micro-focus x-ray for all pit surveillances
- Implement a Zone 12 Material Staging Facility to improve operational efficiencies and reduce PIDAS maintenance and recapitalization costs that are currently planned

#### **Core Capability**

- Continue to execute container surveillance programs (Type B and on-site storage containers)
- Maintain pit pre-screening and routine surveillance capabilities
- Provide environmental control and physical security for the pits
- Ensure pit storage samples meet safety and reliability requirements as specified in DA requirements documents
- Package and facilitate transport of components, as required, to LANL for material recovery

#### **Near-Term (FY12-FY21) Capability/Needs to Achieve NNSA Strategic Goals and Objectives**

- Implement SNM environmental testing capability at Pantex
- Provide environmental control and physical security for the pits
- Increase the storage capacity for pits in Zone 12 South through the construction of the Material Staging Facility
- Ensure pit storage samples meet safety and reliability requirements as specified in DA requirements documents
- Package and facilitate transport of components, as required, to LANL for material recovery
- Establish required capability and capacity for dimensional inspection,

- laser gas sampling, and micro-focus x-ray for all pit surveillances
- Relocate Integrated Pumpdown and Fill Station (IPFS) to W76-1 requalification
- Modify facility as necessary to accept glove box for the B61 LEP pit refurbishment/re-qualification process(es) (as decided by Rigatoni PRT)

#### **Long-Term (FY22-FY31) Capability/Needs to Achieve NNSA Strategic Goals and Objectives**

- Provide environmental control and physical security for the pits
- Ensure pit storage samples meet safety and reliability requirements as specified in DA requirements documents
- Package and facilitate transport of components, as required, to LANL for surveillance and/or material recovery

#### **Future Vision/Core Capability 10-Infrastructure Support Facilities**

##### **Future Vision**

A key tenant of the 2010 NPR is, “*Modernization of the infrastructure, including major capital projects, needed to ensure safe, secure, sustainable and cost-effective operations in support of scientific and manufacturing activities.*” Pantex with the support of the NNSA intends to sustain and recapitalize the infrastructure in order to perform the Pantex mission while supporting the consolidation, energy, and sustainability goals of the Department.

##### **Core Capability**

Pantex infrastructure capabilities include substantially constructed weapons assembly/disassembly bays and cells, HE synthesis, pressing, machining, and firing site facilities. Pantex has identified 235 facilities as Production Support (PS) facilities that directly sustain the capabilities and mission operations in the MC facilities. Examples of these essential facilities are identified in [Appendix G](#).

### ***Near-Term (FY12-FY21) Capability/Needs to Achieve NNSA Strategic Goals and Objectives***

LI projects identified in the Attachments A-1 and A-2 are required to ensure reliable facilities and infrastructure to sustain long-term benefits to NNSA. Near-term, the Fire Suppression, Flame Detector Upgrade, FICAM, HE CoE, and NDE facilities will require support. Additionally, several projects identified in the CBF1 Program in Attachment A-3 will enable Pantex to sustain operations until the LI projects are able to be supported with congressionally authorized funding. These projects (Flame Detection and RAMS) will minimize the disruptions to Production by upgrading individual areas and allowing the obsolete system components to be used for spares to repair those facilities that have yet to be upgraded.

The Pantex Renewable Energy Project (PREP) is being pursued as an Energy Savings Performance Contract. This project will play a key role in satisfying the President's National Objectives and the Secretary of Energy's priorities and goals for energy conservation. It will reduce greenhouse gas emissions at local power plants, enhance energy security, reduce energy costs, and lay the foundation for continued energy conservation in the future. Energy generated and used by the Plant is expected to reduce the Plant's electrical costs. The first 10-15MW will reduce the Plant's energy consumption and annual cost

### **Future Vision/Core Capability 13-Support of Other Mission/Program Capabilities-Material Disposition**

#### ***Material Disposition (MD)***

The Office of Fissile MD (NA-26) provides for the safe, secure, and environmentally sound storage of all fissile materials, thermal monitoring, storage sampling surveillance, development of processes to

by approximately 55% based on preliminary analysis.

The Administrative Support Complex (ASC) is being pursued as an alternative financed facility. When complete and the identified vacating facilities are demolished, the new facility will reduce the Plant footprint by 100,000 ft<sup>2</sup> and reduce the deferred maintenance by \$13.9M.

Initiatives from other NNSA programs include site wide wireless initiatives, Homeland Security Presidential Directive (HSPD)-12 badge authentication into unclassified networks, and cyber security operations centers. These initiatives are being evaluated for potential future funding requests.

Several other LI projects are identified in Attachment A-2 such as RAM Refurbishment, Cells Upgrade, Closed Circuit Television (CCTV), Weapon Surveillance Facility, Flood Natural Phenomenon Remediation, and other replacement/refurbishment projects will require support. Refer to Appendix E sheets 1 through 7.

### ***Long-Term (FY22-FY31) Capability/Needs to Achieve NNSA Strategic Goals and Objectives***

Long-term LI projects identified in the Attachment A-2 are required to address previously identified CPIBP projects to recapitalize enduring facilities and ensure reliable facilities and infrastructure to sustain long-term benefits to NNSA.

utilize the new surplus pit shipping container (MD-2), special pit shipments, and the ultimate disposition of non-weapons grade unusable fissile materials declared surplus to national security needs.

#### ***Future Vision***

Develop and implement process for MD-2 container pit packaging and off-site shipment. Implement enhanced pit thermal monitoring enhanced technology. Package

and ship surplus pits to Savannah River Site (SRS) to pre-stage items supporting the Pit Disposition and Conversion Facility project.

### **Core Capability**

Perform pit repackaging activities for surplus pit off-site shipment to the DA to support storage sample surveillance requirements and Advanced Recovery and Integrated Extraction System (ARIES) demonstrations, as directed per DOE authorization letters.

Monitor the thermal environments of pits in Zone 4 magazines and trailers and thermally characterize additional magazines for pits stored in the Sealed Insert (SI) containers. The project includes retrieval and reporting of thermal data, instrumentation of storage areas containing pits, and monitoring/characterization of storage facilities.

Inspect surplus pit storage samples, selected by the DA, to ensure they continue to meet safety and reliability requirements as specified in DA requirements.

### **Near-Term (FY12-FY21) Capability/Needs to Achieve NNSA Strategic Goals and Objectives**

- Develop and implement process for MD-2 container pit packaging. Package and ship surplus pits to SRS to pre-stage items supporting the Pit Disposition and Conversion Project
- Package ship surplus pit for off-site shipment to the DA to support storage sample surveillance requirements
- Perform pit repackaging activities for surplus pit off-site shipment supporting ARIES demonstrations, as directed per DOE authorization letters
- Implement enhanced thermal monitoring of pits in Zone 4 magazines and trailers and thermally characterize additional magazines for pits stored in the SI containers. The project includes retrieval and reporting of thermal data, instrumentation of storage areas

containing pits, and monitoring/characterization of storage facilities

- Inspect surplus pit storage samples, selected by the DA, to ensure they continue to meet safety and reliability requirements as specified in DA requirements
- Support planning, development, and startup of a new Material Staging Facility

### **Long-Term (FY22-FY31) Capability/Needs to Achieve NNSA Strategic Goals and Objectives**

- Continue storage capability, thermal environmental monitoring, and surveillance activities as defined above
- Transition operations to the new Material Staging Facility
- Package and ship surplus pits to SRS supporting the Pit Disposition and Conversion Project

### **Future Vision/Core Capability 13-Support of Other Mission/Program Capabilities-Work for Others**

#### **Work for Others (WFO) Future Vision**

Reimbursable projects provide unique DOE/NNSA contractor goods or services to Other Federal Agencies (OFAs) and the private sector. These projects are fully funded by the requesting agency and performed on a non-interference basis with DOE/NNSA funded work. Pantex's reimbursable work scope includes but is not limited to: Nuclear nonproliferation, Counterintelligence, HE products and services, Nuclear Counterterrorism Incident Response group, consultation, and other specialized training.

#### **Nuclear Nonproliferation**

Pantex has several WFO programs involved in arms control and the nonproliferation of nuclear warheads, materials, and technologies in the former Soviet Union, including the impact of future arms control

treaties on Pantex and the prevention of the proliferation of nuclear warhead technologies. The current presidential administration could reopen negotiations through the Bilateral Implementation Commission of the Strategic Offensive Reduction Treaty (SORT, Treaty of Moscow) for a verification regime. If a warhead elimination régime were to be negotiated and ratified, there exists the possibility that sometime in the future a Russian delegation could visit Pantex as part of verification regime.

#### ***Counterintelligence (CI) Program***

Counterintelligence (CI) interfaces and supports the Federal Bureau of Investigation (FBI), the Central Intelligence Agency (CIA), and the Department of Homeland Security (DHS).

#### ***HE Products and Services***

B&W Pantex Explosives Technology (ET) Division provides HE support to NNSA's National Laboratories, as directed on a cost-reimbursable basis. As an added benefit the activities will assist in maintaining capabilities and threshold capacities for synthesis, formulation, pressing, machining, and analytical/performance testing of all NNSA explosives, as necessary to meet stockpile acceptance, surveillance, rebuild, JTA, and LEP requirements. These activities also support related elements such as component development, component replacement, component aging studies, and sanitization.

#### ***Nuclear Counterterrorism Incident Response (NCIR)***

B&W Pantex provides qualified technical and professional personnel and equipment for Accident Response Group (ARG), ARG disposition, Joint Technical Operations Team (JTOT), and Radiological Assistance Program (RAP). These enhance DOE capability to respond to accidents and significant incidents involving nuclear weapons or components.

#### ***Secure Transportation Asset (STA) Program***

B&W Pantex provides services to the Offices of Secure Transportation (OST). These services include performance of inspections, maintenance, and modifications of OST trucks/tractors, escort vehicles, Safe Secure Trailers (SSTs), Safeguard Transporters (SGTs), and associated electronics and communications equipment.

#### ***Consultation and Other Specialized Training***

B&W Pantex recently began offering classes and services to Statoil of Norway, the American Public Transportation Association, numerous DOE National Laboratories and Production Sites related to High Reliability Operations (HRO)/Organization, and Causal Factors Analysis. These WFO efforts are anticipated to increase with recent world events.

#### ***Environmental Management***

The DOE Office of Environmental Management (EM) and Office of NNSA have initiated the closeout of the Pantex Plant ER program and transition to Long-Term Stewardship (LTS). In FY11, NNSA will be responsible for Pantex LTS management. Pantex entered into an Interagency Agreement (IA) between the U.S. Environmental Protection Agency (EPA), Region 6, the U.S. DOE, and the TCEQ in early 2008. The IA is pursuant to Section 120(e) of Comprehensive Environmental Response Compensation and Liability Act (CERCLA). The IA describes the process by which the DOE/NNSA will complete cleanup activities to address impacts from legacy operations at Pantex, and defines the roles and responsibilities of each party. NNSA will be responsible for continuing to meet the regulatory requirements as documented in the ROD and amended Compliance Plan.



***Near-Term (FY12-FY21) Capability/Needs to Achieve NNSA Strategic Goals and Objectives***

- Reimbursable systems and processes will continue to be developed and/or upgraded to ensure increased efficiencies and lower costs associated with the Pantex reimbursable work program
- Examples include:
  - Make the WFO program as seamless as possible such that the private sector wants and can do business with B&W Pantex without undue paperwork and bureaucracy
  - Maintain a site-wide integrated project baseline management system to ensure project managers can properly monitor project costs against schedule, while enabling Pantex sponsors to access the same unclassified data
  - Maintain an intellectual property function in which ideas from plant-specific activities can be patented and actively marketed for licensing potential with the commercial sector

- Maintain the capability to support HE projects for other governmental agencies with respect to the fabrication and testing of HE assemblies and evaluation of HE issues
- Provide DOE/HQ with training and training aids for Other Governmental Agencies (OGA) with respect to Weapons Incident Response

***Long-Term (FY22-FY31) Capability/Needs to Achieve NNSA Strategic Goals and Objectives***

- Develop an external E-Business capability enabling potential Pantex reimbursable sponsors to:
  - Identify the plant capabilities and services desired
  - Communicate with the responsible plant management
  - Enter into appropriate contractual instruments electronically
  - Enable the sponsor to update project status and receive unclassified summary reports



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## Section 6-Real Property Asset Management

B&W Pantex has developed a long-range plan that balances new construction, energy conservation, and facilities disposition and is aligned with workload projections to ensure support of the mission. The details of this plan are reflected in Attachments A and E. Based on the planning assumptions, including no identified disposition funding source, Pantex square footage is anticipated to increase as shown in the TYSP timeframe.

The FYNSP funding profiles for Pantex show the Operations of Facilities budget to be adequate to support minimum operations in FY13-FY16. The current funding level for these years supports the DSW mission deliverables which includes the W76-1 LEP, surveillance requirements, and dismantlement activities. It also provides funding to support base program non-labor costs for utility services, regulatory compliance contracts, direct material, minimum unplanned expenditures and/or emerging issues, and onboard headcount. It does not fully maintain all operations or arrest the growth of Deferred Maintenance (DM). The immediate challenge is to increase the site funding for critical infrastructure improvements, upgrades needed to maintain HE pressing capabilities until new facility is operational, and stabilize the growth of DM.

The funding target for FY17 is over \$23M below the minimum operations level for Operation of Facilities. This funding level is inadequate to support the projected on board head count and the base operations. The DSW mission deliverables will be placed at high risk.

Over the past several years, Pantex has been inadequately funded to sustain facility and infrastructure requirements to support NNSA objectives. Due to these funding constraints, available resources were focused on ensuring mission critical facility availability. This was at the expense of the

rest of the plant and is evidenced by the increased rate of degradation of facilities and equipment over the last several years. In FY11, the unplanned facility and equipment failures in MC facilities are resulting in a significant impact to facility availability and placing the site's ability to meet the DSW mission at risk.

### *New Construction-Line Item Projects*

Pantex has identified facility and infrastructure LI projects in support of the site mission. NNSA evaluates and selects LI construction projects to satisfy the program requirements and funding targets identified in the FYNSP. Planned major construction of four new HE facilities, a staging facility, an evaluation facility, and an alternative financed administrative support complex in the 10 year planning horizon will result in approximately 346,000 ft<sup>2</sup> increase in owned production space and 235,000 ft<sup>2</sup> in leased space. This new square footage could result in approximately 394,000 ft<sup>2</sup> of dispositioned owned space and 53,000 ft<sup>2</sup> of dispositioned leased space. Reductions in facility utilization may not be realized until after the 10 year planning horizon and is contingent on funding for disposition activities. In the 20 year planning horizon, planned major construction of nine new facilities will result in approximately 459,000 ft<sup>2</sup> that could result in 415,000 ft<sup>2</sup> of dispositioned owned space. Over the twenty year planning horizon, this would represent a net reduction of 82,000 ft<sup>2</sup> of owned space.

The alternative financed administrative support complex is planned to be a major contributor to energy efficiency and reduction in owned space noted above. The 235,000 ft<sup>2</sup> increase in leased space could result in approximately 334,000 ft<sup>2</sup> of dispositioned owned and leased space over the 20 year planning horizon. The demolition planned as the result of this recapitalization will result in a projected energy savings of approximately \$225,000 and a reduction of approximately \$13.9M in deferred maintenance.

Funding for general plant, expense and capital equipment projects come primarily from RTBF. The current RTBF budget does not allow for adequate recapitalization of plant infrastructure nor does it allow for improvements related to environmental sustainability. Pantex Plant has historically been dependent on FIRP and Plus-Up funding for plant recapitalization and without adequate RTBF funding; the plant infrastructure will continue to deteriorate. Attachment J is provided for informational purposes and represents the backlog of unfunded General Plant Project (GPP), expense, and capital equipment projects at Pantex. Some of the key projects in the backlog include the replacement of the deteriorated high pressure fire loop lead-in piping to production and production support buildings, classified wiring for HE areas, safety and efficiency related projects, and security capital improvements.

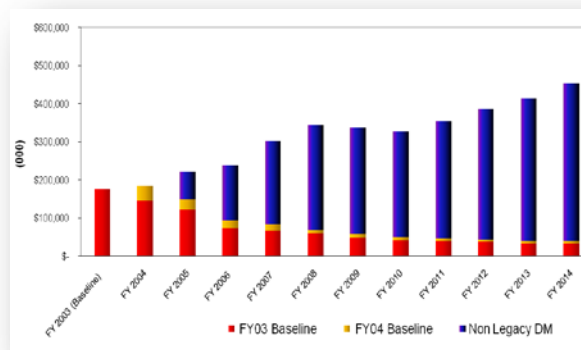
**Deferred Maintenance Reduction**

The DM backlog at the end of FY10 was \$317M, which is \$20M less than the end of FY09. DM buy down in FY10 was \$27M, while new growth due to the minimal inspections performed was \$7M. A significant portion of the increase, \$4M, was due to inflation of the backlog to current year dollars. DM reduction since FY03 is approximately \$246M. Projected DM reduction for FY11 is \$18M.

B&W Pantex DM estimates for deficiencies identified during Condition Assessment Survey (CAS) inspections are derived from the Condition Assessment Information System (CAIS) database. Future DM backlog projections are based on a mathematical model that includes factors for plant deterioration, inflation, and plant growth. The model is also used to estimate required maintenance based on funded and approved projects as listed in this TYSP. Estimated required maintenance is based on maintaining a 2.7% Facility Condition Index (FCI) for MC facilities, and an FCI for MDNC facilities of 11.8% in FY10 and improving to 11% in FY21 for an average

combined (MC/MDNC) FCI of 7% or below, and a stabilized total FCI of 7.5% or below through FY21.

Due to RTBF funding limitations, there is currently no funding mechanism to address DM, which impacts the plant's ability to maintain an adequate condition for all facilities and infrastructure. The result of this is evident in Attachment F-2 and Appendix J, which reflects the in-balance in the FCI for mission critical and mission dependant not critical facilities and



infrastructure.

The FIRP Program was the primary funding source used to restore, rebuild, and revitalize the physical infrastructure at Pantex. As such, the Pantex FIRP Program was the primary funding source focused on reduction of deferred maintenance that significantly increases the operational efficiency and effectiveness of facilities and systems in support of stockpile stewardship mission.

With the sunset of the FIRP Program, the Operations of Facilities funding is not adequate to arrest the growth of backlog DM. The CBF program, currently being initiated, may allow Pantex to modernize/recapitalize and sustain the infrastructure for current and future weapon programs.

**Space Utilization and Consolidation**

Space management encompasses all real property owned or leased by DOE. The RTBF Program is responsible for the overall management of space. However to support

the site mission, individual facilities are assigned to functional organizations based on space requirements and specialized construction. The functional organizations are responsible for the day-to-day utilization of their assigned buildings. Space utilization remains high at Pantex with space being 97.1% utilized in FY10. Because of this high utilization, site planning efforts are closely coordinated with plant mission and support needs so that operations are in facilities appropriate for their use, and changes in facility requirements are coordinated and implemented in advance.

**Sustainability**

Pantex is moving to a whole facility concept to consider all facets of environmental and energy sustainability. Actions and activities

for sustainability encompass the many issues of environmental protection, pollution prevention, resource conservation, waste management, energy and water management as well as the reduction of greenhouse gases resulting from Plant processes and the use of petroleum fuels. Any project can be properly developed to support sustainability, whether it is a specific project to upgrade the efficiency of a building's heating, cooling, and ventilation units; construct a new building; to replace a roof or even to decommission and deconstruct retired buildings. Pantex is striving to replace finite energy sources with sustainable and renewable wind-generated energy and as practical, solar power. Sustainability is a growing concept that will drive improvements in Plant operations for years to come.



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## Section 7-Planned Projects and Cost

Pantex utilizes a risk management process to prioritize identified facilities and infrastructure projects that are reported in the Attachment A cost projection spreadsheet. Once projects are requested, they go through an evaluation phase to develop all pertinent information, then a board including program managers from RTBF, DSW, and Safeguards & Security Programs determine the perceived risk to the plant. This determination allows the project to be ranked against other known projects to compete for available funding. This ranking is then provided to all the Program Offices for their evaluation against their standing list and ranked accordingly for impact to the Pantex Plant. Those projects receiving sufficient ranking then are planned for funding and scheduled to be worked.

Emerging issues are a constant battle taking planned project funds to address more immediate needs. LI projects shown in Attachment A-1 have been approved by the CWG ICAP and are progressing through

the various stages of the CD process. The LI projects shown in Attachment A-2 are proposed in the timeframes when they are needed and may be delayed by availability of funding from Congress.

As noted earlier, Pantex has met mission deliverables within an aging infrastructure; however, risks are increasing due to failing systems and constrained and inconsistent budgets limiting modernization for future program initiatives. Rapid advancements of commercial applications are driving accelerating “end of life” replacements. Availability of parts and supported software represents an increasing risk for system maintainability and reliability. Examples noted earlier included: UV flame detection systems, RAM equipment, fire alarm panels, lightning location and protection warning system, and some multi-program process equipment manufacturers have notified users that the systems are or soon will no longer be supported. A basic multi-year funded program is needed for the NSE to efficiently and effectively modernize and recapitalize the infrastructure.

### Current and Approved Line Items

Nominal Schedule of Pantex Real Property Projects Based on Needs																				
per TYSP Attachment A-1																				
FY	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
HPFL, Zone 12 South, MAA																				
HE Pressing Facility																				
Fire Suppression Lead-ins Project																				
Flame Detector Upgrade																				
Pantex Renewable Energy Project (PREP)																				
HE Science & Engineering Facility																				
HE Packaging & Staging Facility																				
HE Formulation Facility																				
HE Component Fabrication and Qualification Facility																				
FICAM Equipment Replacement																				
Non-Destructive Evaluation Facility																				
High Pressure Fire Loop-Zone 11																				



## Narrative Section

**HPFL, Zone 12 South, MAA**-The HPFL Zone 12 South MAA Upgrade project is to provide a reliable fire suppression system capable of supporting mission essential facilities at Pantex by replacing aging and deteriorated piping in the existing aging HPFL Zone 12 South MAA system. The project involves replacement of the existing ductile iron pipe with High-Density Polyethylene (HDPE) pipe in the fire loop, installation of new fire hydrants, and replacement of necessary valves and appurtenances. Cathodic protection for the valves and hydrants will also be included.

**HEPF**-The project provides a new HE main charge pressing facility with capability and capacity to meet the needs of changing weapon complexity, projected workload, and the LEP activities in the future including various programs.

**Fire Suppression Lead-ins Project**-This project addresses the lead-ins for 35 mission critical bays/cells. The existing piping is predominately ductile and cast iron pipe and was installed between 1979 and 1985. Since the installation of this pipe, various upgrades and maintenance activities have been performed to reduce the acceleration of pipe corrosion. Methods to reduce the rate of corrosion (e.g. cathodic protection or pipe coatings) were not installed with the existing pipe resulting in accelerated pipe degradation. Due to pipe aging and the existing soil conditions, the lead-ins have experienced degradation from corrosion, and several failures have occurred. Twenty-three failures have occurred in the total HPFL system in the last 13 years.

**Flame Detector Upgrade**-In January of 2003, changes in Factory Mutual standard FM3260, 2000 edition, "Radiant Energy-Sensing Fire Detectors for Automatic Fire Alarm Signaling", became effective. In May of 2002, the manufacturer (Det-Tronics) announced that current modular based UV controllers (R7404, R6006, and R1425) will not comply with the new product approval

standard and will be phased out of production. The combination of the new regulatory requirements, component obsolescence, and the availability of new technologies for increased capabilities prompted this phase out. The announcement also indicated that repair capability for these controllers will be maintained only through 2012. These controllers are currently used in the nine buildings included in this project scope.

**PREP**-In response to the Energy Policy Act (EPA) 2005, Executive Orders 13423 and DOE Order 430.2B stated requirements and goals; the mission need for this project is to provide Pantex with the capability to meet these requirements of 7.5% renewable energy and the Secretary of Energy's expectation to meet the requirements. Additionally, Pantex is favorably positioned geographically to advance the NNSA's ability to achieve the administration goal for green energy. As the result of installation of the PREP, Pantex should be positioned to obtain an alternative financed administrative support facility and further reduce energy consumption, maintenance, and deferred maintenance by vacating 31 inefficient and ineffective facilities.

**HE ST&E Facility**-Operational and technology development laboratories for HE testing and development including: environmental aging, test fire operations, new lot testing, laser measurement, and sampling technology development are currently located in 15 separate facilities which are an average of 58 years old and not constructed for today's operations and do not provide for efficient work processes. A consolidated HE ST&E Facility will support the NNSA mission to mature advanced weapons surety technologies, qualify weapon components, and provide data for annual stockpile assessments through weapons surveillance. The Mission Need and Program Requirements documents have been submitted for CD-0.

**HE P&S Facility**-Current staging and packing operations have reduced HE capacity limits creating inefficient operations

located in ten buildings, with an average age of 57 years old, and multiple zones at the Plant. Standard DA HE lot sizes ranging from 2,000 lbs to 5,000 lbs cannot be met with the current facility limit of 400 lbs. Consolidation of packaging and staging operations into a new HE P&S Facility will result in an estimated 38% reduction in square footage and provide for efficient work processes for both HE R&D and production. The Mission Need and Program Requirements documents have been submitted for CD-0.

**HE Formulation Facility (HEFF)-HE** formulation operations are currently being performed in several aged facilities. To support the expected workload and provide backup capability of sufficient quantities of HE, relocation of the formulation processes are necessary. The current facility lacks the capacity to support the expected workload and requires extensive maintenance. A new HEFF being proposed in this TYSP will relocate those HE operations currently performed in Zone 12 to the HE area of the plant in Zone 11. The HEFF will also be capable of larger more homogeneous batches of explosives improving both the quality and consistency. The new facility is consistent with plant modernization strategies and siting it in this manner ultimately advances the HE CoE for HE Manufacturing by evolving toward a consolidated Zone 11. In doing so, formulation, synthesis, pressing, and rough machining activities are collocated, thus improving logistical efficiency and operational responsiveness to better support the needs of the NNSA and the Nation.

**HE Component Fabrication and Qualification Facility-**To address continued stockpile aging questions, NNSA has recently embarked on a form of surveillance transformation initiative. During the next decade the approach escalates the quantity of system evaluations performed at the site while at the same time encumbering them with the complexity of implementing new diagnostics aimed at targeting specific

potential vulnerabilities. Once fully implemented however, the new methodology will serve to minimize the quantity of tests conducted per system by acquiring a limited amount of more informative data. Nonetheless, as the stockpile continues to age and the DAs continue their exploration of weapon materials aging processes, component surveillance, characterization, and lifetime predictions will remain vitally important to ensuring the long-term health of the stockpile.

**FICAM Equipment Replacement-**The field processors and some of the components for the existing alpha and tritium sensors are no longer available from the manufacturer. Certain parts have not been produced by a manufacturer since 1995, and Pantex has used up the entire supply of surplus parts. Additionally, the two radiation sensors are no longer manufactured or supported by the manufacturers. The field processors are board level microprocessors with custom software written for the existing Continuous Air Monitoring System (CAMS). The existing alpha sensors use technologies developed in the 1970's and the current manufacturer has indicated they will no longer manufacture or support the current models. Components are getting harder to find and the last components were purchased through the internet from a firm closing out their inventory. The tritium monitors were upgraded in the late 1990's; however the manufacturer has indicated they will not be supporting this product.

**Non-Destructive Evaluation Facility-**Critical non-destructive evaluations and laboratory analysis of gasses to support analytical and scientific evaluations of weapon systems are currently performed in aging, WWII structures. Temperature levels are very difficult to maintain and the building electrical system is highly unreliable. Several areas have specific temperature and electrical requirements that must be maintained precisely, otherwise extremely expensive electronic equipment is subject to failure, and analyses supporting production



will not be done. The use of state-of-the-art equipment is limited because of the existing facility's aging infrastructure. One example is technology advances in x-ray operations, mainly the use of digital equipment, which is difficult to establish in the existing facility.

**HPFL-Zone 11**-The HPFL is designed to provide water at a pressure, flow rate, and quantity to meet the demands of the fire suppression system in each facility. Failures in the existing system have increased over the past several years. Three failures have occurred since 1995 in the Zone 11 system. The latest of these failures occurred in July 2002. The cast iron pipe deterioration and lack of cathodic protection is expected to increase these failures.

**Fire Protection Building Lead-ins**

**Replacement Project**-This project addresses the lead-ins for the mission dependent not critical facilities in Zone 12 South MAA. The existing piping is predominately ductile and cast iron pipe and was installed between 1979 and 1985. Since the installation of this pipe, various upgrades and maintenance activities have been performed to reduce the acceleration of pipe corrosion. Methods to reduce the rate of corrosion (e.g. cathodic protection or pipe coatings) were not installed with the existing pipe resulting in accelerated pipe degradation. Due to pipe aging and the existing soil conditions, the lead-ins have experienced degradation from corrosion, and several failures have occurred.

Twenty-three failures have occurred in the total HPFL system in the last 13 years.

**HE Inert Machining Facility**-The quantity of components from dismantled weapons will significantly increase as each nation works to reach its agreed threshold limits. Each component generated from the dismantlement process will require characterization, sanitization, and disposed according to approved methodology. This increase is anticipated to exceed the current

capability at Pantex. Additionally, as new HE technology is developed in conjunction with the DAs, new and unique fixtures and test apparatus will be required. Those parts and fixtures will utilize advanced technology currently unavailable.

**Material Staging Facility**-The Staging Area is remote to the production area. Weapons and weapon components are transported 1.3 miles between the staging and production areas. Transporting nuclear weapons and nuclear parts through limited and protected areas is an inherent safety and security risk. Relocating the staging operations to an area in proximity to production will reduce these risks and eliminates inclement weather risks that may cause production delays and postpone weapon movements between the two areas. The facility also supports the consolidation of the Pantex site and reduces the future recapitalization mortgage related to Zone 4 West and the associated PIDAS.

**Operations Systems Development & Integration Project**

This initiative to replace the functionality of the CAS software with a new product enhances Pantex manufacturing operations utilizing modern software solutions. The project provides a technology refresh with added capability and is in line with the Product Realization Integrated Digital Enterprise (PRIDE) vision and the Office of the Chief Information Officer (OCIO) Enterprise Architecture.

**Administrative Support Complex**-The Pantex Plant requires a sustainable administrative support infrastructure that has the capacity to meet the NNSA Defense Programs (DP) Mission. The new facility would address the immediate need for technological and infrastructure enhancements currently unavailable in existing facilities. Eighty-one percent of the administrative and office support space will be consolidated and eliminate 31 buildings, with a net reduction of 100,000 ft<sup>2</sup>.





## Narrative Section

**Weapon Surveillance Facility**-The facility will deliver capacity for current non-destructive evaluation testing techniques and provide space for the deployment of new capabilities required to perform innovative component interrogation and requalification or reacceptance of weapons and weapon components. This facility will consist of radiological evaluation and staging bays.

**Cells Upgrade**-The Nuclear Posture Review (NPR) shows an increased in future dismantlement requirements for Pantex. Investments to modernize the nuclear infrastructure will ensure that the U.S. can continue to decrease this backlog in a responsible manner. Based on this information, the Pantex Plant will require additional production cell capacity to support the increase in workload while some facilities are impacted for required infrastructure upgrades.

**Flood Natural Phenomena Remediation**-Existing conditions within the boundaries of the Pantex Plant are inadequate to prevent facility flooding during a 25-year, 6-hour rainfall event. This emerging project was validated in the July 7, 2010, rainfall event of 10.3 inches of rain (a 6 hour 2000 year event). The system-wide drainage system was incapable of containing and removing the amount of water produced during the rain event as the hazard assessment had predicted. That event lead to significant water levels across the plant including water flows within several of the production facility areas impacting equipment, utilities, production, and personnel. For the next month, production was impacted as the recovery effort progressed to validate facility condition and capabilities.

**Steam Distribution System Upgrade**-System piping experiences leaks, insulation degradation, valve failures, and alignment concerns. These leaks and insulation issues result in energy loss and increase steam production costs. Failure of pipe

anchors, expansion joints, and valves cause safety concerns due to blowing steam and possible pipe breaks.

**Water Secondary Distribution Upgrade**-The majority of the 30 miles of distribution piping and valves have exceeded their service life, and we have experienced increased failures over the past several years. There are currently 15+ leaks on the system affecting 24 facilities/locations. The leaks have caused domestic water to be shutdown to some facilities (restrooms, drinking water, etc.) and supply lines.

**CCTV**-The project provides for installation of a CCTV system in all bays and cells in Zone 12 MAA to enhance safety and address Defense Nuclear Facilities Safety Board (DNFSB) concerns. The system allows for observations of the work areas for safety concerns and aids in accident investigations should one occur. It will allow first responders to a potential emergency situation, in a production facility, the ability to visually assess any hazardous saturation inside a bay or cell prior to entering the facility.

**Replacement, 12-005C, 12-35, 12-068 (CPIBP)**-The project will enable infrastructure refurbishment and the retention of capabilities. A replacement facility will allow the closure and demolition of old, deteriorating existing facilities and improve efficiencies by locating maintenance functions closer to the areas requiring support.

**RAM System (CPIBP)**-The RAMS system is required in production facilities to ensure safe working conditions for personnel. The refurbishment of the RAMS system will ensure the required infrastructure capability to safely support future workload and mission requirements.

**12-002 Replacement, Administrative Support Complex**-The existing medical facility, built in 1972, was not designed to accommodate the number of evaluations required by the Human Reliability Program (HRP) under 10CFR712, Drug/Alcohol

program requirements of 10CFR 707 and 49CFR40. Further the facility is out of compliance with Health Human Services "Mandatory Guidelines for Federal Workplace Substance Abuse Programs". Additionally, the facility and program at Pantex may lose its Accreditation Association for Ambulatory Health Care (AAAHC) accreditation given the new, higher facility requirements for patient confidentiality and inadequate space to perform evaluations.

**Sewer Collection System Manhole**

**Refurbishment**-Increased failures, outages, and operational issues/costs continue to be a concern with 230 manholes and system. Several manholes and lines have deteriorated to the point they have caved in causing sink holes which are a safety concern. Many manholes and lines have also been abandoned due to demolition of facilities in the area causing additional operations issues as to adequacy of flow and waste getting to the sewage lagoon for proper disposal.

**Sewer Equipment Refurbishment**

Operating problems to varying degrees are being realized with 12 of 14 lift stations. Many of the stations have exceeded their useful life causing increased maintenance and repair cost. When a lift station fails it requires shutdown of the buildings/restrooms affiliated with a failed station impacting operations and personnel. These stations are primarily located in pits or manholes which are confined work spaces. This requires additional safety approvals, equipment, and time to make repairs.

**Cogeneration Plant**-Vulnerabilities exist in the likelihood of massive increase in electrical cost due to the local utility's coal-fired plant, increasing emissions and expanding carbon footprint, and most importantly the security risk of unscheduled blackouts and/or planned disruption of the grid at a nuclear facility. Cogeneration addresses these vulnerabilities, providing a continuous availability of both electricity and steam, even during loss-of-power events.

The development/installation of cogeneration will aid in energy conservation, maintaining current energy costs by reducing the amount of energy purchased from the local energy providers, and by addressing carbon footprint and emission reduction.

**Steam Production Facility Upgrade**

Facility/equipment, constructed in the late 1980s, is approaching the end of its useful life and requires upgrading to maintain efficient operations. Steam leaks, outdated controls, inefficient boiler burners/controls, outdated emission control systems and outdated instrumentation are all concerns.

**Fire Alarm Panels Replacement (CPIBP)**

This project replaces the existing fire alarm panels in production facilities due to technical obsolescence. Existing panels will no longer be supported by the manufacturer after 2012.

**Building Upgrades (CPIBP)**

Several production and security facilities require electrical and mechanical system enhancements to support technology changes which require increased power and cooling requirements. Enhancements will support security and production equipment end-of-life replacements and will soon not be supported by the manufacturer. This is a rollup of several building refurbishments including 12-079, 12-044, 11-051/51A, 12-1118, 12-082, 12-001, 12-099, 12-104, 12-037, 12-042, 12-026, 12-83, 16-001, 12-066, and 12-15/15A.

**12-64 Replacement (CPIBP)**

This project provides continued capability in support of weapons assembly/disassembly and ensures the required capability to support future workload and mission requirements.

**Security PIDAS**

PIDAS complementary sensors require replacement. All of these sensors are obsolete or quickly approaching obsolescence. DOE M 470.4-2, Change 1, CH. VII.a (3) requires the PIDAS to employ multiple layers for protecting SNM. Complementary sensor technology is required.

**Protective Force Portal Upgrade and Enhancement Project**-This project provides for upgrades and enhancements to the access/egress Protective Force Stations and Portals at Pantex to maintain an effective security operation today and into the Complex Transformation. The project allows Pantex Protective Force personnel adequate facilities and equipment to control personnel during entry/exit, conduct contraband searches, and house new equipment to enhance both personnel and search activities.

**Protective Force Live Fire Ranges Upgrade and Enhancement Project**-This project provides for upgrades and enhancements to the live fire ranges at Pantex so they can be maintained in good condition up through the DOE Complex Transformation. The project will allow Pantex Protective Force and Office of

Safeguards Transportation personnel to have adequate training facilities for the new firearms and detection equipment added for implementation of the new Graded Security Protection Policy.

**Special Security Systems**

**Refurbishment**-The mission gap for this project is infrastructure refurbishment. Security systems are required throughout the plant to maintain the safe and secure stockpile requirements. The replacement of PXAT 610.03 will ensure the required infrastructure capability to safely meet future workload and mission requirements.

**Fencing**-As part of the planning process, this asset is planned to be upgraded by 2020. Based on past experience, some systems included in this asset reach technical obsolescence after approximately 10 to 15 years. A key piece of this project is the PIDAS.



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*RTBF includes CBFJ Projects*

per TYSP Attachment A-3 series – M=major or C=critical path projects																														
FY	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31										
UV to IR Conversion-12-99		C																												
RAMS Replacement-12-99		C																												
Metrology Lab Environmental Controls Upgrade		C																												
Environmental Controls for LEP in Production Facilities		C																												
Lightning Location and Protection System (LLPS) Replacement		C																												
Explosive Facility Lightning & Surge Protection		C																												
Asset Management Support (Roof/Roads)		C																												
Seismic Upgrades (Ceiling & Wall Modifications)			C																											
Mock HE Capability Upgrade			C																											
Sustainable Facility, 11-2/11-27			M																											
Guard Tower Stair Replacement			M																											
HVAC Replacement (4)			C																											
Num-1 Hoist Upgrade			C																											
Vacuum Chamber Upgrades			C																											
Facility Modifications for Non-Intrusive Pit Reuse			C																											
Fuel Management Upgrades (12-108, 4-147, 16-013, 16-001)				C																										
Narrowband Radio Upgrade				C																										
Alternate Command Center Electrical & Mechanical Sustainability				M																										
Command Center Electrical & Mechanical Sustainability				M																										
Fire Alarm Panel Replacements (bays/cells)				C																										
Environmental Testing Facility–SNM				C																										
Paint Bay Modifications for Sustained Operations					C																									
UV to IR Conversion 12-084E					C																									
RAMS Replacement 12-084E					C																									
Production/Training Floor Space Recapture					C																									
16-016 RCRA Facility Floor Replacement					C																									
HE Formulation Electrical Upgrade for LEP					C																									
Breath and Alcohol Testing (BAT) Facility					C																									
ARGUS AFPS (50)/RAPS (100) Replacement						C																								
ARGUS AFPS (100)/RAPS (500) Replacement						C																								
Uninterruptible Power Supply, 12-98						C																								
Storm Drainage System Modifications							C																							
BDI Replacement							C																							
Capital Equipment Infrastructure Replacement										C																				



## Narrative Section

**UV to IR Conversion-12-99**-Production facility fire protection systems are required to ensure the safety envelope of weapons operations during assembly/disassembly phases. The current Ultraviolet (UV) high speed deluge trip system will be supported by the manufacturer until 2012, assuming component parts are available.

**RAMS Replacement-12-99**-The project replaces all alpha and tritium continuous air monitors (CAMs) equipment located in bays and cells and the field processors and reporting system. Project also replaces the individual area evacuation alarm units (EAUs) and the RAMS field processors and central alarm monitoring systems.

**Metrology Lab Environmental Controls Upgrade**-The project will replace aged and failing HVAC and dehumidification systems in metrology calibration laboratory. Metrology calibrates tooling and equipment required to support all surveillance, Life Extension Programs, and dismantlement activities. Existing systems will not adequately support projected workload including calibration of over 80 new tools, additional copies of tooling, and tooling requirements for dismantlement, and the SS21 process.

**Environmental Controls for LEP in Production Facilities**-Replace old pneumatic controls and devices prone to failure and thereby compromising the environment required to support surveillance and dismantlement activities. Replacing this equipment addresses deferred maintenance, supports energy savings initiatives, and supports the Life Extension Programs. Methodically upgrading and commissioning environmental control systems will significantly improve energy efficiency and ensure temperature and humidity is controlled within the strict parameters required to support production.

**Lightning Location and Protection System (LLPS) Replacement**-The LLPS is

a safety class system that is required for certain lightning sensitive operations in multiple weapon programs and is used for personnel safety warnings. It is credited in sitewide safety documents. The LLPS system sensors and software are the primary items that have reached end of life and the manufacturer is no longer supporting our existing units. The software upgrade will be running on PCs instead of the present Unix computers and the new configuration will be simpler and more reliable. The National Lightning Detection System is upgrading their sites now and in order to remain compatible, Pantex must also upgrade the system.

**Explosive Facility Lightning and Surge Protection**-Upgrade 43 facilities to protect operations from a lightning assault. Protection is required on both the primary side of the facility transformer and/or at the secondary feed in the facility's main distribution panel. Additionally, some facilities require upgrade and certification of the aerial lightning protection system. Upgrade ensures compliance with DOE Explosives Safety Manual-Pantex version, Chapter 2, Sections 8.3.a and 8.3.b., as well as safe and compliant operations in explosive category facilities.

**Asset Management Support (Roof/Roads)**-The project rehabilitates roadways in Zones 12, 11, and 4, which are required for safe and secure transport of weapon systems. Additionally, roof coatings are required every five years to protect roofing membranes from damage caused by infrared and ultraviolet deterioration and resulting leaks.

**Seismic Upgrades (Ceiling & Wall Modifications)**-The project continues seismic upgrades and related improvements to walls and ceilings of specific mission critical production bay and cell facilities. Includes procurement and installation of ground motion monitoring capability at Pantex. Provides for the continuation of planned improvements as documented and

approved in the Site-wide Safety Analysis Report for Nuclear Explosive Facilities and compliance with facility seismic hazard related requirements as set forth in DOE O 420.1B Facility Safety, and DOE STD-1020 NPH Design and Evaluation Criteria for DOE Facilities. Various weapon operations could be impacted if the project is not supported.

**Mock HE Capability Upgrade**-Provides facility upgrade of the HE Formulation facility required to establish the capability of fabricating mock HE as required to satisfy HE mission objectives and meet weapon program requirements for fabrication of a new mock HE. A new type of mock HE is required for use in support of two weapon programs. The new mock recipe essentially eliminates the use of hazardous material in its formulation thus improving worker safety and substantially reducing waste disposal costs

**Sustainable Facility, 11-2/11-27**-The project provides upgrades to a facility quickly becoming uninhabitable. Replaces electrical wiring, deteriorated to the point that insulation crumbles to the touch, and electrical components to meet current code and availability. In addition, the project replaces and reconfigures the HVAC systems to support the increased heating and cooling loads. This project provides adequate office space for critical personnel.

**Guard Tower Safety Enhancement**-Safety upgrades to address hazards associated with ascending or descending to/from older elevated guard towers. Current access limits the ability to carry required security gear without encountering safety hazards. Emergency response personnel are also limited in their ability to carry emergency equipment and stretchers in the event of a medical emergency. Stairs do not currently meet OSHA standards.

**HVAC Replacement (4)**-The project is to replace mission essential chillers and HVACs in mission dependent warehouses and one mission critical laboratory. The chillers and HVACs have exceeded their

design life and require frequent maintenance to remain operational. Replacement is required to ensure continuous operations and sustained required environments in those facilities

**Num-1 Hoist Upgrade**-Provides procurement and installation of 21 seismically qualified hoists that will not drop load during a PC-3 seismic event. Installation planned is 13 bay/cell locations as required by approved, but not implemented, Bays and Cells SAR. Installation remedies noncompliance with NTS-ALO-BWXT-2003-001 and enhanced seismic cranes provide better protection during seismic events.

**Vacuum Chamber Upgrades**-Modernize one vacuum chamber, no longer supported since manufacturer has gone out of business and establish second vacuum chamber bay to support projected acceptance/surveillance requirements for weapon programs. Replacement parts are not readily available and failure of the RGA(s) or cryogenic pumps would result in extended downtime with significant production impacts. The vacuum chambers play a crucial role in stockpile stewardship activities at Pantex.

**Facility Modifications for Non-Intrusive Pit Reuse**-Facility upgrades of the SNM Component Requalification Facility which are required to establish the capability for tube replacement and pit reuse. Pantex Plant has the mission assignment for Non-Intrusive Pit Reuse which requires facility modification to implement pit reuse capabilities, including retubulation and shell over-cladding – per the baseline. Pit tube replacement capability at Pantex Plant will result in substantial cost avoidance for NNSA and supports weapon program First Production Unit required by 2017.

**Fuel Management Upgrades**-Upgrade the fuel (diesel and unleaded) storage, delivery, and cathodic protection systems at four plant locations. Upgrade is required to ensure meeting the 30 Texas Administrative Code, Chapter 334, compliance for

petroleum storage tanks. These systems are required to provide power for mission critical operations in the event of primary power failure. Leaks in any of the systems could result in regulatory fines and penalties.

**Narrowband Radio Upgrade**-Replacement of the majority of radio system backbone electronic equipment, software, and UPS. Upgrade is necessary to meet the operational requirements of the Plant and FCC requirements to be met by January 1, 2013. In addition, replacement parts for existing system are no longer available from the manufacturer

**Alternate Command Center Electrical and Mechanical Sustainability**-Upgrade mechanical and electrical systems in the Security Alternate Command Center. Additional capacity is required to support the installation of new alarm and monitoring systems necessary for the protection of nuclear weapon and material assets. Upgrades are required to allow installation of equipment necessary to sustain the plant mission.

**Command Center Electrical and Mechanical Sustainability**-Upgrade mechanical and electrical systems in the Security Command Center. Additional capacity is required to support the installation of new alarm and monitoring systems necessary for the protection of nuclear weapon and material assets. Upgrades are required to allow installation of equipment necessary to sustain the plant mission.

**Fire Alarm Panel Replacements (bays/cells)**-The project replaces the existing fire alarm panels in production facilities due to technical obsolescence. Existing panels will no longer be supported by the manufacturer after 2012.

**Environmental Testing Facility-SNM**-The project upgrades required to support the Complex Transformation Supplemental Programmatic Environmental Impact Statement (SPEIS) Record of Decision (RoD) to move of SNM surveillance testing

from Lawrence Livermore National Lab (LLNL) Site 300 to Pantex. Includes planning, design, and installation of SNM surveillance testing equipment. LLNL equipment would have to be refurbished or new equipment procured to ensure the QC-1 pedigree. LLNL is budgeting for equipment refurbishment or new equipment.

**Paint Bay Modifications for Sustained Operations**-The project upgrades and modifies existing equipment to support the B61 paint operations and installs maintenance catwalks to enhance accessibility to key components requiring regular maintenance. Project supports the relocation of painting operations to a modern sustainable facility to meet weapon program requirements.

**UV to IR Conversion-12-084E**-Production facility fire protection systems are required to ensure the safety envelope of weapons operations during assembly/disassembly phases. The current ultraviolet (UV) high speed deluge trip system will be supported by the manufacturer until 2012, assuming component parts are available.

**RAMS Replacement-12-084E**-The project replaces all alpha and tritium continuous air monitors (CAMs) equipment located in bays and cells and the field processors and reporting system.

**Production/Training Floor Space Recapture**-The project fills in five floor pits, which are no longer required, in three facilities providing additional useable floor space for training, component storage, and operations. Additional space supports mission critical operations, including nuclear component packaging and long-term storage capacity requirements.

**16-016 RCRA Facility Floor Replacement**-The project replaces flooring in Pantex's main hazardous waste storage facility serving as a secondary containment required by 40CFR264.175. Regulatory noncompliance, permit violations, and a reduction in permitted waste storage capacity could result from failure to contain chemical leaks or spills



**HE Formulation Electrical Upgrade for LEP**-Upgrade of the electrical system in HE Formulation facility. Wiring in this circa 1945 building is aged, deteriorating, and unreliable with circuit breakers frequently tripping and severely impacting the HE Formulation processes. HE formulation capability supports the WR acceptance of materials used in the Life Extension Programs.

**Breath and Alcohol Testing (BAT) Facility**-Mobile facility to provide required testing at location remote to the existing medical facility. Provide physical, sound, and visual privacy for drug/alcohol program testing.

**ARGUS AFPS (50) /RAPS (100) Replacement**-The project provides for replacement of 50 existing access control ARGUS Field Panels (AFPS) and 100 Remote Access Panels (RAPS) required to access various areas of the Plant. Replacement supports migration to the enhanced ARGUS system adopted by NNSA and the safeguard and security mission assigned to Pantex as well as the Directed Stockpile Workload.

**ARGUS AFPS (100) /RAPS (500) Replacement**-The project provides for replacement of 100 existing access control ARGUS Field Panels (AFPS) and 500 Remote Access Panels (RAPS) required to access various areas of the Plant. Replacement supports migration to the enhanced ARGUS system adopted by NNSA and the safeguard and security mission assigned to Pantex as well as the Directed Stockpile Workload.

**Uninterruptible Power Supply, 12-98**-Replace four UPSs that are approximately 30 years old and prone to failure. The uninterruptible power supply (UPSs) for Bldg. 12-98 is required to provide emergency power for safe shutdown including: Emergency Lights, Blast Door Interlock, RAMs, and communications in the area. Replacement ensures continued operations.

**Storm Damage System Modifications**-Upgrade storm water drainage system in accordance with site-wide drainage evaluation, to prevent damage to mission critical facilities. Includes repair, modification, and installation of: culverts, ditches, surface contours, curb and gutter, erosion control features. Today, the storm water drainage system does not meet DOE Natural Phenomenon Hazard Performance Criteria. The rainfall event of July 7, 2010, along with other rainfall events, have resulted in significant impact to operations and damaged critical equipment and facilities emphasizing the importance of upgrading drainage system

**BDI Replacement**-The project replaces the blast door interlock (BDI) system and the operational machine interface (OMI) system utilized to mitigate high explosive machining risk. The current programmable logic controller is obsolete and replacement parts are not available. Project is required to maintain operability of the BDI/OMI system which is a required engineered safety system for mission critical explosive processing operations supporting all weapon systems. HE component manufacturing capabilities/ capacities in support of the LEPs are at risk if systems fail.

**Capital Equipment Infrastructure Replacement**-Replaces multi-program infrastructure equipment required to support the plant mission.

**East Property Structures Demolition**-Demolition of structures no longer needed to accomplish the plant mission.

**Buildings 4-20E, 4-24, 4-27, 4-29**-Demolition of structures no longer needed to accomplish the plant mission.

**Trailers 09-056, 09-108, 09-054, 09-098, 09-111**-Demolition of structures no longer needed to accomplish the plant mission.

**Building 11-015A, 11-R-016, 11-018**-Demolition of structures no longer needed to accomplish the plant mission.

**Building 12-024E, 12-024S**-Demolition of structures no longer needed to accomplish the plant mission.

**Buildings 12-034, 12-034SS, 12-R-034**-Demolition of structures no longer needed to accomplish the plant mission.

**Building 12-005G3, 12-080, 16-010B**-Demolition of structures no longer needed to accomplish the plant mission.

**Buildings 12-045, 12-047, 12-041SS**-Demolition of structures no longer needed to accomplish the plant mission.

**Steam Distribution System: Replaces Insulation and Repair**-The project provides restoration of approximately 10,000 linear feet of steam and condensate pipe insulation damaged by the July 2010 flood event.

**Steam Distribution System: Replace Minimum of 12 failed to Drain CRU**-Condensate Return Units (CRUs) require replacement with energy conserving compressed air units.

**Building Continuous Commissioning Upgrade**-Perform continuous commissioning of Plant buildings to optimize building system equipment and operations. Building commissioning is the best mechanism to achieve optimal performance and efficiency for a site's existing buildings to meet: Greenhouse Gas requirements of EO13514 §2(a) and (b); Energy reduction requirements of EO 13423 §2(a) and HPSB requirements of EOs 13423 and 13514.

**Solar Hot Water Panels at Three Buildings**-This project provides progress toward DOE

O 430.2B, CRD 5.b. to reduce use of thermal renewable energy by 7.5%.

**16-13 Boiler Burner and Control/CRU Upgrade**-The project replaces the central steam plant boiler burners and control system with more efficient low Nitrogen Oxide (NOX) burners and efficient controls to save natural gas and reduce greenhouse gas emissions resulting from steam production. The existing boiler burners and control systems are greater than 20 years

old with control inefficiencies that consume more natural gas and create more greenhouse gases than necessary. Replacement and upgrade of the burners and controls are critical to maintain efficient, reliable steam production, helping to meet: Greenhouse Gas requirements of EO13514 §2(a) and (b); and Energy reduction requirements of EO 13423 §2(a).

**HPSB Compliance-Install Advanced Electric, Natural Gas, Steam, and Water Meters**-Design and install building metering systems for electricity, water, and steam systems. Advanced metering is a requirement of EPACT 2005 §103, EISA §432, 434(b), and DOE Order 430.2B and will provide the tracking and trending of energy usage allowing high use areas to be identified and remediated.

**Vehicle Wash Facility**-Construct a new vehicle wash facility for Plant vehicles. Car wash will utilize water from Pump and Treat remediation project and eliminate fuel consumption to existing car wash (~60 mile round trip). Utilizing on-site car wash helps meet numerous EO 13423 and 13514 requirements especially Greenhouse Gas reduction.

**Replace steam heaters in ramps that are failed to drain**-Condensate Return Units (CRUs) require replacement with energy conserving compressed air units.

**Lo-Flow Devices in 31 Buildings**-Purchase and install EPA-labeled WaterSense products (faucets, lavatories and toilets) in 31 buildings. Project would reduce potable water consumption by replacing out-of-date, inefficient faucets, lavatories, and toilets. Fixtures would meet the requirements: Greenhouse Gas requirements of EO13514 §2(a) and (b); Energy reduction requirements of EO 13423 §2(a) and HPSB requirements of EOs 13423 and 13514.

**Solar Ventilation Air Preheat at Steam Plant**-This project provides progress toward DOE

O 430.2B, CRD 5.b. to reduce use of thermal renewable energy by 7.5%.

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*Facilities and Infrastructure Recapitalization Projects*

per TYSP Attachment A-4																				
FY	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Chiller Replacement, 12-109																				
Site-Wide Pipe Replacements (FSB contract)																				
12-21 Refurbishment Part 1																				
FY11 Mechanical Task (Chiller Replacement, 12-032, 12-042, 16-012)																				
RAMP Site Support (FY12)																				
Chiller Replacement, 12-021																				
Piping Upgrade, 12-021																				
Chiller Replacement, 12-085																				
Chiller Replacement, 12-096																				
Chiller Replacement, 12-068A																				
FY13 RAMP Site Support																				
Electrical Upgrade, 12-021																				
Steam Pipe Refurbishment (West Loop)																				

**Chiller Replacement, 12-109**-The project will install two new chillers at mission dependent facility. One chiller replaces existing trailer mounted temporary chiller and second chiller which provides dual capability for surrounding facilities. Project utilizes chillers procured through the Energy Savings Performance Contract.

**Site-wide Pipe Replacements (FSB contract)**-Replaces domestic water line and valve replacements in Zone 12 and Zone 11 amounting to approximately 2,776 linear feet of pipe, 28 valves, and 13 hydrants.

**12-21 Refurbishment Part 1**-The project will refurbish 12-021 with funding from the remaining funding from the FIRP LI projects at Pantex.

**FY11 Mechanical Task (Chiller Replacement, 12-032, 12-042, 16-012)**- Upgrade the HVAC, boiler, and other ancillary mechanical equipment, that has failed or is near failure. The mechanical equipment is required to meet environmental requirements and/or personnel environments in Buildings 12-32, 12-42A, and 16-12. The mechanical equipment will be replaced with energy

efficient equipment and will reduce maintenance costs.

**RAMP Site Support (FY12)**-Represents the site support costs, (i.e. Project & Construction Management, Security, etc.) associated with roof repairs/replacements executed through the enterprise wide Roof Asset Management Program (RAMP).

**Chiller Replacement, 12-021**-Replace two chillers at Building 12-21. Both chillers have exceeded their design life and one chiller has failed. Replacement will ensure continued operations in this Mission Critical Facility.

**Piping Upgrade, 12-021**-Project provides replacement of piping that has exceeded its useful life, subject to failure, and is sporadically impacting operations. Piping to be upgraded includes: domestic water (hot and cold), steam, condensate, chill water supply, and chill water return. Project replaces piping in this circa 1940's building and will address a major cause of impacts to production.

**Chiller Replacement, 12-085**-The project replaces the chiller that has exceeded its design life and prone to failure. Replacement ensures continuous operation in a Mission Critical Facility.

**Chiller Replacement, 12-096**-The project replaces the chiller that has exceeded its design life and prone to failure. Replacement ensures continuous operation in a Mission Critical Facility.

**Chiller Replacement, 12-068A**-The project replaces the chiller that has exceeded its design life and prone to failure. Replacement ensures continuous operation in a mission dependent facility.

**FY13 RAMP Site Support**-The project represents the site support costs, (i.e. Project and Construction Management, Security, etc.) associated with roof repairs/replacements executed through the enterprise wide Roof Asset Management Program (RAMP).

**Electrical Upgrade, 12-021**-The wiring in Building 12-021, circa 1940's, is no longer sufficient to adequately support the instruments for the NDE and Gas Lab and/or technological upgrades. New wiring, combined with other upgrades, will allow capacity of facility to be maximized.

**Steam Pipe Refurbishment (West Loop)**-The project repairs the damaged west loop of the steam piping system. Repair will restore redundancy to the system which supplies steam for facility heat and weapon and high explosive production processes.



## Appendices

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## Appendix A-NNSA Missions

NNSA is responsible for the management and security of the nation’s nuclear weapons, nuclear non-proliferation, and naval reactor programs. It also responds to nuclear and radiological emergencies in the U.S. and abroad. Additionally, NNSA federal agents provide safe and secure transportation of nuclear weapons and components and special nuclear materials along with other missions supporting the national security.

Code	Mission	Description
M1	Managing the Stockpile	<p>Maintaining the safety, security, and effectiveness of the nuclear deterrent without nuclear testing, especially at lower numbers, requires increased investments across the NSE.</p> <p>Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Design and build 21st Century uranium and plutonium processing facilities</li> <li>• Ensure the capabilities to complete ongoing Lifetime Extension Programs</li> <li>• Strengthen science, technology and engineering base</li> <li>• Reinvest in the scientists and engineers who perform the mission</li> </ul>
M2	Preventing Proliferation	<p>Keeping Weapons of Mass Destruction (WMD) out of the hands of state and non-state actors requires a coordinated effort on the part of suppliers of proliferation-sensitive materials, equipment, and technologies. Even advanced countries with elaborate trade control systems frequently lack the capability to make those systems truly effective in detecting, deterring, and interdicting illicit WMD-related trade.</p> <p>NNSA prevents and counters WMD proliferation by strengthening export control systems in other countries and transitioning WMD expertise and infrastructure in partner countries to peaceful purposes.</p> <p>Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Domestic Export Licensing</li> <li>• International Export Control Cooperation</li> <li>• Scientist Engagement and Redirection</li> </ul>
M3	Powering the Nuclear Navy	<p>Providing militarily effective nuclear propulsion plants and ensuring their safe, reliable, and long-lived operation.</p> <p>The Naval Nuclear Propulsion Program comprises the military and civilian personnel who design, build, operate, maintain, and manage the nuclear-powered ships and the many facilities that support the U.S. nuclear-powered naval fleet. The program has cradle-to-grave responsibility for all naval nuclear propulsion matters. Program responsibilities are delineated in Presidential Executive Order 12344 of February 1, 1982, and prescribed by Public Laws 98-525 of October 19, 1984 (42 USC 7158), and 106-65 of October 5, 1999 (50 USC 2406).</p> <p>Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Research, development, and support laboratories</li> <li>• Contractors responsible for designing, procuring, and building propulsion plant equipment</li> <li>• Shipyards that build, overhaul, and service the propulsion plants of nuclear-powered vessels</li> <li>• Navy support facilities and tenders</li> <li>• Nuclear power schools and Naval Reactors training facilities</li> <li>• Naval Nuclear Propulsion Program Headquarters and field offices</li> </ul>

M4	Emergency Response	<p>Ensuring that capabilities are in place to respond to any NNSA and DOE facility emergency. It is also the nation's premier responder to any nuclear or radiological incident within the U.S. or abroad and provides operational planning and training to counter both domestic and international nuclear terrorism.</p> <p>Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Planning for Emergencies</li> <li>• Responding to Emergencies</li> <li>• Counterterrorism</li> <li>• International Programs</li> <li>• Emergency Communications</li> <li>• Operations Center</li> <li>• Emergency Operations Training</li> <li>• Continuity Program</li> </ul>
M5	Continuing Management Reform	<p>Managing and securing the nation's nuclear weapons, nuclear non-proliferation, and naval reactor programs. It also responds to nuclear and radiological emergencies in the United States and abroad. Additionally, NNSA federal agents provide safe and secure transportation of nuclear weapons and components and special nuclear materials along with other missions supporting the national security.</p>
M6	Recapitalizing Infrastructure	<p>Investing in the transformation of a Cold War nuclear weapons complex into a 21st Century NSE.</p>

## Appendix B-NNSA Programs

NNSA Programs from TYSP Guidance for reference

<p><b>Directed Stockpile Work (DSW)</b></p>	<p>The DSW program is responsible for maintaining and enhancing the safety, security, and reliability of the U.S. nuclear weapons stockpile without using underground testing.</p> <p>Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Life Extension Program (LEP)</li> <li>• Stockpile Systems</li> <li>• Weapons Dismantlement &amp; Disposition (WDD)</li> <li>• Stockpile Services</li> </ul>
<p><b>Science Campaign</b></p>	<p>The Science Campaign supports the development of the knowledge, tools, and methods used to assess the performance of the nuclear explosive package of a nuclear warhead.</p> <p>Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Primary Assessment Technologies</li> <li>• Secondary Assessment Technologies</li> <li>• Dynamic Materials Properties</li> <li>• Advanced Radiography &amp; Transformational Technologies</li> <li>• Advanced Certification</li> </ul>
<p><b>Engineering Campaign</b></p>	<p>The Engineering Campaign provides the complex with modern tools and capabilities in engineering sciences and technologies to ensure the safety, security, effectiveness and performance of the current and future U.S. nuclear weapon stockpile without further underground testing, and provides a sustained basis for stockpile certification and assessments throughout the lifecycle of each weapon.</p> <p>Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Enhanced Surety</li> <li>• Weapon Systems Engineering Assessment Technology</li> <li>• Nuclear Survivability</li> <li>• Enhanced Surveillance (ESV)</li> </ul>
<p><b>Inertial Confinement Fusion (ICF) Campaign</b></p>	<p>The ICF Campaign provides the experimental capabilities and scientific understanding in High-Energy Density Physics (HEDP) necessary to maintain a safe, secure, and reliable nuclear weapons stockpile without underground testing.</p> <p>ICF Campaign has three strategic objectives: (1) achieve thermonuclear ignition in the laboratory and develop it as a routine scientific tool to support stockpile stewardship; (2) develop advanced capabilities including facilities, diagnostics, and experimental methods that access the High-Energy Density (HED) regimes of extreme temperature, pressure, and density required to assess the nuclear stockpile; and (3) maintain the U.S. preeminence in HED science and support broader national science goals.</p> <p>Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Ignition</li> <li>• Support of Other Stockpile Programs</li> <li>• NIF Diagnostics, Cryogenics, and Experimental Support</li> <li>• Pulsed Power Inertial Confinement Fusion</li> <li>• Joint Program in High Energy Density Laboratory Plasmas</li> <li>• Facility Operations and Target Production</li> <li>• Inertial Fusion Technology</li> <li>• High-Energy Petawatt Laser Development</li> </ul>
<p><b>Advanced Simulation and Computing (ASC) Campaign</b></p>	<p>The ASC Campaign’s mission is to provide leading-edge, high end simulation capabilities needed to meet weapons assessment and certification requirements and to predict, with confidence, the behavior of nuclear weapons through comprehensive, science-based simulations.</p> <p>Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Integrated Codes (IC)</li> <li>• Physics and Engineering Models</li> <li>• Verification and Validation (V&amp;V)</li> <li>• Computational Systems and Software Environment (CSSE)</li> <li>• Facility Operations and User Support (FOUS)</li> </ul>
<p><b>Readiness</b></p>	<p>The Readiness Campaign identifies, develops, and deploys new or enhanced processes,</p>



<p><b>Campaign</b></p>	<p>technologies, and capabilities to meet current nuclear weapon design, production, and dismantlement needs and provides quick responses to national security requirements.                  Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Advanced Design and Production Technologies</li> <li>• High Explosives and Weapons Operations</li> <li>• Non-nuclear Readiness</li> <li>• Stockpile Readiness</li> <li>• Tritium Readiness</li> </ul>
<p><b>Readiness in Technical Base and Facilities (RTBF)</b></p>	<p>The goal of the RTBF program is to operate and maintain NNSA program facilities in a safe, secure, efficient, reliable, and compliant condition.                  RTBF includes: including facility operating costs (e.g., utilities, equipment, facility personnel, training, and salaries); facility and equipment maintenance costs (e.g., staff, tools, and replacement parts); Environment, Safety, and Health (ES&amp;H) costs; and the costs to plan, prioritize, and construct state-of-the-art facilities, infrastructure, and scientific tools within approved baseline costs and schedule.                  Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Operations and Maintenance                         <ul style="list-style-type: none"> <li>○ Operations of Facilities</li> <li>○ Program Readiness</li> <li>○ Material recycle and Recovery</li> <li>○ Containers</li> <li>○ Storage</li> </ul> </li> <li>• Construction</li> <li>• Capability Based Facilities and Infrastructure (CBFI) - planned to be initiated in FY2013.                      Program elements include the following:                         <ul style="list-style-type: none"> <li>○ Recapitalization/Life Extension</li> <li>○ Infrastructure LI</li> <li>○ Disposition</li> <li>○ Sustainability</li> </ul> </li> </ul>
<p><b>Secure Transportation Asset (STA) Program</b></p>	<p>The STA mission is to provide a capability for the safe and secure transport of nuclear warheads, components, and materials that will meet projected DOE, Department of Defense (DoD), and other customer requirements.</p>
<p><b>Nuclear Counterterrorism Incident Response (NCTIR)</b></p>	<p>The NCTIR Program mission is to ensure that capabilities are in place to respond to any DOE/NNSA facility emergency, nuclear, or radiological incident within the United States or abroad, and to provide operational planning and training to counter both domestic and international nuclear terrorism and assure that DOE can carry out its mission-essential functions.                  Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Emergency Management</li> <li>• Emergency Response</li> <li>• NNSA Emergency Management Implementation</li> <li>• Emergency Operations Support</li> <li>• National Technical Nuclear Forensics</li> <li>• International Emergency Management and Cooperation</li> <li>• Nuclear Counterterrorism</li> </ul>
<p><b>Facilities and Infrastructure Recapitalization Program (FIRP)</b></p>	<p>The FIRP mission is to restore, rebuild, and revitalize the physical infrastructure. FIRP applies direct appropriations to address an integrated, prioritized series of repair and infrastructure projects focusing on completion of deferred maintenance that significantly increases operational efficiency and effectiveness of NNSA.                  Sunsets in FY13                  Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Recapitalization</li> <li>• Facility Disposition</li> <li>• Infrastructure Planning</li> <li>• FIRP Construction</li> </ul>
<p><b>Site Stewardship</b></p>	<p>Site Stewardship’s mission is to ensure environmental compliance, sustainability, and energy and operational efficiency, while modernizing, streamlining, consolidating, and sustaining the stewardship and vitality of the sites as they transition within NNSA.</p>

	<p>Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Environmental Projects and Operations (EPO)</li> <li>• Nuclear Materials Integration</li> <li>• Energy Modernization and Investment Program (EMIP)</li> <li>• Construction</li> </ul>
<b>Defense Nuclear Security (DNS)</b>	<p>DNS is responsible for the development and implementation of security programs for the NNSA. In this capacity, DNS is the NNSA line management organization responsible for security direction and program management with respect to prioritization of resources, program evaluation, and funding allocation.</p> <p>Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Program Management</li> <li>• Performance Assurance</li> <li>• Resource Management</li> <li>• Protective Force</li> <li>• Physical Security Systems</li> <li>• Information Security</li> <li>• Personnel Security</li> <li>• Materials Control and Accountability (MC&amp;A)</li> </ul>
<b>Cyber Security</b>	<p>NNSA Cyber Security Program's mission is to ensure that sufficient information technology and information management security safeguards are implemented throughout the NNSA complex to adequately protect the NNSA information assets.</p> <p>Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Infrastructure Program</li> <li>• Enterprise Secure Computing</li> <li>• Technology Application Development</li> </ul>
<b>Global Threat Reduction Initiative</b>	<p>The Global Threat Reduction Initiative identifies, secures, removes and/or facilitates the disposition of high risk vulnerable nuclear and radiological materials around the world, as quickly as possible, that pose a threat to the United States and the international community.</p> <p>Program elements include the following:</p> <ul style="list-style-type: none"> <li>• Research Reactor Conversion</li> <li>• Nuclear and Radiological Material Removal</li> <li>• Nuclear and Radiological Material Protection</li> </ul>

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### Appendix C-NNSA Core Capabilities

SITE	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13
	Design, Certification, Testing, Surveillance, and ST&E Base	Plutonium Operations and Pit Manufacture	Uranium Operations and Secondary and Case Fabrication	Tritium Operations & R&D	High Explosives (HE) R&D	Non-Nuclear component production / testing	Assembly / Disassembly & High Explosive (HE) Production	Transportation	Category I/II SNM Storage	Infrastructure Support Facilities	Nuclear Non-Proliferation	Counter-Terrorism	Support of Other Mission / Program Capability
Kansas City Plant (KCP)						X				X			
Lawrence Livermore National Laboratory (LLNL)	X	X		X	X					X	X	X	X
Los Alamos National Laboratory (LANL)	X	X		X	X	X			X	X			
Nevada National Security Site (NNSS)	X				X					X			
Pantex Plant (PX)					X		X		X	X			X
Sandia National Laboratory (SNL)	X				X	X				X			
Savannah River Site (SRS)				X						X	X		
Y-12 National Security Complex (Y-12)	X		X				X		X	X	X		
Office of Secure Transportation (OST)								X		X			

#### Pantex Supporting Capabilities

The capability and capacity for synthesis, formulation, pressing, machining, and analytical and performance testing of all NNSA explosives to meet acceptance, surveillance, rebuild, JTA, and LEP requirements. These explosive materials also support activities such as development work, component work, component replacement, component aging studies, and sanitization activities.	C1, C5, C6, C13
Capability and capacity for synthesis, formulation, pressing, machining, and analytical and performance testing of all NNSA explosives to meet acceptance, surveillance, rebuild, JTA, and LEP requirements. These explosive materials also support activities such as development work, component work, component replacement, component aging studies, and sanitization activities.	C1,
Pantex has several programs involved in arms control and the nonproliferation of nuclear warheads, materials, and technologies in the former Soviet Union. These programs look at diverse issues such as the impact of future arms control treaties on Pantex and the prevention of the proliferation of nuclear warhead technologies.	C11
Pantex provides qualified technical and professional personnel and equipment for Accident Response Group (ARG), ARG disposition, Joint Technical Operations Team (JTOT), and Radiological Assistance Program (RAP). These enhance DOE capability to respond to accidents and significant incidents	C11, C12

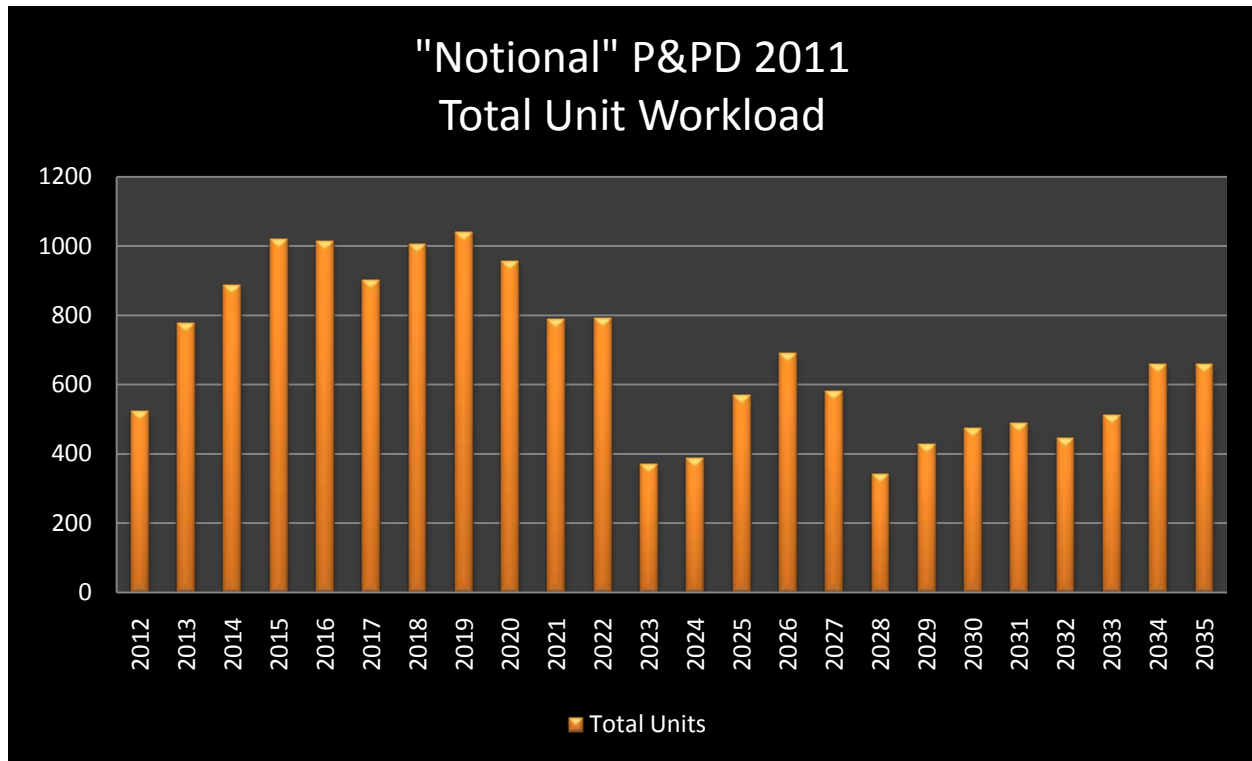
<b>involving nuclear weapons or components.</b>	
<b>Pantex provides services to the OST supporting the secure transportation of nuclear weapons, nuclear components, and other cargoes related to the maintenance of stockpiled weapons. These services include scheduling and performance of inspections, maintenance, and modifications of OST trucks/tractors, escort vehicles, Safe Secure Trailers (SSTs), Safeguard Transporters (SGTs), and associated electronics and communications equipment.</b>	C8, C13
<b>DOE Office of Environmental Management (EM) closed out the Pantex Environmental Restoration (ER) program in FY10. NNSA's Environmental Projects &amp; Operations (EPO) will be responsible for Pantex Long Term Stewardship (LTS) management. Funding is to be part of RTBF Operations of Facilities.</b>	C13
<b>Sanitizing and disposing of components from dismantled weapons.</b>	C7





A detailed design definition and a rigorous cost estimate study are conducted early in such projects (during a Phase 6.2A – in accordance with the previously cited Development and Production Manual). Forecasts and plans are developed based on the best estimate of weapons workload for FY12 to FY22 provided by NNSA. The workload projected for Pantex is changing significantly and impacts funding, personnel,

and facilities. The unit workload chart below shows the weapons workload based on the “Notional” P&PD 2011. This chart shows that the workload increases from FY12 and peaks in FY19. The increase during this period is attributable to a ramp-up on the W76 LEP, the W87 Neutron Generator (NG) change out beginning in FY13, and the B83 NG change out beginning in FY15.



**Direct Labor Required for Notional Workload P&PD 2011**

Disassembly and HE component fabrication for the B61 LEP begins in FY16 and FPU is scheduled for FY17. This creates a three-year overlap during which the B61 and W76 LEPs are running concurrently. One factor that will impact production capacity during this time period is the HPFL lead-in replacement and the Flame Detection Upgrade projects. These replacements are currently scheduled from FY17 through FY20. Various production facilities will be taken off-line for up to six weeks while this work is being performed. In order to stay

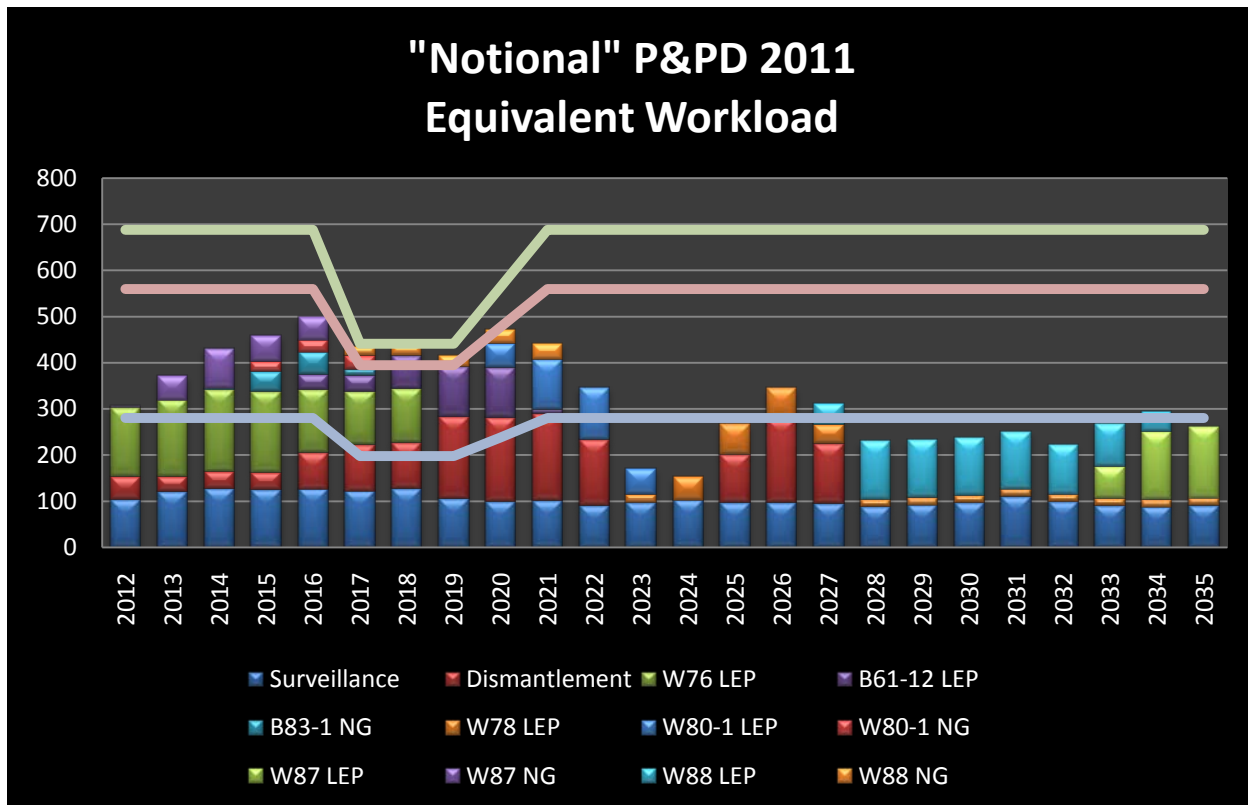
within capacity constraints during this time, Pantex may be required to move some dismantlement into FY21 and beyond. Workload projections for weapons are provided to Pantex as numbers of stockpile weapons, or units by type. B&W Pantex uses this information to develop labor and facility projections required to process the weapons. The weapons workload is not always linearly proportional to the number of units processed. Production workload is more accurately defined by the amount of direct and supporting labor required to

perform work on units of varying complexity that are being processed through the production plant.

Capacity through the production line varies based on the type of weapon system and the activity being performed, as well as the complexity of the weapon system. Retired weapon dismantlement is relatively simple and can be accomplished more quickly than

Disassembly and Inspection (D&Is) and rebuilds, which are more complex and require more time and resources. LEPs are the most complex and consume the most man-hours and facility resources.

The labor adjusted weapons workload for FY12 through FY35 is provided in figure below noted as "Notional" P&PD 2011 Equivalent Workload.



### Projected Out-Year Weapons Work

Staffing levels at Pantex are driven by workload assigned by NNSA, and security and safety requirements. A variety of measures will be used to execute the workload, including hiring personnel, outsourcing, subcontracting, and increasing the efficiency of the incumbent workforce.

Pantex is currently loading data into a new version of the Long Range Pantex Production Model (LRPPM) which will provide better forecasting of facility requirements and utilization of the cell, bay, LINAC, mass property, and explosive pressing facilities during the P&PD planning horizon.

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## Appendix E-Pantex Maps

### *Current*

The map provides the current layout of the Pantex Plant Zones 11 and 12.

### *High Explosives Related Demolition*

The map provides the planned demolition in the 10 and 20 year time frames related to the HE CoE.

### *High Explosives Future Construction*

The map provides the planned construction in the 10 and 20 year time frames related to the HE CoE.

### *Production Related Demolition*

The map provides the planned demolition in the 10 and 20 year time frames related to the Production CoE.

### *Production Future Construction*

The map provides the planned construction in the 10 and 20 year time frames related to the Production CoE.

### *Support Related Demolition*

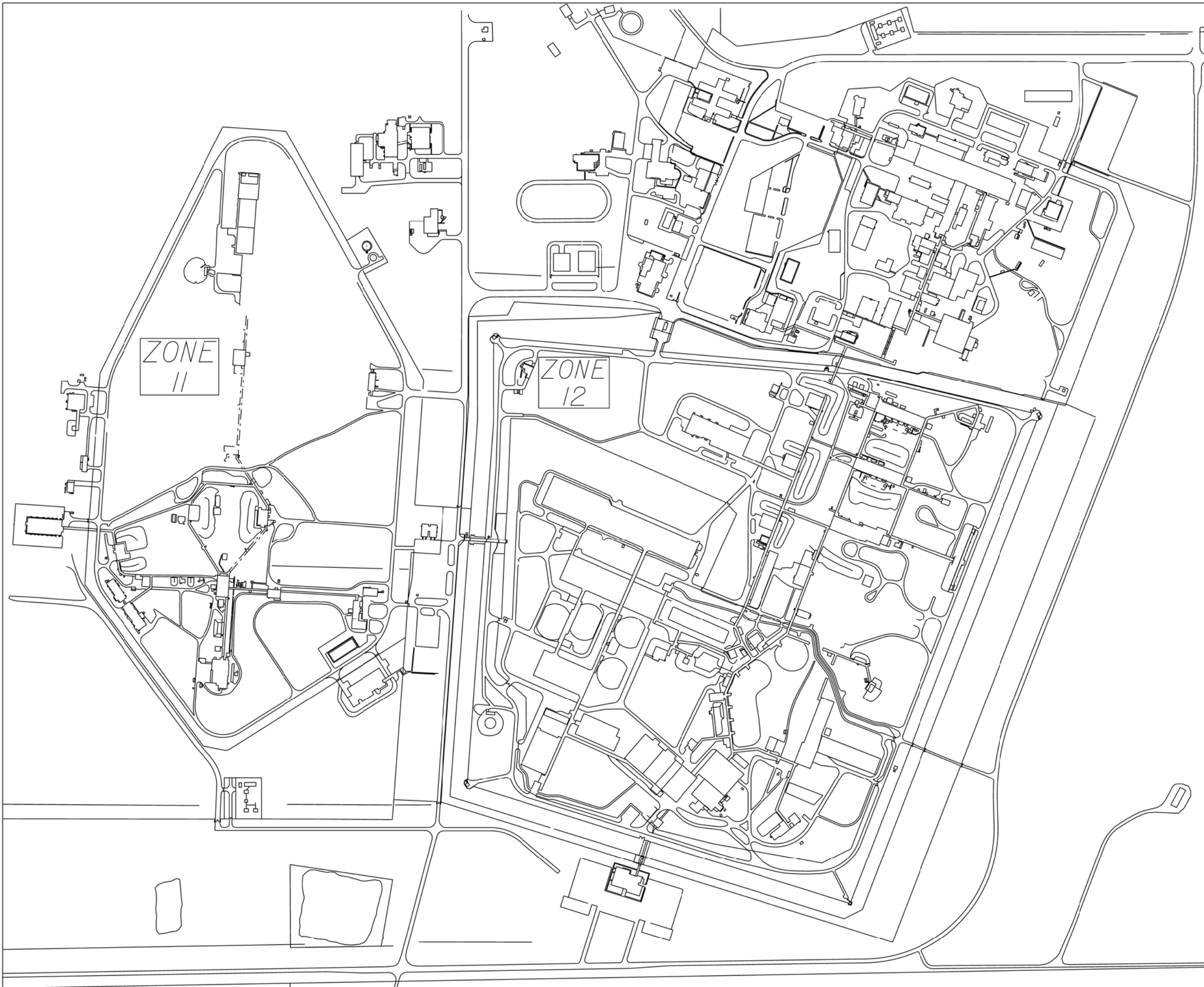
The map provides the planned demolition in the 10 and 20 year time frames related to the Support infrastructure.

### *Support Future Construction*

The map provides the planned construction in the 10 and 20 year time frames related to the Support infrastructure.



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ZONE  
11

ZONE  
12



B&W - LLC - PANTEX PLANT  
PANTEX PLANT, AMARILLO, TEXAS

CURRENT PANTEX PLANT  
ZONES 11 AND 12



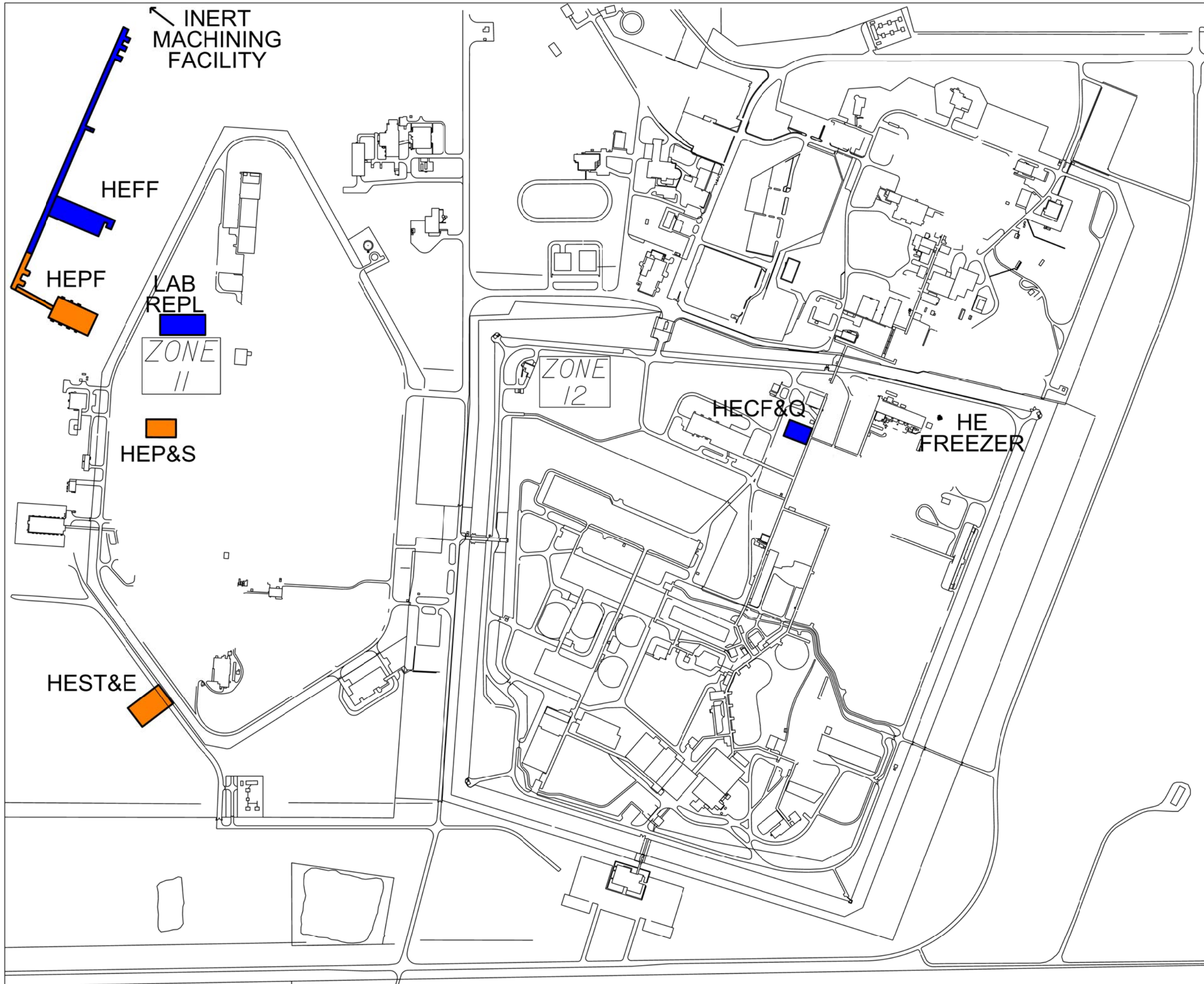
**LEGEND**

- 10 Year Construction Plan
- 20 Year Construction Plan
- 10 Year Demo Plan
- 20 Year Demo Plan



B&W - LLC - PANTEX PLANT  
PANTEX PLANT, AMARILLO, TEXAS  
HIGH EXPLOSIVES RELATED DEMOLITION  
ZONES 11 AND 12





INERT MACHINING FACILITY

**LEGEND**

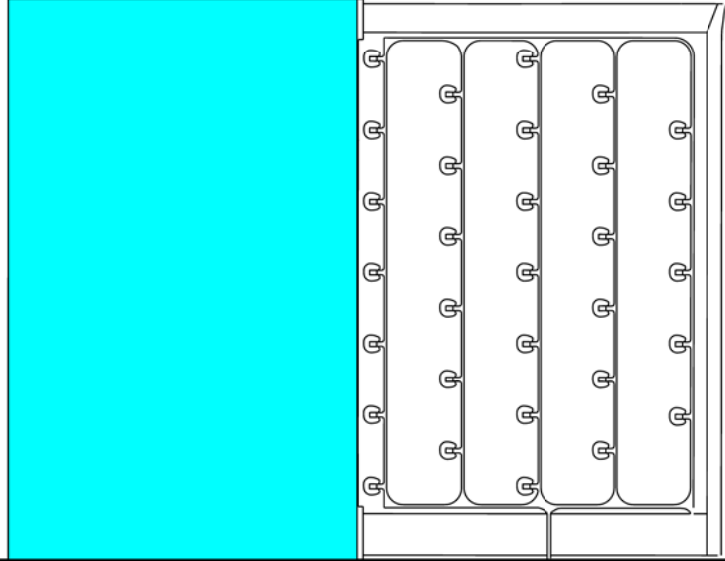
- 10 Year Construction Plan
- 20 Year Construction Plan
- 10 Year Demo Plan
- 20 Year Demo Plan



B&W - LLC - PANTEX PLANT  
 PANTEX PLANT, AMARILLO, TEXAS  
 HIGH EXPLOSIVES FUTURE CONSTRUCTION  
 ZONES 11 AND 12







ZONE 4 INSET



ZONE 11

ZONE 12

LEGEND

-  10 Year Construction Plan
-  20 Year Construction Plan
-  10 Year Demo Plan
-  20 Year Demo Plan



B&W - LLC - PANTEX PLANT  
PANTEX PLANT, AMARILLO, TEXAS  
PRODUCTION RELATED DEMOLITION  
ZONES 4, 11 AND 12



ZONE 4 INSET

ZONE 11

ZONE 12

WSF





INDEF

ELEC BLDG

12-64  
REPL

MSF

LEGEND

-  10 Year Construction Plan
-  20 Year Construction Plan
-  10 Year Demo Plan
-  20 Year Demo Plan



B&W - LLC - PANTEX PLANT  
 PANTEX PLANT, AMARILLO, TEXAS  
 PRODUCTION FUTURE CONSTRUCTION  
 ZONES 4, 11 AND 12





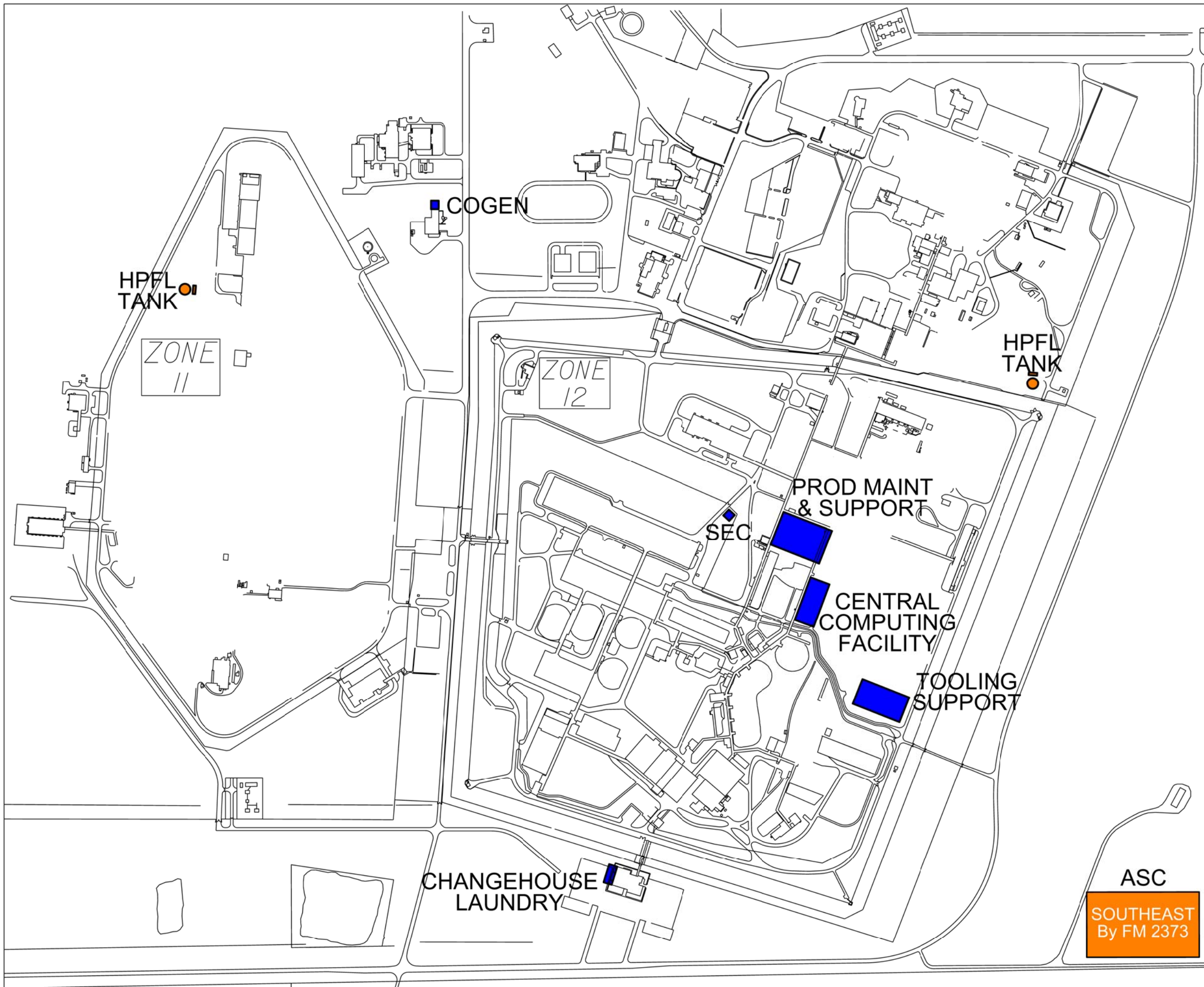
**LEGEND**

	10 Year Construction Plan
	20 Year Construction Plan
	10 Year Demo Plan
	20 Year Demo Plan



B&W - LLC - PANTEX PLANT  
 PANTEX PLANT, AMARILLO, TEXAS  
 SUPPORT RELATED DEMOLITION  
 ZONES 11 AND 12





**LEGEND**

- 10 Year Construction Plan
- 20 Year Construction Plan
- 10 Year Demo Plan
- 20 Year Demo Plan



B&W - LLC - PANTEX PLANT  
 PANTEX PLANT, AMARILLO, TEXAS  
 SUPPORT FUTURE CONSTRUCTION  
 ZONES 11 AND 12

ASC  
 SOUTHEAST  
 By FM 2373

### Appendix F-Pantex Funding Targets

Pantex Funding Targets (\$000s) <sup>2</sup>						
	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016
<b>DSW3</b>						
Life Extension Program	38,506	48,560	49,729	54,952	53,492	61,782
Stockpile Systems	43,971	51,665	57,754	61,651	68,987	67,862
Weapons Dismantlement & Disposition	24,627	17,922	19,555	17,856	20,620	21,111
Stockpile Services	92,089	102,001	89,550	96,161	83,542	85,420
DSW Total	199,193	220,148	216,588	230,620	226,641	236,175
<b>Campaigns</b>						
Enhanced Surveillance	3,300	2,175	3,461	3,083	3,034	3,103
ADAPT/Non Nuclear Readiness	295	-	700	1,840	1,840	1,840
HEWO	2,211	-	4,750	4,500	4,500	4,500
Campaigns Total	5,806	2,175	8,911	9,423	9,374	9,443
<b>RTBF4</b>						
Operations of Facilities	127,475	164,848	172,020	170,204	173,096	172,920
Program Readiness	3,568	-	-	-	-	-
Containers	4,367	3,883	3,837	3,882	4,012	4,105
Storage	8,246	13,146	17,524	12,340	12,608	12,802
Line Item Construction	30,000	66,960	24,800	11,844	10,000	-
RTBF Total	173,656	248,837	218,181	198,270	199,716	189,827
FIRP	11,775	10,482	10,482	-	-	-
Capability Based Facilities & Infrastructure	-	-	15,000	35,000	50,000	50,000
Security (Cyber & Physical)	142,043	141,210	142,081	143,481	144,581	144,781
Other DP (NCIR & STA) <sup>5</sup>	7,510	7,569	7,752	7,898	8,035	8,112
Site Stewardship	11,319	14,630	15,781	21,245	23,905	24,627
MD	6,093	4,107	4,572	4,718	4,870	5,027
Reimbursable <sup>6</sup>	8,362	8,000	8,250	8,500	8,500	8,500
Grand Total	565,757	657,158	647,598	659,155	675,622	676,492

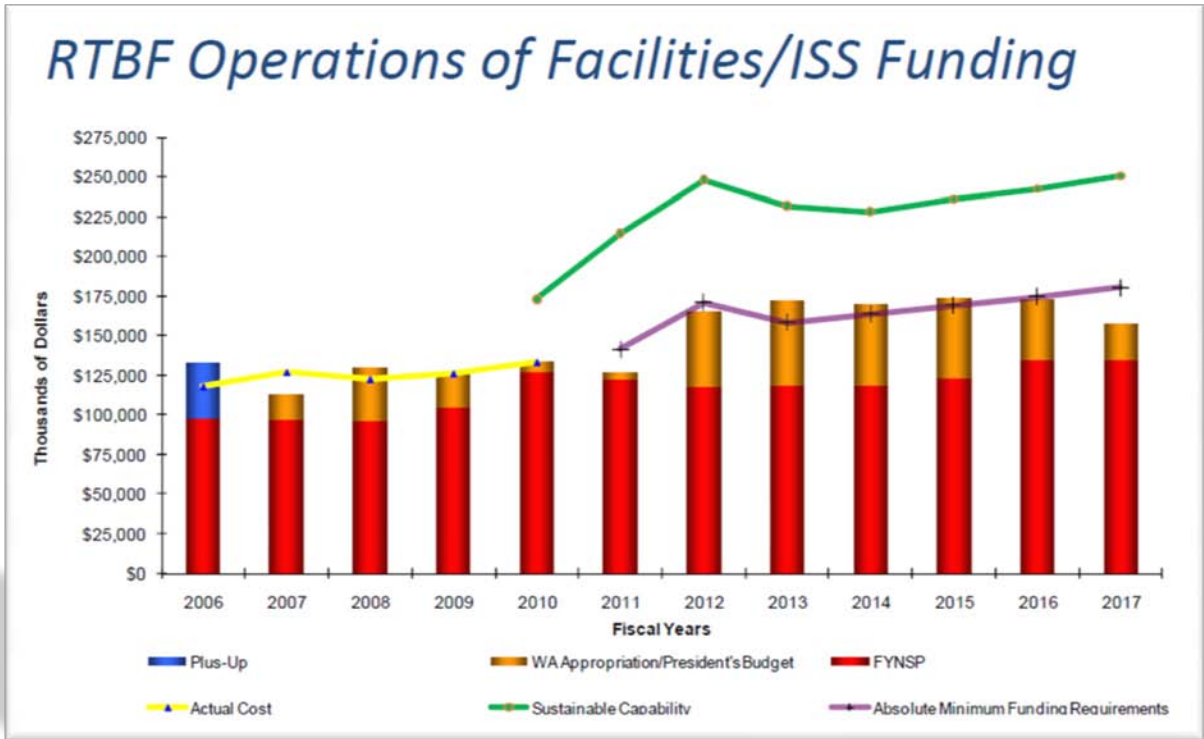
<sup>1</sup> FY11 Target data is consistent with the Current Year Top Down Report for Current Year Target (as of March 2011).

<sup>2</sup> FY12-FY16 Budget data for all efforts other than Reimbursable are consistent with the President's Budget Request distributed by NA-62 February 14, 2011, unless noted below.

<sup>3</sup> FY13-FY16 NA-10 and NA-70 Budget is based on Post Senior Management Review Site Splits (3/25/11).

<sup>4</sup> Other DP is comprised of Nuclear Counterterrorism Incident Response (NCIR)/replaces Weapons Incident Response and Secure Transportation Asset (STA)/replaces OST.

<sup>5</sup> Reimbursable Targets consistent with WFO Summary estimates provided to the Albuquerque Service Center for FY12; estimated FY13-FY16.



FY12 RTBF

Minimum Operations of Facilities budget number includes \$17.2M for flood recovery. The FYNSP funding profiles for Pantex show the Operations of Facilities budget

to be adequate to support minimum operations in FY13 through FY16. FY17 funding level does not fully support projected on-board head-count nor will base operations. The DSW mission deliverables will be placed at high risk.



## Appendix G-Site Overview and Snapshot Template

**Location:** Amarillo, Texas

**Type:** Multi-Program Site

**Web site:** <http://www.pantex.com>

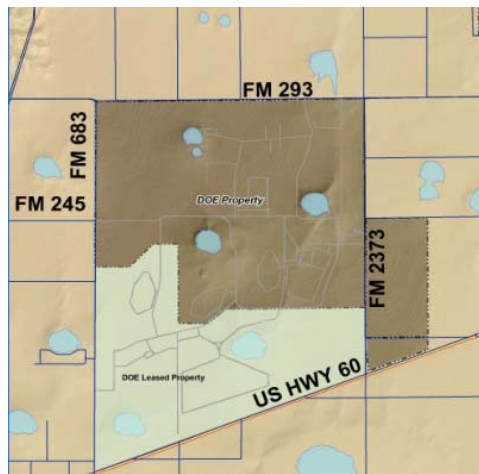
**Contract Operator:** B&W Pantex, LLC

**Responsible Field Office:** Pantex Site Office

**Site Manager:** S. Erhart

### Site Overview

The Pantex Plant, located 17 miles northeast of Amarillo, TX, resides on 11,606 acres owned by the DOE including the land acquired just east of FM 2373. Pantex operations near the southern boundary require DOE to lease approximately 5,800 acres of land between the Plant and U.S. Highway 60 from Texas Tech University (TTU), primarily for safety and security buffer areas. An additional 9 acres are leased for support functions. Approximately 2,500 acres of Pantex Plant proper are used for industrial operations, the burning grounds, and firing sites. Some land not actively used for Plant operations is provided to TTU for agricultural purposes through a service agreement. Approximately 8,070 acres of agricultural land within the combined main plant area and the Pantex Lake property are managed by TTU through a service agreement with DOE for farming and ranching use.



The Pantex Ordnance Plant was originally authorized February 24, 1942, as a conventional munitions site to support World



War II and was operated by Certain-Teed Products Corporation. The plant consisted of 15 “Zones” and was supported by rail lines to each. The site was closed in 1946 after the end of the war. In 1951, the

Atomic Energy Commission recaptured the Plant from Texas Technological College research and refurbished some of the structures to support HE research and nuclear weapon assembly operations. The plant was managed and operated by Procter & Gamble from 1951 to 1955. Operating contractor changed in 1956 to Mason & Hanger – Silas Mason Co. Inc. Mason & Hanger continued to

operate the plant until being bought by Day & Zimmerman in 2000. Day & Zimmerman was replaced by the current contractor, Babcock & Wilcox Technical Services Pantex, LLC. Pantex is operated by the M&O contractor, Babcock & Wilcox Technical Services Pantex, LLC (B&W Pantex) under the direction of the PXSO.

The Pantex mission supports Stockpile Systems by performing disassembly, inspection and rebuild of weapon evaluation cycle units, assembly of JTAs and JTA post mortem analysis, assembly and disassembly of testbed units, LLCE, programmatic alterations (usually defined as Alts or Mods), weapon repairs, weapon and component radiography and non-destructive evaluation, HE testing and explosive component evaluation, pit and non-nuclear evaluations, electrical and mechanical tests, and surveillance/evaluation testing in

support of (QERs). All B&W Pantex activities ultimately support the core mission of nuclear weapons stockpile stewardship.

Pantex consists of approximately 627 buildings containing 3,120,874 square feet. This facility square footage is consistent with Facility Information Management System (FIMS) as of September 30, 2010. There are 52 enduring MC facilities, 390 MDNC facilities, and 185 NMD facilities. Of the 390 MDNC facilities, 235 have been identified as Production Support (PS) facilities and directly sustain the capabilities and mission operations in the MC facilities. Examples of the PS facilities includes: weapon and component staging, explosive storage, MC equipment rooms and fan rooms that are not physically adjoined to the building, tooling, maintenance facilities, utility systems (including steam generation and distribution, compressed air, water, sewer, and electricity and natural gas distribution), generator facilities, guard stations, guard headquarters and alternate command post.

In 2004, DOE/NNSA/PXSO completed consultations with the Texas State Historic Preservation Office (SHPO) and the President’s Advisory Council culminating in a final Programmatic Agreement and Cultural Resource Management Plan



Production Support Facilities

(PA/CRMP). This plan identifies a range of preservation activities for 173 eligible facilities including preservation in-situ of 10 mission-related buildings (Buildings 11-20, 12-17, 12-17A, 12-17B, 12-17E, 12-26, 12-33, 12-44 Cell 1, 12-60, and 12-64). Other buildings determined eligible for the Register, can be Decontaminated and Demolished (D&D) when measures are developed to resolve any adverse effects to the property and agreed upon measures have been taken to preserve the historic significance of the property.



Future plans for Pantex include modernization of the plant to be smaller and more responsive to the country's needs in accordance with the strategies delineated in the Complex Transformation SPEIS and the nation's nuclear posture. Those initiatives include developing and refining the HE CoE,

consolidating laboratory destructive surveillance operations, consolidating category I/II SNM, providing non-destructive testing evaluation, developing area attribute for renewal energy, and executing dismantlements planned and authorized by NNSA.

### Real Property

- 17,415 Acres (Leased / Owned)
- 627 Buildings/Trailers:
- 3,030,041 gsf Active & Operational
- 90,833 gsf Non-Operational
- 86,332 gsf Leased
- Replacement Plant Value: \$ 3.65B
- DM: \$ 317M
- Facility Condition Index:
- MC: 2.7 %
- MD: 14.0 %
- Asset Utilization Index (Overall): 97.1 %

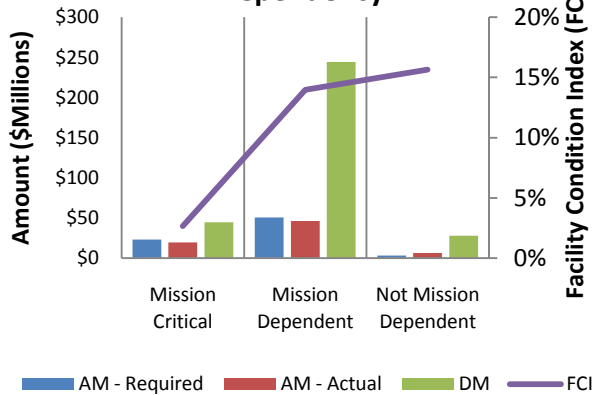
### FY10 Funding by Source:

FY10 Total Site Operating Cost: \$ 545.2 M

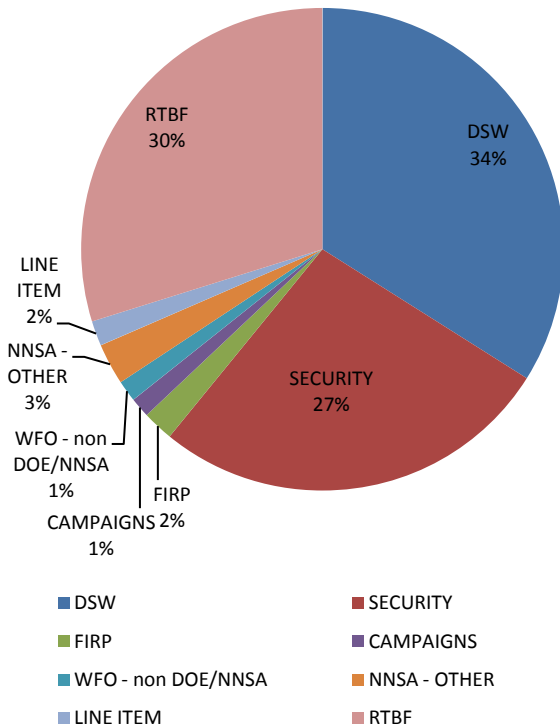
FY10 Total NNSA/DOE Costs: \$ 538.1M

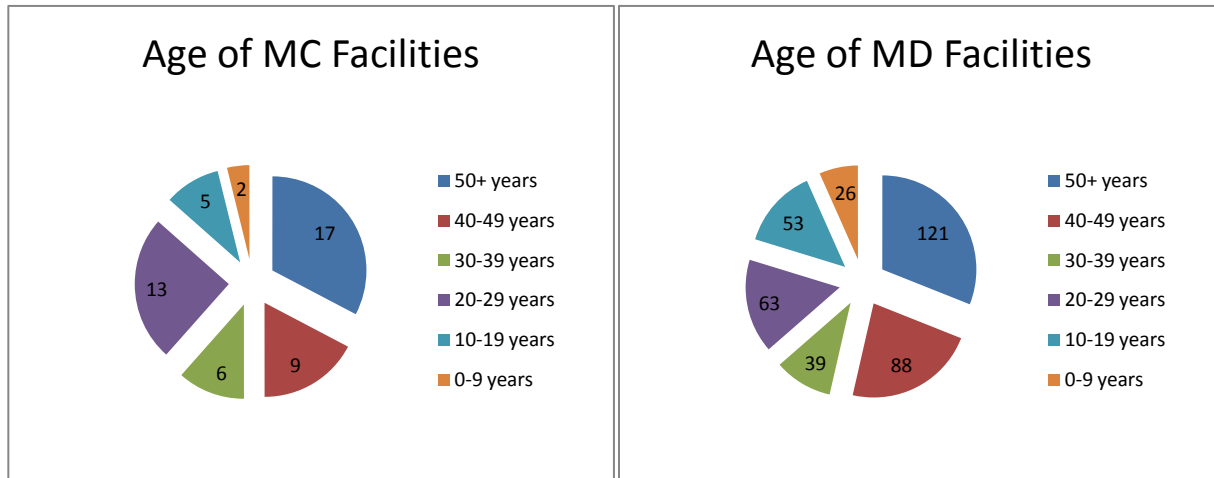
FY10 Total Non-NNSA Work: \$ 7.1M

**Maintenance and FCI by Mission Dependency**



**FY2010 Funding by Source**





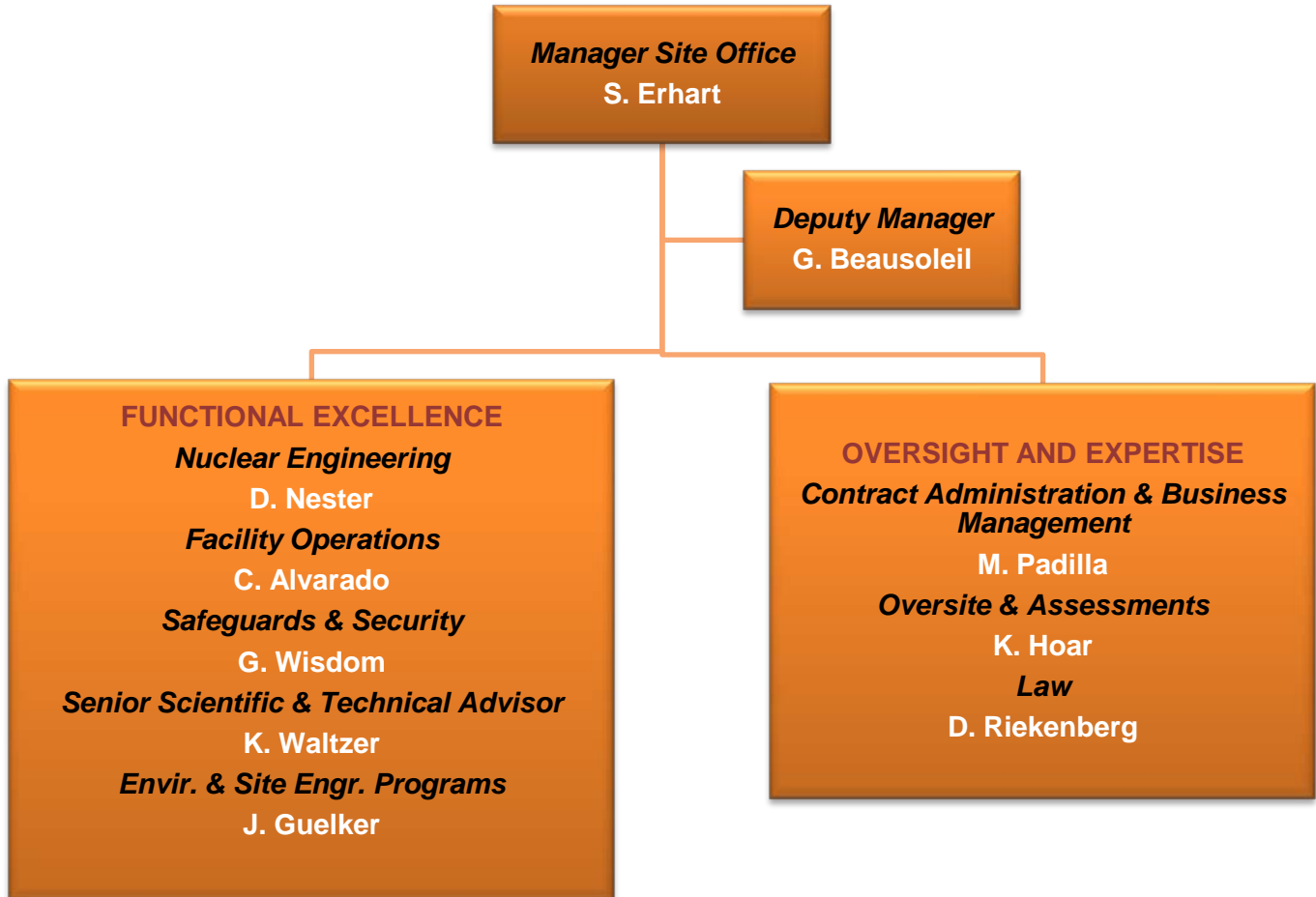
*Staffing*

Approximately 3,575 people are employed at the Pantex Plant. The exact number varies weekly based on terminations and new hires. This population consists of PXSO, B&W Pantex, Office of Secure Transportation (OST), Sandia National Laboratory’s (SNL) Weapons Evaluation Testing Laboratory (WETL), and the Tri-Lab Project Office personnel. Numerous other organizations also have a presence at Pantex including the DNFBSB, the State of Texas Division of Emergency Management, and several subcontractors. Other major groups on site include technical subcontractors and construction personnel. The numbers of construction personnel are anticipated to increase with the award of the HEPF in May 2011. Both PXSO and the B&W Pantex organizations are flat to minimize duplications and provide better communication channels both up and across the organizations.

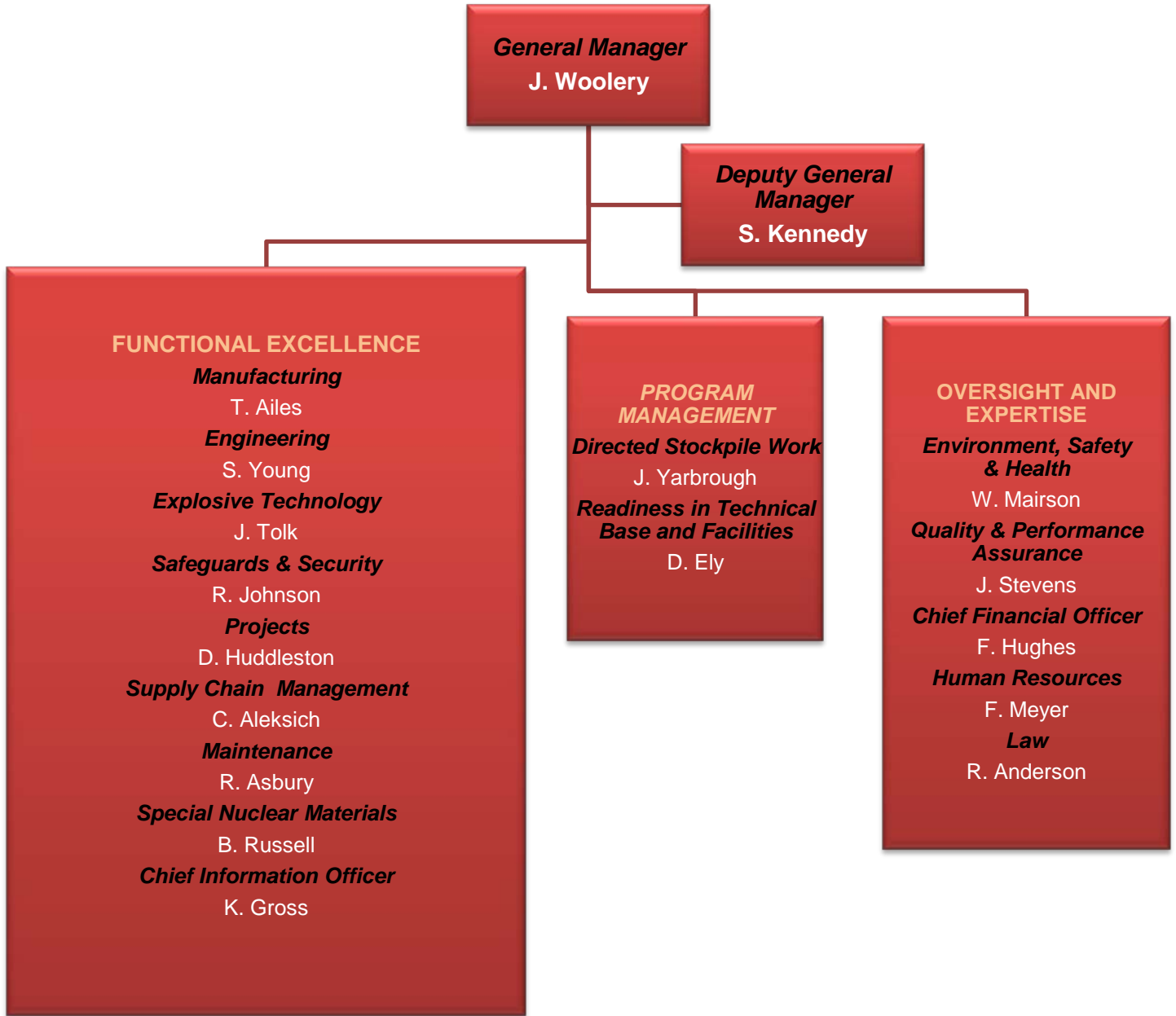
Organization	Number of Employees
<b>B&amp;W Pantex</b>	3296
<b>DOE/PXSO</b>	85
<b>Office of Secure Transportation</b>	166
<b>SNL</b>	21
<b>Tri-Labs</b>	7
<b>Subtotal</b>	3575
<b>Other (excludes construction personnel)</b>	264
<b>Construction Personnel</b>	458
<b>Total</b>	<b>4297</b>

Pantex provides ongoing workforce planning to insure the needed skills are available as workload changes occur. This planning provides a map to workforce restructuring, realignment, staffing, and employee development. Pantex skill mix continues to adjust to the needs of mission work. Forecasts and plans are developed based on the NNSA weapons workload for FY11 to FY38 provided by the P&PD and PCDs. Critical skills staffing requirements for FY11-20 have been identified at 1,400 with a staffing focus on engineers and technicians. Pantex continues to partner with regional universities to provide a pipeline for the critical skill needs for future missions. In addition, compensation and benefits are monitored to stay competitive for talent in the lean technical market. Attrition has increased from 3% in FY10 to 5% in FY11 due to market/economy improvements easing concerns for those ready to retire and the DOE announcement of a two-year wage freeze.

*Organizations*









## Appendix H-Real Property Asset Management

Assumptions:

Information in the below table is based on information as of September 30, 2010.

Number of assets in Mission Dependency includes Other Structure and Facilities (OSFs). Laboratory space at Pantex has a FIMS usage code of manufacturing/production related laboratories.

Warehouse includes staging magazines and trailers (all 400 series FIMS usage codes).

Replacement Plant Value (RPV)		\$3,649	Million			
Total Deferred Maintenance (DM)		\$317	Million			
Site Wide Facility Condition Index (FCI)		8.8%				
			Facility Condition Index (FCI)	Asset Utilization Index (AUI)	# of Assets	Gross Square Feet (GSF) Buildings & Trailers (000s)
Mission Dependency	Mission Critical	2.7%	96.9%	52	992,787	
	Mission Dependent	14.0%	98.9%	463	1,817,887	
	Not Mission Dependent	15.6%	87.1%	198	310,200	
Facility Use	Office	8.0%	97.4%	64	414,102	
	Warehouse	5.5%	97.5%	235	711,474	
	Laboratory	6.4%	100%	9	78,447	
	Housing	N/A	0%	0	0	

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## Appendix I-Site Footprint (Current and Future) Template

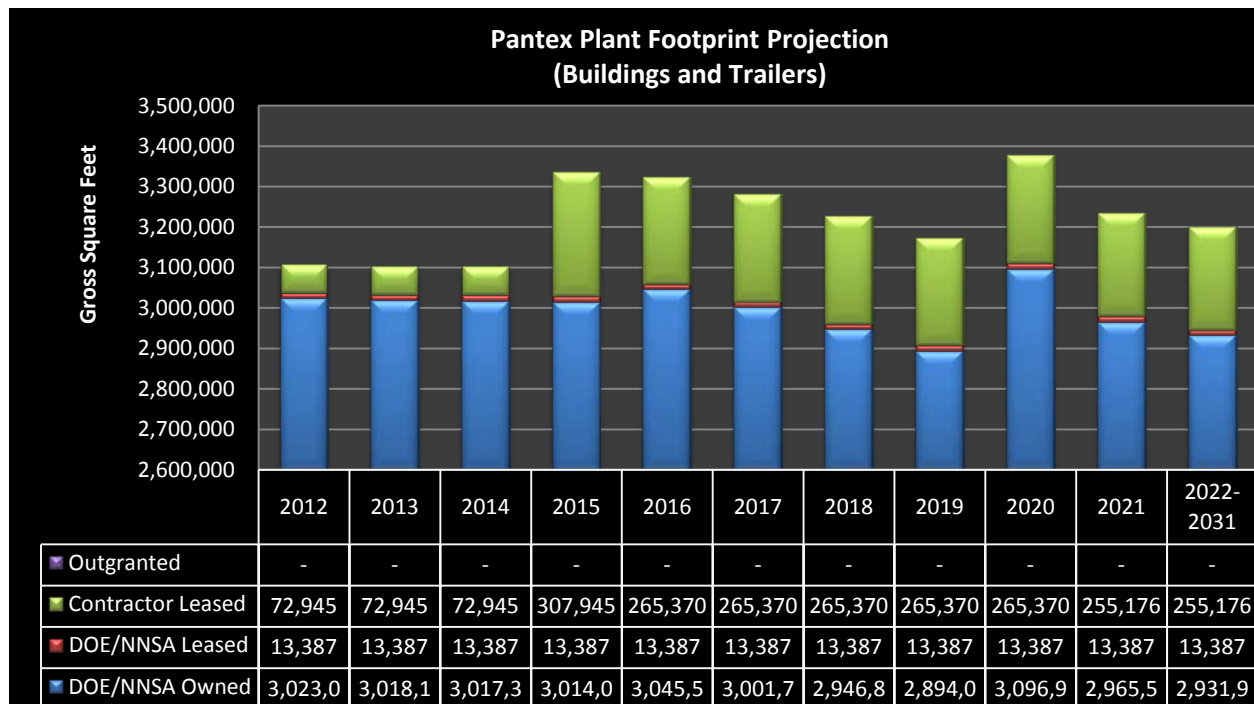
### Assumptions:

In order to be consistent with Attachment E for years 2012 through 2021, the square footage for any proposed project shown in A-2 as completed on or before 2021 is shown in 2022-2031.

Square footage related to the Weapon Surveillance Facility is shown in 2022-2031.

Square footage related to the Administrative Support Complex is shown in 2015, and associated demolition is captured in 2016-2020.

All demolition associated with new construction, including CBFi new construction, is included, even for buildings shown in A-2 as completion in 2031.

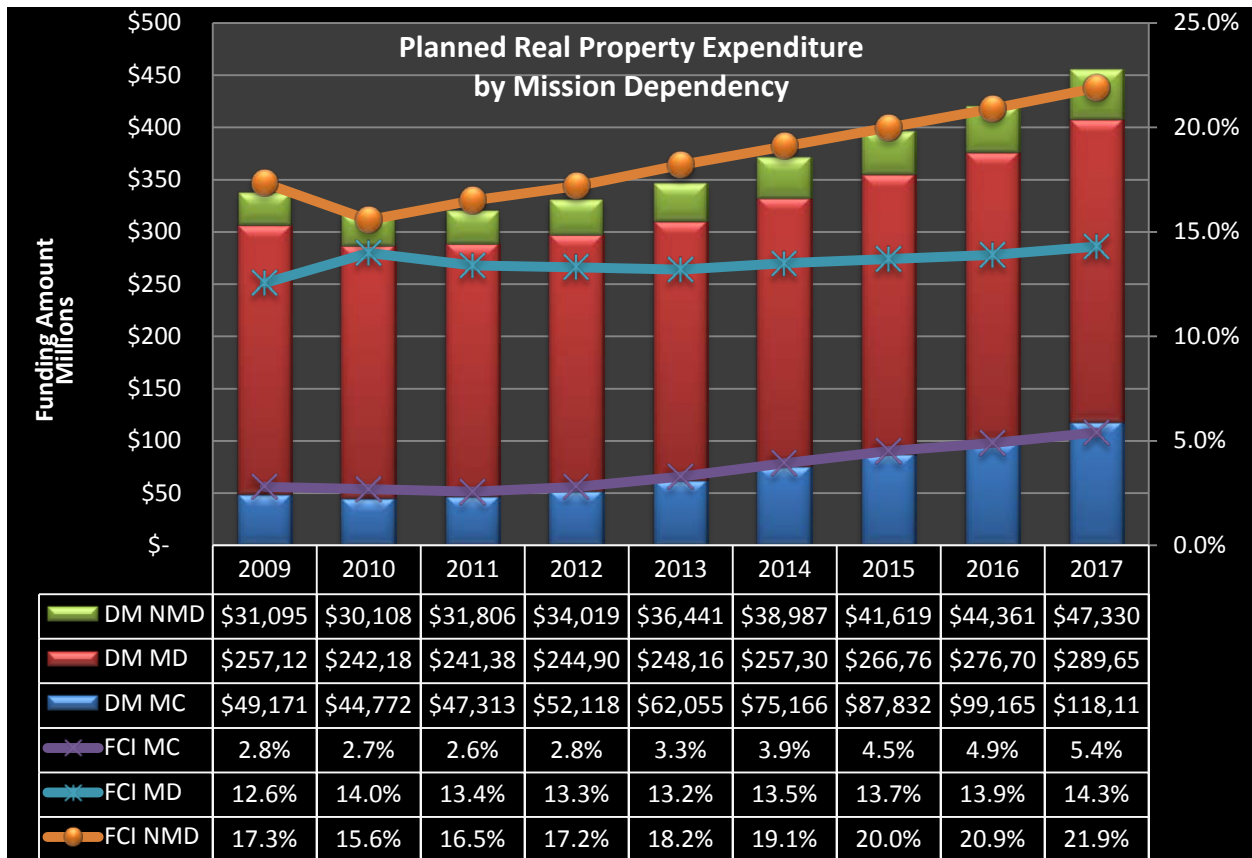


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### Appendix J-Deferred Maintenance & Facility Condition Index Template

Due to RTBF funding limitations and the sunset of FIRP, there is currently no funding mechanism to address DM, which impacts the plant's ability to maintain an adequate condition for all facilities and infrastructure. The result of this is evident below and in Attachment F-2, which reflects the in-balance in the FCI for MC and MDNC facilities and infrastructure.

The estimated FCI below is based on funded and approved projects identified in Attachments A-1 and all tables in A-3. Shown below and in Attachment F-2, the FCI for MC facilities goes from 2.8% in FY09 to 5.4% in FY17, and the FCI for MDNC facilities grows from 12.6% in FY09 to 14.3% in FY17.



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## Appendix N – Acronyms

AAHC	Accreditation Association for Ambulatory Health Care
AEMS	Automated Energy Management System
ARG	Accident Response Group
ARIES	Advanced Recovery and Integrated Extraction System
AUI	Asset Utilization Index
AWE	Atomic Weapon Enterprise
BDI	Blast Door Interlock
CAIS	Condition Assessment Information System
CAMS	Continuous Air Monitoring System
CAS	Contractor Assurance System
CBFI	Capability Based Facilities & Infrastructure program
CCTV	Closed Circuit Television
CD	Critical Decision
CERCLA	Comprehensive Environmental Response Comprehensive and Liability Act
CFA	Causal Factors Analysis
CI	Counterintelligence
CIA	Central Intelligence Agency
CPIBP	Corporate Physical Infrastructure Business Plan
CRU	Condensate Return Unit

CSA	Canned Sub Assembly
CT	Computed Tomography
CWG	Construction Working Group
D&D	Decontaminated and Demolished
D&I	Disassembly and Inspection
D&P	Development and Production Manual
D2M	Design to Manufacture
DA	Design Agency
DHS	Department of Homeland Security
DM	Deferred Maintenance
DNFSB	Defense Nuclear Facilities Safety Board
DoD	Department of Defense
DOE	Department of Energy
DPP	Defense Programs Package
DSW	Directed Stockpile Work
EM	DOE Office of Environmental Management
EMCS	Energy Management and Control System
EPA	Environmental Protection Agency
EPACT	Energy Policy Act
EPO	NNSA Environmental Projects & Operations
ER	Pantex Environmental

	Restoration Program
ES&H	Environment Safety and Health
ET	Explosives Technology
FBI	Federal Bureau of Investigation
FCI	Facility Condition Index
FICAM	Facility Installed Continuous Air Monitoring
FIMS	Facility Information Management System
FIRP	Facilities and Infrastructure Recapitalization Project
FPU	First Production Unit
FSB	Federal Small Business
FSLI	Fire Suppression Lead In
FY	Fiscal Year
FYNSP	Future Years Nuclear Security Profile
GHG	Greenhouse Gas
GPP	General Plant Project
GSF	Gross Square Feet
HDPE	High-Density Polyethylene
HE	High Explosive
HE CoE	High Explosives Center of Excellence
HEFF	High Explosive Formulation Facility
HE P&S	HE Packaging and Staging Facility

HEPF	HE Pressing Facility
HE ST&E	HE Science, Technology, and Engineering
HMX	High Melting Explosive
HNS	Hexanitrostilbene
HPFL	High Pressure Fire Loop
HRO	High Reliability Organization
HRP	Human Reliability Program
HSPD	Homeland Security Presidential Directive
HVAC	Heating, Ventilation, and Air Conditioning
IA	Interagency Agreement
ICAP	Integrated Construction Alignment Plan
ICPP	Integrated Construction Project Plan
IPFS	Integrated Pump down and Fill Station
IR	Infrared
JTA	Joint Test Assembly
JTOT	Joint Technical Operations Team
LANL	Los Alamos National Laboratory
LCOs	Limiting Conditions for Operations
LEP	Life Extension Program
LI	Line Item
LINAC	Linear Accelerator
LLCE	Limited Life Component

	Exchange
LLNL	Lawrence Livermore National Laboratory
LRPPM	Long Range Pantex Production Model
LTS	Long Term Stewardship
M&O	Management and Operating
MAA	Material Access Area
MC	Mission Critical Facilities
MD	Material Disposition
MD-2	New surplus pit shipping container
MDNC	Mission Dependent, Not Critical Facilities
MRP	Material Requirements Planning
NCIR	Nuclear Counterterrorism Incident Response
ND3	Non-destructive density determination
NDE	Non Destructive Evaluation
NG	Neutron Generator
NMD	Not Mission Dependent Facilities
NNSA	National Nuclear Security Administration
NNSS	Nevada National Security Site
NOX	Nitrogen Oxide
NPR	Nuclear Posture Review
NSE	Nuclear Security Enterprise

OCIO	Office of the Chief Information Officer
OFA	Other Federal Agencies
OGA	Other Governmental Agencies
OMI	Operational Machine Interface
OSF	Other Structures and Facilities
OSHA	Occupational Safety and Health Administration
OST	Office of Secure Transportation
P&PD	Production and Planning Directive
PA/CRMP	Programmatic Agreement and Cultural Resource Management Plan
PBX	Plastic Bonded Explosive
PCD	Program Control Document
PDRD	Plant Directed Research, Development and Demonstration
PETN	Pentaerythritol Tetranitrate
PIDAS	Perimeter Intruder Detection and Assessment System
PREP	Pantex Renewable Energy Project
PRIDE	Product Realization Integrated Digital Enterprise
PS	Production Support
PXSO	Pantex Site Office
QER	Quality Evaluation Report
R&D	Research and Development
RAM	Radiation Alarm Monitoring

RAMP	Roof Asset Management Program
RAMS	Radiation Alarm Monitoring System
RAP	Radiological Assistance Program
RAPS	Remote Access Panels
RCRA	Resource Conservation Recovery Act
RDX	Research Department Explosive
RGA	Residual Gas Analyzer
RoD	Record of Decision
RPV	Replacement Plant Value
RTBF	Readiness in Technical Base and Facility
RTG	Radioisotopic Thermoelectric Generator
SGT	Safeguard Transporters
SHPO	State Historic Preservation Office
SI	Sealed Insert
SNL	Sandia National Lab
SNM	Special Nuclear Material
SORT	Strategic Offensive Reduction Treaty
SPEIS	Supplemental Programmatic Environmental Impact Statement
SS-21	Seamless Safety for the 21st Century Programs

SRS	Savannah River Site
SSMP	Stockpile Stewardship and Management Plan
SSP	Stockpile Stewardship Program
SST	Safe Secure Trailers
STA	Secure Transportation Asset
TATB	Triamino Trinitrobenzene
TBP	Technical Business Practices
TCEQ	Texas Commission on Environmental Quality
TTU	Texas Tech University
TYSP	Ten-Year Site Plan
UPS	Uninterruptible Power Source
UV	Ultraviolet
VPP	Voluntary Protection Program
WETL	Weapons Evaluation Testing Laboratory
WFO	Work For Others
WMD	Weapons of Mass Destruction
WR	War Reserve
WSF	Weapon Surveillance Facility
WW	World War

**Attachment A Summary  
Facilities and Infrastructure Cost Projection Spreadsheet  
Projects for Pantex Plant  
(\$000s)**

Backup Sheet (Attachment)	Site Name	Title	Total	Prior Years Funding	FY 2011 Current	FY 2012 FYNSP	FY 2013 FYNSP	FY 2014 FYNSP	FY 2015 FYNSP	FY 2016 FYNSP	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
A-1	PX	Costs for All NNSA Site Line Items	2,257,425	58,101	69,561	86,111	107,376	33,590	84,600	341,548	412,238	472,400	252,000	316,700	14,300	8,900	-	-	-	-	-	-	-	-	-
A-1	PX	Costs for ALL Non-NNSA DOE Alternative Financing Line Items	200,000	-	-	-	500	196,000	1,000	2,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-1	PX	Costs for ALL Non-NNSA <Provide Program Name> Line Items	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-2	PX	Costs for All NNSA Site Line Items	2,983,073	-	-	3,000	4,700	70,400	157,600	43,400	234,950	457,750	386,360	107,800	272,213	71,000	114,723	84,277	62,300	251,650	126,900	113,723	182,127	145,073	93,127
A-2	PX	Costs for ALL Non-NNSA <Provide Program Name> Line Items	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-2	PX	Costs for ALL Non-NNSA <Provide Program Name> Line Items	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-3a	PX	RTBF/Operations of Facilities (Facilities & Infrastructure reported under this category)	38,702	27,532	1,970	9,200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-3b	PX	RTBF/Capability Based Facilities & Infrastructure - Recapitalization Projects	224,847	-	-	-	7,257	30,300	46,500	33,650	34,600	29,050	14,840	11,000	17,650	-	-	-	-	-	-	-	-	-	-
A-3c	PX	RTBF/Capability Based Facilities & Infrastructure - Disposition Projects	7,700	-	-	-	-	-	-	-	400	5,900	1,100	300	-	-	-	-	-	-	-	-	-	-	-
A-3d	PX	RTBF/Capability Based Facilities & Infrastructure - Sustainability Projects	59,280	-	-	-	7,743	3,500	2,200	6,350	9,650	17,500	4,500	-	7,837	-	-	-	-	-	-	-	-	-	-
A-4	PX	Facilities and Infrastructure Recapitalization Program (FIRP)	47,469	14,805	11,700	10,482	10,482	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-5	PX	Costs for NNSA Security Other Facilities and Infrastructure Costs	10,720	10,720	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-5	PX	Costs for NNSA Readiness Campaigns/OST Other Facilities and Infrastructure Costs	4,070	375	2,945	500	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-5	PX	Costs for ALL Non-NNSA <Provide Program Name> Other Facilities and Infrastructure Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-5	PX	Costs for ALL Non-NNSA <Provide Program Name> Other Facilities and Infrastructure Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL</b>			<b>5,833,286</b>	<b>111,533</b>	<b>86,176</b>	<b>109,293</b>	<b>138,308</b>	<b>333,790</b>	<b>291,900</b>	<b>427,448</b>	<b>691,838</b>	<b>982,600</b>	<b>658,800</b>	<b>435,800</b>	<b>312,000</b>	<b>79,900</b>	<b>114,723</b>	<b>84,277</b>	<b>62,300</b>	<b>251,650</b>	<b>126,900</b>	<b>113,723</b>	<b>182,127</b>	<b>145,073</b>	<b>93,127</b>



**Attachment A Summary  
Facilities and Infrastructure Cost Projection Spreadsheet  
Projects for Pantex Plant  
(\$000s)**

Backup Sheet (Attachment)	Site Name	Title	Total	Prior Years Funding	FY 2011 Current	FY 2012 FYNSP	FY 2013 FYNSP	FY 2014 FYNSP	FY 2015 FYNSP	FY 2016 FYNSP	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
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**Attachment A-1  
Facilities and Infrastructure Line Item Cost Projection Spreadsheet  
APPROVED Line Item Projects for Pantex Plant  
(\$000s)**

Site Name	Fiscal Year	Fund Source	Project Name or SSP Conservation Measure Name	Project Number or SSP FEMP Measure #	Included in the SSP? (Y/N)	Priority	Score	Mission Code	Core Capability Code	Special Interest Code #1	Special Interest Code #2	FIMS		FIRP		Deferred Maintenance Reduction	FIMS		GSF Added or Eliminated	Fund Type	Total	Prior Years Funding	FY 2011 Current	FY 2012 FYNP	FY 2013 FYNP	FY 2014 FYNP	FY 2015 FYNP	FY 2016 FYNP	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Notes					
												Property Sequence Number*	Facility Name*	Deferred Maintenance Identifier(s)	Legacy Deferred Maintenance Reduction		Mission Dependency	Mission Dependency Program																															
(59)	(23)	(26)	(48)	(49)	(33)	(47)	(56)	(39)	(8)	(61)	(62)	(50)	(22)	(10)	(36)	(13)	(40)	(41)	(32)	(27)	(64)	(46)	(28)	(29)	(29)	(29)	(29)	(29)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(43)				
<b>A. Readiness in Technical Base and Facilities (RTBF) Construction Line Items</b>																																																	
PX	2004	RTBF - LI	High Pressure Fire Loop-Zone 12 South MAA	06-D-160-01	Yes	1	N/A	M6	C10	RC	DM					1,598																										FIRP funded design (PE&D). Project is still constructing the HPFL tanks and pump houses. Partially included in SSP							
PX	2003	RTBF - LI	HE Pressing Facility	04-D-103-02	Yes	2	N/A	M1	C7	RC	SY																																						
PX	2011	RTBF - LI	Fire Suppression Lead-ins		No	3	7.91	M6	C10	RC	DM	207146	HPFL Water Piping		314	610																																	
PX	2011	RTBF - LI	Flame Detector Upgrade *		No	4	6.79	M6	C10	RC	None																																						
PX	2009	RTBF - LI	Pantex Renewable Energy Project (PREP)	PX-R-01/TC11	Yes	5		M6	C10	SY	None																																						
PX	2011	RTBF - LI	HE Science, Technology & Engineering *		No	6	7.48	M1	C7	RC	None																																						
PX	2011	RTBF - LI	High Explosive Packaging & Staging *		No	7	7.13	M1	C7	RC	None																																						
PX	2013	RTBF - LI	High Explosive Formulation	Not Provided	Yes	8	7.9	M1	C7	RC	SY																																						
PX	2014	RTBF - LI	HE Component Fabrication and Qualification	Not Provided	Yes	9	8.16	M1	C7	RC	SY																																						
PX	2011	Multi Program	Material Staging Facility		No	10	2.843	M1	C9	RC	None																																						
PX	2013	RTBF - LI	FICAM		No	11	6.38	M6	C10	RC	DM	207082	RAMS			5,601																																	
PX	2015	RTBF - LI	Non-Destructive Evaluation Facility		No	12	6.97	M1	C7	RC	None																																						
PX	2014	RTBF - LI	Zone 11 High Pressure Fire Loop		No	13	6.39	M6	C10	RC	DM	207146	HPFL Water Piping		1,078	2,421																																	
PX	2013	RTBF - LI	Fire Protection Building Lead-ins		No	14	6.6	M6	C10	RC	DM	207146	HPFL Water Piping		85	194																																	
PX	2015	RTBF - LI	Inert Machining Facility		No	15	3.364	M1	C7	RC	None																																						















Attachment A-3a  
 Facilities and Infrastructure Project Cost Projection Spreadsheet  
 RTBF/Operations of Facilities Projects for Pantex Plant  
 (\$000s)

Site Name (59)	Fiscal Year (23)	Fund Source (26)	Project Name or SSP Conservation (48)	Project Number or SSP FEMP Measure (49)	Included in the SSP? (Y/N) (33)	Priority (47)	Score (56)	Mission Code (39)	Core Capability Code (8)	Special Interest Code #1 (61)	Special Interest Code #2 (62)	FIMS Property Sequence (50) Facility Name* (22)		Deferred Maintenance (10)	Legacy Deferred Maintenance (36)	Deferred Maintenance Reduction (13)	FIMS Mission Dependency (40) Mission Dependency (41)		GSF Added or Eliminated (32)	Fund Type (27)	Total (64)	Prior Years Funding (46)	FY 2011 Current (28)	FY 2012 FYNSP (29)	FY 2013 FYNSP (29)	FY 2014 FYNSP (29)	FY 2015 FYNSP (29)	FY 2016 FYNSP (29)	FY 2017 (30)	FY 2018 (30)	FY 2019 (30)	FY 2020 (30)	FY 2021 (30)	FY 2022 (30)	FY 2023 (30)	FY 2024 (30)	FY 2025 (30)	FY 2026 (30)	FY 2027 (30)	FY 2028 (30)	FY 2029 (30)	FY 2030 (30)	FY 2031 (30)	Notes (43)
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Attachment A-3d  
 Facilities and Infrastructure Project Cost Projection Spreadsheet  
 RTBF/Capability Based Facilities & Infrastructure - Sustainability Projects for Pantex Plant  
 (\$000s)

Site Name	Fiscal Year	Fund Source	Project Name or SSP Conservation	Project Number or SSP FEMP Measure	Included in the SSP? (Y/N)	Priority	Score	Mission Code	Core Capability Code	Special Interest Code #1	Special Interest Code #2	FIMS		FIRP			Deferred Maintenance Reduction	FIMS		GSF Added or Eliminated	Fund Type	Total	Prior Years Funding	FY 2011 Current	FY 2012 FYNP	FY 2013 FYNP	FY 2014 FYNP	FY 2015 FYNP	FY 2016 FYNP	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Notes
(59)	(23)	(26)	(48)	(49)	(33)	(47)	(56)	(39)	(8)	(61)	(62)	Property Sequence (50)	Facility Name* (22)	Deferred Maintenance (10)	Legacy Deferred Maintenance (36)	(13)	Mission Dependency (40)	Mission Dependency (41)	(32)	(27)	(64)	(46)	(28)	(29)	(29)	(29)	(29)	(29)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(43)	

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**Attachment A-6(a) - FY 2011 - FY 2017**  
**NNSA Facilities and Infrastructure Cost Projection Spreadsheet**  
 Currently FUNDED or APPROVED Security Infrastructure Projects for Pantex Plant  
 (\$000s)

Priority (47)	Fiscal Year (23)	Project Name or SSP Conservation Measure Name* (48)	Project Number or SSP FEMP Measure #* (49)	Mission Dependency (40)	Mission Dependency Program (41)	Total (64)	Planned Funding Source (26)								DBT Related? Y or N	Funded or Approved?
							Line Item A-1	RTBF-OPS A-3a	RTBF-CBFI- RCAP A-3b	RTBF-CBFI- DISP A-3c	RTBF-CBFI- SUSY A-3d	FIRP A-4	Other A-5			
<b>FY 2011 Projects</b>																
1	2011	Fixed Camera / Digital Video		MD	DNS	2,842								Security GPP	N	Funded
2	2011	MotoMesh Expansion		MD	DNS	4,499								Security GPP	N	Funded
3	2011	Range 9 Bullet Trap Replacement		MD	DNS	800								Security GPP	N	Funded
4	2011	12-143 Parking Lot		MD	DNS	682								Security GPP	N	Funded
5	2011	12-75 Renovation Project		MD	DNS	515								Security GPP	N	Funded
6	2011	Station 728 Gate Replacement	FY10-16	MD	DNS	757		X							N	Funded
7	2011	Station 711 Gate Replacement	FY10-17	MD	DNS	675		X							N	Funded
8	2011	Armory Inventory System		MD	DNS	932								Security Oper	N	Funded
9	2011	Building 4-148 Modifications		MD	DNS	30								Security Oper	N	Funded
10	2011	Portal Gamma Monitor Pillars		MD	DNS	100								Security Oper	N	Funded
11	2011	Building 12-125 ESS Area		MD	DNS	100								Security Oper	N	Funded
12	2011	Zone 12 Rabbit Deterrent Fence		MD	DNS	220								Security Oper	N	Funded
ETC.																<Select>
<b>FY 2012 Projects</b>																
ETC.																<Select>
<b>FY 2013 Projects</b>																
ETC.																<Select>
<b>FY 2014 Projects</b>																
ETC.																<Select>
<b>FY 2015 Projects</b>																
ETC.																<Select>
<b>FY 2016 Projects</b>																
ETC.																<Select>
<b>FY 2017 Projects</b>																
ETC.																<Select>

Note: Prioritize for each Fiscal Year (FY11, FY12 and FY13) in sequential order site Security Infrastructure projects/activities.

\* Column Headers in green - **when applicable**: data from the FY 2010 Sites Sustainability Plan / Consolidated Energy Data Report (SSP/CEDR) and/or the Facilities Information Management System (FIMS)

**Attachment A-6(a) - FY 2011 - FY 2017**  
**NNSA Facilities and Infrastructure Cost Projection Spreadsheet**  
 Currently FUNDED or APPROVED Security Infrastructure Projects for Pantex Plant  
 (\$000s)

Priority (47)	Fiscal Year (23)	Project Name or SSP Conservation Measure Name* (48)	Project Number or SSP FEMP Measure #* (49)	Mission Dependency (40)	Mission Dependency Program (41)	Total (64)	Planned Funding Source (26)							
							Line Item A-1	RTBF-OPS A-3a	RTBF-CBFI- RCAP A-3b	RTBF-CBFI- DISP A-3c	RTBF-CBFI- SUSY A-3d	FIRP A-4	Other A-5	DBT Related? Y or N

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**Attachment A-6(b) - FY 2011 - FY 2017**  
**NNSA Facilities and Infrastructure Cost Projection Spreadsheet**  
**Currently UN-FUNDED Security Infrastructure Projects for Pantex Plant**  
**(\$000s)**

Priority (47)	Fiscal Year (23)	Project Name or SSP Conservation Measure Name* (48)	Project Number or SSP FEMP Measure #* (49)	Mission Dependency (40)	Mission Dependency Program (41)	Total (64)	Planned Funding Source (26)								DBT Related? Y or N	Funded or Approved?
							Line Item A-1	RTBF-OPS A-3a	RTBF-CBFI-RCAP A-3b	RTBF-CBFI-DISP A-3c	RTBF-CBFI-SUSY A-3d	FIRP A-4	Other A-5			
<b>FY 2011 Projects</b>																
1	2011	12-75 Water Heater	FY10-10	MD	DNS	265		X							N	
<b>FY 2012 Projects</b>																
1	2012	Fixed Cameras Phase II		MD	DNS	1,500							Security GPP	N		
2	2012	Electronic Locking at 711		MD	DNS	700							Security GPP	N		
3	2012	12-103 Lighting		MD	DNS	375							Security GPP	N		
<b>FY 2013 Projects</b>																
1	2013	Reduntant Camera Fiber		MD	DNS	2,000							Security GPP	N		
2	2013	Firearms Training Simulator		MD	DNS	3,763							Security GPP	N		
3	2013	PIDAS		MD	DNS	440,000	X							N		
<b>FY 2014 Projects</b>																
1	2014	Reduntant Camera Fiber		MD	DNS	2,000							Security GPP	N		
2	2014	Firearms Training Simulator		MD	DNS	2,150							Security GPP	N		
3	2014	East/West Gate Automation		MD	DNS	2,000							Security GPP	N		
4	2014	Protective Force Portal Upgrade		MD	DNS	119,000	X							N		
<b>FY 2015 Projects</b>																
1	2015	Reduntant Camera Fiber		MD	DNS	2,000							Security GPP	N		
2	2015	16-24 Equipment Storage		MD	DNS	2,761							Security GPP	N		
3	2015	Protective Force Live Fire		MD	DNS	50,000	X							N		
<b>FY 2016 Projects</b>																
ETC.																
<b>FY 2017 Projects</b>																
ETC.																

Note: Prioritize for each Fiscal Year (FY11, FY12 and FY13) in sequential order site Security Infrastructure projects/activities.

\* Column Headers in green - **when applicable**: data from the FY 2010 Sites Sustainability Plan / Consolidated Energy Data Report (SSP/CEDR) and/or the Facilities Information Management System (FIMS)

**Attachment A-6(b) - FY 2011 - FY 2017**  
**NNSA Facilities and Infrastructure Cost Projection Spreadsheet**  
**Currently UN-FUNDED Security Infrastructure Projects for Pantex Plant**  
**(\$000s)**

Priority (47)	Fiscal Year (23)	Project Name or SSP Conservation Measure Name* (48)	Project Number or SSP FEMP Measure #* (49)	Mission Dependency (40)	Mission Dependency Program (41)	Total (64)	Planned Funding Source (26)								DBT Related? Y or N	Funded or Approved?
							Line Item A-1	RTBF-OPS A-3a	RTBF-CBFI- RCAP A-3b	RTBF-CBFI- DISP A-3c	RTBF-CBFI- SUSY A-3d	FIRP A-4	Other A-5			

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**Attachement E-1  
Footprint - Disposition Plan for Pantex Plant  
FY 2012 - FY2021**

Fiscal Year	Priority	Score	Project Name or SSP Conservation Measure Name*	Project Number or SSP FEMP Measure #*	Funding Source	Funding Type	Deferred Maintenance Identifier	Legacy Deferred Maintenance Reduction (000)	Deferred Maintenance (Note 1) (000)	Per FIMS												Yearly S&M Costs (000)	Total Estimated Disposition Cost (TEC) (000)	Contaminated (Yes/No) (Note 3)	Included in the SSP? (Yes/No)	Notes	
										Property Sequence Number	Facility ID Number	Facility Name	Property Type (B/L/S/T)	Ownership	Mission Dependency	Mission Dependency Program	Status	Gross Square Feet (GSF)	Excess Indicator (Yes/No)	Excess Year	Estimated Disposition Year						Actual Annual Maintenance Cost (Note 2)
(23)	(47)	(56)	(48)	(49)	(26)	(27)	(10)	(36)	(13)	(50)	(21)	(22)	(51)	(45)	((40)	(41)	(63)	(32)	(18)	(19)	(16)	(1)	(68)	(64)	(7)	(33)	(43)
2012	1		Demolish Richmond Magazines		TBD	E		-	60	136872	04-020E	Component Staging	B	DOE Owned	NMD	DSW	Shutdown Pending D&D	1,568	Yes	2011	2012	5,560	1	1,000	Yes	No	Proposed for CBFI funding in 2018. Shown in E as currently available for demolition.
2012	1		Demolish Richmond Magazines		TBD	E		65	124	136876	04-024	Staging Magazine	B	DOE Owned	NMD	DSW	Shutdown Pending D&D	1,555	Yes	2009	2012	-	1	with 04-020E	Yes	No	Proposed for CBFI funding in 2018. Shown in E as currently available for demolition. National Register Eligible (NRE)
2012	1		Demolish Richmond Magazines		TBD	E		65	129	136900	04-027	Staging Magazine	B	DOE Owned	NMD	DSW	Shutdown Pending D&D	1,555	Yes	2009	2012	-	1	with 04-020E	Yes	No	Proposed for CBFI funding in 2018. Shown in E as currently available for demolition. NRE
2012	1		Demolish Richmond Magazines		TBD	E		65	80	136902	04-029	Staging Magazine	B	DOE Owned	NMD	DSW	Shutdown Pending D&D	1,555	Yes	2009	2012	-	1	with 04-020E	Yes	No	Proposed for CBFI funding in 2018. Shown in E as currently available for demolition. NRE
2012	2		Remove Temporary Trailers		TBD	E		-	26	130584	09-054	Inert Storage	T	DOE Owned	NMD	OFO	Operating	556	No		2012	-	1	300	No	No	Proposed for CBFI funding in 2018. Shown in E as currently available for demolition.
2012	2		Remove Temporary Trailers		TBD	E	P-DNM-09-056	-	24	130586	09-056	Radiation Safety Emergency Support	T	DOE Owned	NMD	RTBF	Shutdown Pending D&D	156	Yes	2009	2012	-	1	with 09-054	No	No	Proposed for CBFI funding in 2018. Shown in E as currently available for demolition.
2012	2		Remove Temporary Trailers		TBD	E	P-DNM-09-028	-	30	130624	09-098	Range Cleaning Facility	T	DOE Owned	NMD	DNS	Shutdown Pending D&D	236	No		2012	-	1	with 09-054	Yes	No	Proposed for CBFI funding in 2018. Shown in E as currently available for demolition.
2012	2		Remove Temporary Trailers		TBD	E		-	30	130634	09-108	Break Area	T	DOE Owned	NMD	DNS	Shutdown Pending D&D	75	Yes	2008	2012	-	1	with 09-054	No	No	Proposed for CBFI funding in 2018. Shown in E as currently available for demolition.
2012	2		Remove Temporary Trailers		TBD	E		-	39	130637	09-111	Maintenance Storage	T	DOE Owned	NMD	OFO	Operating	236	Yes	2011	2012	-	1	with 09-054	No	No	Proposed for CBFI funding in 2018. Shown in E as currently available for demolition.
2012	3		Demolish Utility Buildings		TBD	E		114	626	137038	12-024E	Central Chilled Water Equipment Room and	B	DOE Owned	MD	DSW	Operating	3,234	Yes	2007	2012	18,616	6	3,400	Yes	No	Proposed for CBFI funding in 2018. Shown in E as currently available for demolition.
2012	3		Demolish Utility Buildings		TBD	E		-	807	137039	12-024S	Electrical Substation	B	DOE Owned	NMD	DSW	Shutdown Pending D&D	836	Yes	2009	2012	-	1	with 12-024E	No	No	Proposed for CBFI funding in 2018. Shown in E as currently available for demolition.
2012	4		Demolish 12-034		TBD	E	P-DNM-12-034	-	24	137052	12-034	Flammable Liquid Storage	B	DOE Owned	NMD	DSW	Shutdown Pending D&D	129	Yes	2008	2012	-	1	750	Yes	No	Proposed for CBFI funding in 2019. Shown in E as currently available for demolition.
2012	4		Demolish 12-034		TBD	E	P-DNM-12-034SS	2	6	137053	12-034SS	Shade Structure	B	DOE Owned	NMD	DSW	Shutdown Pending D&D	339	Yes	2008	2012	-	1	with 12-034	No	No	Proposed for CBFI funding in 2019. Shown in E as currently available for demolition.
2012	4		Demolish 12-034		TBD	E	P-DNM-12-R-034	21	115	137100	12-R-034	Ramp from 12-019 to 12-034	B	DOE Owned	NMD	NA	Operating	1,000	Yes	2008	2012	-	3	with 12-034	No	No	Proposed for CBFI funding in 2019. Shown in E as currently available for demolition. Note that only part of the ramp will be demolished and is reflected in square footage (does not match FIMS).
2012	5		Demolish Maintenance Structures		TBD	E		-	18	130491	12-005G3	Maintenance Inert Storage	B	DOE Owned	NMD	RTBF	Operating	493	Yes	2009	2012	-	1	710	No	No	Proposed for CBFI funding in 2019. Shown in E as currently available for demolition.
2012	5		Demolish Maintenance Structures		TBD	E		8	13	83571	12-080	Drivers Wait Building	B	DOE Owned	NMD	NA	Shutdown Pending D&D	117	Yes	2008	2012	-	1	with 12-005G3	No	No	Proposed for CBFI funding in 2019. Shown in E as currently available for demolition.
2012	5		Demolish Maintenance Structures		TBD	E		-	-	130827	16-010B	Vehicle Wash System	B	DOE Owned	NMD	RTBF	Shutdown Pending D&D	799	Yes	2007	2012	-	2	with 12-005G3	No	No	Proposed for CBFI funding in 2019. Shown in E as currently available for demolition.
2012	5		Demolish Maintenance Structures		TBD	E		5	28	83584	12-093	Inert Storage	B	DOE Owned	NMD	RTBF	Shutdown Pending D&D	303	No		2012	-	1	with 12-005G3	Yes	No	Available for demolition
2012	5		Demolish Maintenance Structures		TBD	E		10	8	130486	11-R-016	Ramp from 11-020 to 11-021	B	DOE Owned	NMD	NA	Shutdown Pending D&D	267	Yes	2009	2012	-	1	with 12-005G3	No	No	Available for demolition
2012	6		Demolish Storage Buildings		TBD	E		-	2	137143	12-041SS	Shade Structure	B	DOE Owned	NMD	DSW	Shutdown Pending D&D	140	Yes	2009	2012	-	1	300	No	No	Proposed for CBFI funding in 2020. Shown in E as currently available for demolition.
2012	6		Demolish Storage Buildings		TBD	E		5	16	137184	12-045	Inert Storage	B	DOE Owned	NMD	RTBF	Operating	100	Yes	2009	2012	-	1	with 12-041SS	No	No	Proposed for CBFI funding in 2020. Shown in E as currently available for demolition.
2012	6		Demolish Storage Buildings		TBD	E		5	8	137185	12-047	Inert Storage	B	DOE Owned	NMD	RTBF	Operating	140	Yes	2009	2012	-	1	with 12-041SS	No	No	Proposed for CBFI funding in 2020. Shown in E as currently available for demolition.

**Attachement E-1  
Footprint - Disposition Plan for Pantex Plant  
FY 2012 - FY2021**

Fiscal Year	Priority	Score	Project Name or SSP Conservation Measure Name*	Project Number or SSP FEMP Measure #*	Funding Source	Funding Type	Deferred Maintenance Identifier	Legacy Deferred Maintenance Reduction (000)	Deferred Maintenance (Note 1) (000)	Per FIMS											Yearly S&M Costs (000)	Total Estimated Disposition Cost (TEC) (000)	Contaminated (Yes/No) (Note 3)	Included in the SSP? (Yes/No)	Notes		
										Property Sequence Number	Facility ID Number	Facility Name	Property Type (B/L/S/T)	Ownership	Mission Dependency	Mission Dependency Program	Status	Gross Square Feet (GSF)	Excess Indicator (Yes/No)	Excess Year						Estimated Disposition Year	Actual Annual Maintenance Cost (Note 2)
(23)	(47)	(56)	(48)	(49)	(26)	(27)	(10)	(36)	(13)	(50)	(21)	(22)	(51)	(45)	(40)	(41)	(63)	(32)	(18)	(19)	(16)	(1)	(68)	(64)	(7)	(33)	(43)
2013	1		Demolish 12-003		TBD	E	P-DNM-12-003	7	176	83466	12-003	Inert Storage	B	DOE Owned	NMD	NA	Operating	2,062	Yes	2007	2013	-	3	1,750	No	No	
2013	1		Demolish 12-003		TBD	E	P-DNM-12-003L	-	9	130489	12-003L	Generator Building	B	DOE Owned	NMD	NA	Shutdown Pending D&D	87	Yes	2007	2013	-	-	with 12-003	No	No	
2013	1		Demolish 12-003		TBD	E	P-DNM-12-030	20	10	130497	12-R-003	Ramp from 12-003 to 12-R-001	B	DOE Owned	NMD	NA	Shutdown Pending D&D	588	Yes	2007	2013	-	2	with 12-003	No	No	
2013	2		Demolish 12-030		TBD	E	P-DNM-12-R-003	47	64	137044	12-030	Break Area	B	DOE Owned	NMD	NA	Shutdown Pending D&D	453	Yes	2010	2013	-	1	700	No	No	
2013	3		Demolish Water Storage Tanks		TBD	E		21	10	137113	15-024A	High Pressure Fire Loop Pump Facility	B	DOE Owned	MD	RTBF	Operating	839	No		2013	41,398	2	6,200	No	No	TEC includes cost of associated water storage tank (15-024). 15-024/24A may be retained.
2013	3		Demolish Water Storage Tanks		TBD	E		20	7	130817	15-025A	High Pressure Fire Loop Pump Facility	B	DOE Owned	MD	RTBF	Operating	824	No		2013	34,887	2	with 15-024A	No	No	
2014	1		Demolish FS-004		TBD	E		57	109	84018	FS-004	Firing Site	B	DOE Owned	NMD	RC	Shutdown Pending D&D	792	No		2014	-	2	5,000	Yes	No	NRE
2014	1		Demolish FS-004		TBD	E		-	15	130519	FS-004A	Vacuum and Methane Building	B	DOE Owned	NMD	RC	Shutdown Pending D&D	37	No		2014	-	1	with FS-004	Yes	No	
2015	1		Demolish 12-023		TBD	E		14	315	137032	12-023	Office Building	B	DOE Owned	MD	DSW	Operating	3,260	Yes	2009	2015	26,004	6	1,900	Yes	No	
2016	1		Remove Leased Admin Facilities		TBD	E	P-DNM-09-060	-	-	131523	09-060	Leased Office Building	B	Contractor Leased	MD	DSW	Operating	-	No		2016	13,834	-	700	No	No	Contingent on completion of the Administrative Support Complex (ASC). Leased square footage not included in totals.
2016	1		Remove Leased Admin Facilities		TBD	E	P-DNM-09-061	-	-	131716	09-061	Leased Office Building	B	Contractor Leased	MD	NA	Operating	-	No		2016	17,549	-	with 09-060	No	No	Contingent on completion of the ASC. Leased square footage not included in totals.
2016	1		Remove Leased Admin Facilities		TBD	E		-	-	141933	09-129	Leased Office Trailer	T	Contractor Leased	NMD	RTBF	Operating	-	No		2016	-	-	with 09-060	No	No	Contingent on completion of the ASC. Leased square footage not included in totals.
2016	1		Remove Leased Admin Facilities		TBD	E		-	-	143737	09-130	Leased Office Building	B	Contractor Leased	MD	RTBF	Operating	-	No		2016	21,879	-	with 09-060	No	No	Contingent on completion of the ASC. Leased square footage not included in totals.
2016	2		Demolish Admin Facilities - Group 1		TBD	E		-	6	130633	09-107	Radio Equipment Storage	T	DOE Owned	NMD	RTBF	Operating	127	No		2016	-	1	60	No	No	Contingent on completion of the ASC
2016	2		Demolish Admin Facilities - Group 1		TBD	E		42	1,668	83463	12-002	Central Health and Offices	B	DOE Owned	MD	RTBF	Operating	11,516	No		2016	136,727	13	3,400	No	No	Contingent on completion of the ASC
2016	2		Demolish Admin Facilities - Group 1		TBD	E		57	133	83464	12-002A	Analytical Laboratory	B	DOE Owned	MD	RTBF	Operating	1,793	No		2016	12,223	4	with 12-002	Yes	No	Contingent on completion of the ASC
2016	2		Demolish Admin Facilities - Group 1		TBD	E	P-DNM-12-014	-	87	83485	12-014	Office Building	B	DOE Owned	NMD	DSW	Operating	837	Yes	2007	2016	1,176	3	775	No	No	Contingent on completion of the ASC
2016	2		Demolish Admin Facilities - Group 1		TBD	E		53	105	83561	12-072	Office Building	B	DOE Owned	NMD	RTBF	Operating	2,577	No		2016	25,097	5	640	No	No	Contingent on completion of the ASC
2016	2		Demolish Admin Facilities - Group 1		TBD	E		1	237	83594	12-101	Office Building	B	DOE Owned	MD	DSW	Operating	5,398	No		2016	36,346	7	1,300	No	No	Contingent on completion of the ASC
2017	1		Demolish Admin Facilities - Group 2		TBD	E		125	281	83482	12-011A	Office Building	B	DOE Owned	MD	DSW	Operating	5,934	No		2017	13,342	9	1,600	No	No	Contingent on completion of the ASC
2017	1		Demolish Admin Facilities - Group 2		TBD	E		-	96	83598	12-106	Office Building	B	DOE Owned	MD	RTBF	Operating	5,448	No		2017	79,900	7	4,700	No	No	Contingent on completion of the ASC
2017	1		Demolish Admin Facilities - Group 2		TBD	E		-	152	83599	12-106A	Office Building	B	DOE Owned	MD	RTBF	Operating	12,724	No		2017	26,856	14	with 12-106	No	No	Contingent on completion of the ASC
2017	1		Demolish Admin Facilities - Group 2		TBD	E		-	349	83600	12-107	Office Building	B	DOE Owned	MD	DSW	Operating	10,058	No		2017	85,405	12	2,600	No	No	Contingent on completion of the ASC
2017	1		Demolish Admin Facilities - Group 2		TBD	E		-	307	83612	12-127	Office Building	B	DOE Owned	MD	DSW	Operating	9,589	No		2017	52,037	10	2,500	No	No	Contingent on completion of the ASC
2018	1		Demolish Admin Facilities - Group 3		TBD	E		414	3,643	83515	12-036	Office Building	B	DOE Owned	MD	DSW	Operating	33,287	No		2018	1,022,089	47	10,900	No	No	Contingent on completion of the ASC
2018	1		Demolish Admin Facilities - Group 3		TBD	E		-	127	83516	12-036A	Conference Building	B	DOE Owned	MD	DSW	Operating	4,530	No		2018	9,142	7	with 12-036	No	No	Contingent on completion of the ASC
2018	1		Demolish Admin Facilities - Group 3		TBD	E		-	24	130704	12-036P	Generator Building	B	DOE Owned	NMD	DSW	Operating	86	No		2018	-	-	with 12-036	No	No	Contingent on completion of the ASC
2018	1		Demolish Admin Facilities - Group 3		TBD	E		-	43	130705	12-036S	Electrical Substation	B	DOE Owned	NMD	DSW	Operating	265	No		2018	-	-	with 12-036	No	No	Contingent on completion of the ASC
2018	1		Demolish Admin Facilities - Group 3		TBD	E		2	108	83558	12-069	Office Building	B	DOE Owned	MD	DSW	Operating	10,930	No		2018	55,064	12	3,100	No	No	Contingent on completion of the ASC
2018	1		Demolish Admin Facilities - Group 3		TBD	E		-	152	83595	12-102	Office Building	B	DOE Owned	MD	RTBF	Operating	5,823	No		2018	45,287	6	1,600	No	No	Contingent on completion of the ASC

**Attachement E-1  
Footprint - Disposition Plan for Pantex Plant  
FY 2012 - FY2021**

Fiscal Year	Priority	Score	Project Name or SSP Conservation Measure Name*	Project Number or SSP FEMP Measure #*	Funding Source	Funding Type	Deferred Maintenance Identifier	Legacy Deferred Maintenance Reduction (000)	Deferred Maintenance (Note 1) (000)	Per FIMS											Yearly S&M Costs (000)	Total Estimated Disposition Cost (TEC) (000)	Contaminated (Yes/No) (Note 3)	Included in the SSP? (Yes/No)	Notes		
										Property Sequence Number	Facility ID Number	Facility Name	Property Type (B/L/S/T)	Ownership	Mission Dependency	Mission Dependency Program	Status	Gross Square Feet (GSF)	Excess Indicator (Yes/No)	Excess Year						Estimated Disposition Year	Actual Annual Maintenance Cost (Note 2)
(23)	(47)	(56)	(48)	(49)	(26)	(27)	(10)	(36)	(13)	(50)	(21)	(22)	(51)	(45)	(40)	(41)	(63)	(32)	(18)	(19)	(16)	(1)	(68)	(64)	(7)	(33)	(43)
2019	1		Demolish Admin Facilities - Group 4		TBD	E		37	1,138	83559	12-070	Cafeteria	B	DOE Owned	NMD	NA	Operating	12,460	No		2019	138,245	14	3,700	No	No	Contingent on completion of the ASC
2019	1		Demolish Admin Facilities - Group 4		TBD	E		-	46	130766	12-132	Office Building	B	DOE Owned	MD	RTBF	Operating	10,152	No		2019	34,931	11	2,900	No	No	Contingent on completion of the ASC
2019	1		Demolish Admin Facilities - Group 4		TBD	E		-	729	83814	16-012	Office Building	B	DOE Owned	MD	RTBF	Operating	30,227	No		2019	155,743	32	9,000	No	No	Contingent on completion of the ASC
2020	1		Demolish Admin Facilities - Group 5		TBD	E	P-DNM-12-006	-	896	83474	12-006	Office Building	B	DOE Owned	MD	DSW	Operating	18,719	No		2020	786,073	29	9,100	No	No	Contingent on completion of the ASC
2020	1		Demolish Admin Facilities - Group 5		TBD	E	P-DNM-12-006B	-	253	83475	12-006B	Office Building	B	DOE Owned	MD	DSW	Operating	6,470	No		2020	17,289	10	with 12-006	No	No	Contingent on completion of the ASC
2020	1		Demolish Admin Facilities - Group 5		TBD	E		1	5	130669	12-006S	Electrical Substation	B	DOE Owned	MD	DSW	Operating	571	No		2020	-	1	with 12-006	No	No	Contingent on completion of the ASC
2020	1		Demolish Admin Facilities - Group 5		TBD	E		-	41	130670	12-006V	Valve Building	B	DOE Owned	NMD	DSW	Operating	32	No		2020	-	-	with 12-006	No	No	Contingent on completion of the ASC
2020	1		Demolish Admin Facilities - Group 5		TBD	E	P-DNM-12-007	-	312	83476	12-007	Office Building	B	DOE Owned	MD	DSW	Operating	2,799	No		2020	32,569	6	with 12-006	No	No	Contingent on completion of the ASC
2020	1		Demolish Admin Facilities - Group 5		TBD	E	P-DNM-12-007A	-	-	140246	12-007A	Rapid Prototype Facility	B	DOE Owned	MD	DSW	Operating	495	No		2020	-	1	with 12-006	No	No	Contingent on completion of the ASC
2021	1		Demolish ET Facilities - Group 1		TBD	E	P-DNM-11-015	17	1,114	83400	11-015	Material Transport Office Area	B	DOE Owned	NMD	DSW	Operating	5,960	No		2021	51,440	9	28,000	Yes	No	Contingent on completion of HE Packaging & Staging (HEPS), NRE
2021	1		Demolish ET Facilities - Group 1		TBD	E	P-DNM-11-015A	9	915	83401	11-015A	Inert Storage	B	DOE Owned	NMD	DSW	Shutdown Pending D&D	2,334	Yes	2011	2021	3,785	5	with 11-015	Yes	No	Contingent on completion of HEPS, NRE
2021	1		Demolish ET Facilities - Group 1		TBD	E		7	39	83414	11-025	Explosives Staging	B	DOE Owned	MD	RC	Operating	861	No		2021	4,130	2	with 11-015	Yes	No	Contingent on completion of HEPS
2021	1		Demolish ET Facilities - Group 1		TBD	E		7	21	83422	11-037	Explosives Staging	B	DOE Owned	MD	RC	Operating	2,018	No		2021	22,394	3	with 11-015	Yes	No	Contingent on completion of HEPS, NRE
2021	1		Demolish ET Facilities - Group 1		TBD	E		11	999	83427	11-042	Explosives Staging	B	DOE Owned	MD	RC	Operating	3,217	No		2021	33,508	4	with 11-015	Yes	No	Contingent on completion of HEPS, NRE
2021	1		Demolish ET Facilities - Group 1		TBD	E		11	22	130657	11-042E	Equipment Room	B	DOE Owned	MD	RC	Operating	52	No		2021	-	-	with 11-015	No	No	Contingent on completion of HEPS
2021	1		Demolish ET Facilities - Group 1		TBD	E		-	41	83435	11-053	Rest Room	B	DOE Owned	NMD	NA	Operating	265	No		2021	18,430	1	with 11-015	No	No	Contingent on completion of HEPS
2021	1		Demolish ET Facilities - Group 1		TBD	E		-	35	130443	11-R-005	Ramp from 11-015 to 11-042	B	DOE Owned	MD	NA	Operating	1,639	No		2021	-	3	with 11-015	No	No	Contingent on completion of HEPS
2021	1		Demolish ET Facilities - Group 1		TBD	E	P-DNM-11-R-007	76	634	130446	11-R-007	Ramp from 11-015 to 11-017	B	DOE Owned	MD	NA	Operating	4,605	No		2021	-	6	with 11-015	No	No	Contingent on completion of HEPS
2021	1		Demolish ET Facilities - Group 1		TBD	E		44	114	130526	11-R-022	Ramp from 11-015 to 11-038	B	DOE Owned	MD	NA	Operating	7,015	No		2021	2,593	9	with 11-015	No	No	Contingent on completion of HEPS
2021	1		Demolish ET Facilities - Group 1		TBD	E		4	204	130528	11-R-042	Ramp from 11-R-004 to 11-R-005	B	DOE Owned	MD	NA	Operating	3,895	No		2021	177,743	5	with 11-015	No	No	Contingent on completion of HEPS
2021	2		Remove 09-059		TBD	E	P-DNM-09-059	-	-	131503	09-059	Leased Office Building	B	Contractor Leased	MD	RTBF	Operating	-	No		2021	14,053	-	225	No	No	Contingent on completion of HE Science, Technology, and Engineering (HESTE). Leased square footage not included in totals.
2021	3		Demolish ET Facilities - Group 2		TBD	E	P-DNM-11-002	21	626	83394	11-002	Office Building and Changehouse	B	DOE Owned	MD	RC	Operating	10,516	No		2021	94,942	17	60,000	No	No	Contingent on completion of HESTE
2021	3		Demolish ET Facilities - Group 2		TBD	E		36	472	83395	11-005	Material Properties Laboratory Testing	B	DOE Owned	MC	RC	Operating	9,446	No		2021	95,668	17	with 11-002	Yes	No	Contingent on completion of HESTE, NRE
2021	3		Demolish ET Facilities - Group 2		TBD	E		98	1,222	83399	11-014	Technology Development and Offices	B	DOE Owned	MD	DSW	Operating	7,675	No		2021	187,907	14	with 11-002	Yes	No	Contingent on completion of HESTE
2021	3		Demolish ET Facilities - Group 2		TBD	E		14	48	83403	11-016	Explosives Thermal Treatment	B	DOE Owned	MD	RC	Operating	431	No		2021	9,879	2	with 11-002	Yes	No	Contingent on completion of HESTE
2021	3		Demolish ET Facilities - Group 2		TBD	E		-	257	83406	11-018	High Voltage Testing and Small Energetic	B	DOE Owned	MC	ENG	Operating	1,538	Yes	2011	2021	16,038	3	with 11-002	Yes	No	Contingent on completion of HESTE, NRE
2021	3		Demolish ET Facilities - Group 2		TBD	E		7	174	83407	11-019	Inert Annealing and Testing	B	DOE Owned	MD	RC	Operating	1,014	No		2021	-	2	with 11-002	Yes	No	Contingent on completion of HESTE, NRE
2021	3		Demolish ET Facilities - Group 2		TBD	E		19	238	83411	11-022	Laboratory Support Facility	B	DOE Owned	MD	RC	Operating	1,140	No		2021	11,164	4	with 11-002	Yes	No	Contingent on completion of HESTE, NRE
2021	3		Demolish ET Facilities - Group 2		TBD	E	P-DNM-11-027	23	425	83416	11-027	Office Building	B	DOE Owned	MD	RC	Operating	5,138	Yes	2009	2021	58,401	6	with 11-002	No	No	Contingent on completion of HESTE
2021	3		Demolish ET Facilities - Group 2		TBD	E		-	324	83417	11-028	Technology Development and Deployment	B	DOE Owned	MD	RC	Operating	1,843	No		2021	31,838	4	with 11-002	Yes	No	Contingent on completion of HESTE, NRE
2021	3		Demolish ET Facilities - Group 2		TBD	E	P-DNM-11-029	92	504	83418	11-029	Photography Laboratory	B	DOE Owned	MD	NA	Shutdown Pending D&D	4,315	Yes	2007	2021	17,745	6	with 11-002	Yes	No	Contingent on completion of HESTE
2021	3		Demolish ET Facilities - Group 2		TBD	E		11	387	83423	11-038	Explosives Test Fire and High Voltage Te	B	DOE Owned	MC	RC	Operating	7,210	No		2021	77,690	12	with 11-002	Yes	No	Contingent on completion of HESTE, NRE



**Attachement E-1  
Footprint - Disposition Plan for Pantex Plant  
FY 2012 - FY2021**

Fiscal Year	Priority	Score	Project Name or SSP Conservation Measure Name*	Project Number or SSP FEMP Measure #*	Funding Source	Funding Type	Deferred Maintenance Identifier	Legacy Deferred Maintenance Reduction (000)	Deferred Maintenance (Note 1) (000)	Per FIMS											Yearly S&M Costs (000)	Total Estimated Disposition Cost (TEC) (000)	Contaminated (Yes/No) (Note 3)	Included in the SSP? (Yes/No)	Notes		
										Property Sequence Number	Facility ID Number	Facility Name	Property Type (B/L/S/T)	Ownership	Mission Dependency	Mission Dependency Program	Status	Gross Square Feet (GSF)	Excess Indicator (Yes/No)	Excess Year						Estimated Disposition Year	Actual Annual Maintenance Cost (Note 2)
(23)	(47)	(56)	(48)	(49)	(26)	(27)	(10)	(36)	(13)	(50)	(21)	(22)	(51)	(45)	(40)	(41)	(63)	(32)	(18)	(19)	(16)	(1)	(68)	(64)	(7)	(33)	(43)
2021	3		Demolish ET Facilities - Group 2		TBD	E		1	4	130482	11-045	Inert Storage	B	DOE Owned	NMD	RC	Operating	101	No		2021	-	1	with 11-002	No	No	Contingent on completion of HESTE
2021	3		Demolish ET Facilities - Group 2		TBD	E		37	287	130442	11-R-004	Ramp from 11-014 to 11-028	B	DOE Owned	NMD	NA	Operating	2,480	No		2021	-	4	with 11-002	No	No	Contingent on completion of HESTE
2021	3		Demolish ET Facilities - Group 2		TBD	E		1	437	130447	11-R-008	Ramp from 11-017 to 11-020	B	DOE Owned	MD	NA	Operating	4,326	No		2021	-	6	with 11-002	No	No	Contingent on completion of HESTE
2021	3		Demolish ET Facilities - Group 2		TBD	E		-	290	130448	11-R-010	Ramp from 11-016 to 11-022	B	DOE Owned	MD	NA	Operating	3,492	No		2021	7,625	5	with 11-002	No	No	Contingent on completion of HESTE
2021	3		Demolish ET Facilities - Group 2		TBD	E		-	51	130524	11-R-011	Ramp from 11-016 to 11-017	B	DOE Owned	MD	NA	Operating	948	No		2021	6,697	2	with 11-002	No	No	Contingent on completion of HESTE
2021	3		Demolish ET Facilities - Group 2		TBD	E		1	533	130525	11-R-013	Ramp from 11-002 to 11-048	B	DOE Owned	NMD	NA	Operating	4,674	No		2021	648	6	with 11-002	No	No	Contingent on completion of HESTE
2021	3		Demolish ET Facilities - Group 2		TBD	E		12	289	134173	11-R-013A	Ramp from 11-017 to 11-048	B	DOE Owned	NMD	NA	Operating	2,300	No		2021	-	3	with 11-002	No	No	Contingent on completion of HESTE
2021	4		Demolish Richmond Magazines - Group 1		TBD	E		-	9	136848	04-019	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	3,000	No	No	Contingent on completion of MSF, NRE
2021	4		Demolish Richmond Magazines - Group 1		TBD	E		1	12	136873	04-021	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	with 04-019	No	No	Contingent on completion of MSF, NRE
2021	4		Demolish Richmond Magazines - Group 1		TBD	E		65	124	136874	04-022	Firearms Ammunition Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	with 04-019	Yes	No	Contingent on completion of MSF
2021	4		Demolish Richmond Magazines - Group 1		TBD	E		65	124	136875	04-023	NELAJTA Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	with 04-019	Yes	No	Contingent on completion of MSF, NRE
2021	4		Demolish Richmond Magazines - Group 1		TBD	E		7	12	136877	04-025	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	with 04-019	No	No	Contingent on completion of MSF, NRE
2021	5		Demolish 04-026		TBD	E		8	637	136878	04-026	Loading Dock and Transfer Station	B	DOE Owned	MD	DSW	Operating	4,537	No		2021	23,787	7	3,400	No	No	Contingent on completion of MSF, NRE
2021	6		Demolish Richmond Magazines - Group 2		TBD	E		65	125	136901	04-028	Firearms Ammunition Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	1,800	No	No	Contingent on completion of MSF, NRE
2021	6		Demolish Richmond Magazines - Group 2		TBD	E		1	25	136906	04-030	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	with 04-028	No	No	Contingent on completion of MSF, NRE
2021	6		Demolish Richmond Magazines - Group 2		TBD	E		-	15	136907	04-031	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	with 04-028	No	No	Contingent on completion of MSF, NRE
2021	7		Demolish Richmond Magazines - Group 3		TBD	E		17	14	136908	04-032	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	4,200	No	No	Contingent on completion of MSF, NRE
2021	7		Demolish Richmond Magazines - Group 3		TBD	E		10	14	136909	04-033	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	3	with 04-032	No	No	Contingent on completion of MSF, NRE
2021	7		Demolish Richmond Magazines - Group 3		TBD	E		91	60	136910	04-034	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	3	with 04-032	No	No	Contingent on completion of MSF, NRE
2021	7		Demolish Richmond Magazines - Group 3		TBD	E		94	37	136911	04-035	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	3	with 04-032	No	No	Contingent on completion of MSF, NRE
2021	7		Demolish Richmond Magazines - Group 3		TBD	E		8	17	136912	04-036	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	3	with 04-032	No	No	Contingent on completion of MSF, NRE
2021	7		Demolish Richmond Magazines - Group 3		TBD	E		10	74	136913	04-037	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	with 04-032	No	No	Contingent on completion of MSF, NRE
2021	7		Demolish Richmond Magazines - Group 3		TBD	E		10	54	136914	04-038	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	with 04-032	No	No	Contingent on completion of MSF, NRE
2021	8		Demolish Richmond Magazines - Group 4		TBD	E		10	10	136915	04-039	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	3,600	No	No	Contingent on completion of MSF, NRE
2021	8		Demolish Richmond Magazines - Group 4		TBD	E		12	4	136916	04-040	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	with 04-039	No	No	Contingent on completion of MSF, NRE
2021	8		Demolish Richmond Magazines - Group 4		TBD	E		7	7	136917	04-041	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	with 04-039	No	No	Contingent on completion of MSF, NRE
2021	8		Demolish Richmond Magazines - Group 4		TBD	E		12	61	136918	04-042	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	with 04-039	No	No	Contingent on completion of MSF, NRE
2021	8		Demolish Richmond Magazines - Group 4		TBD	E		7	15	136919	04-043	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	with 04-039	No	No	Contingent on completion of MSF, NRE
2021	8		Demolish Richmond Magazines - Group 4		TBD	E		7	115	136920	04-044	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,555	No		2021	-	1	with 04-039	No	No	Contingent on completion of MSF, NRE
2021	9		Demolish SAC Magazines - Group 1		TBD	E		84	47	136931	04-101	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	1,400	No	No	Contingent on completion of MSF, NRE
2021	9		Demolish SAC Magazines - Group 1		TBD	E		153	77	136932	04-102	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-101	No	No	Contingent on completion of MSF, NRE
2021	9		Demolish SAC Magazines - Group 1		TBD	E		94	51	136933	04-103	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-101	No	No	Contingent on completion of MSF, NRE
2021	10		Demolish SAC Magazines - Group 2		TBD	E		-	22	136934	04-104	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	1,400	No	No	Contingent on completion of MSF, NRE
2021	10		Demolish SAC Magazines - Group 2		TBD	E		-	255	136935	04-105	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-104	No	No	Contingent on completion of MSF, NRE
2021	10		Demolish SAC Magazines - Group 2		TBD	E		126	61	136936	04-106	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-104	No	No	Contingent on completion of MSF, NRE
2021	11		Demolish SAC Magazines - Group 3		TBD	E		-	305	136937	04-107	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	1,400	No	No	Contingent on completion of MSF, NRE
2021	11		Demolish SAC Magazines - Group 3		TBD	E		4	110	136938	04-108	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-107	No	No	Contingent on completion of MSF, NRE



**Attachement E-1  
Footprint - Disposition Plan for Pantex Plant  
FY 2012 - FY2021**

Fiscal Year	Priority	Score	Project Name or SSP Conservation Measure Name*	Project Number or SSP FEMP Measure #*	Funding Source	Funding Type	Deferred Maintenance Identifier	Legacy Deferred Maintenance Reduction (000)	Deferred Maintenance (Note 1) (000)	Per FIMS											Yearly S&M Costs (000)	Total Estimated Disposition Cost (TEC) (000)	Contaminated (Yes/No) (Note 3)	Included in the SSP? (Yes/No)	Notes		
										Property Sequence Number	Facility ID Number	Facility Name	Property Type (B/L/S/T)	Ownership	Mission Dependency	Mission Dependency Program	Status	Gross Square Feet (GSF)	Excess Indicator (Yes/No)	Excess Year						Estimated Disposition Year	Actual Annual Maintenance Cost (Note 2)
(23)	(47)	(56)	(48)	(49)	(26)	(27)	(10)	(36)	(13)	(50)	(21)	(22)	(51)	(45)	(40)	(41)	(63)	(32)	(18)	(19)	(16)	(1)	(68)	(64)	(7)	(33)	(43)
2021	11		Demolish SAC Magazines - Group 3		TBD	E		117	63	136939	04-109	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-107	No	No	Contingent on completion of MSF, NRE
2021	12		Demolish SAC Magazines - Group 4		TBD	E		18	30	136940	04-110	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	1,400	No	No	Contingent on completion of MSF, NRE
2021	12		Demolish SAC Magazines - Group 4		TBD	E		11	21	136941	04-111	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-110	No	No	Contingent on completion of MSF, NRE
2021	12		Demolish SAC Magazines - Group 4		TBD	E		14	73	136942	04-112	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-110	No	No	Contingent on completion of MSF, NRE
2021	13		Demolish SAC Magazines - Group 5		TBD	E		13	11	136943	04-113	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	1,400	No	No	Contingent on completion of MSF, NRE
2021	13		Demolish SAC Magazines - Group 5		TBD	E		11	26	136944	04-114	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-113	No	No	Contingent on completion of MSF, NRE
2021	13		Demolish SAC Magazines - Group 5		TBD	E		8	21	136945	04-115	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-113	No	No	Contingent on completion of MSF, NRE
2021	14		Demolish SAC Magazines - Group 6		TBD	E		11	12	136946	04-116	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	1,400	No	No	Contingent on completion of MSF, NRE
2021	14		Demolish SAC Magazines - Group 6		TBD	E		9	23	136947	04-117	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-116	No	No	Contingent on completion of MSF, NRE
2021	14		Demolish SAC Magazines - Group 6		TBD	E		6	10	136948	04-118	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-116	No	No	Contingent on completion of MSF, NRE
2021	15		Demolish SAC Magazines - Group 7		TBD	E		11	15	136949	04-119	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	1,400	No	No	Contingent on completion of MSF, NRE
2021	15		Demolish SAC Magazines - Group 7		TBD	E		9	15	136950	04-120	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-119	No	No	Contingent on completion of MSF, NRE
2021	15		Demolish SAC Magazines - Group 7		TBD	E		34	(8)	136951	04-121	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-119	Yes	No	Contingent on completion of MSF, NRE
2021	16		Demolish SAC Magazines - Group 8		TBD	E		-	16	136952	04-122	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	1,400	No	No	Contingent on completion of MSF, NRE
2021	16		Demolish SAC Magazines - Group 8		TBD	E		-	18	136953	04-123	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-122	No	No	Contingent on completion of MSF, NRE
2021	16		Demolish SAC Magazines - Group 8		TBD	E		-	20	136954	04-124	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-122	No	No	Contingent on completion of MSF, NRE
2021	17		Demolish SAC Magazines - Group 9		TBD	E		-	13	136955	04-125	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	2,300	No	No	Contingent on completion of MSF, NRE
2021	17		Demolish SAC Magazines - Group 9		TBD	E		-	52	136957	04-126	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-125	No	No	Contingent on completion of MSF, NRE
2021	17		Demolish SAC Magazines - Group 9		TBD	E		-	17	136958	04-127	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-125	No	No	Contingent on completion of MSF, NRE
2021	17		Demolish SAC Magazines - Group 9		TBD	E		-	17	136959	04-128	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	10,449	1	with 04-125	No	No	Contingent on completion of MSF, NRE
2021	17		Demolish SAC Magazines - Group 9		TBD	E		-	15	136960	04-129	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-125	No	No	Contingent on completion of MSF, NRE
2021	18		Demolish SAC Magazines - Group 10		TBD	E		-	16	136961	04-130	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	2,300	No	No	Contingent on completion of MSF, NRE
2021	18		Demolish SAC Magazines - Group 10		TBD	E		-	12	136962	04-131	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-130	No	No	Contingent on completion of MSF, NRE
2021	18		Demolish SAC Magazines - Group 10		TBD	E		-	12	136963	04-132	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-130	No	No	Contingent on completion of MSF, NRE
2021	18		Demolish SAC Magazines - Group 10		TBD	E		-	12	136964	04-133	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-130	No	No	Contingent on completion of MSF, NRE
2021	18		Demolish SAC Magazines - Group 10		TBD	E		-	14	136965	04-134	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-130	No	No	Contingent on completion of MSF, NRE
2021	19		Demolish SAC Magazines - Group 11		TBD	E		-	14	136966	04-135	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	2,300	No	No	Contingent on completion of MSF, NRE
2021	19		Demolish SAC Magazines - Group 11		TBD	E		-	11	136967	04-136	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-135	No	No	Contingent on completion of MSF, NRE
2021	19		Demolish SAC Magazines - Group 11		TBD	E		-	12	136968	04-137	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-135	No	No	Contingent on completion of MSF, NRE
2021	19		Demolish SAC Magazines - Group 11		TBD	E		-	12	136969	04-138	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-135	No	No	Contingent on completion of MSF, NRE
2021	19		Demolish SAC Magazines - Group 11		TBD	E		-	14	136970	04-139	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-135	No	No	Contingent on completion of MSF, NRE
2021	20		Demolish SAC Magazines - Group 12		TBD	E		-	14	136971	04-140	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	1,400	No	No	Contingent on completion of MSF, NRE
2021	20		Demolish SAC Magazines - Group 12		TBD	E		-	19	136972	04-141	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-140	No	No	Contingent on completion of MSF, NRE
2021	20		Demolish SAC Magazines - Group 12		TBD	E		-	14	136973	04-142	Weapon and Component Staging	B	DOE Owned	MD	DSW	Operating	1,183	No		2021	-	1	with 04-140	No	No	Contingent on completion of MSF, NRE
2021	21		Demolish Security Infrastructure		TBD	E		4	43	136974	04-143	Pantex Building	B	DOE Owned	MD	DNS	Operating	375	No		2021	917	3	3,000	No	No	Contingent on completion of MSF
2021	21		Demolish Security Infrastructure		TBD	E		-	54	136975	04-144	Pantex Building	B	DOE Owned	MD	DNS	Operating	375	No		2021	3,057	3	with 04-143	No	No	Contingent on completion of MSF

**Attachement E-1  
Footprint - Disposition Plan for Pantex Plant  
FY 2012 - FY2021**

Fiscal Year (23)	Priority (47)	Score (56)	Project Name or SSP Conservation Measure Name* (48)	Project Number or SSP FEMP Measure #* (49)	Funding Source (26)	Funding Type (27)	Deferred Maintenance Identifier (10)	Legacy Deferred Maintenance Reduction (000) (36)	Deferred Maintenance (Note 1) (000) (13)	Per FIMS												Yearly S&M Costs (000) (68)	Total Estimated Disposition Cost (TEC) (000) (64)	Contaminated (Yes/No) (Note 3) (7)	Included in the SSP? (Yes/No) (33)	Notes (43)		
										Property Sequence Number (50)	Facility ID Number (21)	Facility Name (22)	Property Type (B/L/S/T) (51)	Ownership (45)	Mission Dependency (40)	Mission Dependency Program (41)	Status (63)	Gross Square Feet (GSF) (32)	Excess Indicator (Yes/No) (18)	Excess Year (19)	Estimated Disposition Year (16)						Actual Annual Maintenance Cost (Note 2) (1)	
2021	21		Demolish Security Infrastructure		TBD	E		-	67	136981	04-149	Pantex Building	B	DOE Owned	MD	DNS	Operating	497	No		2021	21,126	3	with 04-143	No	No	Contingent on completion of MSF	
2021	21		Demolish Security Infrastructure		TBD	E		-	16	136982	04-150	Pantex Building	B	DOE Owned	MD	DNS	Operating	497	No		2021	11,255	3	with 04-143	No	No	Contingent on completion of MSF	
2021	21		Demolish Security Infrastructure		TBD	E		27	141	136976	04-145	Pantex Building	B	DOE Owned	MD	DNS	Operating	392	No		2021	32,228	3	with 04-143	No	No	Contingent on completion of MSF	
2021	21		Demolish Security Infrastructure		TBD	E		-	13	136977	04-145A	Pantex Building	B	DOE Owned	MD	DNS	Operating	164	No		2021	2,620	2	with 04-143	No	No	Contingent on completion of MSF	
2021	21		Demolish Security Infrastructure		TBD	E		16	57	136978	04-146	Rest Room	B	DOE Owned	NMD	DNS	Operating	283	No		2021	-	3	with 04-143	No	No	Contingent on completion of MSF	
2021	21		Demolish Security Infrastructure		TBD	E		-	3	136979	04-147	Generator Building	B	DOE Owned	MD	DNS	Operating	515	No		2021	31,743	3	with 04-143	Yes	No	Contingent on completion of MSF	
2021	21		Demolish Security Infrastructure		TBD	E		-	96	136980	04-148	Garage	B	DOE Owned	NMD	DNS	Operating	676	No		2021	8,701	3	with 04-143	No	No	Contingent on completion of MSF	
2021	21		Demolish Security Infrastructure		TBD	E		-	47	136844	04-004	Break Area	B	DOE Owned	NMD	DSW	Operating	264	No		2021	-	1	with 04-143	No	No	Contingent on completion of Material Staging Facility (MSF)	
<b>Totals</b>									<b>3,129</b>	<b>28,258</b>								<b>418,542</b>					<b>4,035,469</b>	<b>576</b>	<b>207,310</b>			

(Note 1) Per TYSP guidance, the deferred Maintenance column in E-1 is total DM less legacy, or "Non-Legacy DM"  
 (Note 2) Actual Annual Maintenance Cost is shown in whole dollars as shown in FIMS, not thousands.  
 (Note 3) Potential for contamination based on Active Facilities Data Collection System (AFDCS) model code.

**Attachment E-2 Plan  
Footprint - New Construction for Pantex Plant  
FY 2012 to FY 2021**

Fiscal Year (23)	Priority (47)	Score (56)	Project Name or SSP Conservation Measure Name* (48)	Project Number or SSP FEMP Measure #* (49)	Funding Source (26)	Funding Type (27)	Deferred Maintenance Identifier (10)	Legacy Deferred Maintenance Reduction (36)	Deferred Maintenance (13)	Facility Name (22)	Property Type (B/L/S/T) (51)	Ownership (45)	Mission Dependency (40)	Mission Dependency Program (41)	Gross Square Feet (GSF) (32)	Year of Beneficial Occupancy (67)	Included in the SSP? (Yes/No) (33)	Notes (43)		
2012	2		12-064 Electrical Equipment Building	FY10-48	RTBF	GPP	N/A	N/A	N/A	Electrical Equipment Building	B	DOE Owned	MD	RTBF	320	2012	No			
2004	3		Zone 11 HPFL Pump Facility	06-D-160-01	RTBF	LI	N/A	N/A	N/A	Zone 11 HPFL Pump Facility	B	DOE Owned	MD	RTBF	1,012	2012	No			
2004	4		Zone 12 HPFL Pump Facility	06-D-160-01	RTBF	LI	N/A	N/A	N/A	Zone 12 HPFL Pump Facility	B	DOE Owned	MD	RTBF	1,012	2012	No			
2011	5		B-Press and Extrudable Upgrade Project		DSW	GPP	N/A	N/A	N/A	HE Freezer Building	B	DOE Owned	MD	RC	330	2012	No			
2011	12		Physical Training and Intermediate Use Of Force Facility		STA	GPP	N/A	N/A	N/A	Physical Training and Intermediate Use Of Force Facility	B	DOE Owned	MD	STA	7,450	2012	No			
2015	8		Administrative Support Complex		RTBF/Alt Financing	Alternative Financing	N/A	N/A	N/A	Administrative Support Complex	B	Contractor Leased	MD	RTBF	235,000	2015	No	Alternative Financed, leased facility		
2003	1		HE Pressing Facility	04-D-103-02	RTBF	LI	N/A	N/A	N/A	HE Pressing Facility	B	DOE Owned	MC	RC	53,712	2016	Yes	Includes HEPF, staging structures, and ramp.		
2011	6		HE Science, Technology, & Engineering		RTBF	LI	N/A	N/A	N/A	HE Science, Technology, & Engineering	B	DOE Owned	MC	RC	35,000	2020	No			
2011	7		High Explosive Packaging & Staging		RTBF	LI	N/A	N/A	N/A	High Explosive Packaging & Staging	B	DOE Owned	MD	RC	20,000	2020	No			
2011	9		Material Staging Facility		RTBF	LI	N/A	N/A	N/A	Material Staging Facility	B	DOE Owned	MD	DSW	177,000	2020	No	Anticipated to be multi-program funded.		
2015	10		Non-Destructive Evaluation Facility		RTBF	LI	N/A	N/A	N/A	Non-Destructive Evaluation Facility	B	DOE Owned	MC	DSW	40,000	2021	No			
2015	11		Inert Machining Facility		RTBF	LI	N/A	N/A	N/A	Inert Machining Facility	B	DOE Owned	MD	RC	20,000	2021	No			
<b>Totals</b>															<b>590,836</b>					

**Attachment E-2 Plan  
Footprint - New Construction for Pantex Plant  
FY 2012 to FY 2021**

Fiscal Year	Priority	Score	Project Name or SSP Conservation Measure Name*	Project Number or SSP FEMP Measure #*	Funding Source	Funding Type	Deferred Maintenance Identifier	Legacy Deferred Maintenance Reduction	Deferred Maintenance	Facility Name	Property Type (B/L/S/T)	Ownership	Mission Dependency	Mission Dependency Program	Gross Square Feet (GSF)	Year of Beneficial Occupancy	Included in the SSP? (Yes/No)	Notes
(23)	(47)	(56)	(48)	(49)	(26)	(27)	(10)	(36)	(13)	(22)	(51)	(45)	((40)	(41)	(32)	(67)	(33)	(43)

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**Attachment E-3  
FY 2011 Leased Space for Pantex Plant**

Fiscal Year (23)	Funding Source (26)	Per FIMS											Rental Rate per Rentable SF (54)	Annual Cost (2)	Leased Type (35)	Lease Term - yrs (34)	Exp. Month / Year (20)	Renewal Options (53)	Notes (43)	
		Property Sequence Number (50)	Facility ID Number (21)	Facility Name (22)	Property Type (B/L/S/T) (51)	Ownership (45)	Mission Dependency (40)	Mission Dependency Program (41)	Status (63)	Gross Square Feet (GSF) (32)	# of Occupants (44)	Excess Year (19)								Actual Annual Maintenance Cost (20)
2008	RTBF	131503	09-059	Leased Office Building	B	Contractor Leased	MD	RTBF	Operating	10,194	46	N/A	14,053			Full	5	9/30/2013	0	
2008	RTBF	131523	09-060	Leased Office Building	B	Contractor Leased	MD	DSW	Operating	11,827	30	N/A	13,834			Full	5	9/30/2013	0	
2008	RTBF	131716	09-061	Leased Office Building	B	Contractor Leased	MD	NA	Operating	10,220	16	N/A	17,549			Full	5	9/30/2013	0	
2008	RTBF	141933	09-129	Leased Office Trailer	T	Contractor Leased	NMD	RTBF	Operating	1,442	7	N/A	-			Full	5	9/30/2013	0	
2008	RTBF	143737	09-130	Leased Office Building	B	Contractor Leased	MD	RTBF	Operating	19,086	117	N/A	21,879			Full	5	9/30/2013	0	
2006	RTBF	203876	09-140	Leased Office Trailer	T	Contractor Leased	NMD	RTBF	Operating	859	10	N/A	-			Full	5	7/30/2011	0	
2006	RTBF	203877	09-141	Leased Changing Trailer	T	Contractor Leased	NMD	RTBF	Operating	165	0	N/A	-			Full	5	7/30/2011	0	
2006	RTBF	203878	09-142	Leased Changing Trailer	T	Contractor Leased	NMD	RTBF	Operating	165	0	N/A	-			Full	5	7/30/2011	0	
2006	RTBF	203879	09-143	Leased Changing Trailer	T	Contractor Leased	NMD	RTBF	Operating	165	0	N/A	-			Full	5	7/30/2011	0	
2009	RTBF	126039	18-001	Leased Office Building	B	DOE Leased	NMD	RTBF	Operating	7,218	9	N/A	27,600			Full	5	9/30/2014	5	
2009	RTBF	126038	18-002	Leased Storage	B	DOE Leased	NMD	RTBF	Operating	6,169	0	N/A	-			Full	5	9/30/2014	5	
2006	NCTIR	204056	AP-314	Leased Nuclear Incident Response Program	B	Contractor Leased	NMD	NWIR	Operating	1,271	0	N/A	-			Full	5	5/31/2011	2	
2006	NCTIR	204057	AP-315	Leased Nuclear Incident Response Program	B	Contractor Leased	NMD	NWIR	Operating	2,551	0	N/A	-			Full	5	5/31/2011	2	
2006	NCTIR	204058	AP-317	Leased Nuclear Incidence Response Progra	B	Contractor Leased	NMD	NWIR	Operating	15,000	7	N/A	10,684			Full	5	5/31/2011	2	
2009	RTBF	616	18-002A	Leased Storage	S	DOE Leased	NMD	RTBF	Operating	N/A	N/A	N/A	-			Full	5	9/30/2014	5	
2006	NCTIR	204059	AP-LAND	NIRP Compound	L	Contractor Leased	NMD	N/A	Active	N/A	N/A	N/A	-			Full	5	5/31/2011	2	
2009	RTBF*	84134	TECH TRACT I AND II	Texas Tech Tract I and Tract II	L	DOE Leased	NMD	N/A	Active	N/A	N/A	N/A	-			Full	5	9/30/2014	1	
2009	RTBF*	84139	TECH TRACT III	Texas Tech Tract III	L	DOE Leased	NMD	N/A	Active	N/A	N/A	N/A	-			Full	5	9/30/2014	1	
2009	RTBF*	84136	TEXAS TECH BULL BARN	Texas Tech Bull Barn Land	L	DOE Leased	NMD	N/A	Active	N/A	N/A	N/A	-			Full	5	9/30/2014	1	
2009	RTBF*	84138	TEXAS TECH KILGORE	Texas Tech Kilgore Land	L	DOE Leased	NMD	N/A	Active	N/A	N/A	N/A	-			Full	5	9/30/2014	1	
<b>Totals</b>										<b>86,332</b>	<b>242</b>		<b>105,599</b>	<b>8</b>	<b>47,863</b>					

Note: Utility related agreements and easements are not included.

Note: Per the FY 2012 TYSP Attachment Instructions, the totals for Rental Rate per Rentable SF and the Annual Cost is the average costs. Only building/trailer lease information is included in the average.

\* Plant M&A is used to pay for for the Texas Tech land leases.

**Attachment E-3  
FY 2011 Leased Space for Pantex Plant**

Fiscal Year	Funding Source	Per FIMS											Rental Rate per Rentable SF	Annual Cost	Leased Type	Lease Term - yrs	Exp. Month / Year	Renewal Options	Notes	
		Property Sequence Number	Facility ID Number	Facility Name	Property Type (B/L/S/T)	Ownership	Mission Dependency	Mission Dependency Program	Status	Gross Square Feet (GSF)	# of Occupants	Excess Year								Actual Annual Maintenance Cost
(23)	(26)	(50)	(21)	(22)	(51)	(45)	((40)	(41)	(63)	(32)	(44)	(19)	(20)	(54)	(2)	(35)	(34)	(20)	(53)	(43)

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**Attachment E-4(a)**  
**FOOTPRINT TRACKING SUMMARY SPREADSHEET**  
**Pantex Plant Site Footprint Tracking Summary - NNSA**

Fiscal Year (23)	Beginning Site Footprint (gsf) (6)	Excess Facilities Footprint Elimination (gsf) (17)	New Construction/ Footprint Added (gsf) (42)	Site Footprint Reduction by FY (gsf) (57)	Footprint "Banked" (gsf) (25)	Waiver/ Transfer (gsf) (65)	"Grandfathered" Footprint Added (gsf) (31)	Cumulative "Grandfathered" Footprint Added (gsf) (9)	Site Total Footprint (NNSA only) (gsf) (60)	Site Leased Space (NNSA only) (gsf) (58)	Weapons Activities Account (gsf) (66)
FY 2002 Actual	2,942,259	-128	0	2,942,131	-128		9807	9,807	2,951,938		N/A
FY 2003 Actual	2,942,131	-44,373	224	2,897,982	-44,277		0	9,807	2,907,789		NA
FY 2004 Actual	2,897,982	-59,572	4,158	2,842,568	-99,691		1226	11,033	2,853,601		N/A
FY 2005 Actual	2,842,568	-20,933	49,297	2,870,932	-71,327		3,243	14,276	2,885,208		N/A
FY 2006 Actual	2,870,932	-66,710	42,289	2,846,511	-95,748	-62,776	0	14,276	2,860,787	67,494	-3,934
FY 2007 Actual	2,973,407	-10,036	16,835	2,980,206	-88,949		0	14,276	2,994,482	87,670	-10,036
FY 2008 Actual	2,980,206	-27,697	53,909	3,006,418	-62,737		0	14,276	3,020,694	86,332	-27,697
FY 2009 Actual	3,006,418	-5,393	686	3,001,711	-67,444		0	14,276	3,015,987	86,332	-5,393
FY 2010 Actual	3,001,711	-4,162	14,727	3,012,276	-56,879	10,389	0	14,276	3,026,552	86,332	-4,162
FY 2011	3,020,266	-6,325	77	3,014,018	-63,127		0	14,276	3,028,294	86,332	-6,325
FY 2012	3,014,018	-15,389	10,124	3,008,753	-75,842	-7,450	0	14,276	3,023,029	86,332	-16,214
FY 2013	3,008,753	-4,853	0	3,003,900	-80,695		0	14,276	3,018,176	86,332	-4,853
FY 2014	3,003,900	-829	0	3,003,071	-81,524		0	14,276	3,017,347	86,332	-829
FY 2015	3,003,071	-3,260	0	2,999,811	-84,784		0	14,276	3,014,087	321,332	-3,260
FY 2016	2,999,811	-22,248	53,712	3,031,275	-53,320		0	14,276	3,045,551	278,757	-64,823
FY 2017	3,031,275	-43,753	0	2,987,522	-97,073		0	14,276	3,001,798	278,757	-43,753
FY 2018	2,987,522	-54,921	0	2,932,601	-151,994		0	14,276	2,946,877	278,757	-54,921
FY 2019	2,932,601	-52,839	0	2,879,762	-204,833		0	14,276	2,894,038	278,757	-52,839
FY 2020	2,879,762	-29,086	232,000	3,082,676	-1,919		0	14,276	3,096,952	278,757	-29,086
FY 2021	3,082,676	-191,364	60,000	2,951,312	-133,283		0	14,276	2,965,588	268,563	-201,558

The FY2006 Footprint "Banked" (gsf) includes the square footage transfer approved in the Bruce Scott to James Rispoli memo dated October 12, 2006.

The FY 2007 Beginning Site Footprint is a hard coded number and reflects revised plant square footage resulting from remeasuring existing facilities. Grandfathered footprint square footage was also revised.

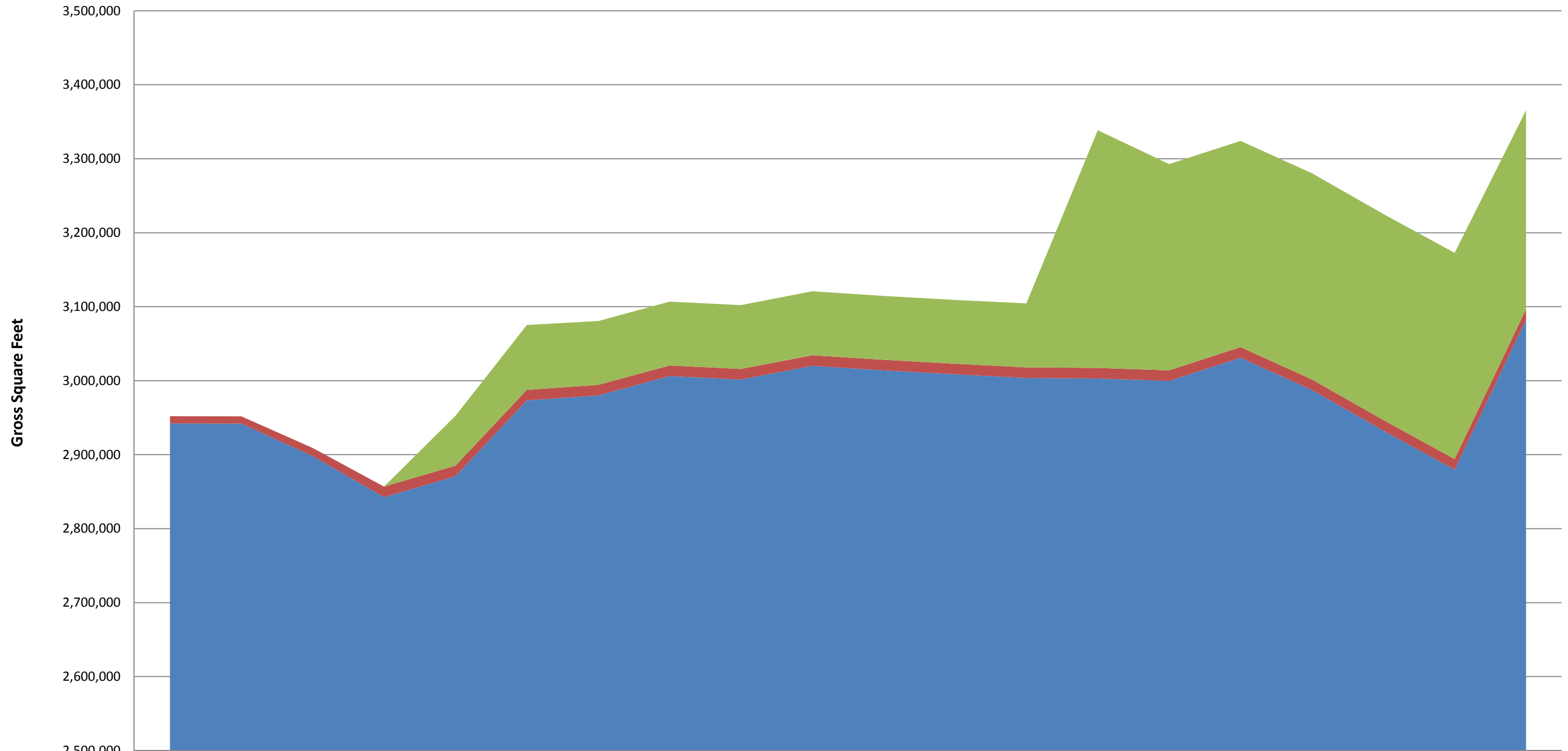
The FY 2011 Beginning Site Footprint is a hard coded number that reflects current square footage and the removal of trailers that were reclassified as personal property based on guidance provided by HQ.

The FY 2010 transfer includes assets transferred from EM to NNSA following the approval of CD-4 for Environmental Management work scope at Pantex and the NNSA acceptance of EM assets (NNSA e-mail dated 9-22-2010). This square footage is included in the hard coded FY2011 Beginning Site Footprint.

They FY 2012 includes an expected transfer of square footage to off-set the construction of the OST Physical Training and Intermediate Use of Force Facility. This square footage is added to the FY 2012 "Banked" square footage.

Future demolition is shown in years when the facility is available for demolition, even when funding has not been identified. This is not consistent with the planned funding years for CBF1 demolition.

### Attachment E-4(a) Chart FOOTPRINT TRACKING SUMMARY SPREADSHEET Pantex Plant Site Footprint Tracking Summary - NNSA



	FY 2002 Actual	FY 2003 Actual	FY 2004 Actual	FY 2005 Actual	FY 2006 Actual	FY 2007 Actual	FY 2008 Actual	FY 2009 Actual	FY 2010 Actual	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
■ Site Leased Space (NNSA only) (gsf)					67,494	87,670	86,332	86,332	86,332	86,332	86,332	86,332	86,332	321,332	278,757	278,757	278,757	278,757	278,757	268,563
■ Cumulative "Grandfathered" Footprint Added (gsf)	9,807	9,807	11,033	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276
■ Beginning Site Footprint (gsf)	2,942,259	2,942,131	2,897,982	2,842,568	2,870,932	2,973,407	2,980,206	3,006,418	3,001,711	3,020,266	3,014,018	3,008,753	3,003,900	3,003,071	2,999,811	3,031,275	2,987,522	2,932,601	2,879,762	3,082,676

**Attachment E-4(b)**  
**FOOTPRINT TRACKING SUMMARY SPREADSHEET**  
**Pantex Plant Site Footprint Tracking Summary - Site Wide**

Fiscal Year (23)	Beginning Site Footprint (gsf) (6)	Excess Facilities Footprint Elimination (gsf) (17)	New Construction/ Footprint Added (gsf) (42)	Site Footprint Reduction by FY (gsf) (57)	Footprint "Banked" (gsf) (25)	Waiver/ Transfer (gsf) (65)	"Grandfathered" Footprint Added (gsf) (31)	Cumulative "Grandfathered" Footprint Added (gsf) (9)	Site Wide Total Footprint (gsf) (60)	Site Wide Leased Space (58)	Weapons Activities Account (gsf) (66)
FY 2002 Actual	2,942,259	-128	0	2,942,131	-128		9807	9,807	2,951,938		
FY 2003 Actual	2,942,131	-44,373	224	2,897,982	-44,277		0	9,807	2,907,789		
FY 2004 Actual	2,897,982	-59,572	4,158	2,842,568	-99,691		1226	11,033	2,853,601		
FY 2005 Actual	2,842,568	-20,933	49,297	2,870,932	-71,327		3,243	14,276	2,885,208		
FY 2006 Actual	2,870,932	-66,710	42,289	2,846,511	-95,748	-62,776	0	14,276	2,860,787	67,494	
FY 2007 Actual	2,978,103	-10,036	16,835	2,984,902	-88,949		0	14,276	2,999,178	87,670	
FY 2008 Actual	2,984,902	-32,255	53,909	3,006,556	-67,295		0	14,276	3,020,832	86,332	
FY 2009 Actual	3,006,556	-5,930	686	3,001,312	-72,539		0	14,276	3,015,588	86,332	
FY 2010 Actual	3,001,312	-4,162	14,727	3,011,877	-61,974	10,389	0	14,276	3,026,153	86,332	
FY 2011	3,020,266	-6,325	77	3,014,018	-68,222		0	14,276	3,028,294	86,332	
FY 2012	3,014,018	-15,389	10,124	3,008,753	-80,937	-7,450	0	14,276	3,023,029	86,332	
FY 2013	3,008,753	-4,853	0	3,003,900	-85,790		0	14,276	3,018,176	86,332	
FY 2014	3,003,900	-829	0	3,003,071	-86,619		0	14,276	3,017,347	86,332	
FY 2015	3,003,071	-3,260	0	2,999,811	-89,879		0	14,276	3,014,087	321,332	
FY 2016	2,999,811	-22,248	53,712	3,031,275	-58,415		0	14,276	3,045,551	278,757	
FY 2017	3,031,275	-43,753	0	2,987,522	-102,168		0	14,276	3,001,798	278,757	
FY 2018	2,987,522	-54,921	0	2,932,601	-157,089		0	14,276	2,946,877	278,757	
FY 2019	2,932,601	-52,839	0	2,879,762	-209,928		0	14,276	2,894,038	278,757	
FY 2020	2,879,762	-29,086	232,000	3,082,676	-7,014		0	14,276	3,096,952	278,757	
FY 2021	3,082,676	-191,364	60,000	2,951,312	-138,378		0	14,276	2,965,588	268,563	

The FY2006 Footprint "Banked" (gsf) includes the square footage transfer approved in the Bruce Scott to James Rispoli memo dated October 12, 2006.

The FY 2007 Beginning Site Footprint is a hard coded number and reflects revised plant square footage resulting from remeasuring existing facilities. Grandfathered footprint square footage was also revised.

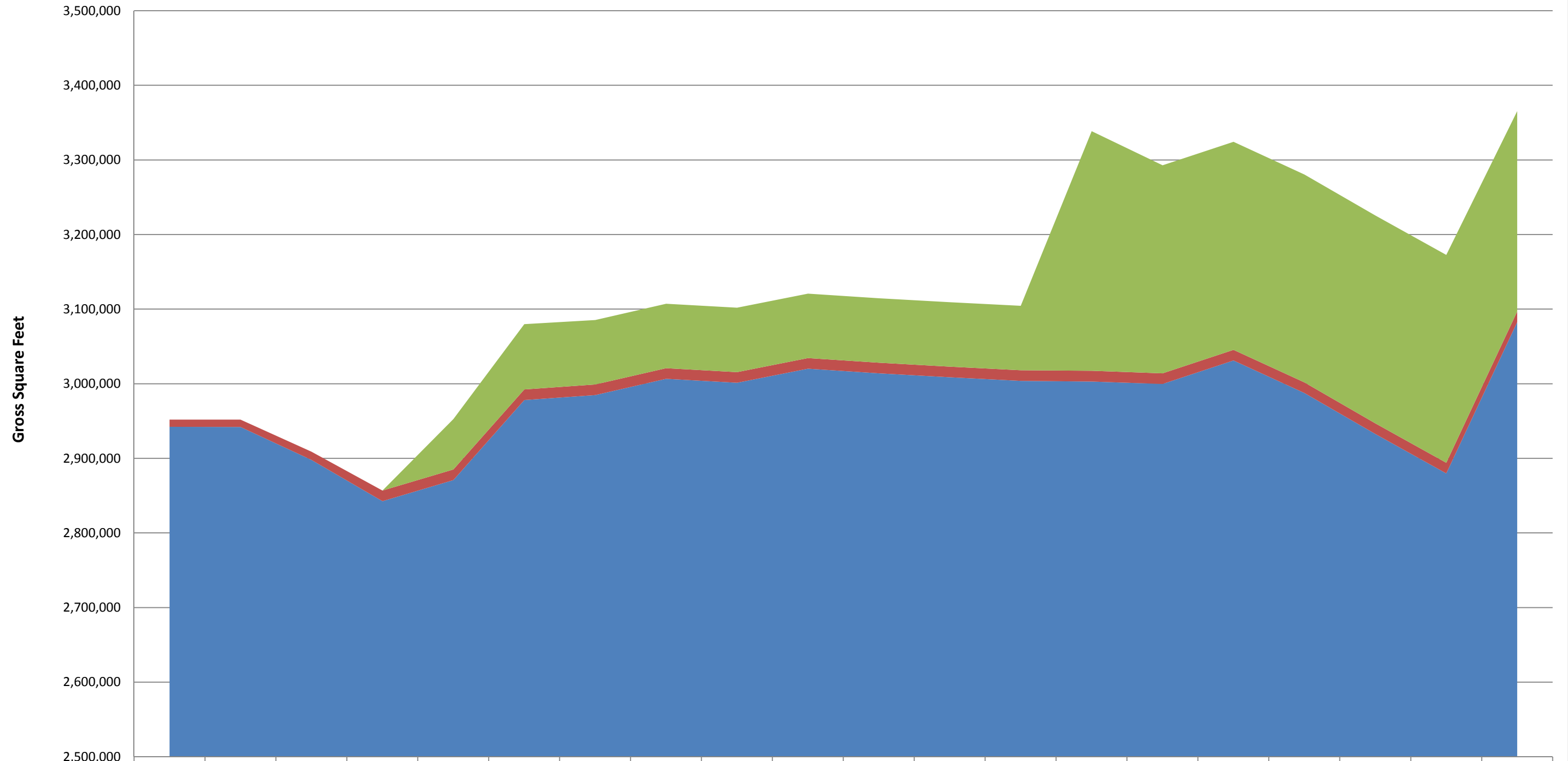
The FY 2011 Beginning Site Footprint is a hard coded number that reflects current square footage and the removal of trailers that were reclassified as personal property based on guidance provided by HQ.

The FY 2010 transfer includes assets transferred from EM to NNSA following the approval of CD-4 for Environmental Management work scope at Pantex and the NNSA acceptance of EM assets (NNSA e-mail dated 9-22-2010). This square footage is included in the hard coded FY2011 Beginning Site Footprint.

They FY 2012 includes an expected transfer of square footage to off-set the construction of the OST Physical Training and Intermediate Use of Force Facility. This square footage is added to the FY 2012 "Banked" square footage.

Future demolition is shown in years when the facility is available for demolition, even when funding has not been identified. This is not consistent with the planned funding years for CBF1 demolition.

### Attachment E-4(b) Chart FOOTPRINT TRACKING SUMMARY SPREADSHEET Pantex Plant Site Footprint Tracking Summary - Site Wide



	FY 2002 Actual	FY 2003 Actual	FY 2004 Actual	FY 2005 Actual	FY 2006 Actual	FY 2007 Actual	FY 2008 Actual	FY 2009 Actual	FY 2010 Actual	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
■ Site Wide Leased Space					67,494	87,670	86,332	86,332	86,332	86,332	86,332	86,332	86,332	321,332	278,757	278,757	278,757	278,757	278,757	268,563
■ Cumulative "Grandfathered" Footprint Added (gsf)	9,807	9,807	11,033	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276	14,276
■ Beginning Site Footprint (gsf)	2,942,259	2,942,131	2,897,982	2,842,568	2,870,932	2,978,103	2,984,902	3,006,556	3,001,312	3,020,266	3,014,018	3,008,753	3,003,900	3,003,071	2,999,811	3,031,275	2,987,522	2,932,601	2,879,762	3,082,676

**Attachment F-1  
NNSA FIRP Legacy (FY03 and FY04) Deferred Maintenance Baseline and Projected Deferred Maintenance Reduction from Baseline  
at Pantex Plant  
(\$000s)**

Category of Maintenance	Spreadsheet Intruction #	Legacy (FY03 & FY04) Baseline	FY 2004 (Actual)	FY 2005 (Actual)	FY 2006 (Actual)	FY 2007 (Actual)	FY 2008 (Actual)	FY 2009 (Actual)	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<b>1. FIRP LEGACY DEFERRED MAINTENANCE (DM) BASELINE (FY03 &amp; FY04) (Excludes Programmatic Real Property or Equipment)</b>	(37)	214,669	145,800	122,046	73,400	68,087	68,751	57,260	49,910	46,203	44,957	44,192								
<b>2. LEGACY DEFERRED MAINTENANCE BASELINE (DM) REDUCTION TOTAL</b>	(38)		30,555	29,709	54,601	11,268	14,186	11,491	7,350	3,706	1,246	765								
A. Reduction in Legacy DM Baseline (total due to FIRP ONLY) for all F&I	(38)		21,200	10,940	21,286	3,148	7,048	7,735	4,874	3,706	1,246	765								
i. Reduction in Legacy DM for <u>Mission-Critical</u> F&I (due to FIRP ONLY)	(38)				752	1,578	171	1,464	99	814	1,011	375								
ii. Reduction in Legacy DM for <u>Mission Dependent, Not Critical</u> F&I (due to FIRP ONLY)	(38)				734	1,139	6,294	6,271	4,649	2,854	235	390								
iii. Reduction in Legacy DM for <u>Not Mission Dependent</u> F&I (due to FIRP ONLY)	(38)				19,800	431	583	-	126	38	-	-								

**Attachment F-1  
 NNSA FIRP Legacy (FY03 and FY04) Deferred Maintenance Baseline and Projected Deferred Maintenance Reduction from Baseline  
 at Pantex Plant  
 (\$000s)**

Category of Maintenance	Spreadsheet Intruction #	Legacy (FY03 & FY04) Baseline	FY 2004 (Actual)	FY 2005 (Actual)	FY 2006 (Actual)	FY 2007 (Actual)	FY 2008 (Actual)	FY 2009 (Actual)	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
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**Attachment F-2  
NNSA Total Deferred Maintenance and Projected Deferred Maintenance Reduction  
at Pantex Plant  
(\$000s)**

Pantex Plant	Spreadsheet Intruction #	FY 2003 (Baseline)	FY 2004 (Actual)	FY 2005 (Actual)	FY 2006 (Actual)	FY 2007 (Actual)	FY 2008 (Actual)	FY 2009 (Actual)	FY 2010 (Actual)	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
1. ANNUAL REQUIRED MAINTENANCE for F&I	(4)	31,625	32,256	35,000	51,090	59,898	65,856	64,330	74,072	77,298	80,390	83,606	86,950	90,428	94,045	97,807	101,719	105,788	110,019	114,420
2. ANNUAL PLANNED MAINTENANCE TOTAL	(3)	31,625	32,256	36,602	54,616	59,898	65,856	64,330	72,618	77,517	84,974	80,168	78,885	80,226	80,146	72,749	74,204	75,688	77,202	78,746
a. Direct	(3)	31,625	32,256	36,602	54,616	59,898	65,856	64,330	72,618	77,517	84,974	80,168	78,885	80,226	80,146	72,749	74,204	75,688	77,202	78,746
b. Indirect	(3)																			
3. DEFERRED MAINTENANCE (DM) TOTAL (Excludes Programmatic Real Property or Equipment) = Inflation Prior Year DM Total + DM New - Prior Year DM Reduction	(15)	176,000	169,800	221,486	237,712	302,266	344,854	337,395	317,060	320,503	331,046	346,660	371,461	396,221	420,228	455,096	483,623	514,409	554,796	595,718
i. Backlog Inflation Rate (%)	(5)									2.0%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%
ii. DM Inflation	(11)		3,872	3,736	4,873	44,369	25,430	25,117	4,265	6,341	6,090	6,290	6,587	7,058	7,528	7,984	8,647	9,189	9,774	10,541
iii. DM NEW	(12)		14,528	98,444	62,862	42,421	49,409	5,173	2,171	14,628	9,061	12,702	18,347	18,780	16,775	27,187	29,333	31,382	31,264	31,142
A. DM, Mission-Critical F&I ONLY	(5,11,12,15)				40,415	47,190	54,225	49,171	44,772	47,313	52,119	62,055	75,167	87,832	99,166	118,113	139,355	163,735	188,704	214,081
B. DM, Mission-Dependent, Not Critical F&I ONLY	(5,11,12,15)				172,266	227,947	263,179	257,129	242,180	241,384	244,909	248,163	257,307	266,770	276,701	289,653	294,926	298,410	310,646	322,878
C. DM, Not Mission-Dependent F&I ONLY	(5,11,12,15)				25,031	27,129	27,450	31,095	30,108	31,806	34,019	36,442	38,988	41,619	44,362	47,330	49,342	52,265	55,446	58,759
4. DEFERRED MAINTENANCE (DM) REDUCTION TOTAL	(14)		24,600	50,494	51,509	22,149	32,251	37,750	26,772	17,527	4,607	3,378	132	1,078	297	304	9,452	9,784	651	761
i. Reduction Total attributed to FIRP ONLY	(52)		21,200	10,940	33,555	10,241	19,540	18,116	21,430	17,074	4,382	3,265								
A. Reduction in DM for Mission-Critical F&I	(14)				7,297	9,705	3,058	10,053	4,255	8,656	4,253	608	115	1,073	-	-	444	-	-	196
1. Reduction attributed to FIRP ONLY	(52)				741	4,031	1,016	4,717	4,195	8,650	4,028	608								
B. Reduction in DM for Mission-Dependent, Not Critical F&I	(14)				12,387	9,816	26,211	27,112	21,013	8,272	354	2,770	17	5	297	304	7,962	9,578	614	564
1. Reduction attributed to FIRP ONLY	(52)				990	4,490	16,110	13,311	16,315	7,825	354	2,657								
C. Reduction in DM for Not Mission-Dependent F&I	(14)				31,825	2,628	2,982	585	1,504	599	-	-	-	-	-	-	1,046	206	37	-
1. Reduction attributed to FIRP ONLY	(52)				31,824	1,720	2,414	88	920	599	-	-								
5. REPLACEMENT PLANT VALUE (RPV) for Facilities and Infrastructure (F&I) = Inflation of PY RPV + Increase or Decrease due to other causes	(55)	2,050,543	2,130,200	3,020,800	3,181,847	3,386,119	3,670,154	3,982,712	3,609,405	3,829,667	3,902,430	3,976,576	4,052,131	4,129,122	4,207,575	4,421,439	4,661,446	4,897,014	4,990,057	5,084,868
A. RPV for Mission-Critical F&I ONLY	(55)				1,438,844	1,524,391	1,565,158	1,756,077	1,684,250	1,828,560	1,863,303	1,898,705	1,934,781	1,971,542	2,009,001	2,181,092	2,378,533	2,570,725	2,619,569	2,669,340
B. RPV for Mission-Dependent, Not Critical F&I	(55)				1,489,751	1,584,798	1,872,600	2,047,356	1,732,711	1,807,896	1,842,246	1,877,248	1,912,916	1,949,261	1,986,297	2,024,037	2,062,494	2,101,681	2,141,613	2,182,304
C. RPV for Not Mission-Dependent F&I	(55)				253,252	248,470	232,396	179,280	192,443	193,211	196,882	200,623	204,435	208,319	212,277	216,310	220,420	224,608	228,876	233,224
D. RPV Increase from prior year attributed to inflation	(55)				153,981	184,566	287,824	309,495	(373,307)	214,262	66,098	74,146	75,555	76,990	(62,004)	213,864	246,274	236,705	(536,243)	(58,189)
E. RPV Increase / decrease attributed to causes other than inflation	(55)				20,068	19,706	(3,789)	3,063	-	6,000	6,666	-	-	-	140,457	(6,267)	(1,138)	629,286	153,000	

**Attachment F-2  
NNSA Total Deferred Maintenance and Projected Deferred Maintenance Reduction  
at Pantex Plant  
(\$000s)**

Pantex Plant	Spreadsheet Intruccion #	FY 2003 (Baseline)	FY 2004 (Actual)	FY 2005 (Actual)	FY 2006 (Actual)	FY 2007 (Actual)	FY 2008 (Actual)	FY 2009 (Actual)	FY 2010 (Actual)	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<b>Facility Condition Index (FCI)</b>		<b>FY 2003 (Baseline)</b>	<b>FY 2004 (Actual)</b>	<b>FY 2005 (Actual)</b>	<b>FY 2006 (Actual)</b>	<b>FY 2007 (Actual)</b>	<b>FY 2008 (Actual)</b>	<b>FY 2009 (Actual)</b>	<b>FY 2010 (Actual)</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<b>FCI TOTAL</b>		8.6%	8.0%	7.3%	7.5%	8.9%	9.4%	8.5%	8.8%	8.4%	8.5%	8.7%	9.2%	9.6%	10.0%	10.3%	10.4%	10.5%	11.1%	11.7%
<b>FCI Mission Critical</b>					2.8%	3.1%	3.5%	2.8%	2.7%	2.6%	2.8%	3.3%	3.9%	4.5%	4.9%	5.4%	5.9%	6.4%	7.2%	8.0%
<b>FCI Mission Dependent, Not Critical</b>					11.6%	14.4%	14.1%	12.6%	14.0%	13.4%	13.3%	13.2%	13.5%	13.7%	13.9%	14.3%	14.3%	14.2%	14.5%	14.8%
<b>FCI Not Mission Dependent</b>					9.9%	10.9%	11.8%	17.3%	15.6%	16.5%	17.3%	18.2%	19.1%	20.0%	20.9%	21.9%	22.4%	23.3%	24.2%	25.2%
<b>Asset Condition Index (ACI)</b>		<b>FY 2003 (Baseline)</b>	<b>FY 2004 (Actual)</b>	<b>FY 2005 (Actual)</b>	<b>FY 2006 (Actual)</b>	<b>FY 2007 (Actual)</b>	<b>FY 2008 (Actual)</b>	<b>FY 2009 (Actual)</b>	<b>FY 2010 (Actual)</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<b>ACI TOTAL</b>		0.91	0.92	0.93	0.93	0.91	0.91	0.92	0.91	0.92	0.92	0.91	0.91	0.90	0.90	0.90	0.90	0.89	0.89	0.88
<b>ACI Mission Critical</b>					0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.96	0.96	0.95	0.95	0.94	0.94	0.93	0.92
<b>ACI Mission Dependent, Not Critical</b>					0.88	0.86	0.86	0.87	0.86	0.87	0.87	0.87	0.87	0.86	0.86	0.86	0.86	0.86	0.85	0.85
<b>ACI Not Mission Dependent</b>					0.90	0.89	0.88	0.83	0.84	0.84	0.83	0.82	0.81	0.80	0.79	0.78	0.78	0.77	0.76	0.75

Note: Unfunded demolition is not included in future DM calculations.

Attachment J - Requested Small Projects above FYNSP Targets NNSA Facilities and Infrastructure Cost Projection Spreadsheet RTBF/Operations of Facilities Infrastructure for Pantex Plant (\$000s)															
Priority	Project Name	Deferred Maintenance Reduction	Funding Type	Project Type	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<b>EXPENSE</b>															
1	12-84 Stairway Replacement		E	Safety	100										
2	12-68 Freeze Repairs		E	Capability	2,500										
3	Additional Freeze Repairs		E	Capability	1,000										
4	ESD Flooring		E	Safety	175	1,200	1,200	1,200	1,000	1,000					
5	12-75 Locker Hot Water - Construction		E	Capability	245										
6	Unplanned Emergency Repairs		E	Capability	1,030										
7	Pressing Upgrades Required to Maintain Operational Viability <sup>1</sup>		E/GPE	Capability	15,000	15,000	10,000								
8	UV to IR Conversion (Prototype Design)		E	Safety	660										
9	12-68 De-chlorinator for Distilled Water System		E	Capability	150										
10	Re-skin Building 4-026		E	Capability	1,000										
11	12-130 Warning Sirens		E	Safety	2,000										
12	UV to IR Conversion (Prototype Build)		E	Safety	1,000										
13	Repair Facility HPFL lead-in lines		E	Safety	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
14	12-5 North Parking Lot Walkway		E	Safety	600										
15	11-55 Rotocloner/scrubber access modified		E	Safety	2,000										
16	Installation of material from ESPCII - Lighting		E	Capability	500	500	500	500	500	500					
17	12-19 Electrical Upgrade		E	Safety	3,500										
18	VMI Carousels Installation		E	Capability	650										
19	12-23/12-42F Office Mods		E	Capability	1,800										
20	12-36 Vault Modifications		E	Capability	300										
21	12-36 Window Replacements		E	Capability	500										
22	Install Duct smoke detectors in 12-62		E	Safety	2,000										
23	Emergency pump for 13-48 lift station failure		E	Capability	500										
24	PPA Drainage (L) - Tech		E	Safety	500										
25	PPA Drainage (L) - Area D		E	Safety	500										
26	12-86 HVAC		E	Capability	3,000										
27	12-35 HVAC		E	Capability	3,000										
28	Access to the rooftop of 12-138		E	Safety	1,000										
29	Misc. Electrical Safety Enhancements		E	Safety		1,500									
30	Misc. DM Reduction Projects	1,600	E	DM		5,000									
31	Misc. Safety Enhancements		E	Safety		2,000									
32	Misc. Infrastructure Modifications		E	Capability		5,000									
33	Misc. Envir. Protection Enhancements		E	Environment		1,000									
34	Misc. Electrical Safety Enhancements		E	Safety			1,500								
35	Misc. DM Reduction Projects	1,600	E	DM			5,000								
36	Misc. Safety Enhancements		E	Safety			2,000								
37	Misc. Infrastructure Modifications		E	Capability			5,000								
38	Misc. Envir. Protection Enhancements		E	Environment			1,000								
39	Misc. Electrical Safety Enhancements		E	Safety				1,500							
40	Misc. DM Reduction Projects	1,600	E	DM				5,000							
41	Misc. Safety Enhancements		E	Safety				2,000							
42	Misc. Infrastructure Modifications		E	Capability				5,000							
43	Misc. Envir. Protection Enhancements		E	Environment				1,000							
44	Misc. Electrical Safety Enhancements		E	Safety					1,500						

<sup>1</sup> Series of projects and equipment requirements to maintain operations until construction of the HE Pressing Facility.  
Note all estimates are Preliminary Rough Order of Magnitude

**Attachment J - Requested Small Projects above FYNSP Targets  
NNSA Facilities and Infrastructure Cost Projection Spreadsheet  
RTBF/Operations of Facilities Infrastructure for Pantex Plant  
(\$000s)**

Priority	Project Name	Deferred Maintenance Reduction	Funding Type	Project Type	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
45	Misc. DM Reduction Projects	1,600	E	DM					5,000						
46	Misc. Safety Enhancements		E	Safety					2,000						
47	Misc. Infrastructure Modifications		E	Capability					5,000						
48	Misc. Envir. Protection Enhancements		E	Environment					1,000						
49	Misc. Electrical Safety Enhancements		E	Safety						1,500					
50	Misc. DM Reduction Projects	1,600	E	DM						5,000					
51	Misc. Safety Enhancements		E	Safety						2,000					
52	Misc. Infrastructure Modifications		E	Capability						5,000					
53	Misc. Envir. Protection Enhancements		E	Environment						1,000					
54	Misc. Electrical Safety Enhancements		E	Safety							1,500				
55	Misc. DM Reduction Projects	1,600	E	DM							5,000				
56	Misc. Safety Enhancements		E	Safety							2,000				
57	Misc. Infrastructure Modifications		E	Capability							5,000				
58	Misc. Envir. Protection Enhancements		E	Environment							1,000				
59	Misc. Electrical Safety Enhancements		E	Safety								1,500			
60	Misc. DM Reduction Projects	1,600	E	DM								5,000			
61	Misc. Safety Enhancements		E	Safety								2,000			
62	Misc. Infrastructure Modifications		E	Capability								5,000			
63	Misc. Envir. Protection Enhancements		E	Environment								1,000			
64	Misc. Electrical Safety Enhancements		E	Safety									1,500		
65	Misc. DM Reduction Projects	1,600	E	DM									5,000		
66	Misc. Safety Enhancements		E	Safety									2,000		
67	Misc. Infrastructure Modifications		E	Capability									5,000		
68	Misc. Envir. Protection Enhancements		E	Environment									1,000		
69	Misc. Electrical Safety Enhancements		E	Safety										1,500	
70	Misc. DM Reduction Projects	1,600	E	DM										5,000	
71	Misc. Safety Enhancements		E	Safety										2,000	
72	Misc. Infrastructure Modifications		E	Capability										5,000	
73	Misc. Envir. Protection Enhancements		E	Environment										1,000	
74	Misc. Electrical Safety Enhancements		E	Safety											1,500
75	Misc. DM Reduction Projects	1,600	E	DM											5,000
76	Misc. Safety Enhancements		E	Safety											2,000
77	Misc. Infrastructure Modifications		E	Capability											5,000
78	Misc. Envir. Protection Enhancements		E	Environment											1,000
	<b>Expense Subtotal</b>				<b>46,210</b>	<b>32,200</b>	<b>27,200</b>	<b>17,200</b>	<b>17,000</b>	<b>17,000</b>	<b>15,500</b>	<b>15,500</b>	<b>15,500</b>	<b>15,500</b>	<b>15,500</b>

Note all estimates are Preliminary Rough Order of Magnitude

Attachment J - Requested Small Projects above FYNSP Targets NNSA Facilities and Infrastructure Cost Projection Spreadsheet RTBF/Operations of Facilities Infrastructure for Pantex Plant (\$000s)															
Priority	Project Name	Deferred Maintenance Reduction	Funding Type	Project Type	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<b>GPP</b>															
1	B-Press Upgrade (construction only)		GPP	Capability	260										
2	Remove Smoking Areas in Zone 12		GPP	Safety	150										
3	Relocate 35 Acct operations to 12-118 / Relocate IH Personnel to 11-51A		GPP	Capability	1,200										
4	Installation of Misc Classified Drops		GPP	Capability	3,000										
5	12-2 Mods for Drug/Alcohol sampling		GPP	Capability	500										
6	Enhanced Thermal Monitoring System Upgrade		GPP	Safety	100	2,500	2,500								
7	Zone 4 HPFL Loop		GPP	Safety	10,000										
8	Alternate Road for Intra-Plant Shipments		GPP	Safety	6,400										
9	Technology Upgrade		GPP	Capability		5,000									
10	Capability Upgrades		GPP	Capability		5,000									
11	Energy Conservation Upgrades		GPP	Capability			5,000								
12	Technology Upgrade		GPP	Capability			5,000								
13	Capability Upgrades		GPP	Capability			5,000								
14	Energy Conservation Upgrades		GPP	Capability				5,000							
15	Technology Upgrade		GPP	Capability				5,000							
16	Capability Upgrades		GPP	Capability				5,000							
17	Capability Upgrades		GPP	Capability					5,000						
18	Energy Conservation Upgrades		GPP	Capability					5,000						
19	Technology Upgrades		GPP	Capability					5,000						
20	Capability Upgrades		GPP	Capability						5,000					
21	Energy Conservation Upgrades		GPP	Capability						5,000					
22	Technology Upgrades		GPP	Capability						5,000					
23	Energy Conservation Upgrades		GPP	Capability							5,000				
24	Capability Upgrades		GPP	Capability							5,000				
25	Technology Upgrades		GPP	Capability							5,000				
26	Energy Conservation Upgrades		GPP	Capability								5,000			
27	Capability Upgrades		GPP	Capability								5,000			
28	Technology Upgrades		GPP	Capability								5,000			
29	Energy Conservation Upgrades		GPP	Capability									5,000		
30	Capability Upgrades		GPP	Capability									5,000		
31	Technology Upgrades		GPP	Capability									5,000		
32	Energy Conservation Upgrades		GPP	Capability										5,000	
33	Capability Upgrades		GPP	Capability										5,000	
34	Technology Upgrades		GPP	Capability										5,000	
35	Energy Conservation Upgrades		GPP	Capability											5,000
36	Capability Upgrades		GPP	Capability											5,000
37	Technology Upgrades		GPP	Capability											5,000
	<b>GPP Subtotal</b>				<b>21,610</b>	<b>12,500</b>	<b>17,500</b>	<b>15,000</b>	<b>15,000</b>	<b>15,000</b>	<b>15,000</b>	<b>15,000</b>	<b>15,000</b>	<b>15,000</b>	<b>15,000</b>

<sup>2</sup> Assumes that the GPP Limit remains at \$10M.  
Note all estimates are Preliminary Rough Order of Magnitude

Attachment J - Requested Small Projects above FYNSP Targets NNSA Facilities and Infrastructure Cost Projection Spreadsheet RTBF/Operations of Facilities Infrastructure for Pantex Plant (\$000s)															
Priority	Project Name	Deferred Maintenance Reduction	Funding Type	Project Type	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<b>GPE</b>															
1	LINAC Equipment + Manipulator		GPE	Capability		4,100									
2	LINAC Equipment - Gantry		GPE	Capability		4,800									
3	Sealed Vacuum Pump		GPE	Capability		330									
4	Compression Press		GPE	Capability		555									
5	X-Ray Equipment		GPE	Capability		4,600									
6	R-1 Lid Replacement		GPE	Capability		80									
7	HC&NO Analyzer		GPE	Capability		180									
8	CCTV System Upgrade		GPE	Capability		690									
9	LC-Mass Spectrometer		GPE	Capability		300									
10	HPLC		GPE	Capability		180									
11	Robotic Equipment		GPE	Capability			3,600								
12	Lightning Detection & Static Monitoring Systems		GPE	Capability		1,200									
13	COLOSSIS		GPE	Capability				13,000							
14	LINAC Equipment		GPE	Capability					3,300					3,500	
15	Horizontal Air Bearing		GPE	Capability						6,800					
16	Leak Check Manifolds		GPE	Capability						200					
17	Vacuum Chambers		GPE	Capability		1,500			600	1,300					
18	LINAC Equipment		GPE	Capability						2,600					
19	Rad Safe Equipment		GPE	Capability							350				
20	LINAC Equipment		GPE	Capability											2,900
21	Infrastructure Capital Equipment		GPE	Capability	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
22	Information Technology Capital Equipment		GPE	Capability	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
23	Rescue Apparatus		GPE	Capability	350										
24	Hazardous Material Response Vehicle		GPE	Capability	350										
25	105' Aerial Apparatus		GPE	Capability	600										
26	Hose Tender Replacement		GPE	Capability	150										
27	Compressed Air Foam System Tanker Replacement		GPE	Capability	300										
28	Ambulance Replacements (3)		GPE	Capability	200	200				200					
29	Fire Engine Replacement (4)		GPE	Capability	800				900					1,100	1,200
30	MSA Self Contained Breathing Apparatus		GPE	Capability	550										
31	Linac Manipulator Controls		GPE	Capability	1,500										
32	High resolution mass spectrometer		GPE	Capability	2,700										
33	Linac Replacement		GPE	Capability	3,500										

Note all estimates are Preliminary Rough Order of Magnitude



Attachment J - Requested Small Projects above FYNSP Targets NNSA Facilities and Infrastructure Cost Projection Spreadsheet RTBF/Operations of Facilities Infrastructure for Pantex Plant (\$000s)															
Priority	Project Name	Deferred Maintenance Reduction	Funding Type	Project Type	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
34	HE Radiography		GPE	Capability	3,100										
35	Mass Spectrometer		GPE	Capability	750										
36	Bottle & Container Evacuation Station		GPE	Capability	150										
37	Linac Manipulator Controls		GPE	Capability											
38	Transport Trailer - Onsite (4)		GPE	Capability									4,000		
39	Integrated Pumpdown & Fill Stations (3) Replacement		GPE	Capability											6,000
40	Laser Gas Sampling Replacement		GPE	Capability											1,300
41	Integrated Pit Inspection Station Replacement		GPE	Capability											1,100
42	Leak Test Station Replacement		GPE	Capability											500
43	Coordinate Measurement Machine Replacement		GPE	Capability					1,300						700
44	Radiation Dosimetry Equipment		GPE	Capability		900									
45	Narrow Band Radio System		GPE	Capability											
46	HE Mills (4)		GPE	Capability					8,750						
47	HE Lathes (5)		GPE	Capability					7,000						
48	HE Saws (2)		GPE	Capability					2,600						
49	HE Machining Coordinate Measuring Machines (2)		GPE	Capability						1,650					
50	Blast Door Interlock Control Replacement		GPE	Capability		400									
	<b>GPE Subtotal</b>				<b>21,000</b>	<b>26,015</b>	<b>9,600</b>	<b>19,000</b>	<b>30,450</b>	<b>18,750</b>	<b>6,350</b>	<b>6,000</b>	<b>10,000</b>	<b>10,600</b>	<b>19,700</b>
<b>TOTAL ABOVE FYNSP</b>					<b>88,820</b>	<b>70,715</b>	<b>54,300</b>	<b>51,200</b>	<b>62,450</b>	<b>50,750</b>	<b>36,850</b>	<b>36,500</b>	<b>40,500</b>	<b>41,100</b>	<b>50,200</b>
Note all estimates are Preliminary Rough Order of Magnitude															

<b>Attachment J - Requested Small Projects above FYNSP Targets NNSA Facilities and Infrastructure Cost Projection Spreadsheet RTBF/Operations of Facilities Infrastructure for Pantex Plant (\$000s)</b>															
<b>Priority</b>	<b>Project Name</b>	<b>Deferred Maintenance Reduction</b>	<b>Funding Type</b>	<b>Project Type</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>

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