PANTEX FY2008 - FY2017

TEN-YEAR

March 16, 2007

Table of Contents

TABLE OF CONTENTS 4
LIST OF ATTACHMENTS 6
LIST OF FIGURES 8
LIST OF TABLES 10
ACRONYMS AND ABBREVIATIONS 12
EXECUTIVE SUMMARY 1
INTRODUCTION 1
1.0 INTRODUCTION 1
1.1 OVERVIEW 1
1.2 ASSUMPTIONS 2
1.2.1 Budget Assumptions 2
1.2.2 Site Boundaries Assumptions 4
1.2.3 ES&H Operating Conditions/Constraints Assumptions 4
1.2.4 Workload Assumptions 5
1.2.5 Technology Development, Deployment, & Obsolescence Assumptions 7
1.2.6 Security and Safeguards Assumptions 8
1.2.7 Footprint Reduction and Excess Facility Assumptions 9
1.2.8 Future Conditions Assumptions 9
1.2.9 General Assumptions 9
1.3 CURRENT SITUATION 10
1.4 CHANGES FROM PRIOR YEAR TYSP 12
2.0 SITE DESCRIPTION 1
2.1 GENERAL SITE DESCRIPTION 1
2.1.1 Physical Description 2
2.1.2 Plant Population 3
2.1.3 Land Acquisition Discussion 3
2.1.4 Historic Facilities 4
2.1.5 Organizational Structures 4
2.2 SITE MAPS 6
3.0 MISSION NEEDS/PROGRAM DESCRIPTIONS 1
3.1 CURRENT MISSION, PROGRAMS, AND WORKLOAD 1
3.1.1 Directed Stockpile Work (DSW) 3
3.1.2 Campaigns 6
3.1.3 Readiness in Technical Base and Facilities (RTBF) 13

PRIME

Pantex Plant

FY 2008 - 2017

TEN-YEAR SITE PLAN

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Ioy Plant

FY 2008 TYSP

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High Explosive Formulation Facility I-17
High Pressure Fire Loop (HPFL) Storage Tanks & Pumps I-19
High Pressure Fire Loop (HPFL) Zone 11 ..... I-21
Non-Destructive Evaluation and Gas Laboratory Replacement I-23
Operations Systems Development & Integration Project I-27
Protective Force Facilities Upgrade and Enhancement Project I-31
Protective Force Live Fire Ranges Upgrades and Enhancement Project I-35
Protective Force Portal Upgrade and Enhancement Project I-37
(b)(2)High
Security Perimeter Intrusion Detection & Assessment System (PIDAS) Upgrade I-43
Sewer Collection System Manhole Refurbishment I-45
Sewer Equipment Refurbishment I-47
Steam Distribution System Upgrade I-49
Steam Production Facility Upgrade I-51
Ultraviolet (UV) to Infrared (IR) Detector Upgrade I-53
Water Secondary Distribution Upgrade I-55
Zone 4 Richmond Magazine Upgrade (6) I-57

J Project Descriptions J-1

K Requested Projects above FYNSP Targets K-1

L Pantex Building List L-1

Appendix

Pantex Funding Targets ..... Appendix 1

Revised FIRP Funding Profile (2/7/2007) ..... Appendix 2

Table F Scenario ..... Appendix 3

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List of Tables

Table 1-1, Pantex Ops of Facilities Budget FY 2008-2013 3
Table 2-1, Plant Population 3
Table 2-2, Zones 11 and 12 Planned Facilities Location 7
Table 2-3, National Register Eligible Facilities 8
Table 3-1, Campaigns Objectives 12
Table 3-2, RTBF and Other Line Item Objectives 21
Table 3-3, Ten-Year Weapons Work 34
Table 3-4, Pantex 2030 Initiatives 37
Table 4-1, Mission Consequence Level 16
Table 4-2, Probability of Failure 16
Table 4-3, Project and Equipment Categorization Score 16
Table 4-4, FY 2007 RTBF Performance Indicators 19
Table 4-5, Gross Square Footage for NNSA and Non-NNSA Facilities 20
Table 4-6, Current Facilities Utilization – FY 2006 23
Table 4-7, Future Facilities Utilization – FY 2017 24
Table 4-8, Future Facilities Utilization – FY 2030 25
Table 4-9, Summary of Pantex Future Environmental Liabilities ($K) 32
Table 4-10, Summary of the Short-Range Demolition Plan 35
Table 4-11, Summary of the Long-Range Demolition Plan 35
Table 4-12, Line Item Projects Supported /Integrated Construction Program Plan 36
Table 4-13 Proposed Line Item Projects for Inclusion in the ICPP 37
Table 4-14 NWC Roofing Funding 39
Table 4-15, Additional FY 2008 Annual Funding for Maintenance, Capacity, and Capability 44
Table 4-16, Utility Capacities and Usage 48
Table 4-17, Decision Dates to Support Planned Increases In Production 59
Table 4-18, Critical Skills Staffing Requirements 65

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Acronyms and Abbreviations

A – B – C	
AB	Authorization Basis
ADAPT	Advanced Design and Production Technologies
AEP	Acquisition Execution Plan
AL	Action Levels
AL-R8/SI	Al-R8 Sealed Insert
ARIES	Advanced Recovery and Integrated Extraction System
ARG	Accident Response Group
ATR	Applied Technology Roadmap
BBS	Behavior Based Safety
BIO	Basis for Interim Operations
BNA	Baseline Needs Assessment
BNTI	Bechtel North Texas, Inc.
BWXT	BWXT Pantex, LLC
BOP	Balance of Plant
BTU	British Thermal Unit
CAIS	Condition Assessment Information System
CAMS	Continuous Air Monitoring System
CAS	Condition Assessment Survey
CCTV	Closed Circuit Television
CD	Critical Decision
CDR	Conceptual Design Report
CEF	Component Evaluation Facility
CERCLA	Comprehensive Environmental Response, Compensation, & Liability Act
CFR	Code of Federal Regulations
CMS/FS	Corrective Measure Study/Feasibility Study
CNPC	Consolidated Nuclear Production Center
CP	Compliance Plan
CPDS	Construction Project Data Sheet
CRA	Contractor Readiness Assessment
CREM	Classified Removable Electronic Media
CRP	Conservation Reserve Program
CSA	Canned Subassembly
CSPP	Cyber Security Program Plan
D – E – F	
D&D	Deactivation and Decommissioning
D&I	Disassembly & Inspection
D&P	Development and Production
DBT	Design Basis Threat
DM	Deferred Maintenance

O - P	
OA ISM	Office Assessment Integrated Safety Management
OPC	Other Project Costs
OPEC	Operations Security
OSF	Other Structures and Facilities
OST	Office of Secure Transportation
OUO	Official Use Only
P&PD	Production and Planning Directive
PAAA	Price-Anderson Amendments Act
PA/CRMP	Programmatic Agreement & Cultural Resource Management Plan
PARS	Project Assessment Reporting System
PCD	Program Control Document
PDRD	Plant Directed Research, Development, and Demonstration
PE&D	Preliminary Engineering & Design
PIDAS	Perimeter Intrusion Detection and Assessment System
PM	Preventive Maintenance
PMP	Performance Management Plan
PPBES	Planning, Programming, Budgeting, and Execution System
PPIV	Positive Personnel Identification Verification
PSIG	Pounds per Square Inch Gauge
PS&I	Planning Scheduling & Integration
PTIP	Performance Throughput Improvement Plan
PXSO	Pantex Site Office
Q - R - S	
QER	Quality Evaluation Report
QET	Quality Evaluation Test
QIP	Quality Assurance Improvement Plan
RAP	Radiological Assistance Program
R&D	Research and Development
R&I	Receiving and Inspection
RAMS	Radiation Alarm Monitoring System
RCM	Reliability Centered Maintenance
RCRA	Reliability Conservation Recovery Act
RDD	Radiological Dispersal Device
RI	Responsive Infrastructure
RIK	Replacement-In-Kind
ROD	Record of Decision
RPV	Replacement Plant Value
RRR	Risk Reduction Rule
RRS	Risk Reduction Standard
RRW	Reliable Replacement Warhead
RTBF	Readiness in Technical Base and Facilities
RTG	Radioisotopic Thermoelectric Generator
S&M	Surveillance and Maintenance
S&S	Safeguards and Security
SA	Supplement Analysis

SAC	Steel Arch Construction
SAR	Safety Analysis Report
SCBA	Self-contained Breathing Apparatus
SECOM	Security Communication Equipment
SECON	Security Condition Levels
SFI	Significant Finding Investigation
SGT	Safeguard Transporters
SHPO	State Historic Preservation Office
SI	Sealed Insert
SMRI	Stockpile Management Restructuring Initiative
SNL	Sandia National Laboratories
SNM	Special Nuclear Material
SQA	Software Quality Assurance
SR	Strategic Reserve
SRF	Special Response Force
SS-21	Seamless Safety – 21st Century
SSC	Structures, Systems, and Components
SSSP	Site Safeguards and Security Plan
SST	Safe Secure Trailer
SWMU	Solid Waste Management Unit
T – U – W - X	
TBP	Technical Business Practice
TCEQ	Texas Commission on Environmental Quality
TEC	Total Estimated Cost
TLAP	Texas Land Application Permit
TPC	Total Project cost
TPV	Total Plant Value
TSR	Technical Safety Requirement
TSSM	Technical Surveillance Countermeasures
TTSD	Transportation Technical Support Department
TYSP	Ten-Year Site Plan
UCNI	Unclassified Controlled Nuclear Information
U.S.	United States
USCOE	United States Corps of Engineers
USQ	Unreviewed Safety Question
UV	Ultraviolet
WETL	Weapons Evaluation Test Laboratory
WI	Work Instruction
WIR	Weapons Incident Response
WFO	Work for Others
WR	War Reserve
XTX	Extrudable Explosive
YTD	Year-to-Date

Not all acronyms and abbreviations are used in this document, however the list is provided as a reference.

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The facility and infrastructure plans set by Pantex in this FY 2008 TYSP are consistent with NNSA's goals and objectives. Adequately and consistently funding Pantex required Readiness in Technical Base and Facilities (RTBF) base operations and infrastructure requirements, Line Item (LI) projects, and Facility and Infrastructure Recapitalization Program (FIRP) projects, as identified in this TYSP, will position the site to safely and reliably meet NNSA's goals and expectations:

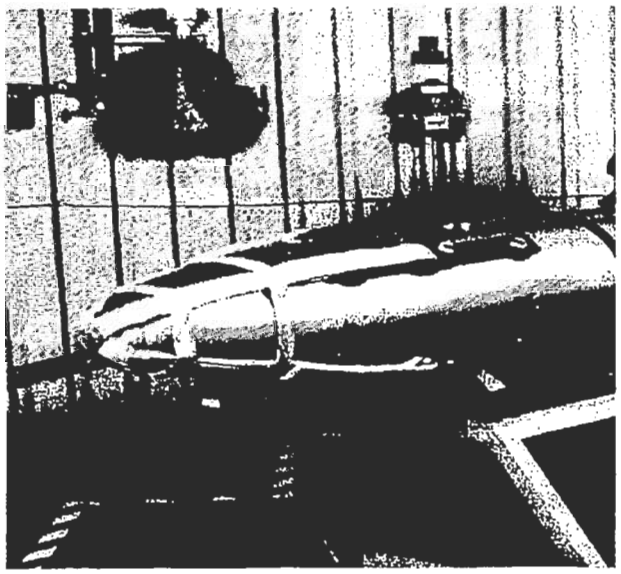
- Exceptional Industrial & Nuclear Safety Performance
- Near-term and long-term Stockpile Stewardship Program mission, e.g., Dismantlements, Life Extension Programs, Surveillance
- Safe and secure management of Special Nuclear Material
- Enhanced project management
- Real property maintenance and overall facility condition goals
- Responsive Infrastructure for long-term mission requirements, e.g., Reliable Replacement Warhead (RRW)
- Establish Pantex as "Center of Excellence" for high explosive development, manufacturing, and testing
- Excellence in environmental and energy management

Based on Pantex's proven performance over the past several years, appropriately and consistently funding Pantex is central to NNSA achieving its objectives. Appropriately funded, Pantex will establish a reliable and responsive infrastructure for the near and long-term NNSA mission and continue to have an unparalleled safety program. A continued and sustained investment in Pantex will secure NNSA's Stockpile Stewardship goals and objectives.

NNSA / BWXT Pantex Notable Accomplishments

Stockpile Stewardship

BWXT Pantex delivered the first production unit for the life extension of the B61-7/11. This is a major milestone, reached on time because of excellent work by the plants, the site offices, and Headquarters. The B61 was first produced in 1966 at the Pantex Plant. Pantex Plant is now charged with weapons maintenance and disassembly. The W76 is an important part of the U.S. nuclear weapons stockpile. Refurbishments will enhance the W76 safety and security, and extend its life an additional 30 years.



At almost the same time, BWXT Pantex completed the disassembly of the last W56 warhead (an old warhead for Minuteman missiles). Designed in an era where disassembly was not given a great deal of thought in design, the W56 posed a number of difficult challenges that were successfully overcome.

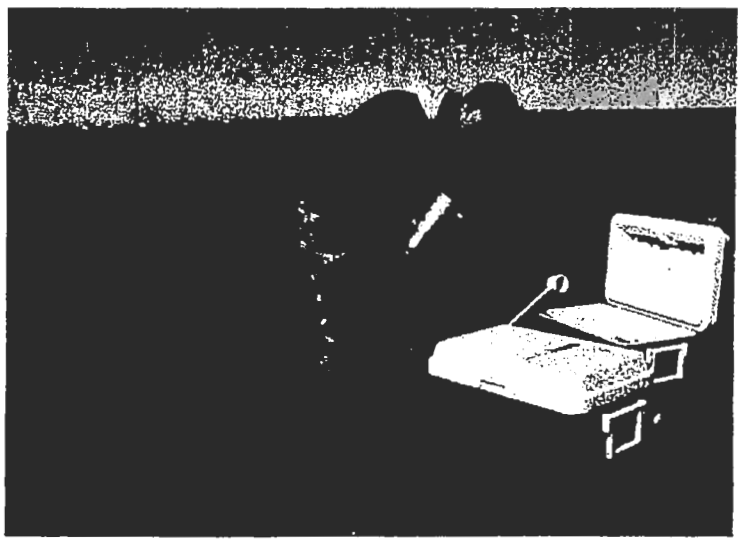
BWXT Pantex is on schedule to deliver W76 LEP FPU. Key to achieving this major milestone is the startup of the Special Nuclear Material (SNM) Component Requalification Facility (SNMCRF) to recertify W76 pits. SNMCRF startup authorization will be received in the 2nd quarter of FY 2007, a significant Plant accomplishment.

Safeguards & Security

Pantex successfully implemented the FY 2003 DBT. Implementation of the FY 2005 DBT has begun and is on schedule with the approved implementation plan. Three infrastructure projects required to support this plan are underway and are on track to meet all milestones.

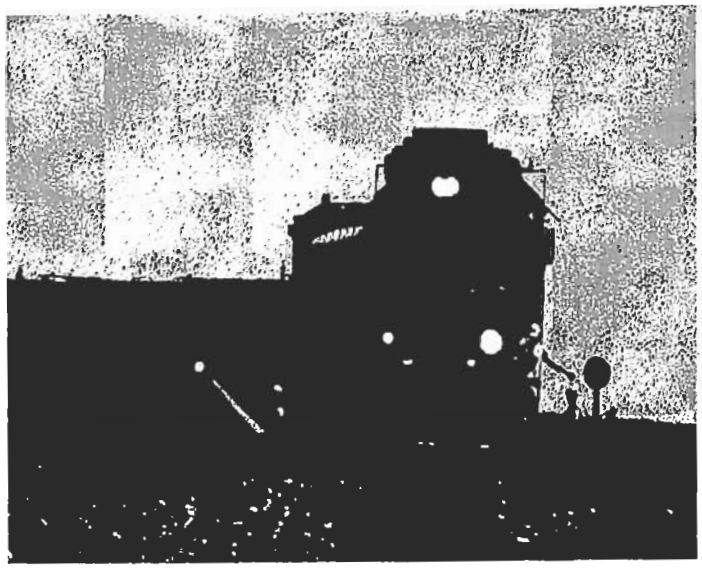
Environmental Management

Pantex's environmental cleanup program is scheduled to transition to Long-Term Stewardship by FY 2009. This is a significant milestone for NNSA. Innovative technologies such as Ozone injection, In Situ Bioremediation and Permeable Reactive Barriers ensure that the use of the Ogallala Aquifer, the primary source of drinking water for this region, will remain a clean and viable natural resource for generations to come.



Environmental monitoring will remain an important part of Long-Term Environmental Stewardship at Pantex.

Deferred Maintenance Reduction



Pantex continues to make progress toward NNSA's goal of reducing deferred maintenance (DM). Pantex eliminated $52 million in DM in FY 2006, of which $38 million was eliminated through the execution of FIRP and RTBF Operations of Facility Plus-up projects. Condition Assessment Survey (CAS) inspections identified assets previously reported as deferred to be in adequate condition and not in need of repair or replacement. The condition of these assets was updated in CAIS thus eliminating $13.5 million from the backlog. Refer to Attachments F-1 through F-5. Some of the key DM bought down in FY 2006 was the removal of the Pantex rail system. Several of the trains used to transport weapons across the rail lines were donated to the Amarillo Railroad Museum and the Atomic Museum in Albuquerque.

In FY 2007, Pantex has allocated approximately $64 million of Operations of Facilities funding toward real property maintenance. This equates to approximately 47% of the total Operations of Facilities budget and approximately 2% of Replacement Plant Value (RPV). This funding level is sufficient to stabilize maintenance and prevent growth in the backlog in FY 2007.

Energy Conservation

Conserving energy is important to Pantex. BWXT Pantex and PXSO initiated aggressive energy management plans to control the rising cost of plant utilities and meet President Bush's September 26, 2005 directive to reduce energy consumption by 10% from the FY 2004 baseline. This aggressive plan exceeded the President's plan and reduced energy consumption at the Plant by 13%. Construction activities associated with the recently awarded $19.5 million Energy

number of weapons, but lead to a safer and more secure stockpile, with weapons that are more easily manufactured and maintained, backed up by a more responsive nuclear weapons infrastructure. The vehicle for this transformation is NNSA's concept for the RRW. RRW is not a new weapon providing new or different military capabilities and/or missions. It will meet the same military requirements as current legacy warheads by utilizing replacement components. It will be able to ensure greater long-term confidence in safety and reliability while decreasing the likelihood that underground nuclear testing would ever be needed to ensure that confidence. Through innovative and enhanced safety and surety features, RRW will also have the capability to prevent unauthorized use.

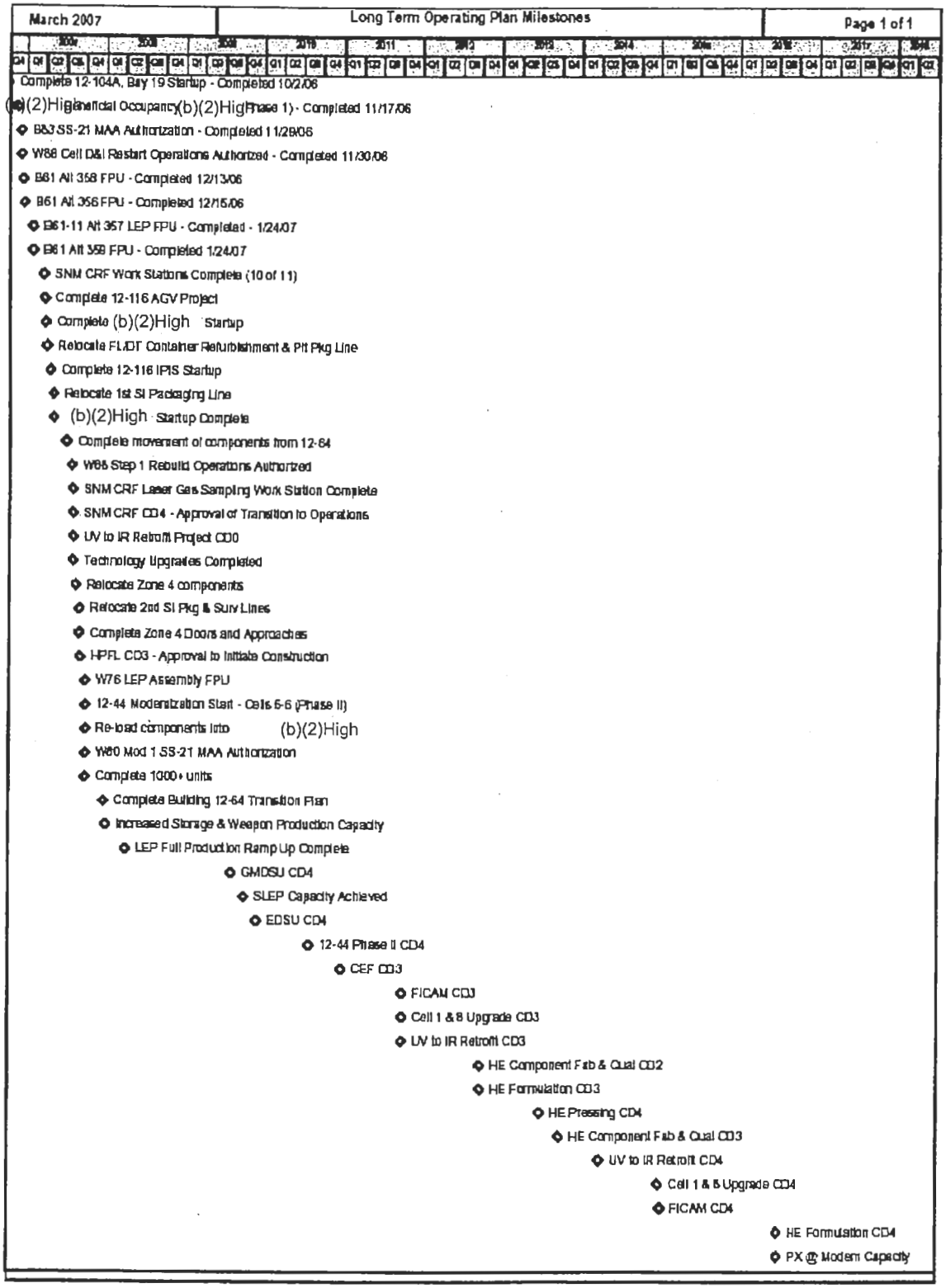
In the meantime, NNSA will continue to maintain and extend the life of the current stockpile through its Life Extension Program. The current stockpile consists of warheads that were developed and nuclear tested during the Cold War to stringent requirements. As weapons are refurbished and their lifespan extended, the inevitable accumulation of small changes that occur results in refurbished weapons that have moved away from their original designs. This raises concerns among scientists about our ability to assure the safety and reliability of the legacy stockpile indefinitely, absent underground nuclear testing.

Through NNSA program planning, an appropriate set of technology upgrades and construction projects has been defined and initiated to deliver the post-FY 2007 LEP capacity requirements. The Building 12-44 Production Cells Upgrade (Phase I and II) and the Special Nuclear Material (SNM) Component Requalification Facility (SNMCRF) Line Item projects are all in process to ensure there is sufficient production capacity and capability to support the post-FY 2008 LEP workload. Additionally, the High Explosive Pressing Facility and the Component Evaluation Facility are being designed to ensure Pantex has the infrastructure necessary to support the high explosive mission and responsive infrastructure to support the RRW initiative. The Long Term Operating Plan shown in Figure ES-1 identifies key project milestones that must be completed at Pantex to upgrade the infrastructure and deploy required technologies and capabilities to meet production requirements safely and securely.

In order to ensure success, BWXT Pantex has developed a long term operating strategy that incorporates the following success factors:

- Maintain exceptional safety posture
- Compliance (e.g., Nuclear Safety, Environmental, 10 CFR 851)
- Deliver weapons per Program Control Document (PCD) schedules
- Satisfy LEP Plan requirements
- Meet Long Term Operating Plan project completion schedules
- Expand Plant storage capacity.
- Establish an High Explosive Center of Excellence

Figure ES-1, Long Term Operating Plan



Strategic Issues

BWXT Pantex and NNSA must achieve and/or address the following key issues to ensure the success of the Stockpile Stewardship mission at Pantex.

- Continue to improve Plant performance to achieve and sustain 1,200 units per year capability in 2008
- Consistently fund DSW commensurate with the directive schedule
- Fund RTBF consistent with increased DSW mission

A critical and near-term concern that NNSA must address is Pantex's RTBF Operations of Facilities FY 2008 and 2009 FYNSP targets. The FY 2008 FYNSP is less than the actual funding received in fiscal year 2003. At the present RTBF Operations of Facilities FY 2008 FYNSP level, $95 million, Pantex will only be able to support approximately 75% of the on-board headcount supporting the Plant's maintenance, facility engineering and industrial/nuclear safety functions. The number of impacted personnel would be approximately 215 FTPs (based on current staffing level), which would significantly affect the site's ability to meet mission goals and impact production abilities in future years. The FY 2009 FYNSP further exacerbates the Plant's ability to meet NNSA maintenance and facility condition goals, and would result in a further reduction of Plant personnel and services. The loss of these resources would further degrade the Plant's infrastructure condition, affect the safety posture, and impact the DSW mission. The requisite RTBF Operations of Facilities funding to support DSW mission is outlined in this 2008 TYSP.

Pantex will achieve 1000 units in FY07 and is on course to achieve 1200 units in FY 2008. With NNSA's commitment to adequately fund both DSW and RTBF, Pantex will be positioned to meet the near and long-term Stockpile Stewardship mission.

1.0 Introduction

This section provides an overview of the content of the Ten Year Site Plan (TYSP) and defines the foundation upon which the site's long-range facilities and infrastructure planning process is built. This section includes assumptions, current situation, and changes from the prior year TYSP.

Long-range facilities and infrastructure planning at Pantex is based on a combination of efforts:

Annual strategic planning session to review changes to NNSA policies and directives, workload drivers, new initiatives, and changes to current long-range plans.

Consultation with programmatic and functional subject matter experts throughout the year to advise of changes in the activities they manage.

Together, these activities and communication paths ensure the basis for the TYSP is current and supports the strategic objectives of NNSA. Refer to Section 4.1 for a complete description of the planning process.

1.1 Overview

The TYSP is prepared by the sites within the Nuclear Weapons Complex (NWC) and is the foundation for strategic planning for the physical complex, incorporating the various programs' technical requirements and budget planning. The Fiscal Year (FY) 2008 plans serve to support the FY 2009 budget submission and are aligned with the NNSA's implementation of the Planning, Programming, Budgeting, and Evaluation System (PPBES) process and site-specific strategic plans. The FY 2008 TYSP also supports the Complex 2030 initiative.

The TYSP process allows an objective assessment of where Pantex is today and where it needs to be in the future to accomplish its mission and the NNSA goals. The content and format of this site plan comply with the following requirements and guidance:

- Department of Energy (DOE) Order 430.1B, *Real Property Asset Management*
- NNSA, FY 2008 – 2017 TYSP Guidance, December 21, 2006
- NNSA Complex 2030, *An Infrastructure Planning Scenario for a Nuclear Weapons Complex Able to Meet the Threats of the 21st Century*

The Pantex Plant TYSP also provides information relative to personnel, technologies, and strategic planning, which facilitates a more complete analysis of the requirements integral to achieving the mission goals of the NNSA.

This TYSP is for FY 2008 through FY 2017; however, certain information is shown over a much longer time period due to the extended weapon production-planning horizon and the planning required for implementation of the Complex 2030 strategic initiatives.

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1.2 Assumptions

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

1.2.1 Budget Assumptions

- Budget data for DSW, Campaigns, and RTBF are based on NA-133 Defense Program Site Splits for FY 2009-2013, adjusted for the 3% HQ reserve. All other NNSA funding, including FIRP, Security, and Material Disposition (MD) are consistent with the FY 2008 Congressional Budget Request published by NA-10 for FY 2007-2012 (February 2007). The budget data are shown in Appendix 1. Variations in funding levels occur in DSW for changes in the workload. LI construction projects funding fluctuations are the reflection of execution phase of projects. DSW has experienced increased operational requirements in Production Support and Dismantlement. These increases have been managed within available funding; however, the impacts can be seen in the requirements for additional facilities and personnel. For FY 2013, targets are based on an escalation factor of 2.3% based on NNSA guidance. Refer to Table 1-1 and Figure 1-1 on the following pages.

- For FY 2008 and beyond, the Safeguards & Security budget request assumes funding levels necessary to support sustainment of the FY 2003 Design Basis Threat (DBT), implementation and sustainment of the FY 2005 DBT, deployment of new technologies, infrastructure upgrades, lifecycle replacement of required equipment/systems and implementation of new security orders.

- Attachment E in the FY 2008 TYSP reflects FIRP disposition funding ending in FY 2009 and any additional disposition activities funded from other sources. Pantex has identified four additional buildings for consideration in the FIRP

D&D program in 2013.

- The ICPP process used by NNSA evaluates and selects Line Item construction projects to satisfy program requirements and funding constraints identified in the Future Year Nuclear Security Program (FYNSP). Attachments A-1 and E-2 are consistent with the ICPP (exceptions footnoted) dated November 7, 2006. Additional candidate RTBF, S&S, DSW, and MD Line Item projects requested for inclusion in the out years of the ICPP are noted in Attachment A-2.

- Responsibility for the Environmental Restoration Program is expected to transition to NNSA in FY 2009. Funding targets in DOE EM's Integrated Planning Accountability and Budgeting System (IPABS) for FY 2009 – FY 2013 are approximately $5 million; however, recent CERCLA and RCRA requirements identified in the Corrective Measure Study/Feasibility Study (CMS/FS) will result in requests to NA-56 for approximately $8 million annually.

- Operations of Facilities programs have been impacted by increased requirements in safety authorization basis and additional funding required to sustain maintenance. Congressional Plus-Up has principally covered Operations of Facilities base program shortfalls and GPP and Expense projects. Pending a FY 2008 Plus-Up or alternative funding strategy, Pantex RTBF Operation of Facilities base program requirements of approximately $123.4 million in FY 2008 are under funded at the $95 million FYNSP level in the President's budget. An additional $21.8 million annually above base is required to maintain an adequate facility condition index. Reference Appendix 3 of this TYSP for further discussion.

Table 1-1, Pantex Ops of Facilities Budget FY 2008-2013

FY 2008 - 2013 Operations of Facilities Budget						
	$ In Millions					
	FY 2008	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Base Requirement	123.4	131.5	140.5	150.0	160.2	171.2
Projects Requirement	21.8	22.1	22.4	22.8	23.1	23.4
Total Requirement	145.2	153.6	162.9	172.8	183.3	194.6
FYNSP	95.0	99.2	101.5	104.6	106.7	109.3
Difference	(50.2)	(54.4)	(61.4)	(68.2)	(76.7)	(85.2)

Capital Assets, and that apply to baseline development, maintenance, and implementation.

- The Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) jointly regulate Environmental Restoration (ER) activities at Pantex, under a memorandum of agreement for activities at federal facilities. Under this memorandum of agreement, EPA is the lead agency for radiological legacy release issues under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and TCEQ is the lead agency for non-radiological legacy release issues under Resource Conservation Recovery Act (RCRA).

- Pantex received approval for the completion of its RCRA Facility Investigations from the TCEQ and EPA in August 2005. Process documents are in place that implement controls to obtain regulatory approval of soil disturbances, during construction activities, that have the potential to interfere or disturb a Solid Waste Management Unit (SWMU) defined by the Compliance Plan (CP) No. 50284 as part of the Pantex Plant RCRA Permit Hazard Waste-50284. Refer to Figure 3-3, *Pantex Solid Waste Management Units*, and Attachment H, *Summary of Pantex Future Environmental Liabilities*.

- A baseline risk assessment is required to determine if the risks resulting from CERCLA-related spills or releases require remediation. Acceptance and approval of the baseline risk assessment is expected in FY 2007. In addition to a site investigation and a baseline risk assessment, other required RCRA/CERCLA elements include a CMS/FS, public participation, a Federal Facility Agreement, EPA's issuance of a Record of Decision (ROD) and cleanup implementation.

- National Environmental Policy Act (NEPA) requirements are being addressed in conjunction with the CMS/FS processes, allowing for an evaluation of, and public input on, the impacts of proposed remedial actions before they are selected. The Environmental Assessment of Corrective Measures for Perched Groundwater will be submitted to the public in FY 2007.

- Long Term Environmental Stewardship (LTES) activities will be maintained as required, based on regulatory clean-up levels achieved. Generally, once the regulatory agency has approved a Corrective Measure Implementation Report, the corrective action identified will be implemented and operated until no longer required to protect human health and the environment in accordance with regulatory permits. Media that is remediated to industrial land use standards will require continued LTES via institutional controls.

1.2.4 Workload Assumptions

- The ten-year weapons workload was derived from the Draft Production and Planning Directive (P&PD), issue 2007-0. The P&PD reflects the stockpile developed to implement the Nuclear Posture Review (NPR) findings that have

been included in the approved Nuclear Weapons Stockpile Memorandum/Requirements and Planning Document. The Draft P&PD 2007-0 provides the long-term plans to support the new NPR stockpile. Future treaties and/or strategic defense reassessments, or NWC realignment that could have impacts on the Pantex Plant are not included in this TYSP and would require re-evaluation. If the U.S. adopts future strategic arms reduction agreements, significant production resources could be required. For example, if large quantities of weapons are scheduled for elimination from the stockpile, additional personnel and equipment will be required to dismantle the weapons. In addition, as the stockpile is reduced in size, it is anticipated that the scope of the evaluation program will increase; i.e., an evaluation scope increase for each weapon surveyed and an increase in the number of weapons surveyed. Analysis of any future change in stockpile levels as stated in the Draft P&PD 2007-0 will be required. NNSA is currently evaluating its options to consolidate the NWC. Any decisions as the result of this analysis are not included.

- Production workload and facility forecasts are determined through modeling processes and are based on existing activity process times. The model includes schedule contingency for some weapon activities that are anticipated, but not yet defined by the design agencies.

- Production workload and facility forecasts are based on all weapon systems utilizing one unit per production area (bay or cell) during operations. Efforts are ongoing to achieve multiple unit processing; however, it is not planned in Draft P&PD 2007-0. Analysis was performed to determine the impact of simultaneously processing multiple units per production facility and showed that for both single unit and multiple unit processing, the need for additional production capacity scheduled to be provided by the Line Item projects for upgrading Building 12-44 will still be required. The benefits that multiple unit processing provides are the increased confidence (or reduction in risk) that the Life Extension Program (LEP) workload can be accomplished in the facilities available and the additional capacity to accommodate the increasing workloads projected beyond FY 2013. It does not eliminate the requirement to have additional production cell capacities available in FY 2007. (Refer to Section 4.1.9)

- Lightning downtime is tracked on a monthly basis and reviewed at the end of the fiscal year to determine adjustments to lightning downtime factors in the model. These factors have been incorporated in the production workload and facility forecasts.

- Limited Life Component support for the inactive weapon stockpile is not included in the resource requirements.

- A backlog of legacy weapons and inert weapon components generated from past weapon dismantlement operations exists on-site that was generated from past weapon dismantlement operations. Component disposition activities

scheduled from FY 2005 through FY 2014 consist of this backlog in addition to components generated from active weapon dismantlement and evaluation programs.

- Component disposition of DOE-owned components that are in the custody of the DoD or other DOE facilities are not included in the ten-year workload.

- The Reliable Replacement Warhead (RRW) is a weapon replacement for legacy systems that is easier to assemble, disassemble and maintain. RRW concepts include increased safety and surety features over current stockpile systems and is assumed to provide reduced Documented Safety Analysis controls and increase throughput.

- The RRW-1 First Production Unit (FPU) is scheduled for FY 2012. The production rate for War Reserve (WR) assembly is anticipated to be limited by new pit production from the Los Alamos National Laboratory TA-55 facility. New Material testing is assumed to begin in parallel with WR production as well as Joint Test Assembly production. Stockpile surveillance activities are assumed to begin in FY 2014. Assembly inspection and surveillance diagnostic requirements have yet to be developed by the design agencies, but could significantly increase the process flow time and resource requirements.

- All explosives and explosive components residing at Pantex as a result of the explosive manufacturing process or weapon assembly/disassembly process will be sanitized to meet current requirements prior to release.

- Security conditions change in response to the world political situation. Whether a change will occur cannot be predicted, nor can the length of time at a heightened state of awareness be predicted. Heightened security levels may cause delays in operations and construction. These delays have not been factored into workload or ongoing project schedules.

- The workload at Pantex continues to rise based on production throughput plans. Refer to sections 3.1.10 Workload, 4.1.9 Production Personnel, and 4.1.9 Workforce Profile.

1.2.5 Technology Development, Deployment, & Obsolescence Assumptions

- The Nuclear Weapons Complex (NWC) is undergoing a period of transformation as evidenced by the Complex 2030 vision. The NNSA has identified four strategies that will support the vision and transform NWC into a flexible, agile, and responsive enterprise: (1) transformation of the nuclear stockpile through development of Reliable Replacement Warheads (RRW), refurbishment of limited numbers of legacy designs, and accelerated dismantlement of the Cold-War stockpile; (2) transformation to a modernized, cost-effective NWC; (3) creation of a fully-integrated and interdependent NWC;

and (4) driving the science and technology base essential for long-term national security.

- The assumption is that enabling technologies will be in place to support the Complex 2030 vision. Information technology is a transparent enabler of productivity; delivering on-demand the information and computing resources required to achieve the Plant's mission. Electronic communication must proceed quickly and seamlessly through an NWC-wide architecture. Enterprise Systems have to be in place to respond rapidly to supply chain difficulties and other material availability issues.

- Capabilities that must be developed and deployed include:

  - An infrastructure that will enable employees to communicate efficiently and participate in a collaborative work environment for both classified and unclassified information. This includes state-of-the-art network and telecommunication infrastructures, enterprise systems, computer hardware, and device-enabled point-to-point encryption.
  - Concurrent digital design tools for flexible, agile, responsive, and economical production and operations.
  - Agile, multi-use facilities.
  - Advanced diagnostic techniques, self-diagnosing weapons, NDE technologies (including radiography) and test facilities for aging experiments.

- Additionally, several infrastructure systems have been identified as approaching technical obsolescence and will require replacement. Examples of these systems include: ultraviolet flame detection, radiation detection and alarm, natural gas, electrical distribution, steam and condensate return systems. As these systems are replaced, new technologies will be implemented.

- Facilities like the HE Formulation and HE Component Fabrication and Qualification support the HE Center of Excellence. The Administration Support facility consolidates facilities, processes, and functions in support of efficient and effective plant operations. Several other facilities are still being refined and will be further defined through the Site Wide Environmental Impact Statement process.

1.2.6 Security and Safeguards Assumptions

- Pantex will continue to set the standard for the Complex in providing the optimal balance of personnel and technologies necessary to provide a highly effective security posture. As the only Category IA facility in the complex, Pantex has begun implementation of the FY 2005 DBT and expects to achieve full implementation by the date included in the approved plan. Pantex has

received funding for three of the four infrastructure projects identified in the approved implementation plan and the projects are underway. Pantex anticipates receiving funding for the remaining FY 2005 DBT-related infrastructure project in FY 2008. Additionally, Pantex will continue implementation of the new security orders, some of which require additional infrastructure.

1.2.7 Footprint Reduction and Excess Facility Assumptions

- Facility utilization for mission support is high at Pantex. Older facilities are currently being planned for demolition after new energy efficient replacements are built.

- Equalizing the reduction of excess facilities associated with new construction will be balanced, if needed, by disposal of excess square footage at other NNSA sites as approved by NNSA. Requirements for offsetting additional square footage at another site will be presented to NNSA. It is assumed NNSA will act as broker based on priority of new square footage to meet the NNSA mission. Facilities that were designed and/or approved prior to FY 2003 are considered grandfathered and square footage is not included in the balance of square footage.

1.2.8 Future Conditions Assumptions

- The operating space at Pantex is projected to expand in the future. Older facilities are being replaced with newer facilities, lowering the DM and improving the energy efficiency of the Plant. Additionally, the Component Evaluation Facility and the proposed security projects will require NNSA to allocate "banked" square footage eliminated from other sites to support mission driven growth and modernization at Pantex.

- Future facility utilization is based upon authorization and completion of planned projects as shown in Attachment A. If projects are not funded as planned, changes in the future use of some facilities will not occur as planned, and plant square footage reduction will be less than depicted in this TYSP.

1.2.9 General Assumptions

- All data provided in this document is based on information accumulated as of September 30, 2006 unless noted otherwise.

- Facility and personnel resource requirements for any new federal, state, and local laws and regulations or their interpretations that may be enforced subsequent to October 2006 are not included in resource projections in this TYSP.

- Resources to support International Atomic Energy Agency (IAEA) inspections or future treaty obligations are not included.

- Existing technologies are used as the baseline in evaluating resource projections for this TYSP; however, new technologies will continue to be evaluated for future applicability at the site.

- Waste treatment, disposal, and off-site shipments will continue as currently managed in accordance with applicable laws and regulations.

- RPV for facilities as calculated by the Facilities Information Management System (FIMS) using *RS Means* estimating methods, includes costs for the building envelope and facility systems (heating, ventilation, and air conditioning (HVAC), electrical service, telephone), but excludes furnishings, equipment, and site preparation. Medium and large buildings include fire alarm and suppression, but small buildings do not. Therefore, the RPV for plant facilities will always be less than the cost of actually constructing that facility and making it ready to use. RPV is useful to develop relative costs for facilities, but understates the actual value of the asset. Pantex RPV is based on FY 2007 FIMS model costs and site-specific adjustment factors and includes leased facilities. The FY 2007 RPV is $3.3 billion

- DM is calculated by the Condition Assessment Information System (CAIS) using *RS Means* cost estimating methods with site factors applied for security, general, and administrative overheads.

- Information provided in this TYSP pertaining to project scopes, schedules, and costs is subject to change as criteria and assumptions evolve. Baseline scopes, schedules, and costs in the plan are revised on an annual basis and should not be used to assess and track project completion. Project Execution Plans are developed and used for that purpose.

1.3 Current Situation

Approximately 55 percent of the Plant's square footage is more than 25 years old. Eighteen percent of the facilities were constructed during World War II; this is a 2% reduction from FY 2006. The Pantex Plant has undergone several periods of expansion and facility and infrastructure upgrades since it was originally built.

Future weapons workload requires more cell operations that use task exhaust than in prior years. Consequently, the cells in Building 12-44 require upgrades to meet production demands. The FY 2002 Line Item, Building 12-44 Production Cells Upgrade, has completed construction on three cells and is in the start-up process. The remaining two cells are being evaluated for possible construction in FY 2009. Refer to Section 4.1.9, Production Readiness/Plant Capacity.

Modernization of the Weapons Evaluation Test Laboratory (WETL) operated by Sandia National Laboratories (SNL) was accomplished through the construction of a new facility (Building 11-59) at Pantex. Funding and scope of work for the project

was included in the SNL budget; therefore, project costs are not included in the Pantex TYSP. The facility start-up completed in FY 2006.

Alternatives are being evaluated to expand Zone 4 pit staging capacity to accommodate required levels of pits to be generated in support of weapons workload requirements. This would be accomplished primarily by two projects. The first project would modify four rooms in Building 12-116. The second project would modify the remaining six Richmond magazines to Modified Richmond magazine capabilities. Several Richmond modification scenarios are under consideration; the evaluation is expected to yield the best and most cost effective solution. If the completion of the project to modify the remaining six Richmond Magazines is delayed beyond 2013, storage capacity issues are expected to directly impact the ability to conduct scheduled weapons work.

Pantex experienced a 40 percent decline over a seven-year period (FY 1994 through FY 2000) in the amount of funding directed to infrastructure issues. During the same time period, the total Plant footprint increased three percent and compliance requirements significantly increased. The gap between required and actual maintenance funding resulted in a "bow wave" of deteriorating facility and infrastructure conditions. Although FIRP has worked to eradicate the DM backlog, a sizable backlog still remains. The existing backlog as of the end of FY 2006 will not be reduced substantially over this ten-year planning period through available funding sources; i.e., FIRP, RTBF Operations of Facilities and Line Item Construction. BWXT Pantex has completed initial three-year surveillance effort to re-establish the Condition Assessment Survey (CAS) program at Pantex. All buildings have been inspected for civil, structural, electrical, and mechanical deficiencies.

- Modeling the DM backlog into the future, based on FYNSP targets, indicates a gap between required and actual maintenance of approximately $21.8 million per year. This gap is comprised of Replacement-In-Kind (RIK) of aging systems, and minor modifications and betterments of the physical plant (e.g., fire protection lead-in piping. Even with the effective use of FIRP, maintenance management practices that are continually being improved, and dedication to reducing the DM backlog, it is projected that the DM backlog will continue to rise.

- In addition to performing classical preventive and corrective maintenance, the maintenance program accomplishes surveillance and testing to comply with nuclear facility technical safety requirements, explosive safety requirements, and industrial safety requirements. Consequently, the allocation of maintenance resources is not totally discretionary. Approximately 10 percent of the maintenance budget sustains surveillance and testing requirements, regulatory training, and AB implementation requirements in mission facilities.

1.4 Changes from Prior Year TYSP

Major changes from the FY 2007 TYSP include the following:

- Sections of the previous TYSP are located in new sections of this TYSP or have been eliminated.

- Pantex has identified two Line Item projects that support vacating WWII facilities and support the HE Center of Excellence. These include the HE Formulation Facility and HE Component Fabrication and Qualification Facility.

- In developing concepts for Complex 2030, Pantex is identifying several projects that support this initiative. The Administrative Support Facility (possible third party financing) supports the 2030 initiative by consolidating facilities, processes, and functions in support of efficient and effective plant operations. Other projects will be proposed as Complex 2030 is further defined through the Site Wide Environmental Impact Statement process.

- During FY 2006, facilities were recategorized from Mission Essential to Mission Critical (MC). The NNSA provided guidance, review, and approval of the facilities included in the MC category. In FY 2007, Non-Mission Essential facilities and those facilities not categorized as MC from the previous Mission Essential category will be recategorized to Mission Dependent-Not Critical (MDNC), and Not Mission Dependent (NMD). The final list of MDNC and NMD facilities has not been reviewed by NNSA but it is expected to be finalized in FY 2007. This clarification and consistency will provide NNSA with the basis for equitable comparison of facilities and their contribution to the NNSA NWC mission.

- Attachment A-1 reflects the Line Item projects as shown in the ICPP dated November 7, 2006 unless otherwise noted.

- Attachment A-6d has been changed to A-6b to help NNSA identify improvements to the assets required to support the safeguards and security posture.

- Attachment E-4, Pantex Plant Footprint Summary, projects the Plant will be approximately 75,000 square feet short of banked footage based on the current approved projects in the Integrated Construction Project Plan to offset future construction. Currently, the projection indicates the Component Evaluation Facility (CEF) project will require a waiver to offset square footage. The future footprint needs for unfunded Production and Security Infrastructure, in Attachment A, as well as other Proposed LI projects and unfunded GPP projects, are not included in the table at this time.

- Attachment G was added to identify the approved list of Mission Critical Facilities at Pantex. This list reflects the approved list by Thomas P.

D'Agostino in memorandum "Fiscal Year (FY) 2007 Mission Critical List, Revision 0" dated August 7, 2006.

- Attachment H was added to provide the summary table of Pantex future environmental liabilities and the closure criteria.
- The EM Program is scheduled to transfer to NA-50, Infrastructure and Environment, in FY 2009.
- Table 4-9 provides data on Long Term Stewardship (LTS) and future environmental liabilities that are not included in any other budget requests.

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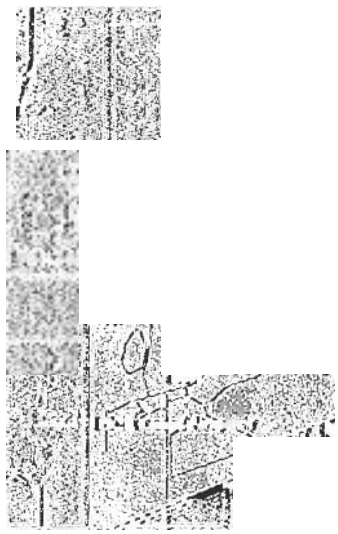


The total FY 2007 RPV for Pantex is approximately $3.3 billion excluding programmatic real property, mobile equipment, land owned by DOE, and land leased from Texas Tech University. This cost reflects the total cost associated with the replacement of all facilities and infrastructure required for the mission of the Pantex Plant. In addition, approximately $176 million in personal property and capital equipment is used in plant operations.

2.1.1 Physical Description

The Pantex Plant resides on land owned and leased by the DOE. The DOE owns approximately 9,100 acres at Pantex Plant proper and 1,077 acres of detached property, called Pantex Lake, approximately 2.5 miles northeast of the main Plant site. 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, primarily for safety and security buffer areas. 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 Texas Tech University for agricultural purposes through a service agreement. Refer to Figure 2-9 Agricultural Land Use at Pantex.

Pantex consists of 638 buildings containing 3,065,809 square feet. Facility square footage in the FY 2008 TYSP reflects the square footage in FIMS as of September 30, 2006. This includes 9 leased facilities representing 67,494 square feet.

Pantex has approximately 55 linear miles of paved roads and 60 miles of fencing. Pantex utility operations meet federal, state, and local permit and other regulatory requirements. Site utilities consist of the following services:

- Potable water system - on-site production wells, storage tanks, treatment facilities and underground distribution.
- Domestic wastewater (sewage) collection and treatment - on-site facilities and underground irrigation system.
- Steam plant and condensate return - generated and distributed on-site.
- Compressed air - generated and distributed on-site.
- Electrical distribution system – on-site aerial and underground distribution, switchgear, and generator loop backup power; electricity procured from a public utility.
- Natural gas distribution – off-site transmission and on-site distribution; gas procured from a public utility.

2.1.2 Plant Population

Approximately 4,000 people are employed at the Pantex Plant. The exact number varies weekly based on terminations and new hires. This population consists of BWXT Pantex employees as well as PXSO, OST, Sandia National Laboratory's Weapons Evaluation Testing Laboratory (WETL); and the Tri Lab Project Office. Numerous other organizations also have a presence at Pantex including the Defense Nuclear Facility Safety Board (DNFSB), the State of Texas Division of Emergency Management, and several subcontractors. In addition, construction personnel temporarily work at Pantex. Table 2-1 provides the organizations and their approximate number of employees at the site.

Table 2-1, Plant Population

ORGANIZATION	NUMBER OF EMPLOYEES
PXSO	84
BWXT PANTEX	3,316
OST	127
SNL	18
TRI LAB	14
OTHER (EXCLUDES CONSTRUCTION PERSONNEL)	428
TOTAL	**3,987**

2.1.3 Land Acquisition Discussion

The Department of Energy is currently under contract with the U.S. Army Corps of Engineers (USACE) to negotiate the acquisition of real property adjacent to the DOE/NNSA Pantex site for environmental restoration monitoring and potential future remediation of contaminated perched groundwater. This property is east of the Plant. Options for beneficial use of the property are planned and discussed in Section 4.1.2.3. Refer to Figure 4-10 for the perched groundwater extent to the east and acquisition area.

The goal of the land acquisition project is to acquire property that could be used for irrigation with treated perched groundwater, monitoring of perched and Ogallala groundwater, and possible in-situ treatment of perched groundwater. These alternatives are described and analyzed in the Environmental Assessment of Corrective Measures for Perched Groundwater, which was submitted to the public in FY 2007. Once environmental work is completed, DOE will disposition the property.

2.1.4 Historic Facilities

Buildings eligible for inclusion on the National Register of Historic Places were determined by DOE/NNSA/PXSO based on recommendations by BWXT Pantex. Through consultations between DOE/NNSA/PXSO, Texas State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation, final eligibility determinations were made. Pantex has 173 buildings, approximately 1,013,000 square feet, eligible for inclusion on the National Register of Historic Places. This does not include eligible buildings that have been demolished (Buildings 11-36, 12-24 North, 12-24 South, and 12-78). The eligible buildings are denoted in FIMS and depicted on the map in Figure 2-8 for Zones 11 and 12. A list of all historically eligible buildings is included before the maps in Table 2-3.

DOE/NNSA/PXSO completed consultations with the Texas SHPO and the President's Advisory Council on Historic Preservation in FY 2004 culminating in a final Programmatic Agreement and Cultural Resource Management Plan (PA/CRMP). This plan identifies a range of preservation activities including, as the cornerstone, 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). The most effective preservation method is continued use, which ensures a safe and operable condition is maintained. Any required modifications will be designed so that the historic characteristics of these buildings are not adversely impacted. In addition, with the completion of the new HE Pressing Facility, the Building 12-17 complex will be designated a classified museum and classified visitor center.

2.1.5 Organizational Structures

Pantex is operated under the direction of the Pantex Site Office (PXSO). The Management and Operating (M&O) contractor is BWXT Pantex, LLC (BWXT Pantex).

PXSO organizational structure is provided in Figure 2-3. BWXT Pantex organizational structure is provided in Figure 2-4.

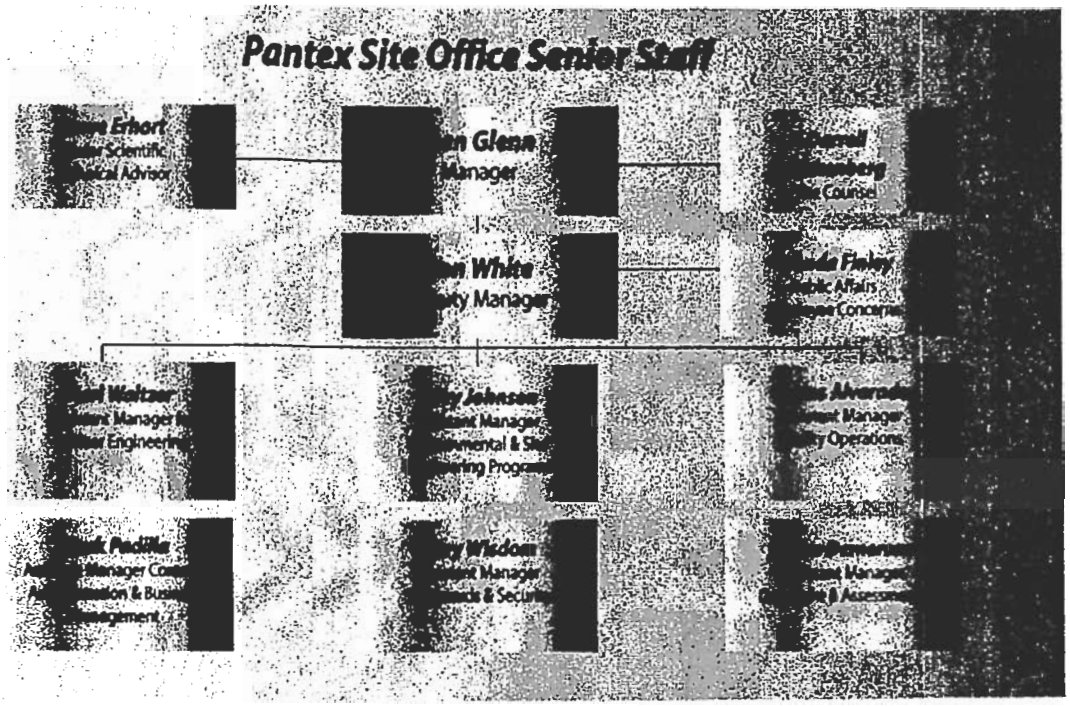


Figure 2-3, PXSO Organizational Chart

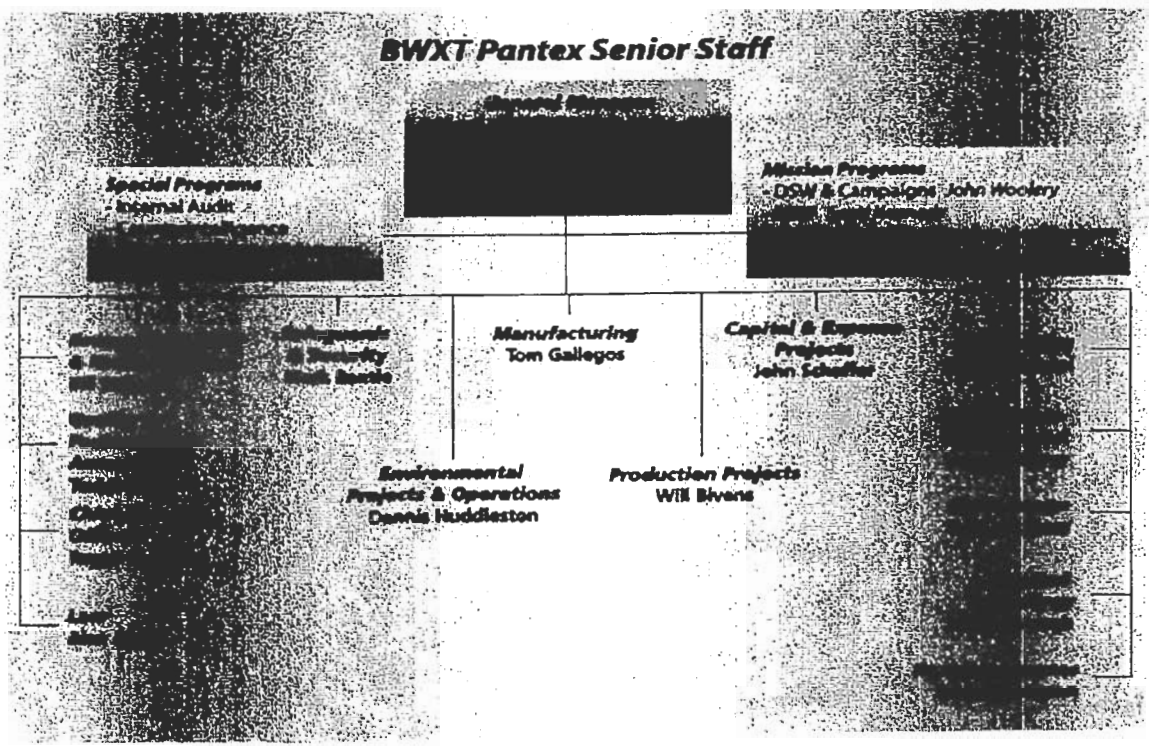


Figure 2-4, BWXT Pantex Organizational Chart

2.2 Site Maps

Site maps depicting planned ten-year construction and demolition are provided in Figure 2-5, Figure 2-6, and Figure 2-7. Table 2-2 is a listing of the planned new construction facilities in Zones 11 and 12. This table includes unfunded projects and those projects that are not currently supported in the ICPP. The grid coordinates assist with locating construction projects on Figure 2-7.

PRIME

Table 2-3 is a listing of all historically significant facilities located at the Pantex Plant. Figure 2-8 shows those facilities that are located in Zones 11 and 12.

(b)(2)High

(b)(2)High

[1] Preservation In-Situ, facilities cannot be demolished.
[2] Demolished Facilities

(b)(2)High

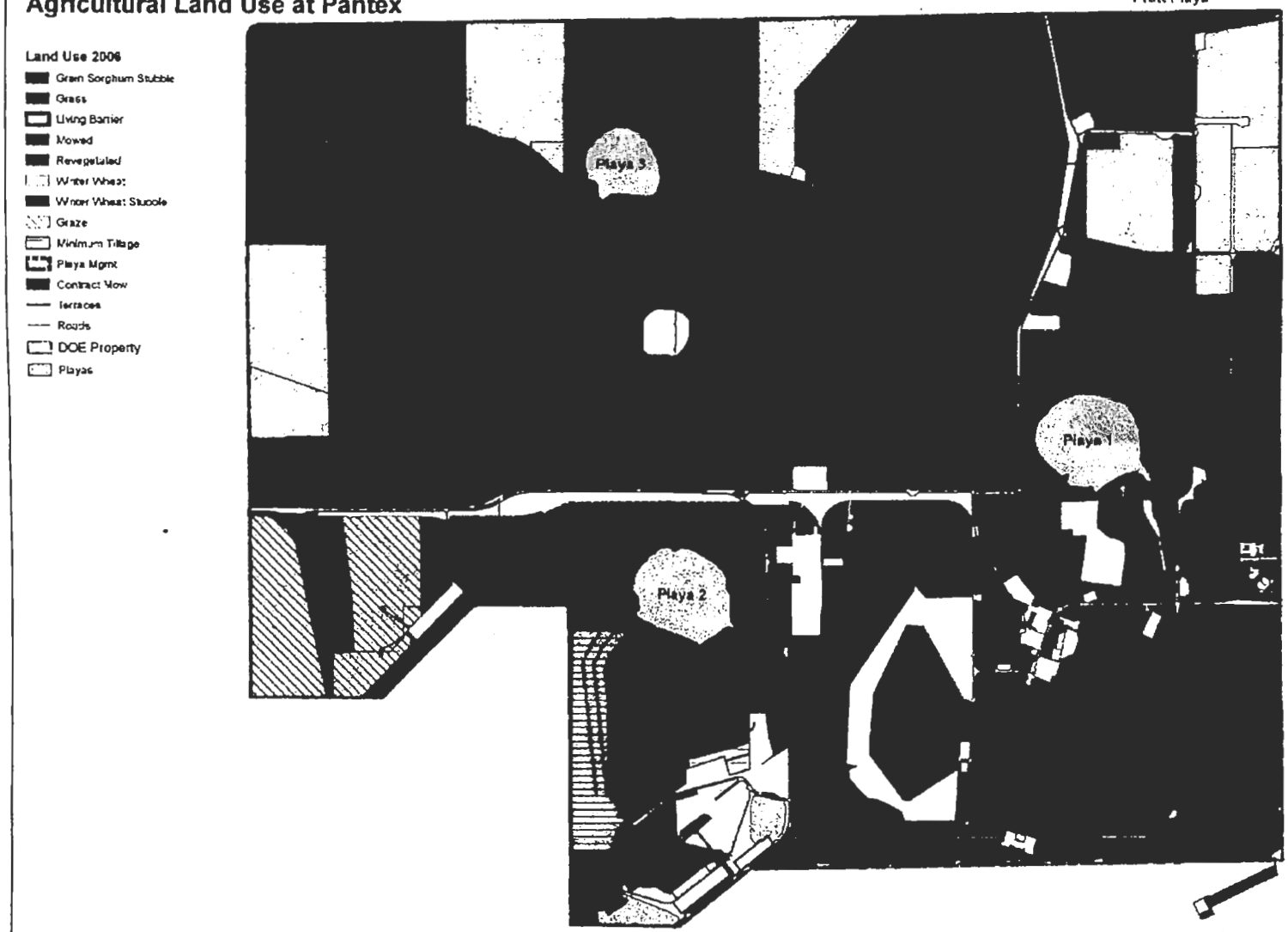
(b)(2)High

N-24
PLANNED CONSTRUCTION PROJECTS
PLANNED CONSTRUCTION PROJECTS

(b)(2)High

(b)(2)High

Agricultural Land Use at Pantex



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3.0 MISSION NEEDS/PROGRAM DESCRIPTIONS

This section provides a detailed description of workload and expected changes including potential new missions and requirements over the ten-year planning period. The linkage of future workload to mission critical facilities and infrastructure is discussed in detail in Section 3.2.

3.1 Current mission, programs, and workload

The mission of BWXT Pantex is to support nuclear weapons Stockpile Stewardship while continuously improving levels of safety and productivity. Major activities include:

- Evaluating, retrofitting, and repairing weapons in support of both life extension programs and certification of weapon safety and reliability
- Dismantling weapons surplus to the stockpile
- Sanitizing components from dismantled weapons
- Developing, testing, and fabricating chemical and explosive components
- Providing interim storage and surveillance of plutonium components.

Weapons program responsibilities and support activities are integrated into DSW, Campaigns, RTBF, S&S, and Non-NNSA activities. These program elements define the scope of the work to accomplish the workload assigned to Pantex. Figure 3-1 depicts the programs and their sub-elements.

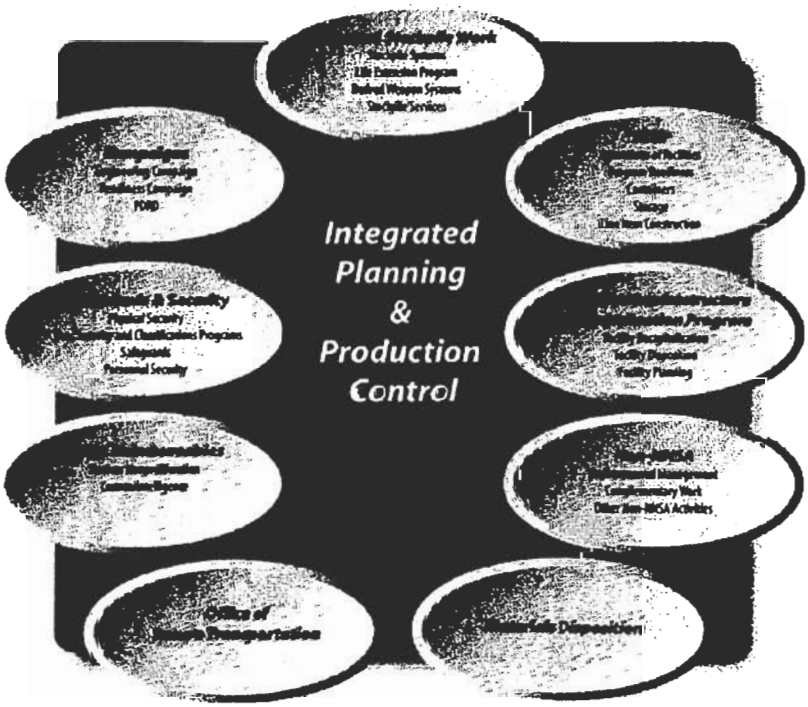

Figure 3-1, Pantex Programs

All BWXT Pantex activities ultimately support the core mission of nuclear weapons Stockpile Stewardship. To accomplish this effectively, programmatic activities and funding mechanisms must be properly aligned and coordinated as depicted in Figure 3-2. These activities begin with BWXT Pantex personnel interacting with the design agencies to obtain the necessary design and surveillance requirements while simultaneously ensuring that manufacturing constraints are understood. Long lead-time technologies and processes are then typically introduced into Pantex under the Campaigns Program. These involve multi-site design and implementation teams conducting projects with specific goals of finite length. Once the technologies and/or processes are ready for deployment, they are transitioned to the DSW Program that oversees all direct production activities. Serving as a foundation for all programmatic activities, the RTBF Program ensures the right facilities and infrastructure are in place to support the nuclear weapons stockpile and to maintain the site and facilities in a safe, secure, reliable, and compliant condition. With appropriate strategic alignment between all of the programmatic elements, design requirements are folded into all production and readiness activities. This alignment ensures a seamless transition between programmatic elements and timely implementation of new processes and technologies.

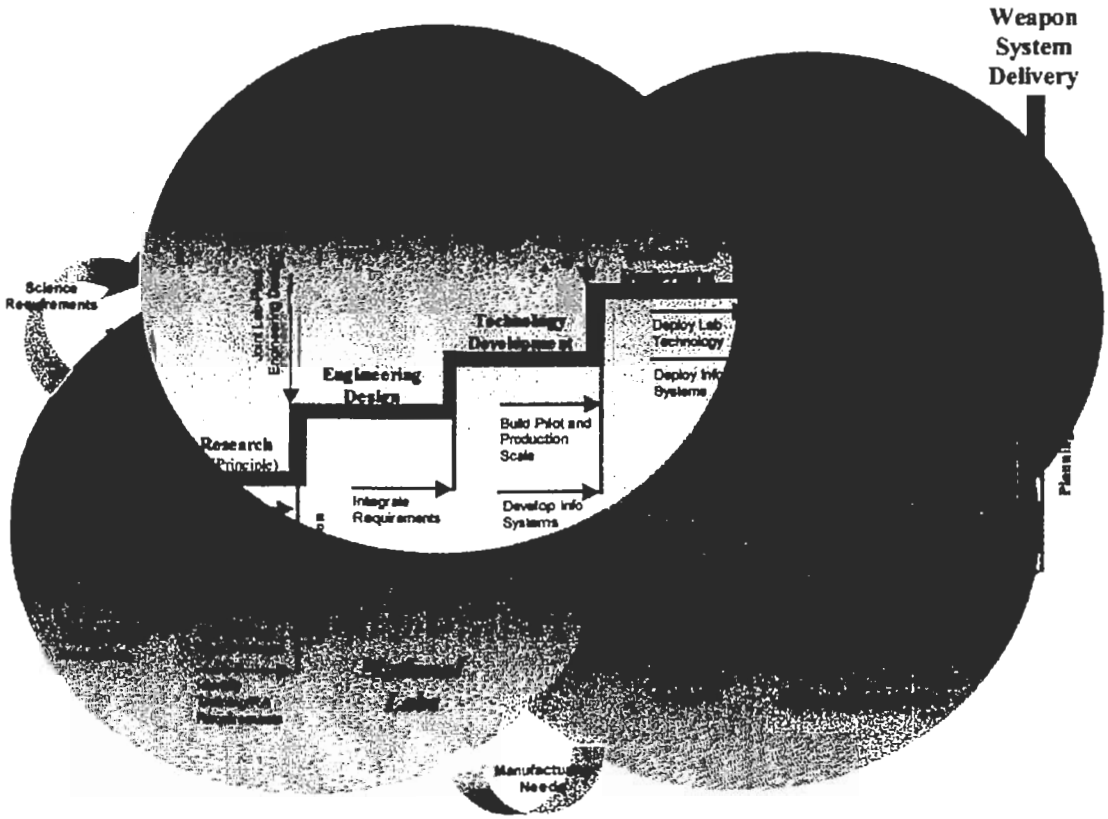

Figure 3-2, Programmatic Alignment

BWXT Pantex is committed to the principles of Integrated Safety Management (ISM), including the elements of the Voluntary Protection Program (VPP) that engage all people at the site in improving safety performance. Those elements include management leadership, employee involvement, worksite hazard analysis, hazard prevention and control, safety and health training, and process feedback. These elements are key to Security, the RTBF program, the DSW program, and the Campaigns program.

3.1.1 Directed Stockpile Work (DSW)

DSW includes production and evaluation functions required to maintain and certify the current nuclear weapons stockpile and refurbishment efforts supporting life extension initiatives. DSW also supports dismantlement and component disposition of retired weapons systems. DSW encompasses program planning, production preparation, production startup, ongoing production execution, and surveillance elements. DSW is managed in the following subprograms:

- Stockpile Systems
- LEP
- Retired Weapon Systems
- Stockpile Services/Production Support

3.1.1.1 Stockpile Systems

Stockpile Systems Program activities support programmatic flight testing, laboratory testing, and component/subassembly surveillance. Activities are directed through the Production and Planning Directive (P&PD), Program Control Documents (PCDs), Technical Business Practices (TBPs), and the Development and Production (D&P) Manual. The work performed at Pantex includes:

- Disassembly and inspection of weapon evaluation cycle units.
- Assembly of Joint Test Assemblies (JTAs).
- JTA post mortem analysis.
- Assembly and disassembly of test bed units.
- Rebuild of evaluation cycle units.
- Component surveillance/evaluation and preparation of the Quality Evaluation Report (QER).
- Delivery of Quality Evaluation Test (QET) components to other NNSA sites.
- Limited Life Component Exchange (LLCE).
- Programmatic alterations (usually defined as Alts or Mods).
- Weapon repairs.
- Significant Finding Investigations (SFI).

- Non-destructive evaluation.
- Weapon and component radiography.
- Weapon atmosphere analysis.
- Laser gas sampling and analysis.
- High Explosives (HE) testing.
- Explosive component evaluation.
- Non-nuclear component evaluation.
- Pit evaluation.
- Component prescreening.
- Electrical and mechanical tests.

Recognizing that the nuclear weapons stockpile is aging beyond its original design life, the NNSA is undertaking new surveillance initiatives. This is increasing the Pantex workload, which includes augmented sampling, increased testing, and deployment of new capabilities to meet new testing requirements. More diagnostic evaluation tests are being conducted on components than previously performed. As the Enhanced Surveillance initiative establishes new technologies and a more predictive evaluation capability, new testing techniques are being incorporated.

3.1.1.2 Life Extension Program (LEP)

The LEP objective is to extend the life of a weapon system beyond its original certification. Pantex supports life extension of weapons systems in two ways: performing LEPs and supporting the Life Extension Options (LEO) Group. LEP tasks assigned to Pantex include weapon disassembly, inspection, component requalification, component fabrication, component testing, component replacement, weapon assembly, and weapon testing. BWXT Pantex supports the planning and scheduling of future LEP workload through participation in the LEO Group.

The B61-7 Alt 357 first production unit (FPU) was achieved in June 2006 and the B61-11 Alt 357 PFU was achieved in January 2007, increasing the reliability of the weapon system. The W76-1 FPU is scheduled for September 2007 and will increase the reliability and surety of this weapon system. In order to meet the FPU for the W76, several Campaigns projects are needed for component reacceptance including eddy current for pit tubes, ultrasonic inspection of physics packages, and SNMCRF for pit package reacceptance. The LEPs require facility modification to increase cell capacity. The 12-44 Production Cells Upgrade project increases cell capacity. The SNMCRF is required for pit reacceptance capability. Other projects include the modifications in the Computed Tomography (CT) bay allowing nuclear operations and the HE Pressing facility providing risk mitigation for the current aging press equipment and facility.

3.1.1.3 Retired Weapon Systems

Retired weapons are dismantled to meet revised national security requirements. During dismantlement, a retired weapon is disassembled into subassemblies and components. Components are dispositioned (stored, sanitized, etc.) per NNSA guidance unless they are requested by the design agencies for further evaluation. Plutonium pits are staged on-site on an interim basis. Uranium and tritium components are shipped off-site.

3.1.1.4 Stockpile Services

Stockpile Services focuses on activities that support multiple weapon programs. These activities include support for weapon production, evaluation, and development work. However, these activities are not directly identified with or allocated to a specific weapon program. Typical activities include:

- Production control, planning and integration.
- Transportation and movement for weapon systems and components.
- Manufacturing, Engineering, Quality, and Applied Technology Division management and administration.
- Weapon configuration management support.
- Receipt and inspection of weapon-related materials and equipment.
- Environment, safety and health support including nuclear explosive safety.
- Multi-program test equipment support.
- Multi-program evaluation and analysis.
- Metrology operations.
- Waste operations.
- Independent reviews for weapon operations.

3.1.1.5 Reliable Replacement Warhead

RRW will continue Phase 2 Feasibility Study activities in FY 2007. BWXT Pantex is supporting the feasibility study by providing NNSA with cost and manufacturability assessments of the New Mexico and California designs.

RRW will begin Phase 2A Design Definition and Cost Study activities in FY 2007 and continue into Phase 3 Development and Engineering in FY 2008. BWXT Pantex will be supporting these phases by working with the selected design team, developing process concepts and providing members to support Product Realization Teams.

3.1.1.6 DSW Ten-Year Objectives

DSW ten-year objectives focus on engineering participation to support the LEPs; current stockpile disassembly, surveillance, and assembly PCD requirements; and incorporation of new technologies to support core surveillance. Specific objectives are provided in the anticipated period of accomplishment.

FY 2008 - FY 2012:

- Completion of yearly weapon program LLCE, repair, dismantlement, and evaluation requirements.
- Concurrent engineering and FPU delivery supporting the W76 LEP.
- Reduction of canned subassembly (CSA) surveillance radiography backlog.
- Completion of the Seamless Safety – for the 21st Century (SS-21) implementation for all enduring stockpile and dismantlement programs.
- Establishment of pit refurbishment capabilities in support of life extension requirements.

FY 2013 - FY 2017:

- Completion of yearly weapon program LLCE, repair, and evaluation requirements.
- Completion of yearly program production schedules supporting the W76 life extension requirements.
- Continue concurrent engineering support of anticipated LEP workload.
- Support of weapon program dismantlement initiatives.

3.1.2 Campaigns

Pantex has unique Stockpile Stewardship responsibilities for U. S. nuclear weapons. Modern technologies and capabilities are essential for stockpile surveillance, weapon refurbishment, and dismantlement requirements. The Engineering Campaign, the Readiness Campaign, and the Plant Directed Research, Development, and Demonstration (PDRD) program are focused on ensuring that Pantex has the capability and capacity to meet weapon requirements associated with defined workloads.

3.1.2.1 Engineering Campaign

The Engineering Campaign provides the Nuclear Weapons Complex with modern tools and capabilities in engineering sciences and technologies to ensure the safety, security, reliability, and performance of the current and future US nuclear weapon stockpile, as well as a sustained basis for stockpile certification. The Campaign is the driver for the discovery, innovation, maturation, and application of the advanced engineering required for the nuclear weapons stockpile, and it supports the NNSA Strategic Goal to *Maintain and enhance the safety, security, and reliability of nation's nuclear weapons stockpile to counter the threat of the 21st century.*

understand the chemical and physical mechanisms causing time-dependent changes in materials properties and use that understanding to develop predictive models of materials performance. The chemical and physical mechanisms that cause materials properties to change with time will provide the basis for quantifying future behavior of components. No new facilities are required to support the Material Lifetime Studies.

3.1.2.2 READINESS CAMPAIGN

The Readiness Campaign supports the DOE Strategic Plan General Goal - *Ensure that our nuclear weapons continue to serve their essential deterrence role by maintaining and enhancing the safety, security, and reliability of the U.S. nuclear weapons stockpile.*

The Readiness Campaign is an essential component of the Stockpile Stewardship Program with the responsibility for developing or reestablishing new manufacturing processes and technologies for qualifying weapon components for reuse. The mission of the Readiness Campaign Program is to identify, develop, and provide new or improved processes and technologies to meet current nuclear weapon design and production needs and to provide quick response to future national security mission requirements of the Nuclear Weapon Complex. The day-to-day maintenance of the nuclear weapons stockpile and the Life Extension Programs (LEPs) require the capability to manufacture, inspect, and requalify nuclear weapon components, and to assemble and disassemble nuclear weapons. Some of the processes and technologies required for this future work are obsolete creating an urgent need for modernization.

The Readiness Campaign is composed of five programs that are multi-year, multi-functional focused efforts involving all Nuclear Weapons Complex sites. The focus includes strategies to meet near-term, mid-term, and long-term needs, ranging from developing new solutions for current technology issues to developing a responsive infrastructure for future needs. The breadth of the technology development and deployment span a very wide range of needs and include both nuclear and non-nuclear products and processes supporting DSW customers.

Pantex is involved in the Advanced Design and Production Technologies (ADAPT) and High Explosives and Weapons Operations (HEWO) sub-programs. Requirements flow from Directed Stockpile Work (DSW). ADAPT provides the applied technology necessary to advance a conceptual product or process to the prototype stage. After the prototype stage is complete, ADAPT passes the technology to the HEWO, which further advances it until production capability is demonstrated. This capability may or may not be sufficient to provide the production capacity required by DSW delivery schedules. Additional capacity is funded by either DSW or Readiness in Technical Base and Facilities (RTBF).

Advanced Design and Production Technologies (ADAPT)

The ADAPT sub-program supplies a vital link in supporting NNSA's mission to assure a safe, reliable, and secure nuclear weapons stockpile. ADAPT supports development of manufacturing processes and products that replace sunset technologies and new alternatives processes that provide enhanced safe, reliable and secure functionality.

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Most of the successful development efforts are transitioned to one of the Readiness programs for deployment into directed stockpile production or a weapons system block upgrades. Other ADAPT development goals are to support the planning and design of scheduled new operations facilities for the NWC with new or modified manufacturing processes and technologies. ADAPT also has the responsibility to conceptualize and support development of the optimum framework and key components of a united electronic network and information base for the NWC.

High Explosives and Weapon Operations (HEWO)

The HEWO sub-program was established at Pantex to assure that the Nuclear Weapons Complex was fully ready to support mission and workload requirements associated with production of high explosive components and the assembly and disassembly of war reserve nuclear weapons. The Life Extension Programs (LEPs), which are a part of this work scope, require the requalification and reuse of weapon piece parts, components, and sub-assemblies. This campaign also addresses the necessary activities to ensure that the capability, capacity, infrastructure, workforce, and facilities are available at the Pantex Plant to achieve the assigned mission.

This campaign includes missions exclusive to Pantex, such as the production of high explosives and weapons assembly/disassembly and also addresses new missions to Pantex such as requalification and recertification of weapon components. Pantex uses the latest planning guidance and reviews to determine production readiness and identify gaps that exist relative to meeting future and current requirements. Applicable prototype production technologies demonstrated by the ADAPT and Enhanced Surveillance sub-programs are further developed by HEWO and delivered to either RTBF or DSW for deployment.

3.1.2.3 Plant Directed Research, Development, and Demonstration (PDRD) Program

The PDRD Program is focused on relevant manufacturing technologies to enhance and maintain the vitality of the nuclear weapons production plants. The Pantex PDRD program is guided by the NNSA Strategic Plan, NNSA Applied Technology Roadmap, and Pantex Applied Technology Roadmap. BWXT Pantex management uses these plans and roadmaps to develop strategic direction that identify and prioritize the site's most important long-lead strategic technology needs. The technology needs forecasts developed for the Pantex mission areas provide guidance for identifying focus areas that are of strategic importance to the Pantex Plant. The following focus areas are strategically important to Pantex:

- Safety
- Science-based manufacturing
- HE manufacturing
- Non-destructive evaluation
- Product requalification

PDRD projects are typically high-risk, but have potential high gains if successful. And, while they are not linked directly to DSW schedules, the technologies developed could have impacts on production schedules and facility requirements. Technologies developed by PDRD, normally require further development before being deployed into production. The further development can be accomplished by the Engineering or Readiness campaigns as well as through strategic partnerships with universities and private industry. Only after the technologies are further developed are they considered in facility and process planning.

3.1.2.4 Campaigns Ten-Year Objectives

The Campaigns and the PDRD Program will result in the development of new technologies for weapon production and surveillance. Specific objectives are provided in the anticipated period of accomplishment.

FY 2008 - FY 2012:

- Establish process capability for models-based design/fabrication of special weapon tooling and high explosive main charge.
- Provide System Engineering-based solutions to improve tooling management process.
- Implement Insensitive HE performance diagnostics.
- Implement digital radiography, Computed Tomography, dimensional characterization, and ultrasonic imaging for pit characterization.
- Implement new and expanded capabilities for thermal performance, sensitivity, and mechanical properties testing of explosive materials and components.
- Establish capability to deliver specialty booster and detonator explosives.
- Establish capability to provide TATB and TATB-based explosives.
- Implement improvements to the explosive component fabrication process to reduce costs and increase component reliability.
- Implement automated business systems.
- Establish capability to non-destructively characterize the quality of primary assembly potting material in-situ.
- Establish the enterprise approach to safe, efficient, high-quality weapon operations related to SS-21 process start-ups.
- Establish advanced inventory and materials management systems.

FY 2013 - FY 2017:

- Augment capability and capacity to sustain explosive fabrication to maintain readiness.
- Implement processes for new explosive formulations.
- Establish HE manufacturing capability and capacity.

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- **Environment, Safety, Health and Quality (ESH&Q):** Activities associated with maintaining compliance with federal, state, and local regulations, as well as applicable DOE Orders and Directives. Activities include: the development and implementation of effluent controls, environmental monitoring and surveillance, permitting, evaluation to assure environmental compliance, pollution prevention and quality assurance. Includes management, planning, environmental protection and compliance, pollution prevention, nuclear safety, industrial safety and health, quality assurance, document control and records management, and waste management. Because the ER program completion is scheduled for the end of FY 2008, beginning in FY 2009, LTS responsibilities will rest with the site landlord and will not be EM funded.

- **Excess Facilities Management and Disposition:** Activities include management and disposition of excess DOE weapons production facilities, equipment and land. Also includes activities associated with the development of technology for the reclamation of buildings, equipment and land, so that they may be used for other purposes.

- **Capital Equipment:** This includes items of plant and equipment, including both real and personal property, that are owned by DOE, are recorded in the completed plant accounts, and meet the monetary and service life criteria for capitalization (i.e. a service life of two years or more and a cost equal to or greater than $50,000) regardless of the appropriations or funds charged.

- **Other Project Costs (OPC) by Line Item:** Activities included are all other costs related to a project that are not included in the Total Estimated Cost (TEC), such as Conceptual Design Plans and Reports, Project Execution Plans, NEPA compliance documentation, Construction Project Data Sheets (CPDS), maintenance and operating procedures to support facility startup, initial operator training, commissioning costs, and operational readiness reviews and documentation.

- **General Plant Projects (GPP):** Includes miscellaneous minor new construction projects of a general nature, the total estimated cost of which may not exceed the statutory limit of $5 million and with a service life in excess of two years. GPPs are necessary to adapt new facilities or improve production techniques, to effect economies of operations, and to reduce or eliminate health, fire, and security problems. These projects provide for design and/or construction, additions, improvements to land, buildings, and utility systems, and may include the construction of small new buildings, replacements, or additions to roads, and general area improvements.

- **Expense Funded Projects:** Project activities funded with operating dollars. Examples of these projects include normal maintenance and repair such as painting, cleaning, and small repair jobs not resulting in an addition, replacement of a retirement unit, or betterment.

- **Institutional Site Support:** This includes items listed in the Congressional Budget such that the entire scope equals the budget. Current Congressional

Budget examples include Defense Nuclear Facilities Safety Board (DNFSB) related activities, corporate initiatives, independent and internal technical reviews, and security-related activities

3.1.3.2 Program Readiness

This element supports selected activities common to more than one facility, DSW, or Campaign activity and are essential to achieving the objectives of the Stockpile Stewardship Program. Sub-elements funded at Pantex are defined as follows:

- **Manufacturing Process Capabilities:** Maintains competence in key manufacturing technologies and implements production capability for improved weapon components that are developed as part of a Campaign.

- **Critical Skills Needs:** Includes development and implementation of programs that are directly related to sustaining a nuclear weapons work force capable of meeting upcoming mission requirements related to design, engineering, production, and testing or preserving critical product knowledge and lessons learned that enhance continuing stockpile stewardship.

- **Science and Technology Development:** Includes development of science and technology within RTBF.

- **Program Support:** Activities related to RTBF program operations and management, support to and for the Nuclear Weapons Laboratory, other Federal Agencies supporting NNSA, environmental management, and other program support.

- **Nuclear Criticality Safety Program:** Activities associated with currently active programs not listed above and include Program Capital Equipment Revitalization and the Chronic Beryllium Disease Prevention Program.

3.1.3.3 Containers

This element provides for the specialized containers used for weapon and weapon component movement and their certification. Sub-elements funded at Pantex are defined as follows:

- **Containers:** Includes container procurement to support the pit, CSA, RTG, and reservoir programs. Activities include container procurement, container upgrades, and procurement of consumable items such as bolts, washers, and gaskets.

- **Off-site Transport:** Includes providing adequate quantities of containers to support SNM shipments off-site. Activities include packaging of material in the appropriate containers, off-site transportation, and storage, off-site transportation certification of component containers, off-site transportation documentation for all contents, and the associated production, packaging, and maintenance.

- **Recertification and Maintenance:** Includes the off-site transportation of nuclear material components and special assemblies supporting the NNSA mission that are certified in accordance with the Nuclear Regulatory Commission and Department of Transportation regulations. Activities also include the cost of an on-site container surveillance program.

3.1.3.4 Storage

This element provides for receipt, storage, and inventory 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 the long-term storage of SNM. Activities include planning, engineering, design, and start-up activities; processing and packaging materials for safe storage; storage activities for Strategic Reserve (SR), National Security inventory thermal monitoring, and characterization; and nuclear materials management including planning, assessment, and forecasting nuclear material requirements.

- **Pit Disassembly and Inspection Surveillance:** Includes the disassembly and inspection activities associated with National Security pits in storage. Activities include weight and leak testing, visual inspections, 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.

3.1.3.5 Line Item Construction

The Line Item Construction program provides for the erection, installation, or assembly of a new plant facility and the addition, expansion, improvement, upgrade, or replacement of an existing facility. The TEC of a Line Item Project exceeds $5 million. Construction includes facility design (PE&D); installation of equipment made part of the facility, and related site preparation including excavation, filling, landscaping, or other land improvement.

3.1.3.6 RTBF Ten-Year Objectives

The RTBF Program ten-year objectives are to maintain base programs to support DSW and Campaigns, work cooperatively with FIRP to reduce DM and improve the condition of facilities and infrastructure. Specific objectives are provided in the anticipated period of accomplishment.

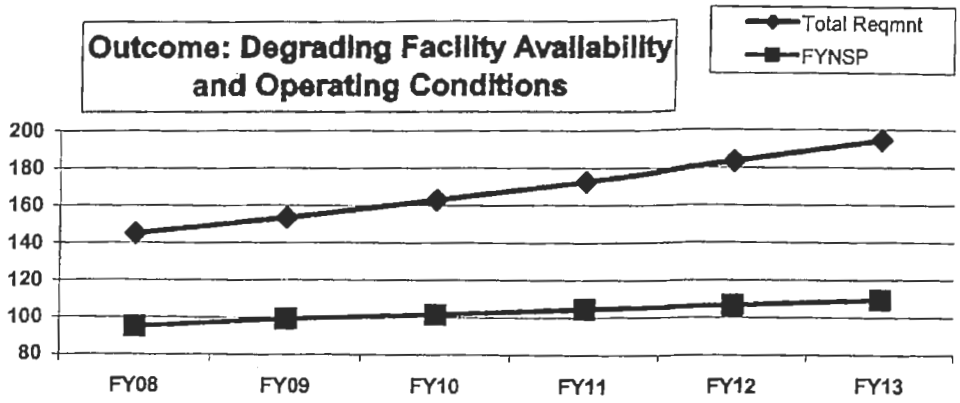
FY 2008 – FY 2012:

- **Operations of Facilities**
  - Sustain maintenance and arrest/stabilize the DM backlog with adequate funding (Reference table and figure below).
  - Operations of Facilities will have to increase by $2 million annually to accommodate the present recovery from EM.
  - Implement non-weapons specific AB upgrades to facilities.
  - Achieve an annual percentage of scheduled days that mission critical and mission dependent not critical facilities are available greater than 90%.
  - Annually, receive no significant violations/adverse actions from environmental regulators and comply with LTSM requirements as required by the Compliance Plan.
  - Annually, achieve full compliance with applicable nuclear safety rules and no significant nuclear safety non-compliances.
  - Annually, prepare and execute an integrated, comprehensive RTBF/FIRP plan consistent with the NWC Enterprise Strategy to ensure flexible, responsive, robust infrastructure.
  - Continue to achieve site-wide results that are better than the national average for the number of reportable accidents/200,000 hours of work, using National Bureau of Labor Standards data.

Pantex Ops of Facilities Budget FY 2008-2013

FY 2008 - 2013 Operations of Facilities Budget

$ In Millions						
	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Base Requirement	123.4	131.5	140.5	150.0	160.2	171.2
Projects Requirement	21.8	22.1	22.4	22.8	23.1	23.4
Total Requirement	145.2	153.6	162.9	172.8	183.3	194.6
FYNSP	95.0	99.2	101.5	104.6	106.7	109.3
Difference	(50.2)	(54.4)	(61.4)	(68.2)	(76.7)	(85.2)



Ops of Facilities Funding

- **Program Readiness**
  - Annually, achieve 90% of planned critical hires; maintain 90% of planned staffing in critical positions; complete 90% of required training and qualifications of critical personnel.
- **Storage**
  - Develop procedures utilizing a DPP-2 container to place a breached pit in an environment that is ready for shipment.
  - Maintain pit pre-screening capabilities within the routine surveillance operation.
  - Provide environmental and physical security for the National Security Asset (NSA) pits as well as those identified as being surplus to National Security needs.
  - Increase the storage capacity for SR pits in Zone 12 South.
  - Accomplish disposition of legacy components.
  - Ensure pit storage samples meet safety and reliability requirements as specified in 2Y 59408 and RM257445.
- **Containers**
  - Maintain a usable inventory of pit containers to support offsite shipments.
  - Execute a container surveillance program.
  - Develop a disposition path for Radioisotopic Thermoelectric Generators (RTG).
  - Implement use of newly developed RTG containers for shipment off-site for surveillance and disposition.
  - Procure authorized containers for shipment of RTGs.

- Ensure pit storage samples meet safety and reliability requirements as specified in 2Y 59408 and RM257445.

- **Containers**
  - Procure authorized containers for shipment of RTGs.
  - Maintain usable inventory of pit containers to support offsite shipments.
  - Execute container surveillance program.

- **Line Item Construction**
  - Complete construction projects in support of maintaining and attaining readiness for the LEP workload.
  - Upgrade Plant infrastructure to support Plant mission and operations.
  - Develop HE mission projects and convert from an expert based knowledge system to a technology based system and infrastructure to support HE Center of Excellence and Complex 2030 initiative.

Table 3-2 lists funded and unfunded Line Item construction objectives, including RTBF, FIRP, and other Program projects, to the driving program, differentiating between primary and support drivers.

Table 3-2, RTBF and Other Line Item Objectives

RTBF Objectives	B61 LEP	W76 LEP	W80 LEP	RRW	Stockpile Systems	Retired Systems	SNM Storage	Plant Readiness
		P						
		P						S*
		P		S	S			S
	S	S	S	S	S	S	S	S
		P/S	S	P	S			S*
			S	S	S		S	S
			S	S	S		S	S
		S			S			S*
				S	S			S
				S	S			S
		S		P	P			
		S	S	P	S			S*
								S
								S
								S
(b)(2)High					S			S
					S			S
					S			S
					S			S
					S			S
					S			S
								S
					S		P	
								S
								S
								S
								S
		S	S	S	S			
		S	S	S	S	S	P	

P = Primary Driver S = Support Driver S* = Projected need for Dismantlement or Future LEPs

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3.1.5 Materials Disposition (MD)

MD provides for the safe, secure, and environmentally sound storage of all fissile materials and the ultimate disposition of non-weapons grade unusable fissile materials declared surplus to national security needs. The MD Program includes support of special pit shipments, storage of pits in Zone 4, pit thermal monitoring in Zone 4, and pit storage sampling surveillance.

3.1.5.1 MD Ten-Year Objectives

MD objectives are focused on maintaining the infrastructure and capability required for Zone 4 West storage and inter-zone transportation of excess pits. It includes all the activities associated with facility management of nuclear facilities and transportation including pit surveillance, thermal monitoring, corrective and preventive maintenance coordination, AB documentation formulation, review and implementation, and order compliance. Activities also include personnel training and qualification required to store pits, the capability to move pits between zones, and the effort required to reconfigure magazines to start and maintain pit storage. Specific objectives are provided in the anticipated period of accomplishment:

FY 2008 - FY 2012:

- Provide support and coordination activities, as needed, by design agency development of a new off-site shipping (Type B) container.
- Perform pit-repackaging activities for off-site shipment to the design agencies to support current programs.
- Advanced Recovery and Integrated Extraction System (ARIES) demonstrations (up to five Campaigns), as directed per DOE authorization letters.
- Maintain the infrastructure and capability required for Zone 4 West storage and inter-zone transportation of excess pits.
- 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 and characterization of storage facilities.
- Inspect storage samples, selected by the design agencies, to ensure they meet safety and reliability requirements as specified in design agency requirements.
- Conduct the multi-year funded construction activities authorized to upgrade the Modified Richmond magazines.

FY 2013 - FY 2017:

- Continue storage capability, thermal environmental monitoring, and surveillance activities as defined above.

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through the Bilateral Implementation Commission of the SORT for a verification regime. If a warhead elimination regime 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.

At present, there are no treaties or agreements that would potentially impact the Pantex Plant that have implementation dates after December 31, 2012.

3.1.7.2 Counterintelligence

Requirements

The Pantex Counterintelligence (CI) Program follows the guidelines of Presidential Decision Directive 61, "Department of Energy Counterintelligence Program," the DOE Counterintelligence Implementation Plan, DOE Order 475.1, "Counterintelligence Program," 12-10-04, PDD/NSC 12 – "Security Awareness and Reporting Foreign Contacts," Executive Order 12333, "United States Intelligence Activities" of 12-4-81, PDD-63, Critical Infrastructure Protection and such Executive orders and policy as may supersede it, whose purposes are to deter and neutralize foreign industrial or intelligence activities directed at or involving DOE programs, facilities, technology, personnel, unclassified sensitive and classified information. These guidelines provide for an active CI program to assist in the protection of classified and sensitive unclassified activities related to National Security falling within the purview of facilities and organizations assigned to the Pantex Plant.

CI Program

The Pantex CI Program is structured to be consistent with the above policies and directives and uses the latest edition of the CI Procedural Guide and OCI/ODNCI Strategic Plan to assist in accomplishing tasks within the program. As requirements and world events evolve, so will the priority of the Pantex CI Program. CI has six core mission areas, which are:

- Support protection of critical U.S. persons, information, and assets (force protection)
- Detect and neutralize espionage
- Support protection of research, development and technology
- Support protection of critical infrastructure
- Support protection of economic security
- Support protection of U.S. interests against covert foreign influence and manipulation.

CI Prioritization

The proper identification and prioritizing of available resources to those programs identified, as most at risk of targeting by our adversaries is required. The following list of priorities, while not all inclusive, addresses our key issues:

- Critical and time-sensitive CI support for the protection of nuclear weapon capabilities and other aspects of weapons of mass destruction from an immediate threat
- Critical and time-sensitive CI support to the protection of personnel and assets from an immediate threat, i.e. terrorist or sabotage action
- Detection and neutralization of espionage
- Integrated CI support to the protection of nuclear weapons, other weapons of mass destruction and related programs
- Integrated CI support to the protection of national security information, including classified technologies/applications
- Integrated CI support to the protection of the DOE/NNSA information infrastructure.

Integrated CI support to the other sensitive programs, within and outside DOE, such as: Special Access Programs (SAP), Work for Others (WFO), Highly Enriched Uranium Transparency Program, etc.

3.1.7.3 HE Services

BWXT Pantex Applied Technology R&D Division provides high explosive support to the NNSA National Laboratories on a reimbursable basis. This includes activities that will establish and maintain the capability and capacity for synthesis, formulation, pressing, machining, and analytical and performance testing of all NNSA explosives to meet surveillance, rebuild, JTA and LEP requirements. These explosive materials also support activities such as development work, component work, component replacement, and component aging studies.

3.1.7.4 Weapons Incident Response Group

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

new facilities (location and square footage) for OST use are captured as to location and proposed square footage in this TYSP, including an increase or decrease to Pantex Plant gross square footage. BWXT Pantex does not approve new facilities funded and constructed by other NNSA organizations at Pantex, and any future square footage increase needs to be offset by square footage at another site.

3.1.9 Non-NNSA Programs

Non-NNSA activities are a very small portion of the Plant's overall budget. Activities include reimbursable work in areas such as OST, Nuclear Nonproliferation, and Counterintelligence. The Non-NNSA workload includes EM, Complementary Work, and Other Non-NNSA activities.

Environmental Management (EM)

The DOE Office of EM funds the Environmental Restoration (ER) Program at Pantex. The ER Program at Pantex includes environmental restoration activities for soil and groundwater as well as deactivation and decommissioning of process contaminated facilities accepted by EM (documented in the October 2000 Memorandum of Agreement between NNSA/Defense programs and DOE EM, Transition of Excess Facilities at Pantex).

The ER Program investigates potential release and contamination sites and performs corrective actions to mitigate risks to human health and the environment. Corrective actions are implemented using a risk based corrective action approach that is consistent with applicable state and federal regulatory requirements. The technical approach of the program encompasses the determination of appropriate corrective actions and preferred remediation alternatives. In addition, risk reduction standards are employed to ensure that cost effective and environmental protective courses of action are taken to restore contaminated environmental media to beneficial use. Completion of the program elements is dependent upon obtaining sufficient funds. No impacts to facilities and infrastructure activities are anticipated. Cooperation between EM, PXSO, and NA-56 will ensure smooth facility disposition activities between the two programs. The EM Program has eliminated approximately 1 million square feet of legacy operation facilities with the elimination of the 12-24 North and South facilities and various other facilities. Facility disposition is discussed further in Section 4.1.3.

Specific elements of the Pantex ER Program are:

- Soils Program:
  - Support the assessment of impacts to groundwater.
  - Perform hot spot removal of contaminants in soil to mitigate risk.
  - Implement Interim Stabilization Measures in higher risk areas.
  - Utilize Soil Vapor Extraction systems to remove vadose zone contamination and provide source reduction to minimize impacts at the Burning Ground and in Zone 11.

- Closeout/transition to Long-Term Environmental Stewardship.

- Groundwater Program:
  - Perched Aquifer:
    - Implement corrective measures design and construction for the perched aquifer.
    - Utilize the Pump and Treat System to remove contaminants as an Interim Stabilization Measure.
    - The final CMS/FS will support options for final remedy, leading to final implementation of remedy and closeout.
    - Predictive groundwater modeling will be used to support remedy selection and to provide guidance for compliance monitoring plan to continue into the Long-Term Environmental Stewardship phase.
    - Maintain an active investigative well monitoring program to evaluate potential perched groundwater impacts.
    - Provide conceptual perched groundwater modeling to aid in determining amounts and flow pattern of potential contaminants.
    - Closeout/transition to Long-Term Environmental Stewardship.
    - Continue monitoring as specified in the Compliance Plan.
  - Ogallala Aquifer:
    - Perform monitoring activities to ensure continued protection of the groundwater.
    - Provide conceptual groundwater modeling to aid in determining amounts and flow patterns.
    - Continue monitoring as specified in the Compliance Plan.
    - Closeout/transition to long-term monitoring.
  - Deactivation and Decommissioning (D&D):
    - Perform characterization and stabilization activities on excess facilities prior to dismantlement.
    - Decontaminate and decommission the facilities safely, environmentally friendly, and cost effectively.
    - Implement a project to transfer process-contaminated facilities from the National Nuclear Security Administration to Environmental Management.
    - Dismantle facilities in a manner that creates a low potential for future environmental contamination.

Pantex has identified and investigated 252 Solid Waste Management Units (SWMUs). Each SWMU is noted in Figure 3-3 and Attachment H with the Risk Reduction Standard (RRS) that is being used to close them. The Risk Reduction Rule (RRR) offers a means

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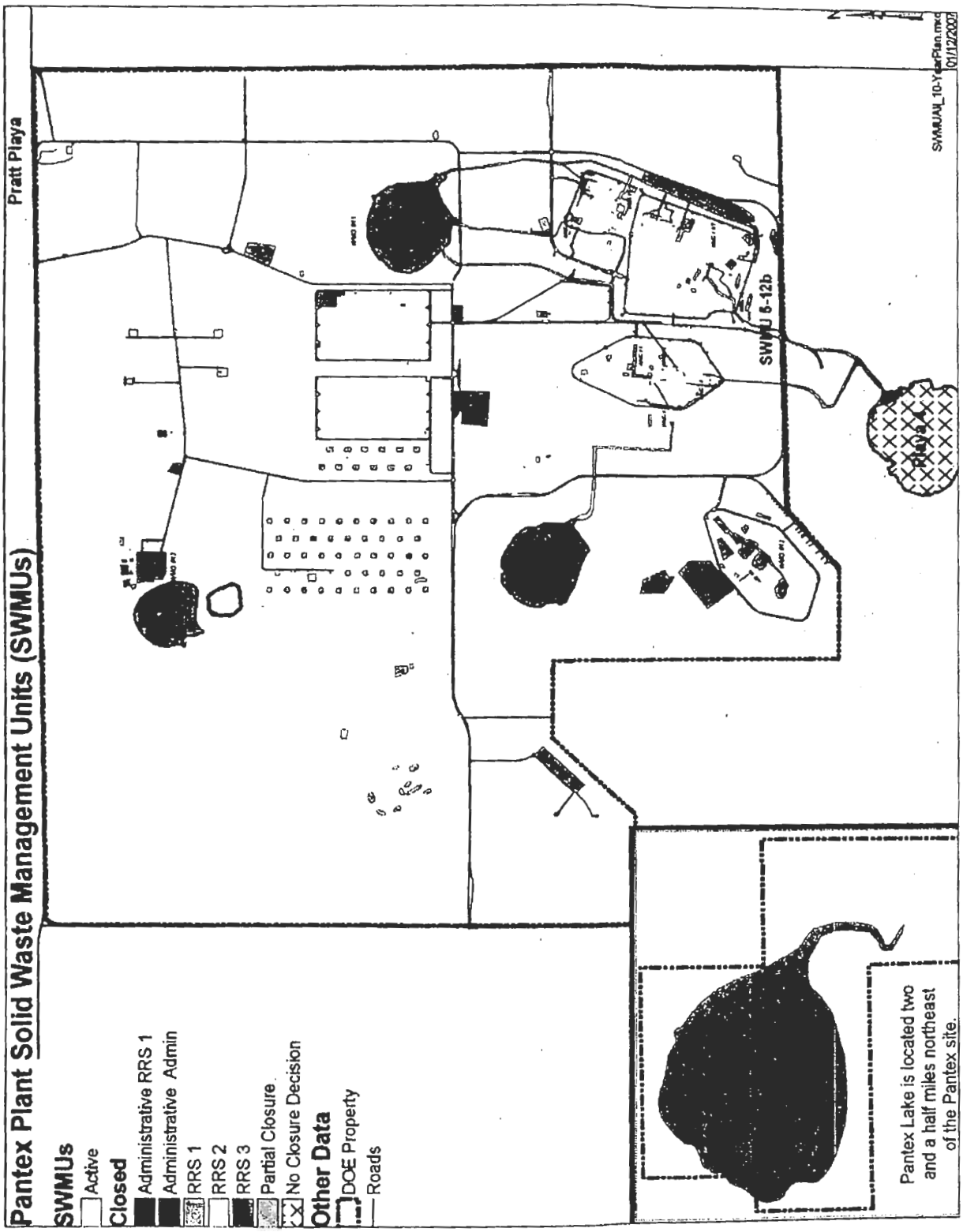


Figure 3-3, Pantex Solid Waste Management Units (SWMUs)

3.1.10 Workload

The majority of work performed at Pantex supports NNSA. The following sections describe NNSA and non-NNSA workload. Funding targets are shown in Appendix 1.

3.1.10.1 NNSA Programs

The NNSA workload includes weapons and other NNSA activities. The predominant workload at Pantex is direct or indirect support of weapons assembly and disassembly.

Weapons Workload Forecast

Operational planning is based on the NNSA weapons workload provided by PCDs and the P&PD. Forecasts and plans are developed based on the best estimate of weapons workload for FY 2007 to FY 2016 provided by NNSA. The workload projected for Pantex is changing in significant ways that impact planning for funding, personnel, and facilities. Figure 3-4 shows the weapons workload based on Draft P&PD 2007-0. This figure shows that the workload increases rapidly beginning in FY 2007 through FY 2008, with another rise in FY 2013 until it reaches peak demand in FY 2014. The increase in 2017 represents the start of the W80-1 neutron generator and W87 neutron generator. Accommodating variations in production quantities requires extensive planning and lead-time to prepare facilities, workers, and engineering support.

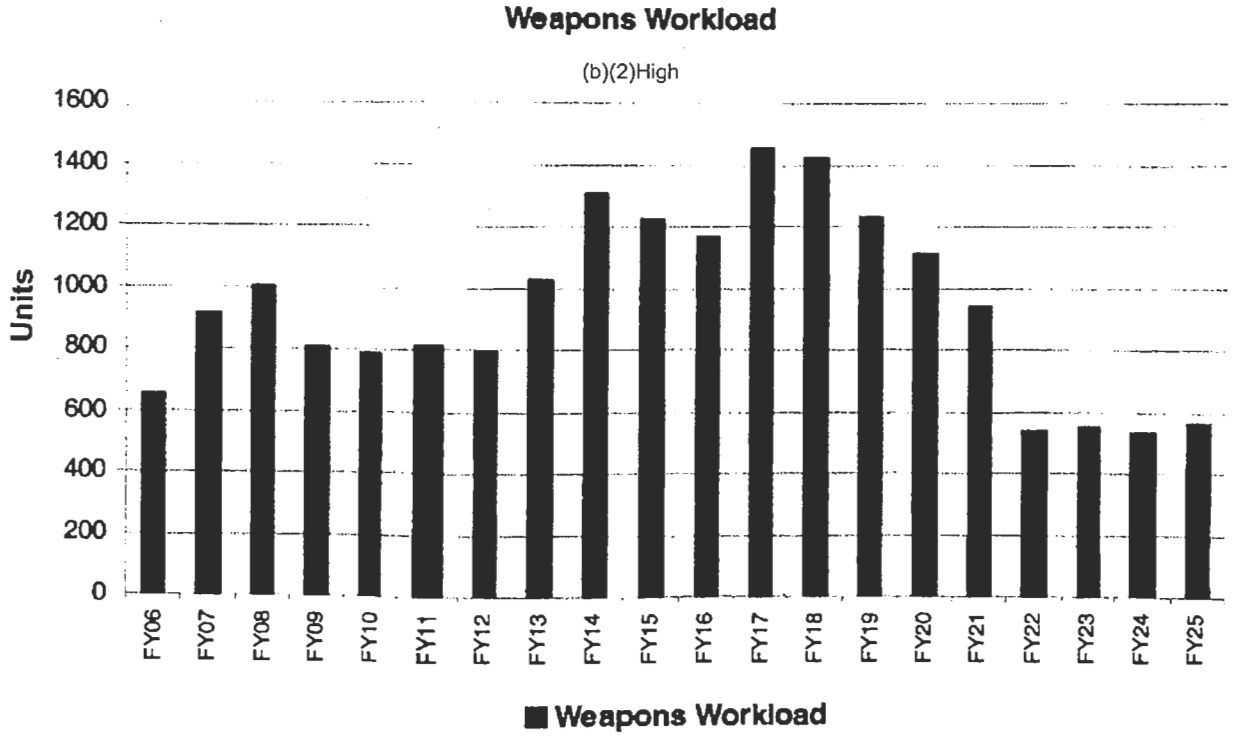


Figure 3-4, Weapons Workload Draft P&PD 2007-0

Workload projections for weapons are provided to Pantex as numbers of stockpile weapons, or units by type. BWXT 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. Figure 3-5 shows the relationship between labor and the projected weapons workload. It depicts the future workload demands for resources compared to FY 2006 to facilitate resource planning. An analysis of the workload indicates that beginning in FY 2007, both the labor per unit and the number of units are increasing rapidly to an initial peak in FY 2010 and a final peak in FY 2014.

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.

Reductions to the P&PD workload are being negotiated based on the lower funding targets provided by NNSA. Revised workload charts will be provided after the Draft P&PD is finalized.

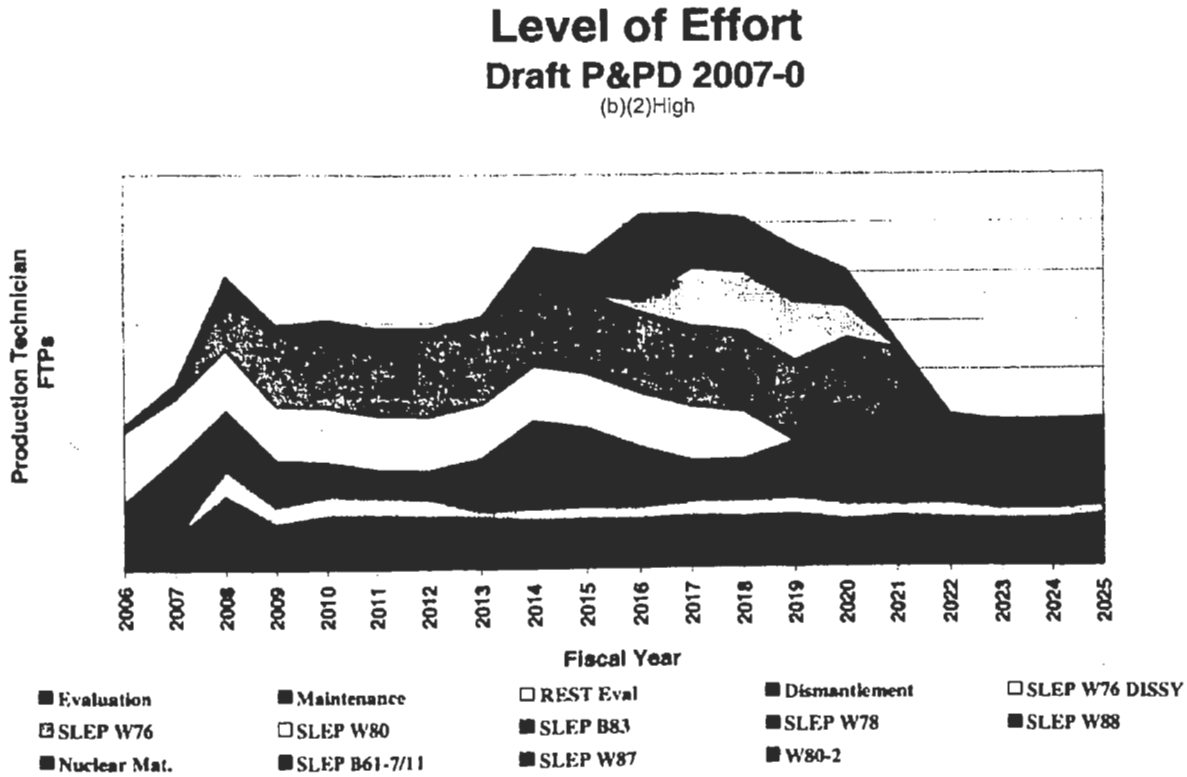


Figure 3-5, Weapons Workload by Labor Level of Effort Draft P&PD 2007-0

The weapons workload for FY 2007 through 2016 is provided in Table 3-3.

Table 3-3, Ten-Year Weapons Work
(In Number of Units Unless Otherwise Indicated)

Work Category	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Weapons Assembly/ Disassembly [1]	1000	1005	809	787	813	791	991	1167	1188	1113
SNM Operations										
- SNM Containers and Packaging[2]	1158	1228	1030	1010	1030	1010	1100	1380	1400	1350
- SNM Surveillance and Monitoring[3]	132	152	152	152	152	152	152	152	152	152
HE Operations										
- HE Fabrication (sets)	300	350	350	400	400	400	400	400	400	400
- HE Testing	2,800	2,900	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Component Disposition										
- Inert (parts)	77,000	72,300	72,300	72,300	65,500	42,200	42,200	42,200	42,200	42,200
- Explosives (lbs.)	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
- Energetic (parts)	2,700	7,400	7,400	7,400	2,000	1,300	1,300	1,300	1,300	1,300

[1] Includes dismantlement, evaluation, maintenance, and repair units.
[2] Includes Pits, CSAs, Reservoirs, and RTGs.
[3] Includes container and component surveillances.

3.2 Mission Critical Facilities and Infrastructure/Linkages

During FY 2006, all facilities and infrastructure at Pantex were reviewed based on criteria provided by NNSA, facilities and infrastructure and were categorized as Mission Critical (MC), Mission Dependent Not Critical (MDNC), or Not Mission Dependent (NMD). PXSO and NNSA HQ reviewed the proposed list of Mission Critical facilities. On August 7, 2006, the Deputy Administrator for Defense Programs approved the consolidated set of Mission Critical facilities and placed the list under change control. The facilities categorized as Mission Critical are provided in Attachment G. The NNSA definition, derived from the Federal Real Property Council (FRPC) Mission Critical definition, is shown here:

> FRPC NNSA Mission Critical - Those facilities and infrastructure that are necessary to perform the primary NNSA missions assigned to the Site. This would encompass any facility or infrastructure where the majority of the structure or utility, or its predominant use (>60%), is to support scientific research, production, or testing to conduct the Stockpile Stewardship Program and without which, operations would be disrupted or placed at risk for a time period that would jeopardize major deliverables (Level 1 milestones).

Additional RTBF Criteria for Mission Critical facilities and infrastructure was provided. RTBF requires a direct link to a program sponsor such as Directed Stockpile Work (DSW) or Campaigns. A direct link includes the following: performing activities to meet a Level 1 or Level 2 DSW/Campaign milestone (ex. producing an item for a stockpile system, storing programmatic material, performing R&D activities for a stockpile system), specifically identified as a key facility within a DSW or Campaign Implementation Plan, and/or directly linked to external commitments made on behalf of NNSA to DOE or other federal agencies. It is expected that all security category I facilities are in this category.

During FY 2007, all remaining facilities and infrastructure at Pantex will be reviewed based on criteria provided on January 16, 2007 by NNSA and categorized as Mission Dependent, Not Critical (MDNC) or Not Mission Dependent (NMD) and submitted to NNSA for approval.

The primary mission of Pantex is performed in facilities categorized as Mission Critical. However, there are several MDNC facilities and infrastructure that are essential support for Mission Critical facilities. Examples of facilities and infrastructure essential to the mission include the steam plant, electrical distribution, generators, fire protection, and weapon and component staging and storage facilities. These facilities are maintained to ensure that the mission is performed in the facilities with the best condition, the highest level of service, and the most scrutiny within the facilities management program.

Mission Critical and facilities essential to the mission receive preferential treatment when prioritizing project and equipment requests. Since the mission critical facilities house the primary mission operations, it is necessary to keep these facilities and essential supporting infrastructure operable and reliable.

All sources of funding are considered to fund project and equipment requests. In addition to RTBF and FIRP funding, Pantex has received supplemental funding from Congressional appropriations that have been used to reduce DM, update equipment, and provide capacity or capability upgrades. The ESPC project will also reduce DM by replacing equipment and systems. BWXT Pantex will continue to focus planning and funding allocation on projects and equipment replacement that will reduce DM and maintain all facilities, but especially facilities essential to the mission, in a safe, secure, compliant, and reliable condition.

The list of Mission Critical facilities is shown in Attachment G.

3.3 Future NNSA Mission, Programs and Workload, and Impacts

BWXT Pantex is developing and managing program elements and processes associated with the pursuit, acquisition, conduct, and completion of all new mission work for the Plant. All relevant planning documents are used to develop and support strategies for future mission work and to analyze impacts to the ongoing mission from potential alternative use of the site's facilities.

Pantex will perform all WR assembly, surveillance, dismantlement, and High Explosive production for RRW. The RRW will meet the same military requirements as current legacy warheads however it will be able to ensure greater long-term confidence in safety and reliability while decreasing the likelihood that underground nuclear testing would ever be needed. Information provided is based on the planning guidance provided by NNSA during the feasibility study. Facility and infrastructure needs are based on this guidance and current inspection and diagnostic requirements for similar weapon systems.

The RRW WR FPU is scheduled for FY 2012. Activities are scheduled to occur from FY 2008 thru FY 2024. These activities include: SS-21 process development (procedures, tooling, testers, training, and facility preparation), WR assembly, new material disassembly/testing/assembly, Joint Test Assembly (JTA) production, and High Explosive production (formulation, synthesis, pressing, and machining). RRW WR assembly activities will require four operations bays, Vacuum Chamber, PAL/CAP, Radiography, and Mass Properties facilities.

Surveillance activities are scheduled to occur from FY 2014 thru FY 2050, they include: WR Disassembly & Inspection (D&I), Testbed Assembly and Disassembly, and High Explosive testing. RRW surveillance activities will require one operation bay, PAL/CAP, Radiography, and Mass Properties facilities. Additional diagnostic capabilities may be required once specific surveillance requirements are developed by the design agencies.

Dismantlement activities are scheduled to occur from FY 2042 thru FY 2052, they include: WR disassembly and component disposition. RRW dismantlement activities will require three operations bays, PAL/CAP and Radiography.

3.3.1 Complex 2030

Alternative use of facilities, beyond the known missions to which they are committed, continues to be a long-range option for the Pantex Plant. Depending upon mission assignment, weapons workload, and current reconfiguration plans, alternate facility use in support of emerging NNSA missions and/or in support of any need the NNSA may have in response to world events will be considered by BWXT Pantex and PXSO. Alternate use of facilities ensures that Pantex continues its strong role to support the needs of the NNSA and the nation while supplementing the DSW and enhancing its ability to attract and retain employees having critical skills.

Potential new missions at the Pantex Plant include the following:

- High Explosives Center of Excellence
- Center of Excellence for Weapons Training
- Consolidated Nuclear Production Center
- Consolidated Plutonium Center
- SNM Consolidation

Pantex has adequate land area available to meet the infrastructure requirements for these potential new missions. Table 3-4 provides information on possible locations and projected personnel resources needed for these potential new missions.

Table 3-4, Pantex 2030 Initiatives

Assignment	Probability to Retain/Attain	Possible Location	Potential FTP[1]	Expected Year of Implementation
High Explosive Center of Excellence	High	(b)(2)High	20	2015
Center of Excellence for Weapons Training	High		3	2011
Consolidated Nuclear Production Center	Medium		2,000	2030
Consolidated Plutonium Center	Medium		1,355	2022
SNM Consolidation	Medium		998	2022

[1] Projections include direct and support FTP

3.3.1.1 HE Center of Excellence

The 2030 vision for the nuclear weapon complex mandates that the complex be reconfigured such that the overall footprint is reduced as well as consolidating functions that will reduce the overall operating cost of the complex. In keeping with this important vision and initiative, Pantex has positioned itself to lead the nation in the manufacturing, research, development, testing and the evaluation of high explosives.

Pantex not only has the capability to support the future nuclear weapon stockpile but the infrastructure to meet the various capacity demands that are currently being considered for the complex. The major operational facilities have been upgraded while other upgrades/replacement facilities have been authorized and funded. These future projects will provide improved consolidation of explosive operations and efficiencies. Figure 3-6 is provided to show the Pantex vision of the proposed HE Center of Excellence. By 2030, Pantex will have significantly reduced our footprint while increasing capability and capacity.

Our experience of manufacturing HE coupled with our established relationship with the Labs makes Pantex the logical choice for being the nuclear weapon complex's HE Center of Excellence. In addition, we have carved out a substantial commercial market by being the sole source (only one in the world) provider for high explosives such as Hexanintrostibene (HNS). This high explosive is used extensively by NASA, the Oil Industry, and other commercial entities.

Pantex has laid the foundation to support the Complex's 2030 vision by aligning the three critical elements i.e. experienced people, right sized infrastructure, and established working relationships with both the National labs as well as the commercial sector to make the 2030 vision a reality and Pantex the HE Center of Excellence.

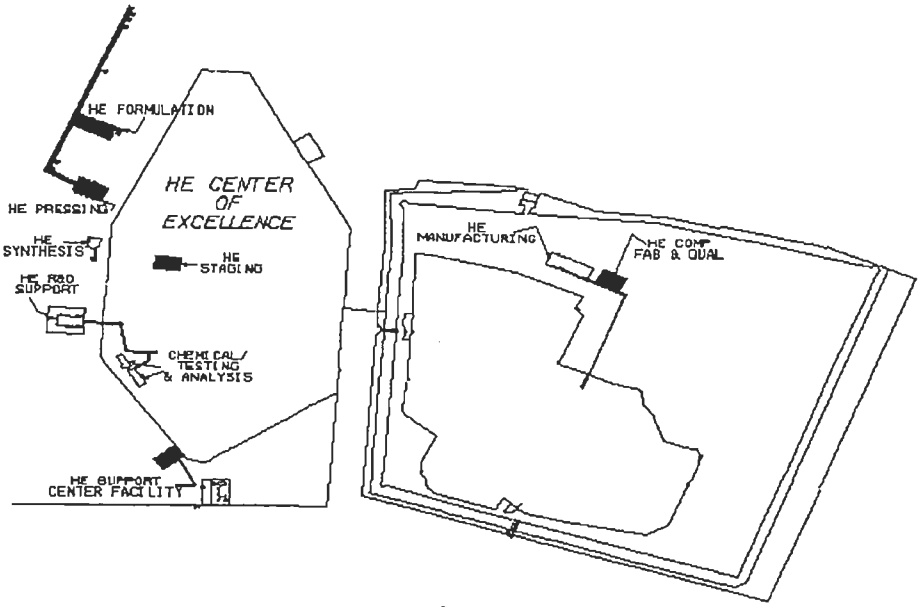


Figure 3-6 Proposed HE Center of Excellence

3.3.1.2 Center of Excellence for Weapons Training

The Pantex Plant is the only location that offers hands-on nuclear weapons training using actual tooling and processes required for weapons operations. Other locations have cutaways and select components, but none have all the elements available in one location. Based on this fact, Pantex is working to become a center of excellence for weapons training. This distinction provides the opportunity to train engineers and scientists throughout the NWC.

Many benefits can be realized through this initiative. First and foremost is the insight that can be provided to the design agency engineers. Many engineers have not had the opportunity to see, touch and manipulate weapon components and learn how the components integrate into the entire system. Training at Pantex in the manufacturing environment gives an engineer a firsthand view of many of the obstacles at a production facility. Interaction between site and design agency engineers fosters good working relationships needed to resolve issues related to extending the life of the current nuclear weapon systems. In addition, engineers and scientists in the intelligence community and other areas also have a need to learn about nuclear weapon systems. This effort supports the mission work of the facility and the cross-training efforts of the weapon training personnel. The NWC will benefit from the creation of a Center of Excellence for Weapons Training.

The Center of Excellence for Weapons Training would be housed in the weapons training organization and does not conflict with any ongoing activities.

3.4 Future Non-NNSA Mission, Programs, Workload, and Impacts

This section identifies anticipated future non-NNSA missions, programs, and workload by timeframe and indicates potential facilities and infrastructure requirements over the next ten years.

3.4.1 Facilities and Infrastructure Impacts from Non-NNSA Programs

Non-NNSA activities do not directly support the NNSA mission. Non-NNSA activities at Pantex include:

- Environmental Management
- Complementary Work.

3.4.1.1 Environmental Management (EM)

The ER Project investigates historical release sites, as well as potential contamination sites, and performs voluntary corrective actions to mitigate future releases, risks to human health and the environment.

The objective of the ER Project is to clean up the Pantex site in a safe, cost-effective, and timely manner that is protective of human health and the environment, in accordance with all regulatory requirements and with input and consideration of the public and stakeholders.

Refer to Section 3.1.9, Non-NNSA Programs for a discussion of the Pantex ER Program, funded by the DOE Office of EM. ER Program activities that could impact Pantex' current and/or future NNSA facilities and infrastructure activities include:

- Soils Program:
  - Perform hot spot removal of contaminants in soil to mitigate risk.
  - Implement Interim Stabilization Measures in higher risk areas.
  - Implement corrective measures construction for the perched aquifer.
- Groundwater Program:
  - Perched Aquifer:
    - Maintain the Pump and Treat System to remove contaminants as an Interim Stabilization Measure.
    - Implement interim stabilization measures to reduce risk.
    - Maintain an active investigative well monitoring program to evaluate potential perched groundwater impacts.
  - Ogallala Aquifer:
    - Continue monitoring as specified in the Compliance Plan.

3.6 Facilities & Infrastructure Impact In Support of IT

For customers and stakeholders at Pantex, the timely and cost-effective delivery of accurate information is just as important as the timely delivery of quality materials or products. The information technology (IT) infrastructure is critical for the delivery of information to meet current and future mission and business requirements at Pantex. Information availability, delivery, and accuracy are vital to plant operations such as:

- Safety
- Security
- Assembly/Disassembly
- Product Re-qualification
- HE Manufacturing
- Surveillance
- Nuclear Materials

In some cases, new facilities and infrastructure are required to adequately support the plant mission today, provide state-of-the-art capabilities to fulfill the Complex 2030 vision, and ensure that NNSA's strategic goal to maintain and enhance the safety, security, and reliability of the nation's nuclear weapons stockpile is realized. These projects are identified in Attachments A and K, with descriptions provided in Attachments I and J.

4.0 THE PLAN

This section discusses detailed planning, processes, facility utilization and condition, meeting the NNSA weapons production, responsive infrastructure, production readiness, and the resources required to support production requirements within FYNSP targets.

4.1 Planning Process

BWXT Pantex Strategic Plan

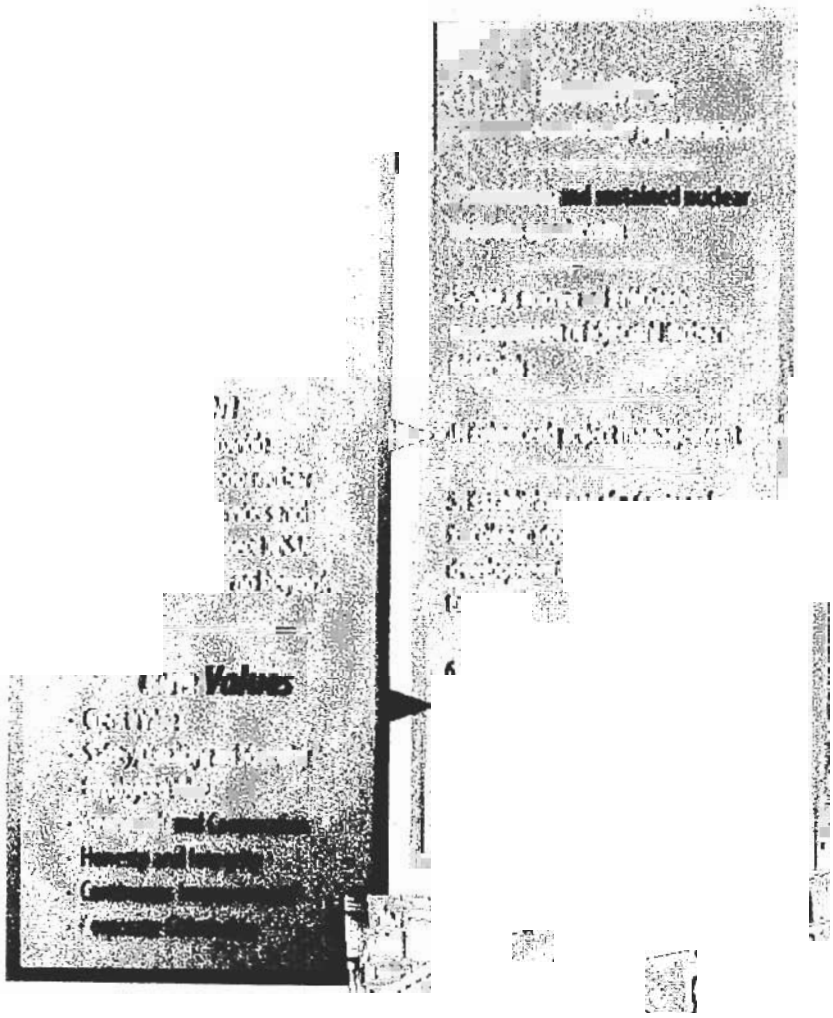
The BWXT Pantex Strategic Plan provides the vision and strategies for accomplishing the NNSA weapons production mission in a challenging work environment. The plan illustrates current actions supporting a long-term view for Pantex and positioning the site to be a key element of national defense in 2030 and beyond.

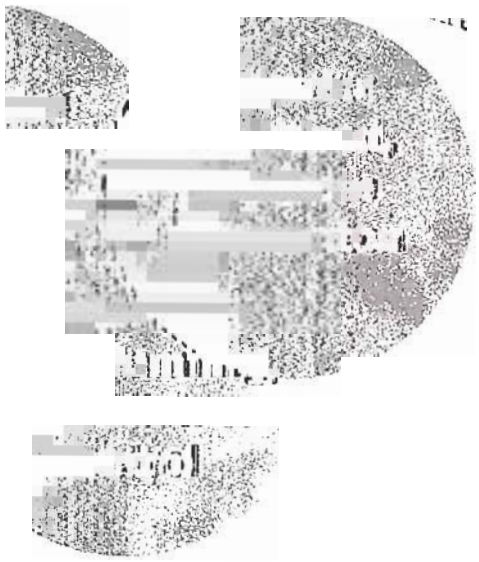
BWXT Pantex will achieve this level of performance through three enabling strategies to support employees, line management and the NNSA. Those strategies are:

- Superior leadership and teamwork
- Superior work planning, execution and control
- Superior sustained, reliable production

Implementation of these strategies will strengthen the technical competence of our workforce and improve our processes to produce more responsive management systems. Completion of scheduled milestones will demonstrate progress toward meeting our strategic initiatives, and our corporate assurance program will evaluate effectiveness as goals are achieved.

This strategic plan provides BWXT Pantex an opportunity to proactively address issues that may impact our mission during coming years. By aligning programs and resources with NNSA goals, we will produce results that meet quality requirements, ensure the safety of our people, enhance the security of our assets and enable future missions at Pantex.





Voluntary Protection Program

BWXT Pantex is committed to the principles of Integrated Safety Management, including the elements of the Voluntary Protection Program (VPP) that engage all people at the site in improving safety performance. Those elements include management leadership, employee involvement, worksite hazard analysis, hazard prevention and control, and safety and health training. BWXT Pantex will use the DOE VPP "Star" process as our guide to validate implementation of these elements.

Measures of Success

- Demonstrate continuous improvement in reducing accidents and injuries
- Submit Voluntary Protection Program Star application by December 2007
- Establish and maintain a Target Zero safety workplace by December 2008

Initiative #2: Increased and Sustained Nuclear Weapons Production

In order to meet national security needs, BWXT Pantex will increase and sustain its ability to meet the weapons production requirements of its customers.

Objectives

Credible Baselines

Establishing credible baselines will allow BWXT Pantex to aggressively and reliably execute and deliver results that meet NNSA requirement targets. This will involve production control, planning and integration work as well as the involvement of the program offices. The Long-Term Operating Plan and the Master Production Plan will support this initiative.

Integrated Progress Tracking

Integrated multi-year visibility of Pantex requirements and milestones will be essential for meeting production commitments. The establishment of a clear, definable, and achievable Work Authorization will be coordinated with the customer. Success in this area will be closely related to appropriate funding of DSW mission objectives, and sufficient facilities and infrastructure being available to support operations.

Conduct of Operations

Continuous improvement in Conduct of Operations will enhance safety and quality and will help avoid unplanned, long-duration shutdowns. High Reliability Organization concepts and Human Performance Improvement will also contribute to sustained, error-free operations.

Metrics

BWXT Pantex will utilize comprehensive metrics to provide management the ability to readily identify potential issues and objectively evaluate the results of operations. Production metrics will be tracked quarterly.

Measures of Success

- Increase the total number of weapons deliverables in FY07 to 1,000, and establish a production capacity of 1,200 units per year thereafter
- Deliver the B61-11 First Production Unit on schedule in FY07, and sustain ongoing production
- Deliver the W76-1 First Production Unit on schedule in FY07, and sustain ongoing production
- Increase the dismantlement of retired weapons by 50% in FY07, and sustain ongoing quantities
- Eliminate the backlog of surveillance units by September 2007
- Implement the Master Production Plan to integrate projects and production goals in FY07
- Semiannually update and maintain the Long- Term Operating Plan

Initiative #3: Safe, Secure and Efficient Management of Special Nuclear Materials

BWXT Pantex will provide an integrated Safeguards and Security Program that protects Pantex personnel and assets in an efficient manner.

Objectives

Systems Effectiveness

BWXT Pantex will operate an effective and efficient Safeguards and Security Program through the proper balance of risk management, personnel, technology and training. Using risk management tools, we will identify the most efficient technologies that can offset personnel costs and still achieve high systems effectiveness.

Design Basis Threat

We will implement the approved Design Basis Threat (DBT) implementation plan as funded by NNSA.

Annual Operating Plan

The company develops and maintains an Annual Operating Plan (AOP). Based on program execution guidance and the Performance Evaluation Plan, an AOP will be developed that ties performance tasks to budget targets.

rmation & Cyber Security

tection of information continues to be an important aspect of the Pantex security gram. BWXT will provide an effective Information and Cyber Security program that ects all classified and sensitive information. BWXT will proactively enhance the gram to meet new information protection challenges and obtain funding to support e improvements.

Force

continue to enhance Pantex' security posture, the company will develop and ement plans to achieve DOE security order implementation, including the fielding of Elite Force.

asures of Success

- Maintain uninterrupted operations provided by a trained and qualified Protective Force
- Complete DBT milestones

ative #4: Enhanced Project Management

XT Pantex will establish the tenets of project management skills as key requirements all managers. Superior performance will be recognized by providing NNSA with ible estimates, technically sound designs and projects completed on schedule. s will be controlled through a stringent control system.

ctives

ct Manager Qualifications

T Project management procedures will be rebaselined to ensure that all the irements of the revised DOE Order 413.3 are met or exceeded. Project managers e trained to the procedure requirements. For larger projects, certified Project agement Professionals will be assigned as project managers.

ct Scope Definitions

cts will be based on detailed scope definitions and validated baseline assumptions are agreed upon by all stakeholders.

stic Budgets

will prepare budgets based on current cost information, predicted escalation, tic labor hour estimates and risk-based contingencies.

(PRIME)

Objectives

Facility and Equipment Upgrades

Providing excellent HE products to the NNSA and other existing or potential customers will require BWXT Pantex to aggressively build, upgrade and consolidate HE facilities and test sites. This will ensure Pantex is positioned to support ongoing and projected nuclear weapons work as well as other HE mission work transferred to Pantex due to NWC consolidation.

Process Improvements and Output Increases

Continuous improvement in HE manufacturing and testing output will ensure the long-term viability of Pantex as the Center of Excellence for HE.

Work for Others Expansion

The Pantex Plant has unique HE capabilities. BWXT Pantex will utilize these capabilities to expand its services to other U.S. government agencies, the U.K. Atomic Weapons Establishment (AWE) and commercial customers. Expanded work for others will benefit the base workload financially as well as maintain technical proficiency.

Measures of Success

- Increase HE manufacturing testing and production support by 10% annually
- Re-authorize CHE operations in the Pressing & Fluid Jet Machining Building by June 2007
- Complete consolidation and upgrades to firing sites by September 2007
- Complete upgrades and relocation of HE pressing operations to the Pressing & Fluid Jet Machining Building by June 2008
- Assume all NNSA surveillance and programmatic HE testing by September 2009

Initiative #6: Long-Term Site Stewardship

BWXT Pantex will assure that processes, policies, plans, materials and decisions are integrated to provide responsive infrastructure and capabilities that support mission needs for the long-term viability of the Pantex Plant.

Objectives

Management Team Excellence

BWXT Pantex is building a resourceful management team to provide exceptional performance and customer focus. This strategy ensures the long-term continuity of operations and breadth of experience through continual development of skilled

managers. Tools include management development, mentoring, improved new manager selection, enhanced manager assessment, and succession planning.

Highly Trained, Agile Workforce

To meet present day requirements and prepare for future missions, the Pantex workforce needs to be highly trained, confident and flexible. Through training initiatives, we will increase workers' technical competence and enhance their level of knowledge for effective operational decision-making. We will also identify the appropriate employee skill mix needed to accomplish weapons work and establish a variety of methods to attract, recruit, develop and retain those skills.

Upgraded Infrastructure Capability

Targeted facility upgrades of weapons production facilities and component storage areas will increase capacity and reliability. Improvements in cells, bays, firing sites, storage facilities and general infrastructure/utility systems are a part of this initiative. The installation of new capabilities to increase the breadth of operations will enhance the site's ability to meet current and future customer requirements. New operational capabilities in radiography, component characterization, mass properties, and other areas are a part of this initiative. We will continue footprint reduction projects that result in a site that is more efficient, safer for workers, and more agile in responding to mission requirements. This effort will also lead to lower operating, maintenance and surveillance costs. In addition, accelerated replacement of aging and obsolete equipment will reduce maintenance costs and help streamline operations.

Upgraded Infrastructure Capability

We will provide Information Technology services that support the Plant's mission and business requirements. These solutions will be a transparent enabler of productivity, delivering the information and computing resources required by Pantex personnel to effectively perform their jobs.

Measures of Success

- Maintain sustained mission-essential facility availability of greater than 95% annually
- Upgrade existing facilities:
  - Manufacturing Cells by FY07
  - Electrical and Gas Main Distribution Systems by 1st Quarter of FY09
  - Energy Savings Performance Contract (Phase 2) by FY08
  - Computing Facility – Uninterruptible Power & HVAC by FY08
- Complete design and start construction on new operations facilities:
  - High Explosive Pressing Facility (CD-3 by March 2008)

- Component Evaluation Facility (CD- 1 by September 2006, CD-2/3 by FY08)
- Complete major demolitions (Rail System by 1st Quarter of FY07, 12-97 by FY07, 12-9 by FY08)

- Begin procurement and implementation of Operational Software Development & Implementation Project by FY08
- Recruit/retain 90% or more of the 1,246 critical skills needed at Pantex by FY09

Initiative #7: Excellence in Environmental and Energy Management

BWXT Pantex will utilize its Environmental Management System (EMS) to administer sound stewardship practices that protect natural and cultural resources while cost-effectively meeting and exceeding compliance with environmental, public health and resource protection laws, regulations and DOE requirements. The EMS encourages environmental excellence and efficient energy management. It promotes environmental sustainability for the long-term Pantex mission, and objectives.

Controls and Actions

BWXT Pantex actively works to analyze environmental hazards and minimize environmental impacts resulting from its activities, products, and services. BWXT Pantex will continue to build environmental controls into site projects and activities during planning.

Regulatory Compliance

We will proactively address new environmental regulations and requirements to ensure strict regulatory compliance.

Continuous Improvement

The company will seek out improved management practices for protection of the environment in Plant processes, including energy conservation, pollution prevention and environmentally preferable purchasing. BWXT Pantex will establish and achieve annual environmental objectives to reduce the impact of Plant activities.

Regulator/Stakeholder Confidence

We will maintain open communications with regulators and other stakeholders on environmental issues and will strive for recognition of accomplishments beyond strict environmental compliance standards.

Conservation Management

We will increase the use of energy efficient equipment and processes to reduce the consumption of energy necessary to accomplish the Plant mission. Personnel in all areas of the Plant will participate in initiatives to reduce energy consumption. BWXT Pantex will ensure effective use and reuse of environmental resources through

recycling, implementation of beneficial reuse, waste minimization, and process improvements.

Environmental Remediation

We will continue to proactively remediate sites impacted by legacy activates to meet the DOE's goals for accelerated clean-up by the end of 2008 and implement the requirements for long-term environmental stewardship by the start of 2009.

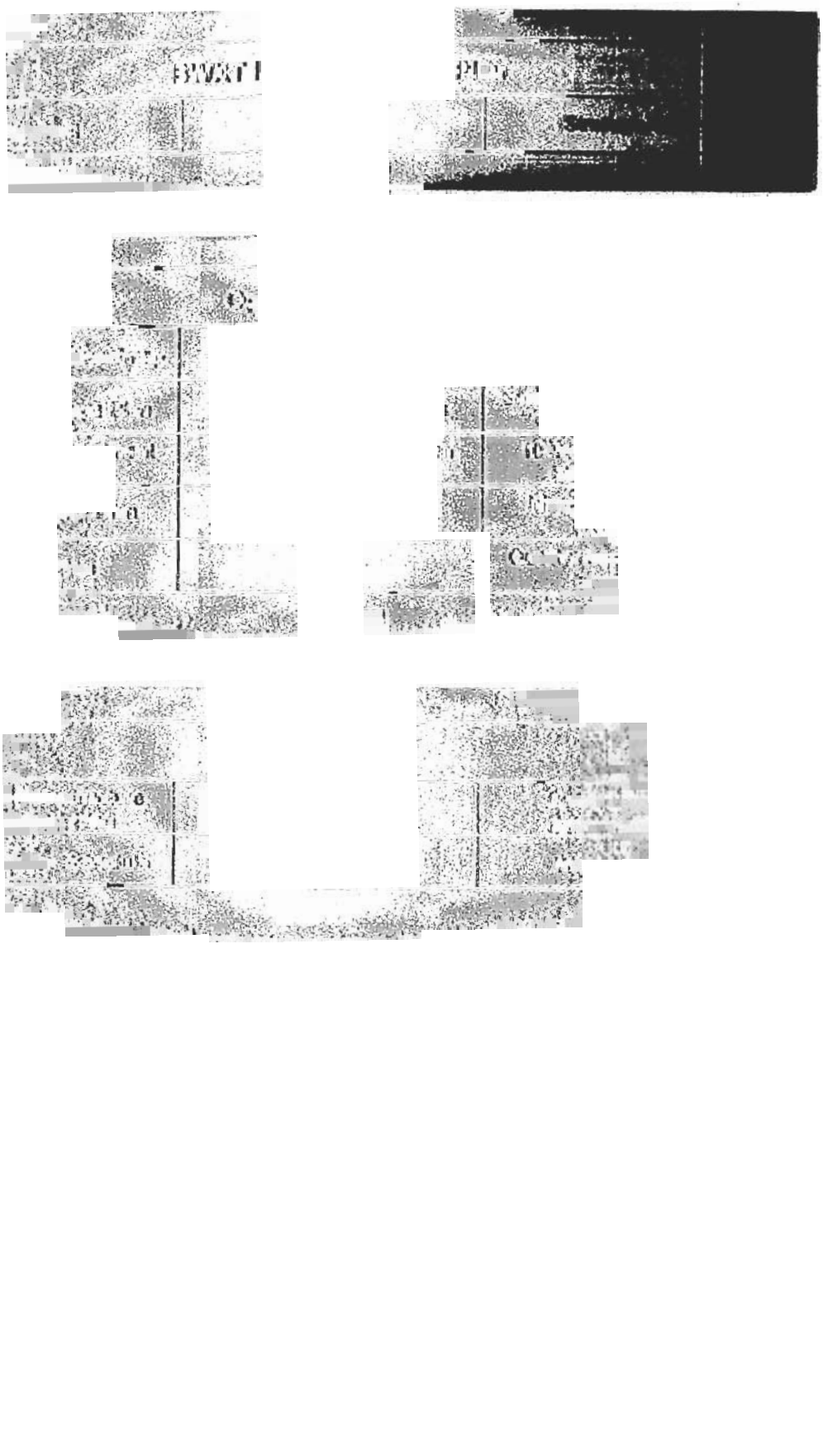
Measures of Success

- Receive no significant violations or adverse regulatory actions from environmental regulators and ensure superior levels of environmental protection and pollution prevention
- Achieve annual energy conservation targets each fiscal year
- Receive customer recognition for Pollution Prevention initiatives through the annual NNSA Pollution Prevention Awards process
- Achieve recognition as an environmental and energy management leader by the customer by the end of FY 2007
- Achieve recognition for environmental management in the Clean Texas program from the TCEQ in FY 2007
- Meet all objectives and commitments from the current approved baseline Environmental remediation schedule
- Meet or exceed environmental management goals specified by DOE through the Integrated Planning and Budgeting Database
- Continue receiving closure letters from both the Environmental Protection Agency and the Texas Commission on Environmental Quality on remaining Solid Waste Managements Units

Master Site Planning

The RTBF Program Director is responsible for the development of the TYSP; however, all senior managers have responsibility for the development and execution of the strategies and plans. As shown in Figure 4-3, the site planning process relies on the integration of workload, facilities, technology, and people through the utilization of effective business processes and performance metrics.

The master site planning process uses the Strategic Plan as a starting point for developing long-range planning alternatives, prioritizing proposed projects, and



Programs; Maintenance; Program Planning and Scheduling; Applied Technology/ R&D; Manufacturing; Security; and Finance organizations. Other organizations from across the site provide information relative to their respective areas of expertise that is necessary to assemble a comprehensive assessment of the mission requirements. A gap analysis is performed to develop the strategies and plans to address shortfalls.

Project Planning

The site's project and capital equipment request process is managed by the Master Site Planning organization within the RTBF Program. Figure 4-5 shows the process flow. A prioritization process was adopted in FY 2003 and enhanced in FY 2004 and FY 2005. The process allows organizations to identify facility and infrastructure requirements or deficiencies that require project development consideration. Through the project request process, organizations provide description, justification, and mission consequence information that is collectively used to determine project candidates, planning estimates, and eventual site project prioritization. This process also includes requests for capital equipment.

Figure 4-5, Facility and Infrastructure Project and Equipment Request Process

Each functional division has a coordinator who ensures the project request forms are complete and signed, reviews and updates project lists, and serves as the division point of contact for project requests. The division coordinator is also responsible for notification of changes to project categories and justification for the change. The rating system is designed to require two independent assessments of any request. The project requester assesses the request based on mission consequence using the criteria outlined in Table 4-1, and the responsible program manager with input from facility engineering staff assesses the request based on plant wide impact and project risk using the criteria outlined in Table 4-2. By using independent reviews of each request, each reviewer objectively analyzes the importance of the requested work based on their knowledge of the operation.

Table 4-1, Mission Consequence Level

1	MISSION SHUTDOWN – FAILURE TO PERFORM WORK WILL SHUTDOWN MISSION FUNCTION, HAVE MAJOR ES&H OR SECURITY ISSUES, IS A PEP DELIVERABLE, OR IS REQUIRED TO MEET PERMIT, CODE, DIRECTIVE, LEGAL, OR ORDER COMPLIANCE. IMPACT IN LESS THAN ONE YEAR.
2	SIGNIFICANT MISSION DELAY – FAILURE TO PERFORM WORK WILL SIGNIFICANTLY REDUCE ABILITY TO PERFORM MISSION, MAY RESULT IN SERIOUS ES&H OR SECURITY ISSUES, OR IS REQUIRED TO MEET PERMIT, CODE, DIRECTIVE, LEGAL, OR ORDER COMPLIANCE. IMPACT WITHIN ONE TO TWO YEARS.
3	MODERATE MISSION DELAY – FAILURE TO PERFORM WORK WILL REDUCE EFFICIENCY IN MISSION PERFORMANCE OR INCREASE OPERATING COSTS.
4	MINOR MISSION DELAY – FAILURE TO PERFORM WORK WILL HAVE MINOR IMPACT ON MISSION PERFORMANCE.
5	NO MISSION DELAY - NO PERCEIVABLE IMPACT IF WORK IS NOT PERFORMED.

Table 4-2, Probability of Failure

HIGH	FAILURE IMMINENT. IMMEDIATE ACTION/SOLUTION REQUIRED. IMPACT IN LESS THAN ONE YEAR.
MEDIUM	FAILURE NEAR TERM. NEGATIVE IMPACTS ARE BEGINNING NOW. ACTION REQUIRED IN THE NEAR TERM. IMPACT IN ONE TO TWO YEARS.
LOW	FAILURE UNCERTAIN, LONG TERM IF AT ALL. IMPACT IN THREE OR MORE YEARS.

Table 4-3 shows the Categorization Score based on input of the Mission Consequence Level and the Probability of Failure.

Table 4-3, Project and Equipment Categorization Score

1	C	B	A
2	D	C	B
3	E	D	C
4	E-F	E	D
5	F	F	F
	LOW	MEDIUM	HIGH

PROBABILITY OF FAILURE

Projects categorized as "**A**" are grouped as the highest priority contenders for funding, then projects in the "**B**" group, and so on. A project request based on a system failure is immediately addressed. This reduces the tendency to rate a request higher than the criteria indicates based on an anticipated failure.

The process is being further refined in FY 2007 with the development and implementation of a Construction Project and Facilities Governance Board. The Board is made up of Program Directors and key support staff, which review new and emerging construction, maintenance, and environmental projects requiring resources for proper prioritization in support of the Pantex mission. This process will further enhance and strengthen decisions that the right projects are being prioritized and worked.

Facilities and Infrastructure Integration

Facilities and infrastructure requirements are derived from a variety of sources. The primary documents are the NNSA Strategic Plan with its cascade to RTBF and FIRP performance indicators, and the Pantex Plant Strategic Plan. Figure 4-6 shows this cascade. In addition, requirements are derived from weapons workload planning documents, and the Responsive Infrastructure initiative.

Master Site Planning engineers interface with all functional areas on a routine basis to determine changes in requirements, future needs, and strategic initiatives. Master Site Planning supports all areas with project planning, Life Cycle Cost analysis, alternatives identification and evaluation, and preliminary scope definition for identified facility and infrastructure needs. This helps the planners remain objective, and also retain a broad working knowledge of all workload requirements, plant capacity and operating capability, fostering effective integration of facilities and infrastructure needs for the good of Pantex Plant.

Facilities and infrastructure requirements are integrated at the site level through planning and coordinating maintenance and construction projects by a team of planners, engineers, and maintenance managers. This team is led by the Master Site Planning organization and meets routinely throughout the year to discuss planned corrective maintenance work, planned and ongoing construction projects, DM reduction initiatives, and equipment requests. The purpose of the meeting is to coordinate planning and optimize all resources to execute work and meet the plant's mission and programmatic needs.

BWXT Pantex functional areas also develop strategic plans, which are the basis to ensure the flow down from the NNSA and Pantex strategic plans follow a logical path to measurable execution strategies. Progress is monitored by functional and program managers in monthly meetings, and issues are identified promptly. Impacts to other functional or programmatic deliverables are identified, and corrective actions are taken in a timely manner.

Table 4-4, FY 2007 RTBF Performance Indicators

Milestones	STATUS	TREND
Achieve 90% of planned staffing in critical positions; complete 90% of required training and qualifications of critical personnel.	98.8% of Critical Skill positions for FY06 "Maintenance of Nuclear Weapons Expertise Data for NNSA Performance Metrics" are filled and maintained.	GREEN
Annual percentage of scheduled days that mission-critical and mission dependent not critical facilities are available is greater than 90%	YTD Mission Critical / Mission Dependent-Not Critical facility availability is 99.7%.	GREEN
Number of reportable accidents per 200,000 hours of work is less than 5.0 (vs. BLS national standard)	Number of reportable accidents per 200,000 hours of work is 1.09 compared to the NNSA goal of 5.0.	GREEN
Annual NNSA complex-wide aggregate Facility Condition Index (FCI), deferred maintenance costs per replacement plant value, for all mission-critical and mission-dependent, not critical facilities and infrastructure is less than 6.8%.	Based on current FIRP and Operations of Facilities funding, maintaining an FCI for MC/MDNC facilities below 6.8% may not be achievable.	YELLOW
Annually, receive no Notices of Violation (NOV)/Preliminary NOV from environmental regulators.	No significant violations. Pantex received 1 Best In Class award and 3 NNSA Environmental Stewardship awards. All 4 are evaluated for the Whitehouse Closing the Circle award.	GREEN
Annually, achieve Compliance with Applicable Nuclear Safety Rules.	No enforcement actions or significant non-compliances for FY07 YTD. PAAA fine was received for FY05 incident.	GREEN
Develop Written Worker Safety and Health Program by February 2007.	On schedule.	GREEN
For RTBF mission-essential facilities and infrastructure, allocate adequate baseline funding (direct/indirect) to support planned maintenance as defined in site FY 2007 Annual Maintenance Plans.	Current funding is, at a minimum, $7.2 million short of the required amount to support planned maintenance.	RED
Complete CD-1 for the Component Evaluation Facility Project at Pantex, Due date 09/2007.	CDR transmitted to PXSO in Oct. 2006	GREEN
Complete CD-4 for the Special Nuclear Material Re-qualification Facility at Pantex, Due date 03/2007.	Presently the baseline CD-4 date is April 2006. BCP developed and submitted but not approved to rebaseline the CD-4 date. Facility construc-tion is complete, and BWXT declared readiness for 10 of the 11 workstations. The DOE ORR, started January 16, 2007, is complete. Authorization for start up received from NA-10. The 11th workstation will be started up separately to support surveillance requirements. CD-4 has been delayed due to issues with finalizing the workstation.	RED
Complete Phase I of the Building 12-44 Production Cells Upgrade Project at Pantex, Due date 12/2006	Complete. Use and Possession of Phase I was taken Nov. 17,2006. Project is red in PARS because of baseline. The Contractor Readiness Assessment is in progress.	RED
Complete CD-2 for the High Pressure Fire Loop for Zone 12 Project at Pantex, Due date 12/2007.	Complete. CD-2 was approved Dec. 1, 2006	BLUE
Complete CD-3 for the High Pressure Fire Loop for Zone 12 Project at Pantex, Due date 09/2007.	On schedule.	GREEN

Four performance indicators are currently issues as seen above. The facility condition index and the maintenance funding milestones are being impacted by the current FIRP funding level and the less than adequate authorized funding for RTBF Operations of Facilities. As a result the goals may not be achievable at Pantex. The third performance indicator, CD-4 for the Special Nuclear Material Re-qualification Facility, has been impacted by technical challenges associated with the deployment of the individual workstations involving new technologies and their startup. The fourth performance indicator, Building 12-44 Production Cells Upgrade Phase I, Use and Possession was taken Nov. 17, 2006, but project is red in PARS because of baseline.

4.1.1 Facilities and Infrastructure Overview

Current facilities and infrastructure activities at Pantex include maintenance (as defined by the TYSP guidance), plus vehicle maintenance, custodial work, construction, and disposal of excess facilities and equipment. As of the end of FY 2006, NNSA owns 624 facilities at Pantex, including two facilities for OST and SNL (WETL). In addition, NNSA leases two facilities from Texas Tech University, seven portable offices, and EM has five facilities for a total of 638 facilities on site. The ten-year planning horizon shows the plant to be fairly stable; i.e., facilities eliminated through facility disposition will be replaced with modern facilities required to support mission work with an increase in gross square footage. Table 4-5 shows the amount of mission critical, mission dependent, and not mission dependent square footage for NNSA and non-NNSA facilities. As a result of DOE Audit Finding number 05-NSQ-AF-01, Pantex has completed a corrective action plan validating facility square footage of all buildings. Facility square footage in this FY 2008 TYSP reflects the square footage in FIMS as of September 30, 2006.

Table 4-5, Gross Square Footage for NNSA and Non-NNSA Facilities

	Mission Critical	Mission Dependent	Not Mission Dependent	Total
NNSA Owned	995,135	1,681,399	311,149	2,987,683
NNSA Leased	0	51,327	16,167	67,494
Non-NNSA Owned	0	5,936	4,696	10,632
Non-NNSA Leased	0	0	0	0

The FY2006 end of year Facility Condition Index (FCI) for all facilities and infrastructure reflected in the FIMS is 7.4%. Refer to Section 4.1.2.1.

4.1.2 Real Property and Asset Management

Several processes are used to manage the assets at Pantex. The Asset Stewardship Program includes the Condition Assessment Survey (CAS) program, the Deferred

Maintenance program, the Facility and Infrastructure Project and Equipment Request process, and the Integrated Safety Management (ISM) program.

In FY 2003, the CAS program was institutionalized to capture and improve the data integrity and accuracy of asset conditions at Pantex. The CAS program is integrated with the DM program and assists in logically assembling deficiencies into DM work packages/projects for execution.

BWXT Pantex established a Deferred Maintenance (DM) Program in October 2005 to manage the selection and prioritization of all DM projects. This single-point of accountability for the plant ensures DM projects are centrally and strategically prioritized within available resources to meet the Plant's mission. The DM Program Manager is responsible for planning, management, and reporting of DM. The selection, prioritization, and authorization of DM work/projects, for all funding sources (e.g. RTBF, FIRP), is determined by the DM Program Manager. Al DM projects are coordinated through the DM Program Manager for concurrence.

The Facility Modification and Construction identification program, described in Section 4.1, is used to plan for longer-term asset management and work that cannot be performed in house. Close coordination between the Maintenance Work Order System and the Facility and Infrastructure Project and Equipment Request process ensure work is reviewed and the appropriate amount of resources are allocated.

As discussed throughout this document, ISM is paramount to ensure all work is performed safely. However another aspect of ISM is the early identification of hazards, including real assets that need to be addressed. BWXT managers at Pantex have been trained on Human Performance Improvement and are applying key aspects of that training to ensure work is analyzed and reviewed prior to being performed and the hazards addressed. Key aspects of Human Performance Improvement are currently being disseminated to all employees. Identified hazards are addressed and if warranted, placed into the Work Order or Facility and Infrastructure Project and Equipment Request process.

4.1.2.1 Condition

The FY 2006 end of year Facility Condition Index (FCI) for all facilities and infrastructure reflected in the Facilities Information Management System (FIMS) is 7.4%. FCI for Mission Critical (MC) facilities is 2.8%, Mission Dependent Not Critical (MDNC) facilities is 11.46%, and Not Mission Dependent (NMD) facilities is 9.88%. The high priority given to providing operationally ready facilities to support mission requirements is evidenced by the low FCI for MC facilities and an average facility availability of 99.7%. The total Deferred Maintenance (DM) backlog reported in FIMS is $238 million. DM for MC facilities is $40 million, $172 million for MDNC, and $25 million for NMD.

As documented in the approved Defense Programs FY2007 Mission Critical List, there are 52 MC facilities at Pantex, of which only 18 are in "less than adequate" condition. There are 3 facilities in poor condition and no facilities in "fail" condition. The DM associated with the 18 facilities is approximately $17.4 million.

Approximately $8 million of the $17.4 total deferred in MC facilities will be addressed within the next 3 to 5 years with projects currently authorized or scheduled for execution. The DM reduction achieved through completion of these projects will improve these facilities to a better than adequate condition. The projects encompass RTBF line items, on-going FIRP projects and proposed initiatives associated with the transformation of the complex and Complex 2030. Site modernization initiatives will create additional facility disposition opportunities for non-enduring facilities resulting in reduction of DM. It should be noted that $4 million of the $17.4 million is associated with deficiencies not impacting the operational mode of the facility.

Pantex is dependent upon FIRP as a funding source to address legacy DM. RTBF Operations of Facilities Plus-Up was utilized to offset shortfalls in FIRP in FY 2006. Given the current trend with reduced funding for the FIRP Program as demonstrated in FY 2006 and current projections within the FY 2007 Continuing Resolution (CR), the site will be required to further scrutinize all deficiencies. The Pantex strategy will continue to focus on providing operationally ready facilities to execute the mission of the Plant, including the MDNC infrastructure required for the operations of mission critical facilities. Continual evaluation and update to the DM backlog will ensure funding allocations are addressing high priority deficiencies versus aesthetic improvements.

As illustrated in Attachment F, projected FCI for MC facilities will increase over the next ten years while the FCI for MDNC facilities will decrease. This is because the only contribution to MC DM is the RTBF funding allocated to maintenance. The FIRP program will mostly be addressing DM in MDNC because that is where the remaining legacy (FY03 baseline) DM is. If the FIRP criteria were broadened to include the total deferred maintenance backlog regardless of the year it was identified, this would allow the site to eliminate deficiencies that limit physical and operational infrastructure required to support the Stockpile Stewardship Program. This would also resolve the imbalance in the FCI projections reflected in Attachment F.

BWXT Pantex reinstated a formal CAS Program in FY 2003 and established a 3-year program to inspect 100% of the facilities. BWXT Pantex completed the third year of the initial 3-year cycle in FY 2006. All data is entered into the DOE Condition Assessment Information System (CAIS).

4.1.2.2 Utilization

Space management encompasses all real property owned or leased by DOE. The RTBF Program is responsible for the overall management of space. Consistency in application of space management policy and cost effective utilization are primary considerations in determining space allocation.

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. For example, assembly/disassembly and associated direct support facilities are assigned to the Manufacturing Division, and HE and associated direct support facilities

are assigned to the Applied Technology Division. Due to the dynamic environment and multi-organizational use of office areas, the RTBF Program manages administrative areas. Requests for additional space or modifications to existing space as well as issues that cannot be resolved within the functional organizations' managed space are submitted to the RTBF Program for evaluation and resolution.

Because of an active D&D program at Pantex, space utilization has steadily improved through recent years. In FY 2003, space was 97.77% utilized, improving to 98.13% utilization in FY 2004 and 98.43% utilization in FY 2005. This positive trend eliminates excess space, thus eliminating surveillance and maintenance costs for those facilities and eliminating potential safety hazards associated with abandoned facilities. Since there is very little excess capacity, 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. All excess facilities at Pantex have been demolished; any future excess facilities and demolition will result from construction of new facilities.

Attachment B shows the current space utilization of Pantex buildings as depicted in the Facilities Information Management System (FIMS). This FIMS report categorizes buildings by the Federal Real Property Council (FPRC) categories. Note that laboratories at Pantex are categorized as "Manufacturing/Production Related Laboratories," which is designated in FIMS to be captured in the FPRC "All Other" category. The EM Asset utilization is 100% for the two facilities they own. Table 4-6 and Figure 4-7 reflect the information in Attachment B for NNSA facilities.

Table 4-6, Current Facilities Utilization – FY 2006

USE CATEGORY	TOTAL			
	NNSA ASSET UTILIZATION INDEX	GROSS SQUARE FEET	NUMBER OF BUILDINGS	PERCENT TOTAL SQUARE FEET
OFFICE	96.80	387,119	57	13.06
HOSPITAL	100.00	11,516	1	0.39
HOUSING	N/A	0	0	0
Warehouse	99.11	698,530	188	23.57
LABORATORY	*	0	0	0
ALL OTHER	98.65	1,866,232	293	62.98
TOTAL	**98.52**	**2,963,397**	**539**	**100**

*Note that laboratories at Pantex are categorized as "Manufacturing / Production Related Laboratories," which is designated in FIMS to be captured in the FPRC "All Other" category.

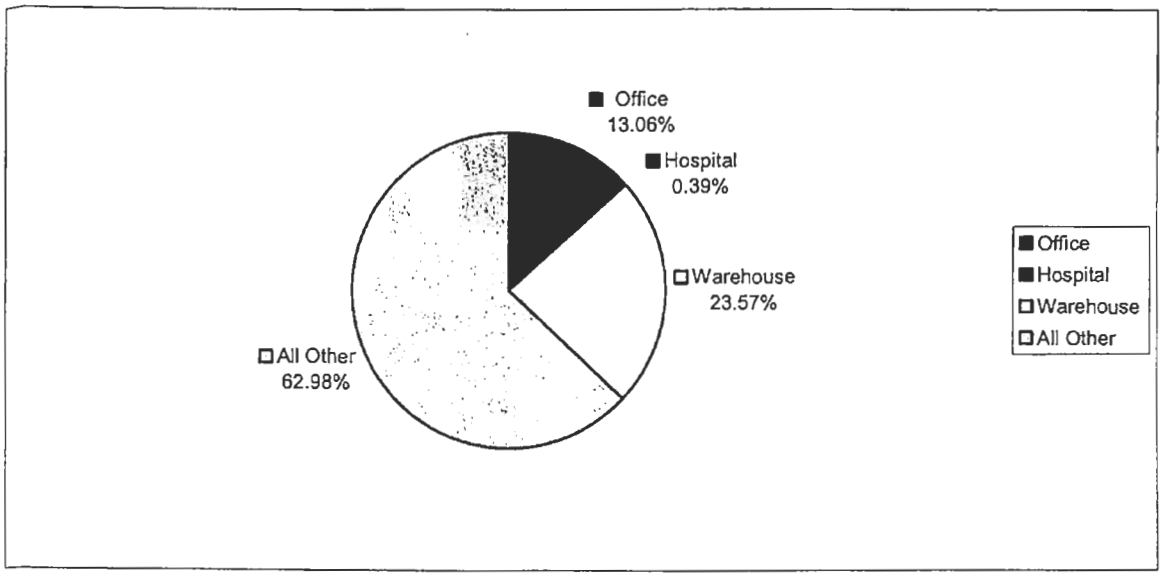


Figure 4-7, Current Facilities Utilization – FY 2006

Table 4-7 and Figure 4-8 shows projected space utilization by use category for FY 2017. Future space requirements will be met through a variety of mechanisms. Existing production space will be improved and new space will be provided through Line Item projects that are ongoing or planned, whereas storage space will be improved through GPP projects. Although the total number of facilities will be reduced, the total square footage for operations will increase. This is due to the CEF and security buildings that are required to accommodate mission needs for production and increasing security requirements. Ultimately, it is expected that 100% of space for each category will be utilized and there will be no excess facilities at the Pantex Plant.

Table 4-7, Future Facilities Utilization – FY 2017

USE CATEGORY	TOTAL		
	GROSS SQUARE FEET	NUMBER OF BUILDINGS	PERCENT TOTAL SQUARE FEET
OFFICE	392,598	51	12.49
HOSPITAL	11,516	1	0.37
HOUSING	0	0	0
Warehouse	689,755	185	21.94
LABORATORY	0	0	0
ALL OTHER	2,049,246	299	65.20
TOTAL	**3,143,115**	**536**	**100**

*Note that laboratories at Pantex are categorized as "Manufacturing/Production Related Laboratories," which is designated in FIMS to be captured in the FPRC "All Other" category.

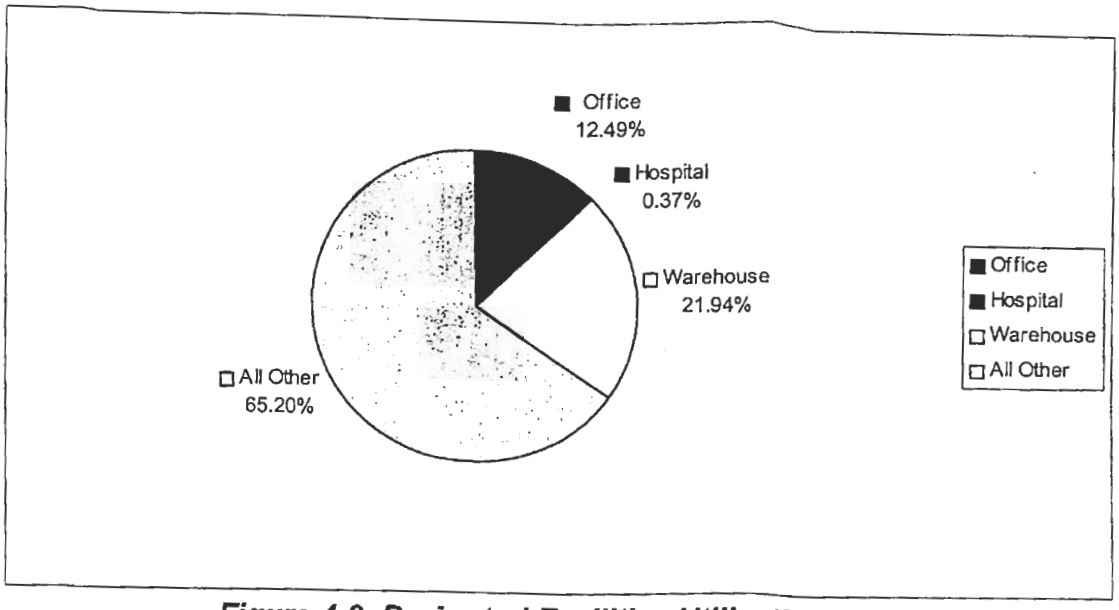


Figure 4-9, Projected Facilities Utilization – FY 2030

4.1.2.3 Land-Use Planning

The TYSP serves to capture the comprehensive land use planning. The comprehensive land use planning process identifies the current condition of existing land and facility assets and the scope of constraints across the site and in the surrounding area. Long-term sustainable development goals are used to focus efforts to steward these assets. The process uses these goals to identify the possible land and facilities use options. The options considered would take advantage of opportunities and mitigate constraints in support of the site or programmatic strategic plan's mission needs and scenarios. When carried out, it will remain a current and living process by using adaptive management techniques that adjust management practices and direction to changes in environmental, mission, economic, cultural and social factors.

The comprehensive land use planning process relies on stakeholder involvement to provide diverse ideas and values in all its phases. The involvement of the public, Local, State, and Tribal governments, and other Federal Agencies in its development and application enables the Department to improve decisions while building trust with the public it serves. Land and facility use planning complements, utilizes, links, supports, and integrates with NEPA and the many other separate processes required by law and regulation.

To achieve its full potential, sites are given, under the life cycle asset management approach, the responsibility of tailoring the process to local conditions and many existing activities which impact on the planning for the DOE's land and facility assets. These include, but are not limited to the NEPA process, site planning and asset management, public participation, economic development under community re-use organizations, privatization of assets, site strategic planning, Environmental Justice, cultural asset management, historic preservation, and natural resource management.

Pantex land use planning utilizes the Pantex Site Wide Environmental Impact Statement, Long-term Stewardship planning under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Resource Conservation Recovery Act (RCRA) and administrative procedures to ensure compliance.

The Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA) jointly regulate ER activities at Pantex, under a memorandum of agreement for activities at federal facilities. Under this memorandum of agreement, EPA is the lead agency for radiological legacy release issues under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and TCEQ is the lead agency for non-radiological legacy release issues under Resource Conservation Recovery Act (RCRA).

The Pantex Plant resides on land owned and leased by the DOE. The DOE owns approximately 9,100 acres at Pantex Plant proper and 1,077 acres of detached property, called Pantex Lake, approximately 2.5 miles northeast of the main Plant site. 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, primarily for safety and security buffer areas. Approximately 2,500 acres of Pantex Plant proper are used for industrial operations, the burning grounds, and the firing sites.

Some land not actively used for Plant operations is provided to Texas Tech University 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 Texas Tech University through a service agreement with DOE for farming and ranching use. A large portion of the Pantex Plant is used for grazing cattle and dry land crop production. Actual acreages of farmed land at Pantex are variable and dependant upon available crop rotational cycles, season, cattle population, soil moisture, and seasonal rainfall. Cattle grazing is allowed on the uplands, playas, and Pantex Lake. Managed grazing is used to maintain biodiversity in the playas. In some areas, grazing is also used to reduce biomass, and thus fire hazard. The Texas Tech Research Farm and their operators follow cultural and conservation farming practices at the Pantex Plant.

In general, land use is expected to remain constant, with continued cooperation with Texas Tech University through the Service Agreement and leasing of Texas Tech University land for security and safety reasons. The impact of continued Plant operations on land resources has been determined to be limited due to little change in expected site land use. Based on the projected plant mission, Pantex will remain in use as an active industrial site under NNSA after completion of environmental cleanup activities. Refer to Figure 2-9 Agricultural Land Use at Pantex.

The DOE is currently under contract with the U.S. Army Corps of Engineers (USACE) to negotiate the acquisition of real property adjacent to the DOE/NNSA Pantex site for environmental restoration monitoring and potential future remediation of contaminated perched groundwater east of the Plant. Refer to Figure 4-10. Only Environmental Restoration activities are planned. There are several options that will be considered for

beneficial use of the property. This may include negotiations with neighboring private landowners, including leasing this land back to them for farming purposes. It is also proposed, that upon completion of this acquisition, Pantex will request Texas Tech Land Management to extend their boundaries of administration of the site to also include this acreage through an existing service agreement.

National Environmental Policy Act (NEPA) Statement

Pantex has a mature NEPA Program that includes all facets of Plant operations. The Final Environmental Impact Statement (EIS) for the Continued Operations of the Pantex Plant and Associated Storage of Nuclear Weapon Components was approved in November 1996. Secretary O'Leary approved the Record of Decision (ROD), based on the SWEIS, in January 1997. The Pantex Site Office Manager approved a Supplement Analysis (SA) that provided a five-year review of the EIS in March 2003. The SA determined that the EIS is still adequate for the continued operations of the Pantex Plant. A second 5-year Supplemental Analysis update is currently being performed and is anticipated to be completed in FY 2008.

Some projects identified in this TYSP do not have NEPA documentation completed. Proposed projects must be at a sufficient stage of planning to allow for detailed NEPA analysis, which could alter planning decisions. As planned projects become proposed actions and are ready for environmental analysis, appropriate NEPA documentation will be prepared according to the planning schedule of the projects. Construction projects, whether new construction, modifications, or demolition, that have not been described in the EIS or SA, will be analyzed in accordance with established NEPA requirements. A NEPA Review Form will be prepared for each project for DOE/NNSA to determine if an EIS or Environmental Assessment (EA) is required. If an EA needs to be prepared, it will be funded by the individual project. Construction contracts must have the proper analysis, NEPA documentation, and approval prior to award.

Current Land Use

BWXT Pantex has a diverse land use as is shown in Figure 2-9, to complement the environmental management of the site.

Environmental Management Long Term Stewardship

The Environmental Management Long Term Stewardship is made up of four core pieces: risk based assessment and end state vision, land acquisition; closeout and transition plan, and long term stewardship.

Pantex Risk-Based End State Vision Document

The Pantex Risk-Based End State (RBES) Vision Document Draft Final – March 2004 provides a basic portrayal of site conditions in relation to current regulatory and other values that can be defined, described, and evaluated. Based on the projected plant mission, Pantex will remain in use as an active industrial site under the National Nuclear Security Administration after completion of environmental cleanup activities. Potential

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Land Acquisition Project

The Department of Energy is currently under contract with the U.S. Army Corps of Engineers (USACE) to negotiate the acquisition of real property adjacent to the DOE/NNSA Pantex site for environmental restoration monitoring and potential future remediation of contaminated perched groundwater east of the Plant. Refer to Figure 4-10 for the perched extent and acquisition area. Pantex will maintain this land in its current condition and does not plan to use this land for future administrative buildings or operational purposes. Only Environmental Restoration activities are planned. There are several options that will be considered for beneficial use of the property. This may include negotiations with neighboring private landowners, including leasing this land back to them for farming purposes. It is also proposed, that upon completion of this acquisition, Pantex will request Texas Tech Land Management to extend their boundaries of administration of the site to also include this acreage through an existing service agreement.

As part of the acquisition of this property, Phase I and Phase II Environmental Site Assessments (ESA), would be conducted, as applicable, prior to the purchase of the property. These ESAs would determine any potential environmental liabilities associated with the properties that are not related to Pantex legacy operations. Projected environmental impacts on the property, once purchased, are expected to be minimal and related to installation of equipment necessary to remediate and monitor perched and Ogallala groundwater.

There are several structures with utilities located on the property in this proposed acquisition. At this point, there is no plan for any changes with respect to these utilities and water wells.

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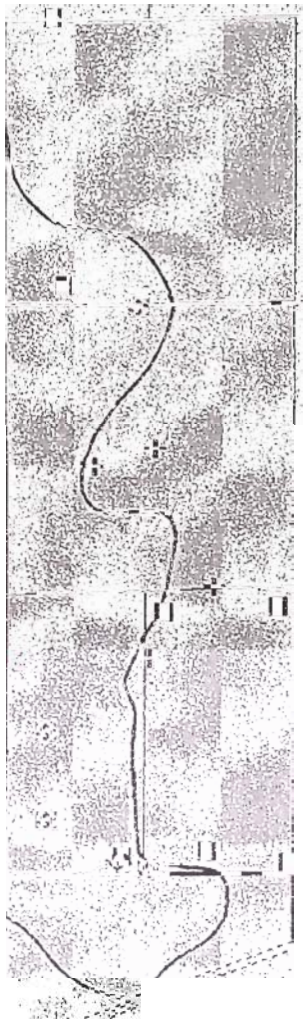

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· and Non-Nuclear Materials - Includes disposition costs of excess materials (components, trainers, ›ciated with retired weapon programs. For active weapon programs, the respective weapon program ›n costs.

›rmental Requirements - Includes funding for Agreement-in-Principle support.

- Includes potential liabilities not falling within another category (the potential for a Natural Resource ›ment was avoided with state and federal approval of the Site-Wide Ecological Risk Assessment 2005).

·ootprint Management

:x has developed a long-range plan that balances facilities elimination and /ith new construction and is aligned with workload projections to ensure e mission. The results of this plan are shown in Attachments E-1 through st demolition projects began in FY 2001 and will continue into the future, :limination of excess and aging facilities to make way for modern facilities le to current and projected mission needs. Concurrently, construction pgrade existing facilities as well as provide new facilities will be executed, more modern plant.

:he assumptions listed in this TYSP, there are 22 buildings totaling ly 115,000 square feet scheduled for demolition or removal from the site ' 2007 and FY 2017. In the same time frame, 17 buildings totaling ly 285,000 square feet will be constructed. This total does not include :d facilities (refer to Attachment E-3), and does not include Line Item : are not currently supported in the ICPP or GPP projects that are currently Equalizing the reduction of excess facilities associated with new will be balanced by disposal of excess square footage at other NNSA sites l by NNSA for additional requirements for Production and Security. Since ion and Security projects are essential to the NNSA future mission and ›creased capacity or improved capability to perform mission work, the ation to balance the additional square footage at Pantex with reductions at /ill be presented to NNSA. It is assumed that NNSA will act as broker based f new square footage to meet the NNSA mission. Once square footage is ›e Office of the Associate Administrator for Infrastructure and Environment ›rdinates Site Manager waiver and transfer requests. A draft waiver has :d and will be submitted when required.

g issues need to be considered when evaluating Attachments E-1 through

ings 12-17 and 11-20 will be excess to Plant needs in FY 2013 and FY , respectively. These buildings, 64,346 square feet (including support ies), are listed on the National Register for historical significance, thus they ot eligible for demolition and are not included in Attachment E-1.

WETL Facility, completed in FY 2006, was funded by and is operated by This facility is approximately 30,000 square feet of new space. The space :d by WETL will be used for Pantex operations. NNSA has directed Pantex

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account for the square footage associated with this facility.

e OST facility is to be completed in FY 2008 and is over 25,000 square feet. SA has directed PXSO to account for the square footage associated with this ility in the Pantex account.

e CEF, to be completed in FY 2016, is required based on increased workload acity and capability. Square footage will not be reduced by the construction his facility.

acility Elimination and Disposition

tivation and Decommissioning (D&D) Plan is a summary of all D&D activities t Pantex Plant between FY 2007 and FY 2017. It is divided into short and e plans. The short-range plan considers prior year projects, those in progress, cts planned for FY 2007 through FY 2009. The long-range plan considers cheduled for FY 2010 through FY 2017.

objectives of the BWXT Pantex Excess Elimination and Disposition Program

duce Surveillance and Maintenance (S&M) costs. These are the annual costs perating, securing, maintaining, and inspecting buildings

duce the footprint of the plant. Footprint is measured in terms of the square t of buildings recorded in FIMS

duce hazards to workers, the environment, and the public.

duce DM

T Pantex Excess Facilities Program has effectively reduced the number of ildings and structures at Pantex Plant. The backlog of excess buildings has inated. Future demolition will be coordinated with new construction. Buildings ed to be demolished usually within one year after they are replaced by new on.

0 provides a summary of the Short-Range Demolition Plan and Table 4-11 a summary of the Long-Range Demolition Plan. Demolition associated with new construction is not included in the Table 4-10 and Table 4-11. A amount of DM will be eliminated through demolition, as well as a nominal annual surveillance and maintenance cost. Since many will be demolished in erm, only a minimal amount of maintenance is performed in order to maintain tions. Therefore, the savings to the annual operating budget is not large even significant amount of square footage will be reduced.

Table 4-10, Summary of the Short-Range Demolition Plan

Fiscal Year	Buildings To Be (or Were) Demolished	FIMS Reduction (Sq Ft)	S&M Cost Reduction ($/Yr)	DM Reduction ($)	Projected Funding ($)
2002*	1	128	1,000	NA	0
2003*	35	44,373	55,000	250,000	4,825,000
2004	21	59,572	41,000	650,000	5,348,000
2005	8	26,462	23,000	1,443,000	5,383,000
2006	16	49,681	33,000	10,781,000	5,550,000
2007	5	16,796	23,000	473,000	3,200,000
2008	1	18,382	33,000	444,000	5,000,000
2009	12	66,882	94,000	5,451,000	10,700,000
Total	**99**	**282,276**	**303,000**	**19,492,000**	**40,006,000**

*Ongoing Prior Year Projects Only. DM is based on DM value in CAIS as of September 30, 2006 and is in FY 2006 dollars. Facilities demolished prior to establishment of the DM baseline in FY 2003 are not included.

Table 4-11, Summary of the Long-Range Demolition Plan

Fiscal Year	Buildings To Be Demolished	FIMS Reduction (Sq Ft)	S&M Cost Reduction ($/Yr)	DM Reduction ($)	Projected Funding ($)
2010	0	0	0	0	0
2011	0	0	0	0	0
2012	0	0	0	0	0
2013	4	12,483	20,000	168,000	5,000,000
2014	0	0	0	0	0
2015	0	0	0	0	0
Total	**4**	**12,483**	**20,000**	**168,000**	**5,000,000**

Funds for D&D are provided primarily from three sources: FIRP, EM, and the RTBF program. FIRP funding is the primary source for the short-range demolition. Attachment E-1 does not take credit for future elimination of facilities where a potential funding source has not been identified. If planned projects are approved, an increase in the level of RTBF funding for D&D projects will be required. Future Line Item project requests include funding to perform D&D of facilities that will become excess after construction is complete.

4.1.3.1 Future Space Needs

New Construction – Line Item Projects

Line Item projects are underway to establish and modernize capabilities and infrastructure systems and enhance the overall safety and operational posture of the

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Complex 2030 initiatives. Pantex utilizes the Program to increase operational efficiency and effectiveness of facilities and systems in support of Stockpile Stewardship mission. New construction combined with footprint reduction provides for an overall reduction in NNSA's total ownership cost.

- **Infrastructure Planning** - Funds the preparation of preliminary and final design documents that are used for procurement, installation, and construction of Recapitalization projects. Infrastructure Planning also funds Other Project Costs (OPC) for the FIRP Utility Line Items. Pantex will develop four projects for Recapitalization/construction in FY 2007:

  - Electrical Upgrades in Electrical Task #2,
  - Roof Replacement for Building 12-64,
  - Building 11-7 Production Storage Facility Replacement, and
  - Applied Technology Facility.

- **Recapitalization** – Funds projects that restore the site infrastructure. The objective is to buy-down the legacy deferred maintenance at the site. The Program will provide funding for site support of two ongoing activities the NWC Roof Asset Management Program and Energy Saving Performance Contract. The NWC Roofing funding provided to Pantex is shown in Table 4-14.

Table 4-14 NWC Roofing Funding

Site	Prior Years	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total
Complex Total	26,400	10,000	10,000	10,000	10,000	10,000	10,000	10,000	$38,569
Pantex	4,379	1,441	*	*	*	*	*	*	$6,052

* NWC RAMP Program is performing a roof assessment in FY 2007. Site splits for FY 2008 and beyond will be determined after assessment.

- **Facility Disposition** – In FY 2007, FIRP will demolish 12-97, 9-3, 12-9A, 12-R-9A, and 12-14. This will reduce the plant footprint by approximately 16,796 square feet. An additional 13 buildings totaling 85,264 square feet are candidates for FIRP funded demolition in FY 2008 and FY 2009. With the anticipated receipt of additional funding, Building 12-9 is planned to start demolition in FY 2007 and complete in FY 2008. This is reflected in Attachment E. FIRP Facilities Disposition is currently scheduled to end in FY 2009. Pantex is proposing FIRP funding for demolition of 4 additional buildings in 2013.

- **FIRP Utility Line Items (ULI)** – Funds projects for utilities that have been the specific responsibility of an individual program. The ULI is managed within DOE Order 413.3. The Pantex FIRP Utility Line Item projects address the utility assets that support multi-program or site-wide activities. Currently, there are three LI projects in various stages of project execution: Electrical Distribution System Upgrade, Gas Main and Distribution System Upgrade, and High Pressure Fire

The costs (both RTBF and DSW) associated with AB Hazards Analysis and AB Controls implementation have more than doubled since FY 2001.

- **Fire Protection Program Improvements:** Since FY 2002, BWXT has implemented the following improvements to the Pantex Fire Department and associated fire programs as a result of a Baseline Needs Assessment (BNA) BWXT Pantex commissioned in January 2002. In FY 2005, the BNA was updated by PXSO and BWXT Pantex to identify resources needed to adequately protect Pantex. The updated BNA took into account engineered systems and the type of facilities being protected.

  - Increased staffing from 48 Full-Time Personnel (FTP) to 61 in the Fire Department in FY 2003, added 8 full time fire system technicians in FY 2004, and added 11 full time dispatch personnel in the Operations Center in FY 2006 in conjunction with a new fire alarm receiving system. The net effect of the changes since the FY 2002 BNA findings are: 13 new fire department personnel, 10 new dispatchers, and 8 new fire system technicians for a total of 31 new positions. This is an increase of 65% in this area of fire protection providing improved response capability, improved dispatching reliability, and improved system maintenance.

  - Increased Fire Department Support Team (volunteer) membership from 12 to 25 people.

  - New fire alarm receiving station was procured and installed in a remodeled Operations Center. This allowing consolidation of fire alarm monitoring with other Operations Center functions.

  - Converted 20 fire alarm accounts in high explosive facilities to the new alarm receiving station. Test procedures for an additional 35 nuclear facility accounts are complete and the accounts are anticipated to be transferred in FY 2007 in conjunction with annual fire protection surveillance maintenance.

  - Improved equipment including expanded high pressure fire loop, two new fire engines, one used aerial platform, one used heavy rescue vehicle, two new grass fire trucks (two more scheduled for delivery in FY 2007), one used compressed air foam tanker, two new ambulances, one new hose tender and 5000 feet of five inch fire hose, one used hazardous-material response vehicle, all new bunker gear, all new chemical/biological self-contained breathing apparatus (SCBA) conversion kits, one new portable compressed air system, and quick hose connections at all HPFL and domestic fire hydrants

Loop (design only). RTBF funding for the High Pressure Fire Loop construction is included in the ICPP. However, additional funding as shown in Attachment A-1 is required.

4.1.4.2 Readiness in Technical Base and Facilities (RTBF)

Demands on RTBF funding have never been higher. In addition to ensuring facility availability to support the mission, Authorization Basis requirements, fire protection requirements, increased maintenance surveillance, and utilities costs have impacted RTBF funding.

RTBF Increases in FY 2007

In addition to the requirement to stabilize DM growth at Pantex, other demands have been made on Operations of Facilities funding in the past few years. The following program areas have experienced growth in requirements with no growth in funding levels:

- **Safety and Health**

  - **Authorization Basis (AB):** The objective of the AB Upgrade Program has been to identify those activities required to achieve compliance with 10 CFR 830, subpart B. This has been accomplished by AB documentation for the site, facilities, and weapon programs. The NNSA approved Pantex Technical Safety Requirement Integrated Implementation Project (TSRIIP) has implemented TSR controls from 10 different Safety Analysis Report (SAR) documents across 10 different weapons programs in over 70 nuclear facilities. Implementation includes facility and equipment modification, procedure revisions, and operator training. TSR controls implementation and emerging requirements combined have significantly increased program cost.

    At the time BWXT Pantex assumed the Pantex Plant M&O contract, much of the work scope associated with AB processes had yet to be fully defined. Since that time improvements have been made in both quality and quantity of personnel as well as deliverables across the entire AB program. Site-wide and facility level SARs were successfully completed against a very aggressive schedule. Timely development and implementation of a comprehensive safety basis was made more difficult by emerging issues such as increased lightning protection requirements, enhanced electrostatic discharge protection, changes to combustible loading scenarios, and increased conservatism in hazard analysis and weapons response areas. The required level of detail associated with hazard analysis has increased many times. BWXT Pantex has continued to work the emerging issues as efficiently as possible to mitigate or eliminate negative impact to scheduled completion targets.

The costs (both RTBF and DSW) associated with AB Hazards Analysis and AB Controls implementation have more than doubled since FY 2001.

- **Fire Protection Program Improvements:** Since FY 2002, BWXT has implemented the following improvements to the Pantex Fire Department and associated fire programs as a result of a Baseline Needs Assessment (BNA) BWXT Pantex commissioned in January 2002. In FY 2005, the BNA was updated by PXSO and BWXT Pantex to identify resources needed to adequately protect Pantex. The updated BNA took into account engineered systems and the type of facilities being protected.

  - Increased staffing from 48 Full-Time Personnel (FTP) to 61 in the Fire Department in FY 2003, added 8 full time fire system technicians in FY 2004, and added 11 full time dispatch personnel in the Operations Center in FY 2006 in conjunction with a new fire alarm receiving system. The net effect of the changes since the FY 2002 BNA findings are: 13 new fire department personnel, 10 new dispatchers, and 8 new fire system technicians for a total of 31 new positions. This is an increase of 65% in this area of fire protection providing improved response capability, improved dispatching reliability, and improved system maintenance.

  - Increased Fire Department Support Team (volunteer) membership from 12 to 25 people.

  - New fire alarm receiving station was procured and installed in a remodeled Operations Center. This allowing consolidation of fire alarm monitoring with other Operations Center functions.

  - Converted 20 fire alarm accounts in high explosive facilities to the new alarm receiving station. Test procedures for an additional 35 nuclear facility accounts are complete and the accounts are anticipated to be transferred in FY 2007 in conjunction with annual fire protection surveillance maintenance.

  - Improved equipment including expanded high pressure fire loop, two new fire engines, one used aerial platform, one used heavy rescue vehicle, two new grass fire trucks (two more scheduled for delivery in FY 2007), one used compressed air foam tanker, two new ambulances, one new hose tender and 5000 feet of five inch fire hose, one used hazardous-material response vehicle, all new bunker gear, all new chemical/biological self-contained breathing apparatus (SCBA) conversion kits, one new portable compressed air system, and quick hose connections at all HPFL and domestic fire hydrants

- Enhanced training including more hands on training for fire fighters and combined training with local fire departments to improve effectiveness during integrated responses.

- Improved fire station systems including a new public address and alarm tone system, a *Fire Programs* computer system for electronic records management, and improved sleeping and exercise facilities.

- **Real Property Maintenance and Scientific/Process Capability Maintenance:** Many unplanned, but costly repairs or service requirements, occur on an annual basis and require maintenance resources to correct, often on overtime. For instance, two domestic water line breaks occurred within a 2-week period in January 2007, and Pantex is experiencing several process equipment failures. Although these events are not unexpected in the world of maintenance and utility management, there is no mechanism to adjust annual funding to accommodate the gradual increase in expenses over time.
- **Utilities and General Services:** Heavy snow and below normal freezing conditions have resulted in increased maintenance of utility lines and general site services (snow removal).

Impacts to Base Program by Funding Maintenance at Required Level

The FY 2007 maintenance budget is approximately $64 million, which is an adequate level to prevent DM growth in FY 2007. At the FY 2008 FYNSP target, base program funding for maintenance is $44 million. This assumes a significant cut in the ESH&Q and Facilities Management & Support sub-elements, which may be unrealistic. Total FY 2008 shortfall in base programs is $28.4 million, $9 million to sustain maintenance and $19 million required to meet base program needs in ESH&Q and Facilities Management & Support.

BWXT Pantex has concluded that an additional $21.8 million above required base program funding is needed to reduce the DM backlog not being addressed by FIRP and to prevent new growth in DM.

4.1.4.3 Growth of the Deferred Maintenance Backlog

The Deferred Maintenance backlog at the end of FY 2006 was $237 million, which is $61 million more than the $176 million DM baseline established in FY 2003. One reason for the growth is because not all facilities and infrastructure were physically inspected when the baseline was established in FY 2003 due to the short time frame given to establish the baseline. Pantex CAS inspections are performed on a 3-year cycle. FY 2006 was the 3rd year of that cycle, thus approximately one-third of the Plant's infrastructure was visually inspected for the first time. Another factor to the DM growth is the less than adequate RTBF funding for maintenance.

BWXT Pantex DM estimates for deficiencies identified during CAS inspections are derived from the 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 approved and proposed projects as listed in this TYSP within FYNSP targets. Required maintenance is estimated based on achieving a 6.4% FCI for Mission Critical and Mission Dependent, Not Critical facilities and infrastructure in FY 2008, trending to 5% in 2011, and stabilizing thereafter. The required maintenance for Not Mission Dependent facilities and infrastructure is based on maintaining a 15% FCI. All projections are based on applying the current funding level and escalating for future years to the maintenance program. The required maintenance estimate is discussed in detail in Section 4.1.5 Maintenance.

Due to RTBF funding limitations, there is currently no funding mechanism to address DM outside of the FY 2003 baseline, 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-4, which reflects the in-balance in the FCI for mission critical and mission dependant not critical facilities and infrastructure.

4.1.5 Maintenance

Overview

The Pantex Plant has the characteristics of several plants from a maintenance program perspective. These characteristics range from general industrial maintenance requirements to more demanding requirements for nuclear explosive operating facilities, and include special maintenance considerations for high explosive processing facilities and the interim storage of nuclear materials. This spectrum of facilities and their special hazards place various levels of requirements on the maintenance program with respect to training, conduct of operations, integrated safety, quality, configuration control, and job planning. Approximately 35,000 work orders are processed each year to maintain the operational status of Pantex. Maintenance backlog is approximately 25,000 hours, which is within industry standards for a facility similar to the Pantex Plant. A graded approach is used that places the greatest maintenance support on production facilities, ensuring that vital safety systems are operable and reliable.

The objective of the maintenance program is to provide safe and cost effective stewardship of the site's physical assets throughout the various phases of their life cycle so that the NNSA's mission can be assured. This includes measures to protect the workers, the public, and the environment. The maintenance management program is designed to preserve and restore facility systems and provide reasonable assurance that facility structures, systems, components (SSC), installed equipment, and other equipment important to safe and reliable plant operations and protection of the environment are capable of fulfilling their design and safety function. This is a significant safety function that supports work at the facility level. Periodic inspections of facility SSC and equipment are made to determine whether degradation or technical obsolescence threatens performance or safety.

The maintenance program at Pantex Plant is mature, stable, and staffed with experienced managers and craft personnel. Pantex has one maintenance management

program for the site coordinated by the Maintenance Division. The primary funding source is RTBF, with a portion of funding from DSW for maintenance of special tooling. All other equipment, including most programmatic equipment, mobile equipment, and some personal property, is maintained from the RTBF program.

Required Maintenance

Required maintenance is defined as the estimate of all costs required to perform maintenance activities for buildings, facility systems and equipment, site utility systems, and OSFs in the optimum fiscal year as determined by engineering, maintenance, life-cycle analysis, and vendor recommended maintenance schedules. Included are preventive and predictive maintenance, and any other maintenance activity for which the current fiscal year is the optimum year of accomplishment. When funding falls short of the required maintenance estimate, maintenance is deferred and a DM backlog develops. Projections of required maintenance are unconstrained. Approximately 50 percent of the classical maintenance budget is required for nuclear and high explosive surveillance and regulation driven work, and is not discretionary for continuing operations or facility sustainment efforts. Nevertheless, the program is closely monitored and frequently assessed to verify its compliance with requirements, and to seek opportunities to improve safety and operating efficiency.

A required maintenance funding level for Pantex was estimated based on the mathematical model discussed in Section 4.1.4.

The analysis yielded an estimate for required maintenance funding of $67 million in FY 2008 inclusive of general, predictive, preventive, and corrective maintenance, RIK, GPP, and Expense projects. The analysis was based on the funding required to preclude growth of the DM backlog for an FCI of 6.4% for mission critical and mission dependent not critical facilities and infrastructure, and target for not mission dependent facilities and infrastructure FCI of 15%. Table 4-15 shows the total additional amount of funding estimated to preclude growth of the DM backlog is $30.8 million in FY 2008 and escalated annually in addition to maintenance funding projected within the Pantex Operations of Facilities budget per FYNSP targets.

Y 2408 A I Funding for Maintenance, Capacity, and

ACTIVITY	CURRENT FUNDING AMOUNT (000)	% OF RPV	ADDITIONAL REQUIRED FUNDING (000)	% OF RPV
	$44,		$,	3
	$44,		$3 ,	

PRIME

The Maintenance organization implements maintenance activities through a balance of predictive, preventive and corrective maintenance, considering manufacturer's recommendations, good engineering practices, and operating experience. Preventive maintenance procedures include technical safety requirements and regulation driven inspection and testing. With the implementation of 10 CFR 851, *Worker Safety*, additional demands on the maintenance program can be expected to address the mitigation or elimination of identified hazards in a timely manner. Predictive maintenance is limited to oil analyses, visual inspections, and infrared evaluations of electrical system components. System engineers and other technical authorities provide input to preventive maintenance and planned maintenance requirements in order to increase selected systems' reliability and operability. While engineering analysis of systems is limited primarily to safety class and safety significant systems, there is increasing attention paid to data captured during Condition Assessment Surveys and the identification of projects, for work-off by maintenance crafts and through subcontracted work. The major challenge is to provide classical maintenance activities to achieve optimum service life of facilities and equipment, while meeting AB requirements and stabilizing the DM backlog in an environment of decreasing budget targets. Proactive steps are being taken to reduce DM, improve system reliability, and improve utilization of craft labor include:

- Establishment of a work management center to improve the evaluation, prioritization and disposition of incoming work requests.
- Development of defined work packages based on data in the CAIS database for work-off by craft resources or unit price maintenance contracts as funding becomes available.
- Use of PassPort© maintenance history for evaluation and revision of planned maintenance tasks to improve system reliability and application of maintenance resources.

Per DOE O 433.1 a *Maintenance Implementation Plan (MIP)* is required for the Pantex Plant nuclear facilities. The *MIP* is reviewed at least every 2 years with changes formally submitted to NNSA/PXSO for approval. The Pantex Plant MIP was updated in September 2006 and has been approved by NNSA/PXSO. It describes a mature maintenance management program that interfaces with safety, quality, and engineering programs. The 18 programmatic elements required by DOE O 433.1 are implemented, and their related objectives and criteria are documented and used for the ongoing evaluation of the maintenance management program.

4.1.6 Identification of Replacement-In-Kind (RIK) Requirements

RIK is defined as the replacement of building subsystems, which include roofs, electrical distribution equipment, HVAC equipment, building control systems, paving, fire protection apparatus, etc. These subsystems require replacement at the end of their optimum service life, but may place undue strain on an annual maintenance budget; i.e., cost in excess of $500,000.

The RIK projects for Pantex were forecast from CAIS based on analyzing major subsystems that will reach the end of their optimum service life during FY 2007 and beyond. Attachment F-5 contains a list of potential RIK projects. Some approved and proposed RTBF and FIRP projects could be classified as RIK. Refer to Attachment A and K.

4.1.7 Utilities

Municipal utility service is not available to Pantex; therefore, site generated utility services must have a high degree of operability and reliability and must have redundancies built in to sustain operations. Pantex utility systems are well managed and on average are available greater than 99.5% of the time annually.

4.1.7.1 Description

Pantex utility operations meet federal, state, and local permit and other regulatory requirements. The following services are provided:

- Electrical distribution system (approximately 33 miles) supporting all Plant electrical requirements including backup power generation to certain areas of the Plant. The Plant procures electrical power from a public utility, which provides two 115 kilovolt power feeds.
- Potable water system that includes operation of four water wells and distribution that provides water for domestic, industrial, and fire protection requirements. The potable water system includes over 30 miles of main line distribution piping.
- Domestic wastewater (sewage) collection and treatment with over 5 miles of main collection lines and 9 miles of branch piping.
- Natural gas distribution throughout the Plant with over 10 miles of main lines and 7 miles of branch piping. Natural gas is procured from a public utility.
- Steam plant operations consisting of four boilers and associated support equipment capable of producing 120,000 pounds per hour and delivering 120 to 150 pounds per square inch gauge (psig) of steam for Plant operations through steam lines. Condensate is returned through a condensate return system. There are approximately 9 miles of overhead steam and condensate return lines.
- Zone 12 compressed air, generated by three main compressors and one diesel driven auxiliary unit, provides 110-psig compressed air to production facilities. Zone 11 compressed air, generated by two main compressors and one diesel driven auxiliary unit, provides 110-psig compressed air to HE development facilities.
- Equipment room operations including operation of HVAC equipment; monitoring of equipment status including some safety systems; and general cleaning and filter changes for HVAC equipment.

Table 4-16 provides the utility capacities and usage rates for Pantex. The table provides the total capacity available for each system, and the actual usage in FY 2006.

Table 4-16, Utility Capacities and Usage

Utility System	Annual Capacity	Actual Usage in FY 2006
Electricity (megawatt-hours)	400,000	70,029
Natural Gas (million cubic feet)	10,220	367
Steam (million pounds)	1,051	264
Water (million gallons)	525	131
Wastewater Treatment (million gallons)	204	84
Compressed Air (million cubic feet) Zone 11 Zone 12	 350 650	 140 311

The site's utility systems are in operating condition; however, some of the components within the systems are past their life expectancy. Both the water distribution system and natural gas system contain lines and valves that were installed in 1942 and represent a significant amount of deferred maintenance in the backlog. Proposed Line Item projects to upgrade these systems are contained in this TYSP. The North Electrical Substation Upgrade replaced antiquated and inefficient transformers and switchgear and increased the capacity from 210,480 to 400,000 megawatt-hours.

(b)(2)High

Utility system capacities are capable of handling present and future loads; however, most of the mainline utility systems are reaching the end of their service life. Twelve major utility upgrade projects are listed in Attachment A.

4.1.8 Energy Savings

4.1.8.1 Energy Savings Performance Contract (ESPC)

DOE's Federal Energy Management Program helps government agencies use ESPC to finance many kinds of energy efficiency projects. Benefits of ESPC are:

- New equipment
- No up-front costs
- Energy and water savings
- Lower utility bills
- Improved reliability and load management
- Better air quality.

ESPC II, a second ESPC delivery order is underway at Pantex. ESPC Phase II implementation cost is $19.5 million and will cover the remaining 85 percent of the site's square footage. The guaranteed savings are $52.8 million over 19 years. The savings include 17,654,125 kilowatt-hour of electricity and 163,613 million BTU of natural gas per year. Annual cost savings are projected to be approximately $2 million. The main focus of Phase II is a new energy management system, upgraded lighting, upgraded dehumidifiers in Zone 12 South, a new chilled water closed loop for the Zone 12 South Material Access Area, and upgraded steam and condensate return systems to reduce losses and increase efficiency. If there are facilities identified for potential demolition and the confidence that these facilities will be demolished is low, the upgrade will be evaluated on a case by case. The ESPC Phase II project will also reduce DM associated with those systems and equipment being replaced.

ESPC Phase II construction started in FY 2006. Construction is scheduled to complete in FY 2009.

4.1.8.2 Excellence in Environmental and Energy Management

Recycling electronics, conserving energy and greening the site's cafeterias are all award-winning activities at the Pantex Plant. The NNSA Pollution Prevention Awards Program recently honored BWXT Pantex with three NNSA Environmental Stewardship Awards and one Best-In-Class award. These programs are to be submitted for the White House Closing-the-Circle competition.

BWXT Pantex was recognized in four areas: Electronics Stewardship, Recycling, Environmental Management System (EMS) and Waste Minimization/Pollution Prevention.

- Electronic Stewardship - approximately 700 unclassified used computers are eligible for the recycling program to school. Before shipment off site, each is stripped of its hard drive and memory devices. The NNSA selected this as a Best-In-Class winner.

:ycling - the Pantex Pollution Prevention Team proactively worked to identify ıropriate disposition paths for old wooden utility poles and compressed gas nders.

ergy management and resource conservation are a significant part of the vironmental Management System at Pantex. In FY 2006, Pantex made an raordinary effort to conserve energy as an EMS objective. The goal set by ISA was to achieve a minimum of 10 percent reduction in energy use as mpared to energy use in FY 2004. BWXT Pantex created a special energy nservation task force to manage the project. Because of work by the task force, ıntex exceeded the NNSA's goals. Pantex reduced energy consumption by .2 percent for electricity and 13.3 percent for natural gas. This resulted in nservation of more than eight million watt hours and 51 million cubic feet of ıtural gas when compared to energy use in FY 2004. As of September 2006, antex saved approximately $484,000 on electricity and $395,000 for natural gas.

'orking through the Environmental Management System, Pantex converted the afeterias to the use of reusable dishware and flatware from styrofoam dishware nd plastic cutlery, resulting in an annual waste reduction of almost 50 metric tons nd an annual cost savings of more than $200,000. In addition to the waste eduction project, the cafeterias collect cardboard, metal food cans, food waste, luminum cans, and plastic bottles for recycling.

Production Readiness/Plant Capacity

will perform all WR assembly, surveillance, dismantlement, and High Explosive tion for RRW. Information provided is based on the planning guidance provided SA during the feasibility study. Facility and infrastructure needs are based on this ce and current inspection and diagnostic requirements for similar weapon ıs.

RW WR FPU is scheduled for FY 2012. Activities are scheduled to occur from FY thru FY 2024, they include: SS-21 process development (procedures, tooling, s, training, and facility preparation), WR assembly, new material sembly/testing/assembly, Joint Test Assembly (JTA) production, and High sive production (formulation, synthesis, pressing, and machining). RRW WR nbly activities will require four operations bays, Vacuum Chamber, PAL/CAP, graphy, and Mass Properties facilities.

illance activities are scheduled to occur from FY 2014 thru FY 2050, they include: Disassembly & Inspection (D&I), Testbed Assembly and Disassembly, and High ısive testing. RRW surveillance activities will require one operation bay, PAL/CAP, ɔgraphy, and Mass Properties facilities. Additional diagnostic capabilities may be red once specific surveillance requirements are developed by the design agencies.

Dismantlement activities are scheduled to occur from FY 2042 thru FY 2052, they include: WR disassembly and component disposition. RRW dismantlement activities will require three operations bays, PAL/CAP and Radiography.

4.1.9.1 Production Personnel

Figure 4-11 depicts the number of production technicians required to process the weapons workload identified in Section 3.1.7 Workload. The number of Production technicians needed to accomplish the workload increases in FY 2008 and again in 2013 because of LEP maintenance and RRW. Beginning in FY 2013, a significant increase in the required number of production technicians is forecast for the remaining years in the ten year planning horizon.

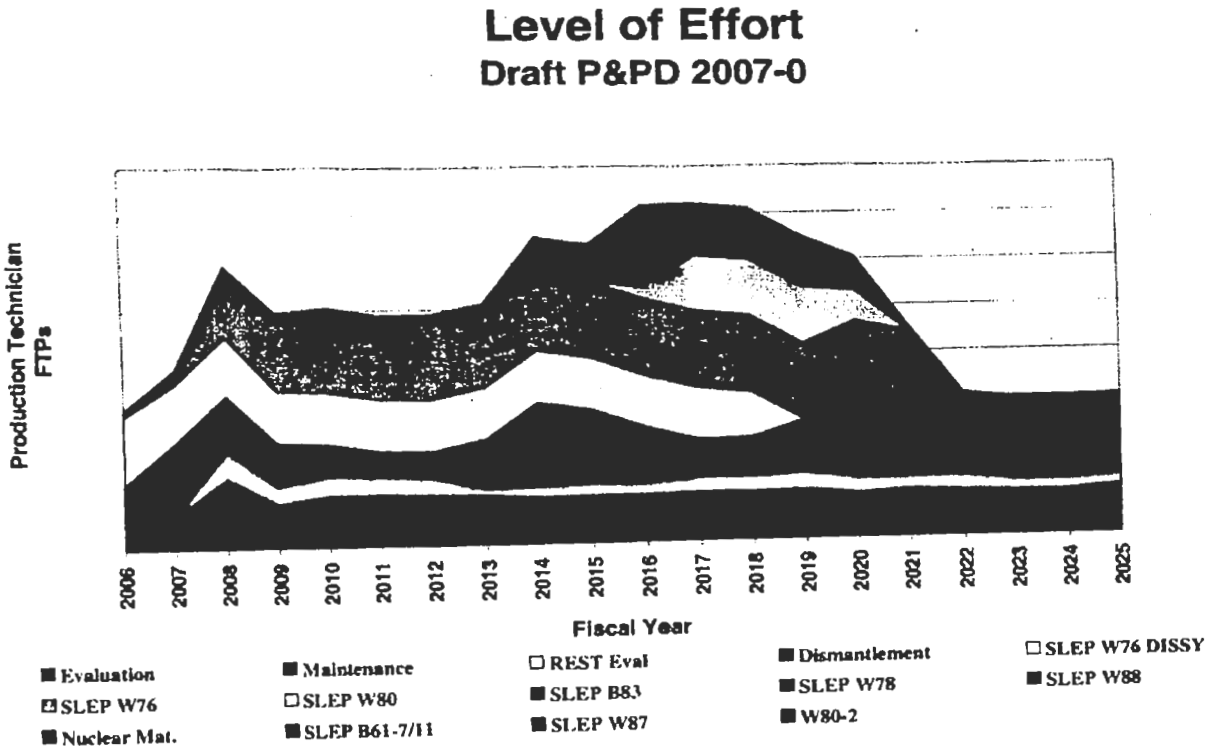

Figure 4-11 Direct Labor Required for Workload Draft P&PD 2007-0

4.1.9.2 Production Facilities and Equipment Capacity

A production readiness analysis was performed utilizing the P&PD 2005-0 workload and identified potential shortfalls and decision dates impacting critical facilities and equipment.

Mass Properties Measurement

Figure 4-12 depicts the number of bays needed to support the workload (based upon current process definition).

(b)(2)High

Figure 4-12, Mass Properties Bay Requirements, Draft P&PD 2007-0

(b)(2)High

(b)(2)High

Linac Bays

(b)(2)High

SNM Component Requalification

NNSA assigned Pantex to develop the capability to process pits through recertification and/or requalification. The process to recertify / requalify existing SNM components is a more desirable alternative than manufacturing new components. It is environmentally prudent since it generates lower levels of radioactive waste and it is more economical since it requires fewer facilities and less processing than producing new pits. The number of pits proposed for recertification/ requalification will complement the approximately 20 new pits per year that will be manufactured by LANL.

The requalification process is an extensive series of operations, evaluations, and inspections. Although requalification is more extensive than recertification (a series of operations, evaluations, and inspections that validate a component is still within its original design life), the processes will not generate transuranic (TRU) waste under normal conditions. Requalification will be performed on weapon components that have exceeded their original design life. Requalification will characterize the normal population, refurbish components if required, and reaccept them for reuse in war reserve weapons. Requalification will be required for pits that flow through the stockpile evaluation and rebuild programs and those that are required to support the LEP workload.

The Stockpile Stewardship and Management Program established a baseline requirement to recertify/requalify approximately 350 pits per year. These pits will be used in war reserve weapons in the enduring stockpile. To accomplish this work, an existing facility is being modified. Approval of Mission Need (CD-0) was received July 2001 and approval of the preliminary baseline was received September 2002 (CD-1) to modify Building (b)(2)Highfor SNM Component Requalification operations. The project took Beneficial Occupancy in December 2004 and is in the process of installing and starting up process equipment to support the LEP workload.

Production Bays

(b)(2)High

(b)(2)High

(b)(2)High

(b)(2)High

HE Pressing

Figure 4-16 represents the projected main charge HE pressings that need to be conducted at Pantex to support the expected weapons workload based on programmatic scheduling activities. These pressings consist of weapons rebuilds, JTAs, LEP, training and development needs and do not include RRW.

To address the increasing surveillance initiatives and assignments, BWXT Pantex proposed the CEF as a Line Item project. The facility will increase capacity and capability for non-destructive evaluation testing and provide space for the deployment of new technologies required to perform new and additional surveillance and requalification or reacceptance of weapons and weapon components. This seven bay facility will consist of the following functional areas: a computed tomography bay, a Linac bay, a mass properties bay, a CSA evaluation bay, a staging bay that will also be used for anomaly evaluation as required, a small lot build bay, and an advanced concepts initiative/diagnostics development bay.

A request to NNSA for approval of mission need (CD-0) was made in September 2000 for an FY 2004 Line Item project to construct the CEF. The CEF project is included in the ICPP as an FY 2005 Line Item project. There is concern that delaying this project will impact the ability to support the need date of FY 2016 for the LEP workload and requirements. (Refer to Table 4-17 for the required dates for the remaining project management critical decisions associated with this project.)

Operational Flexibility

BWXT Pantex is implementing strategies to optimize operational flexibility in order to be able to respond to any workload scenario by redirecting plant resources to maximize the throughput. The resources required to increase production capacities or to "surge" any given weapon program due to an operational necessity consist of three general types: personnel, startup engineering, and facilities. Lead times for these categories are typically:

- Personnel 12 to 18 Months
- Startup Engineering 12 to 18 Months
- Facilities Months to 8 Years.

Additional personnel required to increase throughput capacities are primarily Production Technicians, Quality Assurance Technicians, and Material Handlers. Production personnel can be hired, cleared, and trained in approximately twelve to eighteen months. Personnel can be redirected from other programs and trained to perform work on another program to reach temporary surge level production rates.

Startup engineering includes process development, hazards analysis, tooling design and fabrication, etc. Completing the engineering tasks to start a new production process requires approximately 6 to 12 months. Assuming the tooling design was complete, a lead-time of approximately four to six months is required to reach surge-level production rates on any weapon program already in production.

Facility modification requires between 6 to 18 months for minor modifications and 7 to 8 years for major renovations or new construction in accordance with the process requirements of DOE Order 413.3, *Program and Project Management for the Acquisition*

of Capital Assets. It is possible to expedite the process to a limited extent; however, Line Item projects typically require seven to eight years to bring to fruition.

BWXT Pantex plans to position the Pantex Plant so that any weapon system can be worked in any cell or bay, significantly increasing operational flexibility. When this effort is complete, Pantex could then support any weapon process startup within 36 months.

Decision Dates Required to Support Planned Increases In Production Capacity and Capabilities

To support workload increases or new capabilities, any additional resources must be available in a sufficient time frame to ensure that the required preparatory work can be accomplished on time. Table 4-17 provides a summary of the decision dates associated with the ten-year weapons work and the associated lead-time so the resources are available when required. These dates are based on approved baseline schedules for the listed projects.

Table 4-17, Decision Dates to Support Planned Increases In Production

FY Needed	Longest Lead Resource Needed	Lead Time (Years)	Decision Date (FY)	Workload Driver
	Line Item Projects [1]	7 to 8 [2]		
2006	SNM Component Requalification		CD-4 2007	
2008	(b)(2)High Production Cells Upgrade (5) (Assumes Phase II Construction FY 2009)		CD-4 2010	
2008	High Explosives Pressing		CD-3 2009 CD-4 2013	(b)(2)High
2016	Component Evaluation Facility		CD-0 2004 CD-1 2008 CD-2 2009 CD-3 2011 CD-4 2016	

[1] CD-0 Approve mission need
CD-1 Approve preliminary baseline
CD-2 Approve performance baseline
CD-3 Approve construction
CD-4 Approve operations

[2] Lead Time includes the preplanning activities prior to CD-0 for Line Item projects

(b)(2)High

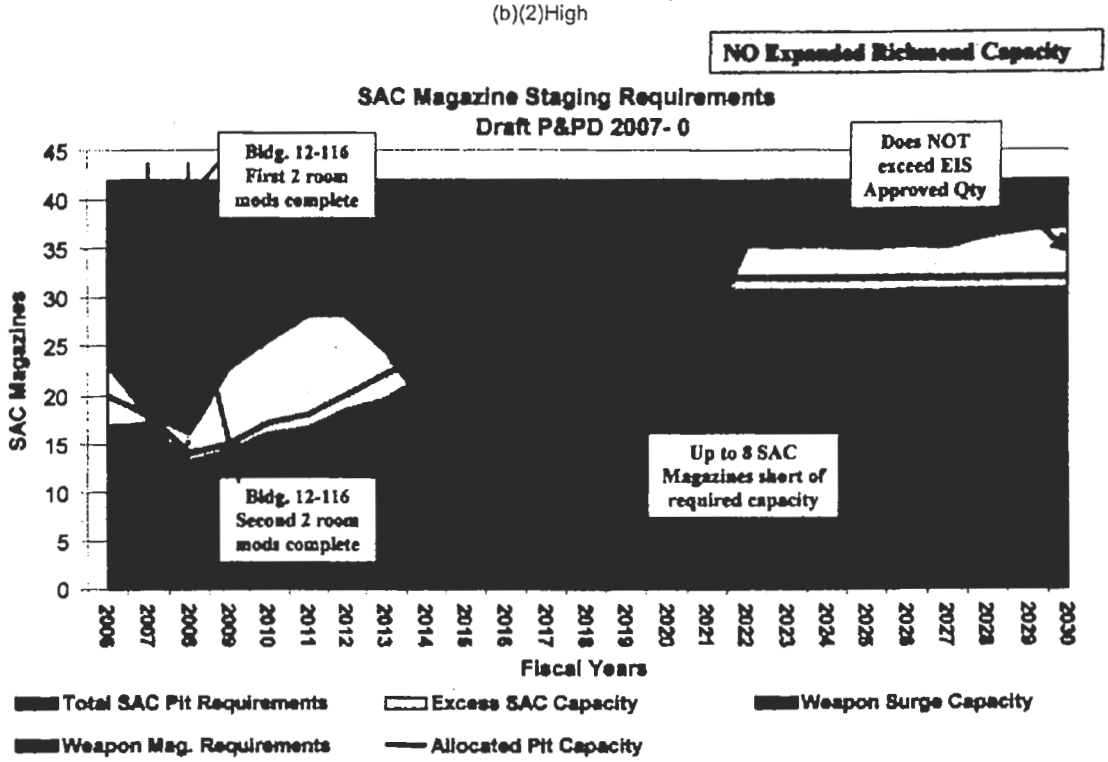

Figure 4-18, SAC Requirements Draft P&PD 2007

ES&H/Regulatory Issues

National Environmental Policy Act (NEPA) Program

BWXT Pantex does not anticipate that any of the projects included in this TYSP will require an EIS level of NEPA documentation, nor impact the site-wide EIS. However, some of the projects identified in this TYSP (Attachment A and K) may require an EA (Environmental Analysis), primarily those projects that involve the construction of new facilities. NEPA evaluation for all projects will identify and mitigate environmental compliance issues such as permitting, water, air, natural resources, and cultural resources before these projects are initiated.

Authorization Basis (AB) Upgrade Program

The objective of the AB Upgrade Program has been to identify those activities required to achieve compliance with 10 CFR 830, subpart B. This has been accomplished by AB documentation for the site, facilities, and weapon programs. The NNSA approved Pantex Technical Safety Requirement Integrated Implementation Project (TSRIIP) has implemented approximately 200 TSR controls from 10 different SAR documents across 10 different weapons programs in over 70 nuclear facilities. Implementation includes facility and equipment modification, procedure revisions, and operator training. TSR controls implementation and emerging requirements combined have significantly increased program cost. The costs (both RTBF and DSW) associated with AB Hazards Analysis and AB Controls implementation have more than doubled since FY 2001.

As reported in the FY 2005 TYSP additional funding above existing Operations of Facilities targets would be needed to support emerging AB requirements. Additional FY 2005 and FY 2006 requirements were paid for out of Congressional plus up.

Funding that must be redirected to support ongoing AB development and maintenance reduces the amount of site funding available to work off deferred maintenance and improve facility condition indices.

The NNSA has also recognized that some controls related to the seismic qualification of facilities and equipment will have to be implemented in a separate project. The scope and cost of the Seismic Project is currently being evaluated. This project is a requirement over target.

Pantex Worker Safety & Health Plan 10 CFR 851

During FY 2006 Pantex expects to come into full compliance with the 10 CFR 851 requirement for a Worker Safety & Health Plan that includes almost all who perform work at Pantex for more than 30 days in a year. While guidance remains fluid and continues to evolve, Pantex has evaluated multiple options and is prepared to execute any of them pending receipt of final NNSA direction, guidance and additional funding if needed. Most increases in cost will be accrued to affected subcontracts.

Environmental Management System (EMS)

The Pantex EMS is a major component of the site's Integrated Safety Management System (ISMS). The system provides for evaluation of all work processes for safety hazards to personnel, the community and the natural environment prior to work initiation. An ISM/EMS requires anyone working within the boundaries of the plant to be aware of safety and environmental issues. Personnel are responsible to individually seek improvements for their own safety and for the safety of the environment within which they work. The system requires continual evaluation and improvement while strengthening environmental compliance, pollution prevention and the achievement of goals for a safer more productive workforce. The Pantex EMS is modeled on the internationally recognized standard from the International Organization for Standardization's ISO 14001, *Environmental Management Systems*.

The system has been recognized within the DOE/NNSA Complex. Pantex is a member of the Clean Texas, Cleaner World program sponsored by the Texas Commission on Environmental Quality. The program recognizes entities within the State for management systems that promote improvement impacts related to work processes.

Quality Assurance Program

BWXT Pantex has developed and implemented a comprehensive Quality Management System, which implements the quality requirements promulgated by the NNSA and nationally recognized quality standards as well as BWXT Pantex management expectations. The Quality & Performance Assurance Division is responsible for maintaining the basic framework of the quality management system, its driving requirements, and the Pantex quality policy. The program is described in Contract Document (CD)-00079, *Quality Assurance Program Description*, and is not limited to but includes the following:

Conduct and submit a Management Self Assessment of the Pantex Quality Management Program.

Implement and maintain infrastructure and processes to establish the basis for confidence in the quality of weapon products and processes.

Assure all contractual requirements are adequately flowed into Plant implementing documents using the Business Requirements And Instruction Network (BRAIN).

Direct the development and implementation of the Quality Management Program and Plans.

Manage the Issues Management Program, Operating Experience Program/Lessons Learned, and maintains a corrective action program to identify, report, track, and bring to closure conditions adverse to quality.

Establish and maintain an organizational performance measurement system linked to key business drivers; measures past, present, and future performance; and is based on

the needs of customers, managers, and other key stakeholders.

Maintain an operational readiness review program and conduct readiness reviews to confirm that hazardous operations or facilities may be started or restarted safely, using trained and qualified personnel.

Establish and maintain a Contractor Assurance Program that monitors effectiveness of the site-wide process for self-assessments conducted by respective managers.

Establish a Supplier Quality Program that oversees the acquisition and acceptance processes to assure materials accepted for use in product applications conform to specifications and requirements.

Establish and maintain the Standards and Calibration Program that provides National Institute of Standards and Technology traceable calibrations to support the quality of Nuclear Weapons and General Operations activities at Pantex.

Establish and maintain a Software Quality Assurance compliance program.

BWXT Pantex will continue to focus significant management attention on strengthening all aspects of the Pantex Quality Management System. This will assure that BWXT Pantex will attain its quality vision.

Workforce Profile

BWXT Pantex, using the following NNSA critical skills definitions, Figure 4-19, has identified 1,246 critical skills positions with direct input form line managers.

CRITICAL SKILL DEFINITION

MISSION ESSENTIAL - SKILL IS REQUIRED TO MAINTAIN THE NUCLEAR DETERRENT CAPABILITY AND SUPPORT A SPECIFIC, TANGIBLE ASPECT OF THE STOCKPILE STEWARDSHIP PROGRAM

AND MEETS AT LEAST ONE OF THE FOLLOWING:

- **EXTENDED TIME TO ACQUIRE** - SKILL REQUIRES ON-THE-JOB TRAINING/EXPERIENCE (2 TO 3 YEARS OR MORE)
- **COMPLEXITY OF SKILL** - SKILL IS SCIENTIFIC, TECHNICAL, OR ENGINEERING REQUIRED BY MISSION
- **UNIQUENESS OF SKILL** - SKILL IS UNIQUE TO THE MISSION OF THE NWC.

Figure 4-19, Critical Skill Definition

BWXT Pantex has analyzed all positions to ensure they are properly designated as critical or non-critical, and that they are categorized appropriately relative to the Common Occupational Classification System.

- Implementation of a management development curriculum designed to enhance hands-on managerial skills that promote a high achievement environment conducive to retention of critical skill personnel.
- Partnering with universities to promote student work programs and recruit new graduates and alumni.
- BWXT Pantex continues to work with Amarillo College, Texas Tech and West Texas A & M universities to bring critical skill degree programs to the Pantex area.
- Recruiting candidates within the NWC to retain skills that have been affected by downsizing.
- Continuation of student work programs for interns and Co-ops that focus on promoting Pantex relationships with universities and students in fields of study that support future weapons missions.
- Providing an attractive and competitive total compensation/benefits package plus variable pay options such as lump merit increases, signing and retention bonuses, and increased base salaries in specialty areas.
- Challenging work which enhances BWXT Pantex' ability to attract and retain individuals in critical skill areas.
- Significant recognition and awards programs to motivate and reward superior performance.
- Implementing multi-media knowledge preservation tools to sustain HE manufacturing competency and to archive weapons processes.
- In-house education and educational assistance programs to promote continuous personal development and improvement of the Plant's knowledge base such as locally delivered Masters of Business Administration (MBA) and Masters of Engineering degrees.

These programs and activities are reviewed regularly and refined as necessary to ensure appropriate critical skills resources are available to meet the Plant's mission.

4.2 Safeguards & Security (S&S)

The Safeguards & Security mission at Pantex includes the protection of NNSA interests from theft, diversion, sabotage, unauthorized access, loss or compromise and other hostile or negligent acts that may cause unacceptable adverse impacts to national security, the environment, or the health and safety of employees and the public. As a result of the terrorist attacks on 9/11/01, Pantex will continue to operate at a heightened security level as directed by NNSA and meet requirements identified in the approved Site Safeguards & Security Plan (SSSP). The 03 DBT has been implemented and

validated, and implementation of the 05 DBT has begun and is on schedule with the approved implementation plan.

4.2.1 Security Infrastructure

Security infrastructure requirements as a result of the 05 DBT have been identified in the approved 05 DBT Implementation Plan. Pantex has received funding for three of the four infrastructure projects identified in the Plan and the projects are underway. Pantex anticipates receiving funding for the remaining 05 DBT related infrastructure project in FY 2008.

In addition to the infrastructure requirements identified as a part of DBT implementation, Pantex has identified several Expense, GPP and Line Item projects required to support continued implementation of the new security orders, and lifecycle upgrades & enhancements (Attachments A-1, A-2, A-6(a) & A-6(b), K). Pantex will continue to identify upgrades and/or enhancements required to maintain a level of systems effectiveness necessary to protect the site in accordance with the approved Site Safeguards & Security Plan (SSSP).

All infrastructure requirements have and will continue to be clearly identified and prioritized in NA-70 budget submissions.

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5.3 F&I Cost Projection Spreadsheets

Attachments A-1 through A-6 present cost projections for Line Item projects in the current ICPP, proposed Line Item projects, RTBF/Operations of Facilities funded projects, S&S projects and FIRP projects. A brief description of all projects is provided in Attachment I, Construction Project Data Sheets, and Attachment J. These attachments were developed consistent with the FYNSP planning targets. The cost projections shown in Attachment A-1 reflect funding profiles reflected in the November 7, 2006 ICPP, or based on the FY 2008 Construction Project Data Sheets as noted. The following changes to supported projects have been included in Attachment A-2:

- Building 12-44 Production Cells Upgrade revised to indicate additional funding to complete Phase II
- HE Pressing Facility represents a revised estimate and approved CD-2
- CEF represents a revised estimate based on the October 06 Conceptual Design Report
- Sewer Equipment Refurbishment represents a delay of one year
- High Pressure Fire Loop – Zone 11 represents a revised estimate
- Water Secondary Distribution Upgrade represents a revised estimate and shows a start date two years earlier.
- 12-044 Cell 1 and 8 projects were combined into a single project.

Attachment K is provided for informational purposes and represents the backlog of unfunded GPP, expense, and capital equipment projects at Pantex. Some of the key projects in the backlog include the replacement of fire alarm panels, the replacement of the high pressure fire loop piping to production and production support buildings, such as Buildings (b)(2)High upgrades to existing facility foundations, and security capital improvements.

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Attachment A-1
Facilities and Infrastructure Cost Projection Spreadsheet
Line Item Projects for Pantex Plant
($000s)

A. Readiness in Technical Base and Facilities (RTBF) Line Items																							
1	SNM Component Requalification Facility[1]	03-D-123		MC	DSW			OPC	2,627	1,601	1,026												
								PE&D	1,089	1,089													
								LI	16,643	16,643													
								Total (OPC)															
2	Production Cells Upgrades (5 cells)[2]	04-D-126		MC	DSW	440		OPC	871	371	200	300											
								PE&D	1,410	1,410													
								LI	19,965	12,465	7,500												
								Total (OPC)															
3	Production Bays Upgrades[3]							OPC															
								PE&D															
								LI															
								Total (OPC)															
4	HE Pressing Facility[4]	04-D-103-02		MC	RC		+52,718	OPC	4,292	1,141	158	200	150	160	440	1,800	243						
								PE&D	8,146	2,688	1,980	3,478											
								LI	68,140				25,300	42,840									
								Total (OPC)															
5	High Pressure Fire Loop - Zone 12 South MAA[5]	08-D-801	P-DM-650-02	MD	RTBF	562		OPC	638			106	178	354									
								PE&D	-														
								LI	31,910				7,000	24,910									
								Total (OPC)															
6	Component Evaluation Facility[6]	05-D-140-5		MC	DSW		+75,600	OPC	6,880	1,880	400	400	400	400	400	400	2,600						
								PE&D	18,035	1,984	2,500	6,551	7,000										
								LI	105,482					30,000	45,482	30,000							
								Total (OPC)															
7	Bunker[7]	05-D-140-5						OPC	-														
								PE&D															
								LI	-														
								Total (OPC)															
RTBF Subtotal									286,128	41,272	13,764	11,035	40,028	98,664	46,322	32,200	2,843						

[1] SNMCRF - Totals based on approved BCP-05.
[2] 12-44 - Funding Profile based on November 7, 2006 ICPP and includes reprogrammed funding. OPC funded by Campaigns Program. The latest required proposed funding level for Phase II is shown on Attachment A-2.
[3] 12-64 - Project cancelled with the approval of BCP-17 and CD-4 November 14, 2006.
[4] HE Pressing - Funding Profile based on FY 2008 Construction Project Data Sheet. OPC funded by Campaigns Program.
[5] HPFL Zone 12 South MAA - Funding Profile based on FY 2008 Construction Project Data Sheet. Project supported by FIRP funding through design.
[6] CEF - Funding Profile based on the ICPP dated November 7, 2006. OPC funded by Campaigns Program. The latest required proposed funding level is shown on Attachment A-2.
[7] Bunker - The November 7, 2006 ICPP did not include funding for this project.

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[redacted]

Attachment A-2
Facilities and Infrastructure Cost Projection Spreadsheet
Proposed Line Item Projects for Pantex Plant
($000s)

Priority (1)	Project Name (2)	Project Number (3)	Defense Environmental Restoration (4)	Mission Dependency (5)	Mission Construction Program (6)	Defense Environmental Restoration (7)	GPP Added or Modified (8)	Funding Type (9)	Total (10)	FY 2007 (11)	FY 2008 (12)	FY 2009 (13)	FY 2010 (14)	FY 2011 (15)	FY 2012 (16)	FY 2013 (17)	FY 2014 (18)	FY 2015 (19)	FY 2016 (20)	FY 2017 (21)
C. Safeguards & Security (S&S) Line Items																				
1	CCTV Enhancement Project			MD	DNS			OPC	8,600		500	1,700	1,000	1,000	500	1,200	1,200	1,500		
								PE&D	5,700				3,300	2,400						
								LI	45,300							25,100	20,200			
								Total (TPC)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	Security PIDAS Upgrade[3]			MD	DNS			OPC	3,046	100	700	500	300	200	100	100	200	200	200	146
								PE&D	17,470			1,500	6,000	9,970						
								LI	129,470							40,000	50,000	39,470		
								Total (TPC)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	Protective Force Facilities Upgrade and Enhancement Project			MD	DNS		+24,120	OPC	9,500			300	2,000	800	800	400	1,600	1,600	2,000	
								PE&D	11,600					7,500	4,100					
								LI	93,100								50,000	43,100		
								Total (TPC)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	Protective Force Portal Upgrade and Enhancement Project[4]			MD	DNS		+4,965	OPC	10,100			300	1,600	1,000	1,000	850	1,200	1,750	2,400	
								PE&D	7,100					4,100	3,000					
								LI	71,000								43,000	28,000		
								Total (TPC)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	Protective Force Live Fire Ranges Upgrade and Enhancement Project			MD	DNS		+3,600	OPC	5,800			400	1,000	700	400	600	1,100	1,600		
								PE&D	3,450					3,450						
								LI	27,250							16,400	10,850			
								Total (TPC)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Safeguards & Security Line Items Subtotal									448,486	100	1,200	4,700	15,200	31,120	9,900	84,650	179,350	117,220	4,600	146

NOTE: For Security Line Items 1-5 OPC, PE&D, and LI will be funded by Safeguards & Security.

[3] PIDAS - Proposed funding level required. The ICPP currently includes partial funding requirements for PE&D.

[4] Project scope has recently changed. Estimate based on consolidation of previous Line Item plus previous GPP projects.

Attachment A-2
Facilities and Infrastructure Cost Projection Spreadsheet
Proposed Line Item Projects for Pantex Plant
($000s)

Priority (1)	Project Name (2)	Project Number (3)	Deferred Maintenance Reduction (4)	Mission Dependency (5)	Median Depreciation Program (6)	Deferred Maintenance Reduction (7)	GSF Added or Eliminated (8)	Funding Type (9)	Total (10)	FY 2007 (11)	FY 2008 (12)	FY 2009 (13)	FY 2010 (14)	FY 2011 (15)	FY 2012 (16)	FY 2013 (17)	FY 2014 (18)	FY 2015 (19)	FY 2016 (20)	FY 2017 (21)
D. Other Defense Programs Line Items DSW																				
1	NDE/Gas Laboratory (DSW) [5]			MC	DSW		+48,000	OPC	12,000				500	2,500	800	800	500	700	2,000	4,200
								PE&D	7,800						4,200	3,600				
								LI	84,300									25,000	59,300	
								Total (OPC)	[illegible]				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Other Defense Programs Line Items Subtotal									104,100	-	-	-	500	2,500	5,000	4,400	500	25,700	61,300	4,200
F. Non-NNSA Line Items Materials Disposition																				
1	Zone 4 Richmond Magazine Upgrade (6)			MD	DSW/FMD			OPC	6,590		300	1,300	500	500	400	1,000	1,500	1,090		
								PE&D	11,150				7,000	4,150						
								LI	52,560							35,000	17,560			
								Total (OPC)	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
Non-NNSA Line Items Materials Disposition Subtotal									70,300	-	300	1,300	7,500	4,650	400	36,000	19,060	1,090	-	-
G. Non-NNSA Line Items Third Party Financing																				
1	Administrative Support Facility [6]			MD	RTBF		+100,000	OPC	10,000			1,000	1,000	2,000	2,000	1,000	1,500	1,500		
								PE&D	9,000			9,000								
								LI	79,000					32,000	20,000		27,000			
								Total (OPC)	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
Non-NNSA Line Items Third Party Financing									98,000	-	-	10,000	1,000	34,000	22,000	1,000	28,500	1,500	-	-
Total Costs for All NNSA Site Line Items									1,568,029	8,351	15,600	54,115	55,533	119,230	205,895	295,408	365,623	245,838	158,250	15,096

[5] For Other Defense Programs Line Item NDE/Gas Laboratory, OPC, PE&D, and LI will be funded by DSW.
[6] Administrative Support Facility Third Party Financing is currently being investigated.

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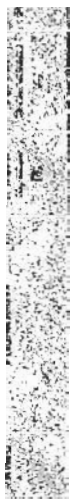

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Attachment A-4(a)
NNSA Facilities and Infrastructure Cost Projection Spreadsheet
Facilities and Infrastructure Recapitalization Program (FIRP) for Pantex Plant
($000s)

23	Building 12-5C Pipe Shop Exterior	60		P-DNM-MZ-26	MD	RTBF	1,143		E	3,000					3,000					1,722
24	NWC RAMP Roofing Support (FY09)	60		P-DM-MZ-05 P-DNM-MZ-22	MD	Various	1,600		E	800					800					1,600
25	Zone 12 Mission Dependent Phase 1 (12-36)	55	PX-P-05-01D	P-DNM-12N-02	MD	DSW	582		E	4,414					2,719	1,695				582
26	Production Storage II	55	PX-P-05-01B	P-DNM-11-02	MD	DSW		+21,000	E	4,000					4,000					
27	Demolition of 11-7	52		P-DNM-11-007	MD	DSW	3,130	-33,700	E	4,900					4,900					4,494
28	Demolition of 11-10 and 11-26	52		P-DNM-11-010 P-DNM-11-026	NMD	NA	459	-7,926	E	1,200					1,200					602
29	Demolition of 11-27, 11-29, 11-54, 11-54A, 12-2B, 12-75A	52		P-DNM-11-027 P-DNM-11-029 P-DNM-11-054 P-DNM-11-054A P-DNM-12-002B P-DNM-12-075A	MD	RC/DNS/DSW	1,655	-22,519	E	4,000					4,000					1,732
30	Demolition of 12-3, 12-3L, 12-R-3	52		P-DNM-12-003 P-DNM-12-003L P-DNM-12-R-003	NMD	NA	207	-2,737	E	600					600					222
31	Rehab Roads	65	PX-R-06-10	P-DM-47-02-01	MD	RTBF	1,106		E	3,525		25			3,500					1,135
32	Planning & Design of FY10 Recap Projects	60			NA	NA				5,500					5,500					
33	Planning & Design of FY11 Recap Projects	60			NA	NA				5,500						5,500				
34	12-21 Refurbishment	65		P-DM-MZ12-35	MC	DSW	853		E	4,000						4,000				2,700
35	NWC RAMP Roofing Support (FY10)	65		P-DNM-MZ-24	MD	Various	900		E	976						976				1,050
36	12-21 Roofing	65		P-DM-MZ12-35	MC	DSW	988		E	2,000						2,000				1,021
37	12-5 Roof Replacement	55		P-DNM-MZ-26	MD	RTBF	2,252		E	5,000						5,000				3,952
38	HPFL Tank Replacement 15-24	60		P-DNM-650-09	MD	RTBF	732		E	4,000						4,000				1,585
39	Site Wide Pipe Replacements - North	55		Various	MD	RTBF	1,325		E	5,000						5,000				2,500
40	Building 12-19 Restoration	65		P-DM-R-05-04	MC	RC	392		E	3,653						3,653				1,870
41	Building 12-84 Interior Refurbishment	65		P-DM-12M-01	MC	DSW	187		E	3,653						3,653				1,998
42	Firing Site and Burning Ground Deferred Maintenance	65		P-DM-FSBG-01 P-DNM-FSBG-02	MD	RC/RTBF	617		E	4,500						4,500				1,735
43	Planning & Design of FY12 Recap Projects	60			NA	NA				5,500							5,500			
44	HPFL Tank Replacement 15-25	60		P-DNM-650-09	MD	RTBF	732		E	4,000							4,000			1,585
45	Site Wide Pipe Replacements - South	60		Various	MD	RTBF	1,325		E	5,000							5,000			2,500
46	NWC RAMP Roofing Support (FY11)	65		P-DM-11-01	MD	Various	900		E	1,000							1,000			1,050
47	Additional Roofing - Coatings	65		Various	MD	Various	600		E	2,000							2,000			700
48	Building 11-50 Renovation	65		P-DM-11-01	MC	RC	16		E	5,000							5,000			2,914
49	Zone 12 Mission Dependent Phase 4	65		P-DM-MZ12-04	MD	DSW/FMD	1,000		E	4,000							4,000			1,200
50	Zone 4 Mission Dependent	65		P-DM-R-05-06	MD	DSW/FMD	1,000		E	4,000							4,000			1,400
51	Zone 12 Mission Dependent Phase 4	65		P-DM-MZ12-04	MD	DSW/FMD	1,125		E	4,500							3,986	514		1,395
52	Zone 12 Mission Dependent Phase 5	65		P-DM-MZ12-35	MD	Various	850		E	3,400							3,400			1,190
53	Zone 12 Mission Dependent Phase 9	65		P-DM-MZ12-06	MD	Various	775		E	3,100							3,100			1,085

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Attachment A-4(a)
NNSA Facilities and Infrastructure Cost Projection Spreadsheet
Facilities and Infrastructure Recapitalization Program (FIRP) for Pantex Plant
($000s)

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Attachment A-4(b)
NNSA Facilities and Infrastructure Cost Projection Spreadsheet
Other Facilities and Infrastructure Recapitalization Program (FIRP) Projects for Pantex Plant
($000s)

FIRP Priority (1)	Project Name (2)	[illegible] (3)	Project Number (3)	[illegible] (4)	[illegible] (5)	[illegible] (6)	[illegible] (7)	[illegible] (8)	Funding Type (9)	Total (10)	FY 2007 (11)	FY 2008 (12)	FY 2009 (13)	FY 2010 (14)	FY 2011 (15)	FY 2012 (16)	FY 2013 (17)
77	12-68/12-68A DM Reduction	65		P-DM-MZ12-13	MD	DSW	550		E	1,650	1,650						
78	Zone 4 Replace Magazine Vent Piping and Caps	65		P-DM-MZ4-11	MD	DSW/FMD	82		E	246		246					
79	12-50E DM Reduction	65		P-DM-MZ12-14	MC	DSW	210		E	630		630					
80	Zone 4 Mission Dependent - Replace Earth Overburden	65		P-DM-MZ4-11	MD	DSW/FMD	351		E	1,053		1,053					
81	16-13 Replace Deareators	60		P-DM645-01	MD	RTBF	2,000		E	4,990			4,990				
									TOTAL	[illegible]	[illegible]	[illegible]	[illegible]				

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Attachment A-5
Other Facilities and Infrastructure Cost Projection Spreadsheet
For Pantex Plant
($000s)

Priority (1)	Project Name (2)	Project Data Sheet (3)	Mission Dependency (4)	Program Facilities & Infrastructure Category (5)	Estimated Program Funding (6)	Total Project Cost Adjustment (7)	Funding Type (8)	Total Est. Cost (9)	Prior Year Cost (10)	Prior Year Obligations (11)	FY 2006 (12)	FY 2007 Current (13)	FY 2008 Request (14)	FY 2009 Request (15)	FY 2010 Request (16)	FY 2011 Request (17)	FY 2012 Request (18)	FY 2013 (19)	FY 2014 (20)	FY 2015 (21)	FY 2016 (22)	FY 2017 (23)
NNSA Facilities and Infrastructure Cost Projection Spreadsheet (Security Operating)																						
1	Security Operations Facility*		MD	DNS		+11,000	GPP	4,999		4,999												
2	Security Locker Facility*		MD	DNS		+12,780	GPP	4,999		4,999												
3	Physical Training Facility		MD	DNS		+13,356	GPP	4,999		4,999												
4	Protective Force Renovation Project		MD	DNS			GPP	5,000				5,000										
							TOTAL															
NNSA Facilities and Infrastructure Cost Projection Spreadsheet (RTBF Storage & Containers)																						
1	Sealed Insert Line Relocation		MC	DSW			GPP	1,207		80	727	400										
							TOTAL															
NNSA Facilities and Infrastructure Cost Projection Spreadsheet (Office of Secure Transportation)																						
1	Central Command Federal Agency Facility		MD	STA		+25,375	GPP	9,863	8,837	570	456											
							TOTAL															
Non-NNSA Facilities and Infrastructure Cost Projection Spreadsheet (Materials Disposition)																						
1	Zone 4 West Approaches & Door Modifications		MD	DSW/FMD				3,723	3,723													
							TOTAL															
Non-NNSA Facilities and Infrastructure Cost Projection Spreadsheet (Environmental Management)																						
1	Compliance Plan Well Installation		MD	EM				1,587				1,587										
2	Corrective Measures Design & Construction - Perched Aquifer Dewatering by Playa 1		MD	EM		+5,537		4,472			1,943	2,529										
3	Corrective Measures Design & Construction - Irrigation Systems and Retention Ponds		MD	EM				5,814			3,875	1,939										
4	Corrective Measures Design & Construction - In-Situ Bioremediation for Perched Groundwater		MD	EM				5,709			2,159	3,550										
							TOTAL															

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Attachment A-6(a) - FY 2007 -- FY 2009
NNSA Facilities and Infrastructure Cost Projection Spreadsheet
Currently Funded Security Infrastructure Projects for Pantex Plant ($000s)

Priority (1)	Project Name (2)	Site Specific Project Number (3)	Mission Dependency (4)	Mission Dependency Program (4a)	Estimated Total Project Cost (5)	Planned Funding Source: Line Item A-1,2	RTBF A-3	FIRM A-4	Other A-5	BRT Related? Y or N
	List FY 07 Projects									
1	Security Operations Facility*	2005-087	MD	DNS	4,999				Security Operating	Y
2	Security Locker Facility*	2001-127	MD	DNS	4,999				Security Operating	Y
3	Physical Training Facility	2005-067	MD	DNS	4,999				Security Operating	Y
	List FY 08 Projects									
4	Protective Force Renovation Project[1]		MD	DNS	5,000				Security Operating	Y

[1]Estimate based on Security Budget Information

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Attachment A-6(b) - FY08 and FY09 Unfunded
NNSA Facilities and Infrastructure Cost Projection Spreadsheet
Security Infrastructure Projects for Pantex Plant
($000s)

Priority (1)	Prioritization Score (2a)	Project Name (2)	Site Specific Project Number (2a)	Budget Parameter (3)	Budget Construction Project (3a)	Total (5)	Proposed for Inclusion in FY08 or FY09 Update	Data Current Y or N
1	65	Elite Force Training Facility Expansion[2]		MD	DNS	5,000	FY08	Y
2	70	Surrogate Tactics and Training Facility (STTF)[2]		MD	DNS	1,800	FY08	Y
3	65	Station (b)(2)High High Security Booth[2]		MD	DNS	4,560	FY08	Y
4	65	Station (b)(2)High High Security Booth[2]		MD	DNS	4,625	FY08	Y
5	65	Station (b)(2)High High Security Booth[1]		MD	DNS	3,400	FY08	Y
6	65	Station (b)(2)High High Security Booth[1]		MD	DNS	2,700	FY08	Y
7	65	Station (b)(2)High High Security Booth[1]		MD	DNS	2,900	FY08	Y
8	65	Zone 12 Guard Tower Enhancements[2]	2005-065	MD	DNS	4,177	FY08	Y
9	65	Zone 4 Guard Tower Enhancements[2]	2005-066	MD	DNS	3,656	FY08	Y
10	65	(b)(2)High Physical Training Facility Expansion[2]		MD	DNS	1,800	FY08	N
11	65	(b)(2)High Range Facility Ammunition Storage Facility[2]	2004-027	MD	DNS	2,423	FY08	N
12	65	(b)(2)High Range Facility Equipment Storage Expansion[2]	2005-074	MD	DNS	2,729	FY08	N
13	60	Construction Gate SS-15 (Construction Only)[3]		MD	DNS	2,700	FY08	N
			TOTAL			42,479		

[1] Rough order-of-magnitude estimates based on preliminary scope

[2] Project scope is currently being developed and refined. Estimates are based on Security budget request information.

[3] RTBF funded design. Construction currently unfunded.

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Page 1 of 2
2/10/2007

U. S. Department of Energy
Facilities Information Management System
Asset Utilization Index by FRPC Categories

Program Office: EM

Site: Pantex Site Office

Site Wide AUI: 100.00% **

Measures	AUI	FRPC Guidelines	OECM Guidelines	Operating Gross Sqft*	Operating No of Bldgs*
Warehouse	100.00%	50 - 85%	89%	4,558	1
All Other Categories	100.00%	N/A	N/A	5,537	1
			Pantex Site Office Site Totals*	10,095	2
			EM Program Totals*	10,095	2

* These numbers do not reflect the total gross square footage and number of buildings. They represent operating buildings only.

** Site Wide AUI includes all DOE Owned Building assets

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Page 2 of 2
2/10/2007

U. S. Department of Energy
Facilities Information Management System
Asset Utilization Index by FRPC Categories

Program Office	NNSA
Site	Pantex Site Office

Site Wide AUI: 98.52% **

Measures	AUI	FRPC Guidelines	OECM Guidelines	Operating Gross Sqft*	Operating No of Bldgs*
Office	96.80%	70 - 95%	95%	387,119	57
Warehouse	99.11%	50 - 85%	89%	698,530	188
Medical	100.00%	70 - 95%	90%	11,516	1
All Other Categories	98.65%	N/A	N/A	1,866,232	293
			Pantex Site Office Site Totals*	2,963,397	539
			NNSA Program Totals*	2,963,397	539

* These numbers do not reflect the total gross square footage and number of buildings. They represent operating buildings only.

** Site Wide AUI includes all DOE Owned Building assets

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[redacted]

[redacted]

Attachment E-1
Facilities Disposition Plan
Pantex Plant

FIRP	12-8	Chemistry Laboratory Annex	Demolished	N/A	N/A	626	N/A	FY 2004	FY 2004	873	18	2	No	No	No
FIRP	12-59	Chemistry Laboratory Annex	Demolished	N/A	N/A	7,215	N/A	FY 2004	FY 2004	with 12-8	247	7	No	No	No
FIRP	12-59E	Equipment Room	Demolished	N/A	N/A	600	N/A	FY 2004	FY 2004	with 12-8	146	1	No	No	No
FIRP	12-59V	Valve Building	Demolished	N/A	N/A	36	N/A	FY 2004	FY 2004	with 12-8	-	1	No	No	No
FIRP	12-R-8	Ramp from 12-008 to 12-R-006	Demolished	N/A	N/A	3,000	N/A	FY 2004	FY 2004	with 12-8	5	4	No	No	No
FIRP	12-R-59	Ramp from 12-059 to 12-R-008	Demolished	N/A	N/A	545	N/A	FY 2004	FY 2004	with 12-8	2	1	No	No	No
FIRP	11-23	Explosives and Inert Storage	Demolished	N/A	N/A	640	N/A	FY 2004	FY 2004	2,208	-	2	No	No	No
FIRP	11-24	Inert Storage	Demolished	N/A	N/A	640	N/A	FY 2004	FY 2004	with 11-23	-	2	No	No	No
FIRP	11-34	Acid Storage	Demolished	N/A	N/A	668	N/A	FY 2004	FY 2004	with 11-23	10	1	No	No	No
FIRP	11-36	Explosives Synthesis	Demolished	N/A	N/A	5,138	N/A	FY 2004	FY 2004	with 11-23	137	9	No	No	Eligible for inclusion in the National Register of Historic Places.
FIRP	11-36SS	Shade Structure	Demolished	N/A	N/A	793	N/A	FY 2004	FY 2004	with 11-23	-	1	No	No	No
FIRP	11-39	Flammable Liquid Storage	Demolished	N/A	N/A	1,000	N/A	FY 2004	FY 2004	with 11-23	15	2	No	No	No
FIRP	11-39SS	Shade Structure	Demolished	N/A	N/A	102	N/A	FY 2004	FY 2004	with 11-23	1	1	No	No	No
FIRP	11-R-14	Ramp from 11-023 to 11-034	Demolished	N/A	N/A	1,140	N/A	FY 2004	FY 2004	with 11-23	-	2	No	No	No
FIRP	11-R-20	Ramp from 11-036 to 11-R-014	Demolished	N/A	N/A	1,140	N/A	FY 2004	FY 2004	with 11-23	35	2	No	No	No
FIRP	11-R-39	Ramp from 11-036 to 11-039	Demolished	N/A	N/A	209	N/A	FY 2004	FY 2004	with 11-23	2	1	No	No	No
FIRP	4-52P	Generator Building	Demolished	N/A	N/A	88	N/A	FY 2004	FY 2004	17	32	1	No	No	No
FIRP	12-R-78	Ramp from 12-24 South to 12-78	Demolished	N/A	N/A	960	N/A	FY 2004	FY 2004	With FY 2005 FIRP 12-78 Demolition	-	1	No	No	No
FIRP	FY 04 TOTAL					24,540				3,098	650	41			
FIRP	11-9	Hazardous Waste Storage	Demolished	N/A	N/A	17,192	N/A	FY 2005	FY 2005	1,301	1,193	13	No	Yes	Small spot of fixed rad. Contamination
FIRP	15-16	Potable Water Well and Building	Demolished	N/A	N/A	200	N/A	FY 2005	FY 2005	76	75	1	No	No	No
FIRP	12-78	NDE Storage	Demolished	N/A	N/A	3,541	N/A	FY 2005	FY 2005	756	77	3	No	No	Eligible for inclusion in the National Register of Historic Places.
FIRP	FY 05 TOTAL					20,933				2,133	1,345	17			
FIRP	9-3	Office Building	RTBF	In Progress	In Progress	1,572	None	FY 2007	FY 2007	with 12-97	with 12-97	1	No	No	No
FIRP	12-97	Office Building	NA	In Progress	In Progress	9,896	DOE	FY 2007	FY 2007	1,000	385	10	No	No	SF118, SF118A, Title V Submitted, HUD Determination Unsuitable, published in Federal Register
FIRP	12-9A	Tester Design and Robotics Laboratory	DSW	In Progress	In Progress	3,083	DOE	FY 2007	FY 2007	700	86	6	No	No	SF118, SF118A, Title V Submitted, HUD Determination Unsuitable, published in Federal Register
FIRP	12-R-9A	Ramp from 12-9 to 12-R-9B	NA	In Progress	In Progress	1,408	DOE	FY 2007	FY 2007	1,200	-	3	No	No	SF118, SF118A, Title V Submitted, HUD Determination Unsuitable, published in Federal Register
FIRP	12-14	Office Building	DSW	In Progress	In Progress	837	DOE	FY 2007	FY 2007	300	2	3	No	No	SF118, SF118A, Title V Submitted, HUD Determination Unsuitable, published in Federal Register
FIRP	FY 07 TOTAL					16,796				3,200	473	23			

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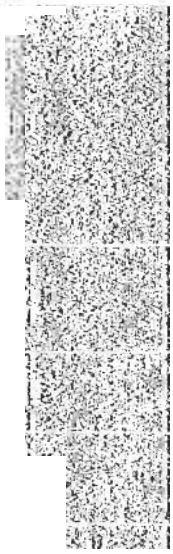

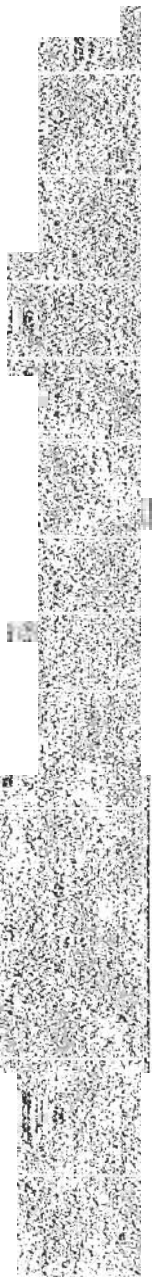

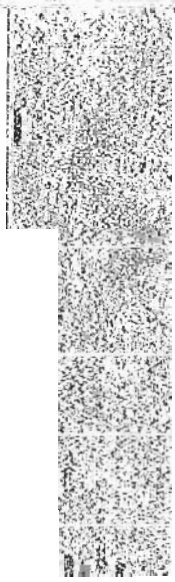

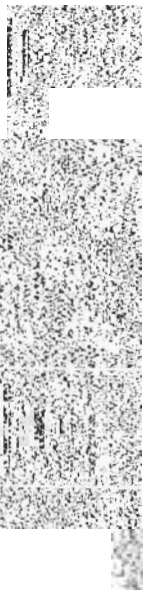

Attachment E-2
New Construction Footprint Added
Pantex Plant

Funding Source (1)	Project Number (2)	Facility Name (3)	Mission Dependency Program (4)	Project Data Sheet (PDS) Item (5)	Project Area (GSF) (6)	Year of Beneficial Occupancy (7)	Notes (8)
FIRP		Generator Facility	DSW	GPP	224	2003	
FIRP	PX-R-02-30	Narrow Band Radio Facility	RTBF	GPP	768	2005	
FIRP	PX-R-04-13	Process Container Storage Facility	RTBF	GPP	16,127	2005	
FIRP	PX-R-04-02	Administration Facility	OFO	GPP	18,279	2006	
FIRP	PX-R-02-17	Records Storage Facility	OFO	GPP	9,837	2006	
FIRP	PX-R-05-07	Technical Support Facility	DSW	GPP	13,462	2006	
FIRP	PX-R-05-03	Tester Design Facility	DSW	GPP	14,096	2007	
FIRP	PX-R-05-03	Ramp	DSW	GPP	1,231	2007	
FIRP	PX-R-04-18	Water Well Building	RTBF	GPP	612	2007	
FIRP	PX-P-05-01B	Production Storage Facility Replacement	DSW	GPP	14,000	2008	
FIRP	PX-P-05-01C	Applied Technology Administration Facility	RC	GPP	13,356	2009	
FIRP		Production Storage II	DSW	GPP	21,000	2009	
FIRP		2030 Maintenance Structure	RTBF	GPP	6,000	2012	
FIRP		2030 Maintenance Structure	RTBF	GPP	6,000	2012	
FIRP		2030 Maintenance Structure	RTBF	GPP	12,000	2012	
RTBF		Utility Break Area	RTBF	GPP	630	2004	
RTBF		Security Supply Warehouse	DNS	GPP	3,528	2004	
RTBF		ESPC Pumphouse	RTBF	GPP	247	2008	
RTBF	04-D-103-02	HE Pressing Facility	RC	LI	52,718	2013	
RTBF	05-D-140-03	Component Evaluation Facility	DSW	LI	75,600	2016	
EM		Soil Vapor Extraction Facility	EM	GPP	239	2005	
EM		Zone 12 Ozone Treatment Facility	EM	GPP	160	2006	
EM		Playa 1 Dewatering Facility	EM	GPP	5,537	2008	
OST		Central Command Federal Agent Facility	STA	GPP	25,375	2008	
Sandia National Lab	01-D-126	Weapons Evaluation Testing Laboratory (WETL)	DSW	LI	31,819	2005	
Sandia National Lab	01-D-126	Argus Access Facility	DNS	LI	344	2005	
Sandia National Lab		Sandia Storage Facility	DSW	GPP	391	2006	
Security		Ammunition Storage Facility	DNS	GPP	160	2006	
Security		Security Operations Facility*	DNS	GPP	11,000	2007	
Security		Security Locker Facility*	DNS	GPP	12,780	2007	
Security		Physical Training Facility	DNS	GPP	13,356	2008	

Table includes only approved Line Item projects in the latest ICPP, and GPP projects that are constrained within Pantex's TYCSP and FYNSP targets.

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Attachment E-3
GRANDFATHERED Footprint Added
Pantex Plant

Funding Source (1)	Project Number (2)	Facility Name (3)	Mission Dependency Program (4)	Facility Type (LI, GPP, GSW) (5)	Project Area (GSF) (6)	Year of Estimated Occupancy (7)	Notes (8)
RTBF	94-D-128	Analytical Laboratory	RC	LI	8,982	2002	
RTBF	N/A	Rapid Prototype Facility	DSW	GPP	495	2002	
S&S	N/A	Supplemental Security Post	DNS	GPP	96	2002	
S&S	N/A	Supplemental Security Post	DNS	GPP	96	2002	
RTBF	N/A	Equipment Building	EM	GPP	138	2002	
RTBF	96-D-122	Main Filter Building	RTBF	LI	613	2004	This facility is part of the Sewer Treatment Quality Upgrade Line Item, received CD-3 in January 1998.
RTBF	96-D-122	Field Filter Building	RTBF	LI	613	2004	This facility is part of the Sewer Treatment Quality Upgrade Line Item, received CD-3 in January 1998.
RTBF	01-PU-20	Weapon Trainer Simulation Facility	DNS	GPP	3,243	2005	This facility was a design-build contract awarded November 2001. This facility was previously the Back-up Fire Alarm Receiving System Facility. The name has changed to reflect the requirement to support a new security mission.

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

Fiscal Year (1)	Beginning Site Footprint (gsf) (2)	Excess Facilities Footprint Elimination (gsf) (3)	New Construction/ Footprint Added (gsf) (4)	Site Footprint Reduction by FY (gsf) (5)	Footprint "Banked" (gsf) (6)	Waiver/ Transfer (gsf) (7)	"Grandfathered" Footprint Added (gsf) (8)	Cumulative "Grandfathered" Footprint Added (gsf) (9)	NNSA Site Total Footprint (gsf) (10)	NNSA Leased Space (11)
FY 2002 Actual	2,942,259	-128	0	2,942,131	-128		9,807	9,807	2,951,938	45,628
FY 2003 Actual	2,942,131	-44,373	224	2,897,982	-44,277		0	9,807	2,907,789	47,070
FY 2004 Actual	2,897,982	-59,572	4,158	2,842,568	-99,691		1,226	11,033	2,853,601	66,156
FY 2005 Actual[1]	2,842,568	-20,933	49,297	2,870,932	-71,327		3,243	14,276	2,885,208	66,156
FY 2006 Actual[2]	2,870,932	-66,710	42,289	2,846,511	-95,748	-62,776	0	14,276	2,860,787	67,494
FY 2007[3]	2,987,683	-16,796	39,719	3,010,606	-72,825		0	14,276	3,024,882	87,670
FY 2008	3,010,606	-18,382	52,978	3,045,202	-38,229		0	14,276	3,059,478	87,670
FY 2009	3,045,202	-66,882	34,356	3,012,676	-70,755		0	14,276	3,026,952	87,670
FY 2010	3,012,676	0	0	3,012,676	-70,755		0	14,276	3,026,952	87,670
FY 2011	3,012,676	0	0	3,012,676	-70,755		0	14,276	3,026,952	87,670
FY 2012	3,012,676	0	24,000	3,036,676	-46,755		0	14,276	3,050,952	87,670
FY 2013	3,036,676	-12,483	52,728	3,076,921	-6,510		0	14,276	3,091,197	87,670
FY 2014	3,076,921	0	0	3,076,921	-6,510		0	14,276	3,091,197	87,670
FY 2015	3,076,921	0	0	3,076,921	-6,510		0	14,276	3,091,197	87,670
FY 2016	3,076,921	0	75,600	3,152,521	69,090		0	14,276	3,166,797	87,670
FY 2017	3,152,521	0	0	3,152,521	69,090		0	14,276	3,166,797	87,670

[1] The FY 2005 and FY 2006 EM demolished square footage in E-1 is included in the Waiver/Transfer column in FY 2007.

[2] FY 2007 Footprint "Banked" (gsf), column 6, includes the square footage transfer approved in the Bruce Scott to James Rispoli memo dated October 12, 2006.

[3] 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 has been revised also. EM owned facilities have been removed and are included in E-4b

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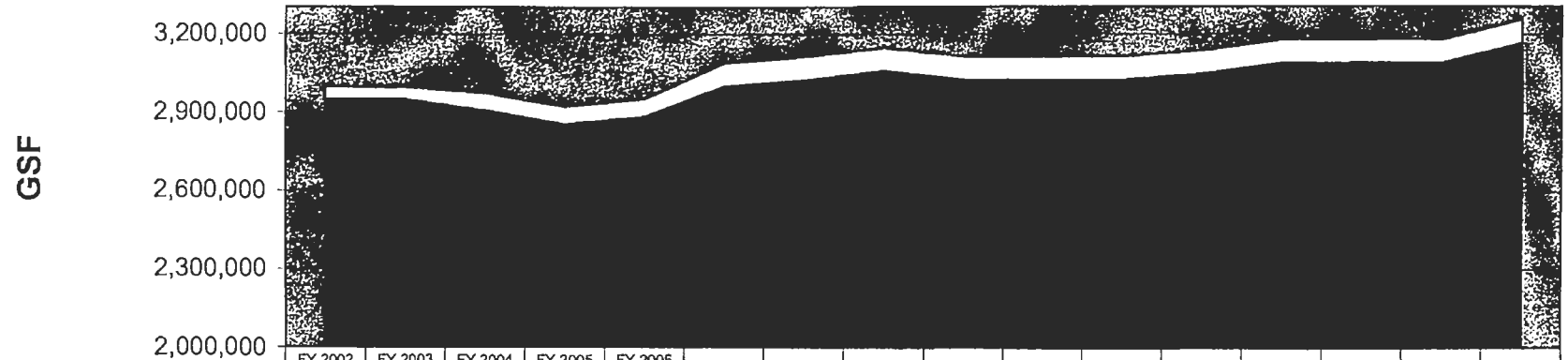
ATTACHMENT E-4(a)
RIVER GRAPH
Pantex Plant Space Tracking Summary - NNSA



	FY 2002 Actual	FY 2003 Actual	FY 2004 Actual	FY 2005 Actual1	FY 2006 Actual2	FY 20073	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
NNSA Leased Space (10)	45,628	47,070	66,156	66,156	67,494	87,670	87,670	87,670	87,670	87,670	87,670	87,670	87,670	87,670	87,670	87,670
Cumulative "Grandfathered" Footprint Added (gsf) (8a)	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
Beginning Site Footprint (gsf) (2)	2,942,259	2,942,131	2,897,982	2,842,568	2,870,932	2,987,683	3,010,606	3,045,202	3,012,676	3,012,676	3,012,676	3,036,676	3,076,921	3,076,921	3,076,921	3,152,521

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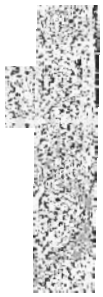

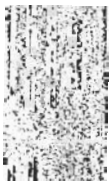

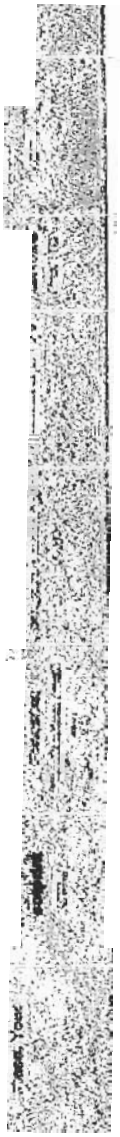

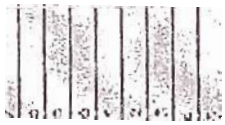

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ATTACHMENT E-4(b)
RIVER GRAPH
Pantex Plant Site Wide Footprint Tracking Summary - SITE WIDE

	FY 2002 Actual	FY 2003 Actual	FY 2004 Actual	FY 2005 Actual	FY 2006 Actual	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY2014	FY2015	FY 2016	FY 2017
□ Leased Space (10)	45,628	47,070	66,156	66,156	67,494	87,670	87,670	87,670	87,670	87,670	87,670	87,670	87,670	87,670	87,670	87,670
■ Cumulative Grandfathered Footprint Added (gsf) (8a)	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
■ Beginning Site Footprint (gsf) (2)	2,942,259	2,942,131	2,897,982	2,842,568	2,870,932	2,998,315	3,021,238	3,061,371	3,028,845	3,028,845	3,028,845	3,052,845	3,093,090	3,093,090	3,093,090	3,168,690

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Attachment E-5
Waiver/Transfer Log (Space Added or Eliminated)
Pantex Plant

Site or Program Donor (1)	Site or Program Receiver (2)	Waiver Received (gsf) (3)	Transfer Received (gsf) (4)	Request Submitted (Yes/No) (5)	Request Approved (Yes/No) (6)	Comments (7)
TBD	Pantex Plant	150,000		No	No	Draft request has been prepared.
Pantex Plant (EM)	Pantex Plant (NNSA)		62,776	Yes	Yes	The total square footage transferred, per memo from Bruce Scott to James Rispoli, dated October 12, 2006, is 99,926 square feet. The 99,926 square feet includes 37,150 square feet for 11-044 and Pantex AT 550 (10-7, 10-7, 10-20) that has already been credited to the Pantex bank per memos from Bruce Scott to Dan Glenn.

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Attachment F-2
NNSA Total Deferred Maintenance and Projected Deferred Maintenance Reduction
NNSA
($000s)

Category of Maintenance	FY 2006 Baseline	FY 2006 Actuals	FY 2007 Original	FY 2007 Current	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
1. NNSA ANNUAL REQUIRED MAINTENANCE	31,825	32,256	35,000	51,090	83,740	75,038	78,784	78,529	80,338	82,183	84,074	86,007	87,985	90,009	92,079
1A. NNSA ANNUAL REQUIRED REPLACEMENT-IN-KIND					2,799	5,538	5,294	699	5,337	3,783	575	3,352	883	557	6,808
2. NNSA ANNUAL PLANNED MAINTENANCE TOTAL	31,825	32,256	36,602	54,618	83,740	44,238	45,255	46,298	47,361	48,450	49,565	50,705	51,871	53,064	54,284
a. Direct	31,825	32,256	36,602	54,618	83,740	44,238	45,255	46,298	47,361	48,450	49,565	50,705	51,871	53,064	54,284
b. Indirect	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2A. NNSA ANNUAL PLANNED REPLACEMENT-IN-KIND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. NNSA DEFERRED MAINTENANCE (DM) TOTAL (Excludes Programmatic Real Property or Equipment) = Inflation Prior Year DM Total + DM New - Prior Year DM Reduction	176,000	189,600	221,486	237,712	238,103	251,069	265,817	276,202	290,314	313,111	329,836	353,160	397,842	433,928	473,917
i. Backlog Inflation Rate (%)	[redacted]	2.2%	2.2%	2.2%	2.2%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
ii. DM Inflation	[redacted]	3,872	3,738	4,873	5,230	5,476	5,776	6,114	6,353	6,677	7,202	7,586	8,353	9,150	9,980
iii. DM NEW	[redacted]	14,528	98,444	82,882	9,752	21,158	21,804	22,306	22,819	23,344	24,015	25,738	28,330	28,935	30,008
A. DM, Mission-Critical F&I ONLY	[redacted]	[redacted]	[redacted]	40,415	48,406	60,909	74,932	80,757	91,659	106,002	120,956	137,712	155,175	173,368	194,770
B. DM, Mission-Dependent, Not Critical F&I ONLY	[redacted]	[redacted]	[redacted]	172,266	162,792	181,600	159,157	159,361	158,030	161,755	158,601	170,040	181,922	194,260	207,069
C. DM, Not Mission-Dependent F&I ONLY	[redacted]	[redacted]	[redacted]	26,031	26,905	28,560	31,728	36,084	40,624	46,354	50,280	55,406	60,746	66,300	72,078
4. DEFERRED MAINTENANCE (DM) REDUCTION TOTAL for NNSA Facilities and Infrastructure (F&I)		24,600	50,494	51,509	14,591	13,668	12,831	18,034	15,060	7,224	14,491	-	-	-	-
1. Reduction Total attributed to FIRP ONLY				33,555	13,770	13,545	12,269	18,034	15,060	7,224	14,491				
A. Reduction in DM for Mission-Critical F&I	[redacted]	[redacted]	[redacted]	7,297	147	1,920	58	7,589	2,914	-	-	-	-	-	-
1. Reduction attributed to FIRP ONLY	[redacted]	[redacted]	[redacted]	741	-	1,920	58	7,589	2,914	-	-	[redacted]	[redacted]	[redacted]	[redacted]
B. Reduction in DM for Mission-Dependent, Not Critical F&I	[redacted]	[redacted]	[redacted]	12,387	14,021	9,979	11,951	10,445	12,146	7,224	14,491	[redacted]	[redacted]	-	-
1. Reduction attributed to FIRP ONLY	[redacted]	[redacted]	[redacted]	990	13,347	9,856	11,389	10,445	12,146	7,224	14,491	[redacted]	[redacted]	[redacted]	[redacted]
C. Reduction in DM for Not Mission-Dependent F&I	[redacted]	[redacted]	[redacted]	31,825	423	1,769	824	-	-	-	-	-	-	-	-
1. Reduction attributed to FIRP ONLY	[redacted]	[redacted]	[redacted]	31,824	423	1,769	824	-	-	-	-	[redacted]	[redacted]	[redacted]	[redacted]
5. REPLACEMENT PLANT VALUE (RPV) for NNSA Facilities and Infrastructure (F&I) = Inflation of PY RPV + Increase or Decrease due to other causes	2,060,643	2,130,200	3,020,800	3,181,847	3,388,119	3,487,280	3,637,335	3,616,694	3,701,924	3,802,068	3,959,388	4,050,454	4,143,814	4,398,818	4,499,990
A. RPV for NNSA Mission-Critical F&I ONLY	[redacted]	[redacted]	[redacted]	1,438,844	1,524,391	1,569,452	1,595,320	1,632,012	1,669,548	1,707,948	1,823,517	1,865,458	1,908,383	2,112,155	2,160,735
B. RPV for NNSA Mission-Dependent, Not Critical F&I	[redacted]	[redacted]	[redacted]	1,489,751	1,596,419	1,653,032	1,884,835	1,723,586	1,763,229	1,818,783	1,854,202	1,896,848	1,940,476	1,985,107	2,030,764
C. RPV for NNSA Not Mission-Dependent F&I	[redacted]	[redacted]	[redacted]	253,252	285,309	264,795	257,180	283,095	289,147	275,337	281,670	288,148	294,776	301,555	308,491
D. RPV increase from prior year attributed to inflation	[redacted]	[redacted]	[redacted]	153,981	184,666	77,881	79,747	81,359	83,230	85,144	87,448	91,068	93,160	95,303	101,173
E. RPV increase / decrease attributed to causes other than inflation (provide separate supporting narrative behind F-2 exhibit)	[redacted]	[redacted]	[redacted]	20,068	19,706	3,280	(9,692)	-	(0)	15,000	59,872	-	(0)	159,900	(0)

FCI Definition	FY 2006 Baseline	FY 2006 Actuals	FY 2007 Original	FY 2007 Current	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
FCI TOTAL	8.6%	8.0%	7.3%	7.5%	7.0%	7.2%	7.5%	7.6%	7.8%	8.2%	8.3%	9.0%	9.6%	9.9%	10.5%
FCI Mission Critical	[redacted]	[redacted]	[redacted]	2.8%	3.2%	3.9%	4.7%	4.9%	5.5%	6.2%	6.6%	7.4%	8.1%	8.2%	9.0%
FCI Mission Dependent, Not Critical	[redacted]	[redacted]	[redacted]	11.6%	10.2%	9.8%	9.4%	9.2%	9.0%	8.9%	8.6%	9.0%	9.4%	9.8%	10.2%
FCI Not Mission Dependent	[redacted]	[redacted]	[redacted]	9.9%	10.1%	11.2%	12.3%	13.7%	15.1%	16.5%	17.9%	19.2%	20.8%	22.0%	23.4%

RPV Changes have occurred since the FY 2007 TYSP and are current in FIMS. Pantex has added Buildings 12-138, 12-141, 09-136, 09-138 thru 09-143.
Changes in RPV for year 2007 through 2017 are reflective of the increase or decrease in planned facility construction or demolition as reported in Attachments E-1 and E-2.

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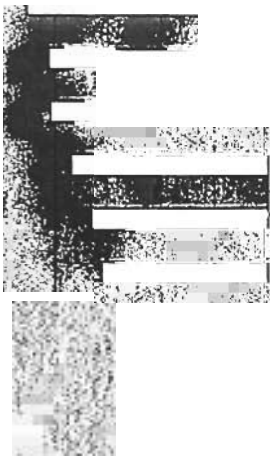
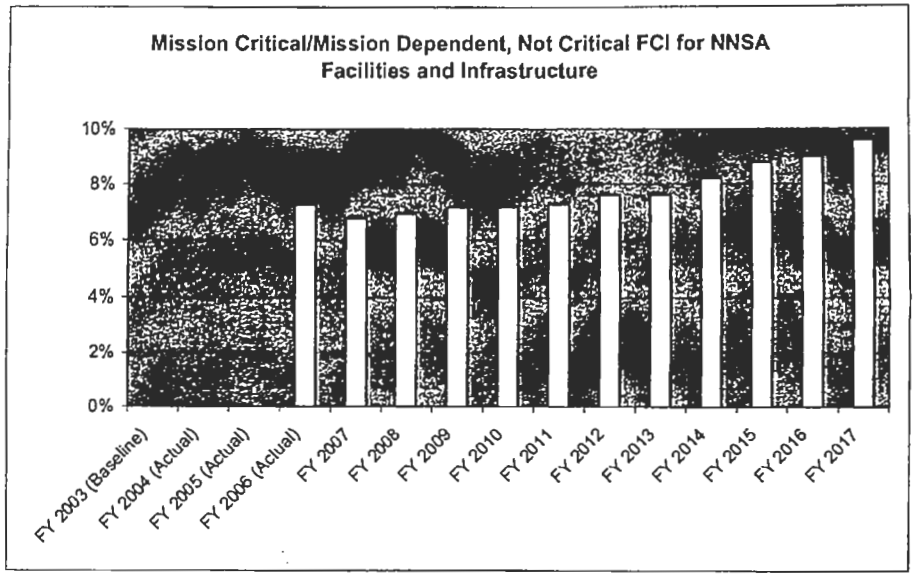


ATTACHMENT F-4: Pantex Facility Condition Index (FCI) for NNSA F&I



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(FIMS 092)

U.S. Department of Energy
Facilities Information Management System
Mission Dependency Report

Program Office: NNSA

Site: Pantex Site Office

Property ID	Property Name	Mission Dependency	Building RPV	Deferred Maintenance	Summary Condition*	MD Pgm Ofc	Gross Square Ft	UIR %
(b)(2)High	Pantex Building	Mission Critical	$25,727,822	$3,563,817	Fair	RC	28,481	100%
	Pantex Building	Mission Critical	$1,013,852	$218,180	Fair	RC	1,000	100%
	Pantex Building	Mission Critical	$31,748,535	$3,744,109	Fair	DSW	35,146	100%
	Pantex Building	Mission Critical	$6,851,779	$764,561	Fair	ENG	7,585	100%
	Pantex Building	Mission Critical	$5,408,321	$993,490	Fair	ENG	7,634	100%
	Pantex Building	Mission Critical	$6,352,416	$804,679	Fair	DSW	6,081	100%
	Pantex Building	Mission Critical	$2,352,137	$397,109	Fair	RC	2,320	100%
	Pantex Building	Mission Critical	$1,327,173	$177,396	Fair	RC	1,358	100%
	Pantex Building	Mission Critical	$1,604,726	$217,978	Fair	ENG	1,642	100%
	Pantex Building	Mission Critical	$2,063,080	$224,546	Fair	RC	2,111	100%
	Pantex Building	Mission Critical	$20,456,240	$857,169	Good	DFO	25,796	100%
	Pantex Building	Mission Critical	$24,378,000	$612,852	Good	DSW	3,873	100%
	Pantex Building	Mission Critical	$24,378,000	$681,722	Good	DSW	3,873	100%
	Pantex Building	Mission Critical	$24,378,000	$870,846	Good	DSW	3,873	100%
	Pantex Building	Mission Critical	$24,378,000	$678,772	Good	DSW	3,873	100%
	Pantex Building	Mission Critical	$8,023,690	$322,509	Good	DSW	5,553	100%
	Pantex Building	Mission Critical	$122,995,235	$3,036,194	Good	DSW	85,122	100%
	Pantex Building	Mission Critical	$18,863,782	$587,604	Good	DSW	22,547	100%
	Pantex Building	Mission Critical	$166,442,801	$3,657,299	Good	DSW	115,191	100%
	Pantex Building	Mission Critical	$6,336,038	$193,370	Good	DSW	5,733	100%
	Pantex Building	Mission Critical	$6,832,303	$248,339	Good	RC	6,991	100%
	Pantex Building	Mission Critical	$162,216	$41,741	Poor	RC	160	100%
	Pantex Building	Mission Critical	$892,221	$304,118	Poor	RC	4,148	100%
	Pantex Building	Mission Critical	$1,760,117	$562,867	Poor	RC	1,801	100%
		Mission Critical Totals:	$1,438,843,795	$40,671,056			995,135	
		Pantex Site Office Site Totals:	$1,438,843,795	$40,671,056			995,135	
		NNSA Program Office Totals:	$1,438,843,795	$40,671,056			995,135	

*Summary Condition: Excellent (DM <2% of RPV); Good (DM is 2 - <5% of RPV); Adequate (DM is 5 - <10% of RPV); Fair (DM is 10 - < 25%); Poor (DM Is 25 - <60% of RPV); Fail (DM is > 59% of RPV); Not Applicable (Bldg falls into one of the following Status Categories: Shutdown Pending Transfer, Shutdown Pending D and D, D and D In Progress, Shutdown Pending Disposal, Deactivation)

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ATTACHMENT H - Summary of Pantex Future Environmental Liabilities

Pantex identified and investigated 252 Solid Waste Management Units (SWMUs). Each SWMU is noted in Figure 3-6 and here in Attachment H with the Risk Reduction Standard (RRS) used to measure SWMU closure. The RRS criteria is also included in at the end of Attachment H.

Number	Waste Management Group (WMG)	DESCRIPTION	SWMU/AOC Number	2005 TCEQ Closure Status	Closed on	2005 TCEQ RCRA Risk Closure
1	1	AOC 8a: SOLVENT LEAKS (PAD 11-12)	AOC 8a	Soil Closure with Uncertainty Management		RRS 3
2	1	AOC 8b: SOLVENT LEAKS (PAD 11-13)	AOC 8b	Soil Closure with Uncertainty Management		RRS 3
3	1	Building 11-12	SWMU 150	Soil Closure with Uncertainty Management		RRS 3
4	1	LANDFILL E OF 11-13 PAD (DEBRIS FROM BLDGS 11-12,11-13)	UN-12/SVS 5	Soil Closure with Uncertainty Management		RRS 3
5	1	SWMU 147 ZONE 11 TNT SETTLING PIT (11-13)	SWMU 147	Soil Closure with Uncertainty Management		RRS 3
6	1	SWMU 149: ZONE 11 TNT SETTLING PIT (11-26)	SWMU 149	Soil Closure with Uncertainty Management		RRS 3
7	N/A	AOC 2: MAIN ELECTRICAL SUBSTATION (4-28)	AOC 2	CLOSED	09/22/93	RRS 1
8	1	SWMU 60 LANDFILL 9 (Group III)	SWMU 60	Soil Closure with Uncertainty Management		RRS 3
9	1	SWMU 61 LANDFILL 10 (Group III)	SWMU 61	Soil Closure with Uncertainty Management		RRS 3
10	1	ZONE 11 PARALLEL DEPRESSION NEAR BLDG 11-26 (SVS 2)	UN-8/SVS 2	Soil Closure with Uncertainty Management		RRS 3
11	2	AOC 1: TRANSFORMER LEAK NEAR 11-14A	AOC 1	Soil Closure with Uncertainty Management		RRS 3
12	2	AOC 8c: SOLVENT LEAKS (PAD 11-17)	AOC 8c	Soil Closure with Uncertainty Management		RRS 3
13	2	SWMU 117 11-44 HE SETTLING TANK	SWMU 117	Soil Closure with Uncertainty Management	03/18/94	RRS 3
14	2	SWMU 118: BLDG 11-44 EQUALIZATION BASIN	SWMU 118	Soil Closure with Uncertainty Management	08/26/02	RRS 3
15	2	SWMU 119a: BLDG 11-44 HE PARTICULATE FILTERS	SWMU 119a	Soil Closure with Uncertainty Management	03/18/94	RRS 3

ATTACHMENT H - Summary of Pantex Future Environmental Liabilities

Number	Waste Management Group (WMG)	DESCRIPTION	SWMU/AOC Number	2005 TCEQ Closure Status	Closed on	2005 TCEQ RCRA Risk Closure
16	2	SWMU 12: DRAINAGE DITCH NEAR 11-14 POND & PIPELINE	SWMU 12	Soil Closure with Uncertainty Management		RRS 3
17	2	SWMU 120a: BLDG 11-44 ACTIVATED CARBON FILTERS	SWMU 120a	Soil Closure with Uncertainty Management	03/18/94	RRS 3
18	N/A	SWMU 81 IGLOO 4-19 WASTE STORAGE	SWMU 81	CLOSED	10/29/93	RRS 1
19	2	SWMU 148: ZONE 11 TNT SETTLING PIT (11-17)	SWMU 148	Soil Closure with Uncertainty Management		RRS 3
20	2	SWMU 3: BLDG 11-44 DRAINAGE DITCH	SWMU 3	Soil Closure with Uncertainty Management		RRS 3
21	2	SWMU 86: WASTE ACCUM 11-14 SOLVENT STORAGE SHED	SWMU 86	Soil Closure with Uncertainty Management		RRS 3
22	2	Unassigned SWMU 11-14 HYPALON POND	Unassigned	CLOSED	02/21/95	RRS 2
23	3	AOC 7a: SULFURIC ACID SPILLS (11-36)	AOC 7a	Soil Closure with Uncertainty Management		RRS 3
24	3	AOC 8d: SOLVENT LEAKS (PAD 11-22)	AOC 8d	Soil Closure with Uncertainty Management		RRS 3
25	3	AOC 8e: SOLVENT LEAKS (BLDG 11-36)	AOC 8e	Soil Closure with Uncertainty Management		RRS 3
26	8	SWMU 108 BATCH MASTER 12-68	SWMU 108	CLOSED	05/29/97	RRS 1
27	N/A	CONTAINER STORAGE AREA (CONEX WM1-A)	Unit 46	CLOSED	04/22/98	RRS 1
28	3	SWMU 113: OVERFLOWS FROM 11-36 COLLECTION SYSTEM/SUMP	SWMU 113	Soil Closure with Uncertainty Management		RRS 3
29	N/A	CONTAINER STORAGE AREA (CONEX WM1-B)	Unit 47	CLOSED	04/22/98	RRS 1
30	N/A	CONTAINER STORAGE AREA (CONEX WM3-A)	Unit 48	CLOSED	04/22/98	RRS 1
31	N/A	CONTAINER STORAGE AREA (CONEX WM5-A)	Unit 49	CLOSED	04/22/98	RRS 1
32	N/A	CONTAINER STORAGE AREA (CONEX WM5-B)	Unit 50	CLOSED	04/22/98	RRS 1

ATTACHMENT H - Summary of Pantex Future Environmental Liabilities

Number	Waste Management Group (WMG)	DESCRIPTION	SWMU/AOC Number	2005 TCEQ Closure Status	Closed on	2005 TCEQ RCRA Risk Closure
33	3	SWMU 5/08 DRAINAGE DITCH 11-36	SWMU 5-08	Soil Closure with Uncertainty Management		RRS 3
34	3	Unassigned FORMER LEACHING BED N OF BLDG 11-50 & W OF BLDG 11-36	UN-6	Soil Closure with Uncertainty Management		RRS 3
35	4	SWMU 13: SURFACE IMPOUNDMENT SOLAR EVAPROATION PITS AT BLDG 11-51	SWMU 13	Soil Closure with Uncertainty Management		RRS 3
36	4	SWMU 5/09a DRAINAGE DITCH 11-17	SWMU 5-09a	Soil Closure with Uncertainty Management		RRS 3
37	4	SWMU 5/09b: DRAINAGE DITCH 11-20	SWMU 5-09b	Soil Closure with Uncertainty Management		RRS 3
38	4	SWMU 5/11 Z11 MAIN DRAINAGE DITCH	SWMU 5-11	Soil Closure with Uncertainty Management		RRS 3
39	4	SWMU 87: WASTE ACCUM 11-20 SOLVENT STORAGE SHED	SWMU 87	Soil Closure with Uncertainty Management		RRS 3
40	4	UNASSIGNED EVAPORATION PIT, EAST OF BAY 3, BLDG 11-20	UN-4	Soil Closure with Uncertainty Management		RRS 3
41	4	UNASSIGNED EVAPORATION PIT, S OF BAY 11, W OF BAY 6, BLDG 11-20	UN-5	Soil Closure with Uncertainty Management		RRS 3
42	5	AOC 7c: SULFURIC ACID SPILLS (12-64)	AOC 7c	Soil Closure with Uncertainty Management		RRS 3
43	N/A	IGLOO 4-46 STORAGE	Unit 52	CLOSED	04/22/98	RRS 1
44	5	SWMU 103: FORMER BATTERY STORAGE AREA, BLDG 12-81	SWMU 103	Soil Closure with Uncertainty Management		RRS 3
45	N/A	IGLOO 4-74 STORAGE	Unit 54	CLOSED	04/22/98	RRS 1
46	N/A	BLDG 11-15A	Unit 38	CLOSED	02/23/99	RRS 1
47	5	SWMU 135: SUBSURFACE LEACH BEDS, BLDG 12-44	SWMU 135	Soil Closure with Uncertainty Management		RRS 3
48	5	SWMU 5/06a: DRAINAGE DITCH 12-44	SWMU 5-06a	Soil Closure with Uncertainty Management		RRS 3
49	5	SWMU 5/06b: DRAINAGE DITCH 12-81	SWMU 5-06b	Soil Closure with Uncertainty Management		RRS 3

ATTACHMENT H - Summary of Pantex Future Environmental Liabilities

Waste Number	Management Group (WMG)	DESCRIPTION	SWMU/AOC Number	2005 TCEQ Closure Status	Closed on	2005 TCEQ RCRA Risk Closure
50	5	SWMU 56 LANDFILL 5 (Group III)	SWMU 56	Soil Closure with Uncertainty Management		RRS 3
51	5	SWMU 57 LANDFILL 6 (Group III)	SWMU 57	Soil Closure with Uncertainty Management		RRS 3
52	5	SWMU 68a: ORIGINAL GENERAL PURPOSE SANITARY LANDFILL	SWMU 68a	Soil Closure with Uncertainty Management		RRS 3
53	N/A	BLDG 11-15B	Unit 39	CLOSED	02/23/99	RRS 1
54	N/A	BLDG 11-9	Unit 37	CLOSED	02/23/99	RRS 1
55	6/7	AOC 10a: PESTICIDE RINSE AREA (BLDG 12-43)	AOC 10a	Soil Closure with Uncertainty Management		RRS 3
56	6/7	AOC 13a: FORMER COOLING TOWER IN ZONE 12 (PAD)	AOC 13a	Soil Closure with Uncertainty Management		RRS 3
57	6/7	AOC 13b: FORMER COOLING TOWER IN ZONE 12 (PIPING/SOIL)	AOC 13b	Soil Closure with Uncertainty Management		RRS 3
58	6/7	SWMU 1: BLDG 12-17 DRAINAGE DITCH	SWMU 1	Soil Closure with Uncertainty Management		RRS 3
59	6/7	SWMU 119b: BLDG 12-43 HE PARTICULATE FILTERS	SWMU 119b	Soil Closure with Uncertainty Management	03/18/94	RRS 3
60	6/7	SWMU 120b: BLDG 12-43 ACTIVATED CARBON FILTERS	SWMU 120b	Soil Closure with Uncertainty Management	03/18/94	RRS 3
61	6/7	SWMU 121 12-43 HE SETTLING TANK	SWMU 121	Soil Closure with Uncertainty Management	03/18/94	RRS 3
62	6/7	SWMU 122a: BLDG 12-43 EQUALIZATION TANK/SOIL	SWMU 122a	Soil Closure with Uncertainty Management	08/26/02	RRS 3
63	6/7	SWMU 122b: Bldg 12-24N/12-43 VICINITY SOILS	SWMU 122b	Soil Closure with Uncertainty Management		RRS 3
64	6/7	SWMU 123: BLDG 12-43 CONCRETE SUMP	SWMU 123	Soil Closure with Uncertainty Management		RRS 3
65	N/A	BLDG 11-9 TANK	Unit 36	CLOSED	02/23/99	RRS 1
66	3	SWMU 130: PORTABLE WASTE SOLVENT TANKS Bldg. 11-36	SWMU 130	CLOSED	05/03/99	RRS 1

ATTACHMENT H - Summary of Pantex Future Environmental Liabilities

Number	Waste Management Group (WMG)	DESCRIPTION	SWMU/AOC Number	2005 TCEQ Closure Status	Closed on	2005 TCEQ RCRA Risk Closure
67	6/7	SWMU 97: WASTE ACCUM 12-34	SWMU 97	CLOSED	05/03/99	RRS 2
68	N/A	FS-22 CONTAINER	UN-1b	CLOSED	08/03/99	RRS 2
69	6/7	SWMU 2: BLDG 12-43 DRAINAGE DITCH	SWMU 2	Soil Closure with Uncertainty Management		RRS 3
70	6/7	SWMU 5/04 DRAINAGE DITCH 12-73	SWMU 5-04b	Soil Closure with Uncertainty Management		RRS 3
71	6/7	SWMU 5/04a: DRAINAGE DITCH 12-19	SWMU 5-04a	Soil Closure with Uncertainty Management		RRS 3
72	6/7	SWMU 5/05 DRAINAGE DITCH BETWEEN BLDGS 12-21 & 12-24	SWMU 5-05	Soil Closure with Uncertainty Management		RRS 3
73	6/7	SWMU 5/07 DRAINAGE DITCH 12-41	SWMU 5-07	Soil Closure with Uncertainty Management		RRS 3
74	6/7	SWMU 5/12a Z12 MAIN DRAINAGE DITCH	SWMU 5-12a	Soil Closure with Uncertainty Management		RRS 3
75	6/7	SWMU 54 LANDFILL 3	SWMU 54	Soil Closure with Uncertainty Management		RRS 3
76	6/7	SWMU 55 LANDFILL 4	SWMU 55	Soil Closure with Uncertainty Management		RRS 3
77	N/A	SWMU 70 FIRING SITE 5	SWMU 70	CLOSED	08/04/99	RRS 2
78	5	UST #38, BLDG 12-98	UN-16	CLOSED	08/18/99	RRS 1
79	5	UST #39, BLDG 12-84	UN-17	CLOSED	08/18/99	RRS 1
80	10	UST #7, BLDG 12-5B	UN-15	CLOSED	08/18/99	RRS 1
81	N/A	SWMU 133: UST #30, WASTE OIL TANK, BLDG 16-1	SWMU 133	CLOSED	08/18/99	RRS 1
82	N/A	UST #9, BLDG 12-17E	UN-14	CLOSED	08/18/99	RRS 1
83	10	AOC 6a: GASOLINE LEAKS AT BLDG 12-35	AOC 6a	CLOSED	08/24/99	RRS 1
84	N/A	AOC 6b: GASOLINE LEAKS AT BLDG 16-1	AOC 6b	CLOSED	08/24/99	RRS 1
85	11 North	CONTAINER STORAGE AREA (CONEX WM1)	SWMU 80/Unit 4	CLOSED	09/01/00	RRS 1

ATTACHMENT H - Summary of Pantex Future Environmental Liabilities

Waste Number	Management Group (WMG)	DESCRIPTION	SWMU/AOC Number	2005 TCEQ Closure Status	Closed on	2005 TCEQ RCRA Risk Closure
104	10	AOC 15: DDT RELEASE AT BLDG 12-35	AOC 15	Soil Closure with Uncertainty Management		RRS 3
105	3	SWMU 112: 11-36 SOVENT TANK	SWMU 112	Administrative Closure	09/19/01	RRS 1
106	10	BLDG 12-5 CONCRETE SUMP	UN-18	Soil Closure with Uncertainty Management		RRS 3
107	3	SWMU 114: 11-36 SCRUBBER SYSTEM	SWMU 114	Administrative Closure	09/19/01	RRS 1
108	10	SWMU 5/01a:DRAINAGE DITCH BLDG 12-5	SWMU 5-01a	Soil Closure with Uncertainty Management		RRS 3
109	10	SWMU 5/01b:DRAINAGE DITCH BLDG 12-5B	SWMU 5-01b	Soil Closure with Uncertainty Management		RRS 3
110	3	SWMU 115: 11-36 CARBON FILTER	SWMU 115	Administrative Closure	09/19/01	RRS 1
111	3	SWMU 116: 11-36 HE SLUDGE FILTERS	SWMU 116	Administrative Closure	09/19/01	RRS 1
112	6/7	SWMU 125: 12-43 HE CHARCOAL BOXES (site wide)	SWMU 125	Administrative Closure	09/19/01	RRS 1
113	6/7	SWMU 126: 12-43 HE WASTE DUMPSTERS (site wide)	SWMU 126	Administrative Closure	09/19/01	RRS 1
114	6/7	SWMU 129b: HE SLUDGE CONTAINERS (12-43)	SWMU 129b	Administrative Closure	09/19/01	RRS 1
115	8	SWMU 141: CLASSIFIED WASTE INCINERATOR	SWMU 141	Administrative Closure	09/19/01	RRS 1
116	8	SWMU 85: MOCA WASTE ACCUMULATION (BLDG 12-16)	SWMU 85	Administrative Closure	09/19/01	RRS 1
117	11 North	SWMU 68b: GP SANITARY LANDFILL 1	SWMU 68b	Soil Closure with Uncertainty Management		RRS 3
118	11 North	SWMU 82: NUCLEAR ACCIDENT RESIDUE STORAGE - ZONE 4	SWMU 82	Soil Closure with Uncertainty Management		RRS 3
119	11 South	OLD PISTOL RANGE NEAR PLAYA #1 (SVS 4)	UN-9/SVS 4	ACTIVE	N/A	N/A

ATTACHMENT H - Summary of Pantex Future Environmental Liabilities

Number	Waste Management Group (WMG)	DESCRIPTION	SWMU/AOC Number	2005 TCEQ Closure Status	Closed on	2005 TCEQ RCRA Risk Closure
120	11 South	SWMU 5/13 (a, b, and c) DRAINAGE DITCH TO PLAYA 1	SWMU 5-13	Soil Closure with Uncertainty Management		RRS 3
121	11 South	SWMU 6: PLAYA 1	SWMU 6	Soil Closure with Uncertainty Management		RRS 3
122	11 South	SWMU 68c: GP SANITARY LANDFILL 2	SWMU 68c	Soil Closure with Uncertainty Management		RRS 3
123	12	ABANDONED ZONE 10 LANDFILLS	SVS 8	Soil Closure with Uncertainty Management		RRS 3
124	12	AOC 14: BATTERY STORAGE AREA, SCRAP/SALVAGE YARD, (10-9)	AOC 14	Soil Closure with Uncertainty Management		RRS 3
125	12	AOC 3a: FORMER BOILER HOUSE AREAS, ZONE 10	AOC 3a	Soil Closure with Uncertainty Management		RRS 3
126	12	SVS 3: CARBON BLACK BURIAL AREA-ZONE 10 (Duplicate of SWMU 67)	SWMU 67 / SVS 3	Soil Closure with Uncertainty Management		RRS 3
127	12	SWMU 143a: FORMER WASTE DRUM STORAGE AREAS/BLDG 10-9	SWMU 143a	Soil Closure with Uncertainty Management		RRS 3
128	12	SWMU 143b: FORMER WASTE DRUM STORAGE AREAS/BLDG 10-7	SWMU 143b	Soil Closure with Uncertainty Management		RRS 3
129	12	SWMU 144: ZONE 10 TNT SETTLING PIT (10-13)	SWMU 144	Soil Closure with Uncertainty Management		RRS 3
130	12	SWMU 145: ZONE 10 TNT SETTLING PIT (10-17)	SWMU 145	Soil Closure with Uncertainty Management		RRS 3
131	12	SWMU 146: ZONE 10 TNT SETTLING PIT (10-26)	SWMU 146	Soil Closure with Uncertainty Management		RRS 3
132	12	SWMU 68d: ACTIVE SANITARY LANDFILL	SWMU 68d	Soil Closure with Uncertainty Management		RRS 3
133	12	SWMU 84: SCRAP AND SALVAGE YARD, BLDG 10-9	SWMU 84	Soil Closure with Uncertainty Management		RRS 3
134	12	Zone 10 Construction Debris Landfills (5)	Unassigned AOC	Soil Closure with Uncertainty Management		RRS 3
135	13	SWMU 14 BURNING GROUNDS-EXPLOSIVE BURN PAD 1	SWMU 14	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3

ATTACHMENT H - Summary of Pantex Future Environmental Liabilities

Number	Waste Management Group (WMG)	DESCRIPTION	SWMU/AOC Number	2005 TCEQ Closure Status	Closed on	2005 TCEQ RCRA Risk Closure
136	13	SWMU 15 BURNING GROUNDS-EXPLOSIVE BURN PAD 2	SWMU 15	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
137	13	SWMU 16 BURNING GROUNDS-EXPLOSIVE BURN PAD 3	SWMU 16	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
138	13	SWMU 17 BURNING GROUNDS-EXPLOSIVE BURN PAD 4	SWMU 17	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
139	13	SWMU 18 BURNING GROUNDS-EXPLOSIVE BURN PAD 5	SWMU 18	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
140	13	SWMU 19 BURNING GROUNDS-EXPLOSIVE BURN PAD 6	SWMU 19	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
141	13	SWMU 20 BURNING GROUNDS-EXPLOSIVE BURN PAD 7	SWMU 20	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
142	13	SWMU 21 BURNING GROUNDS-EXPLOSIVE BURN PAD 7A	SWMU 21	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
143	13	SWMU 22 BURNING GROUNDS-EXPLOSIVE BURN PAD 8	SWMU 22	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
144	13	SWMU 23 BURNING GROUNDS-EXPLOSIVE BURN PAD 9	SWMU 23	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
145	13	SWMU 24 BURNING GROUNDS-EXPLOSIVE BURN PAD 10	SWMU 24	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
146	13	SWMU 25 BURNING GROUNDS-EXPLOSIVE BURN PAD 11	SWMU 25	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
147	13	SWMU 26 BURNING GROUNDS-EXPLOSIVE BURN PAD 12	SWMU 26	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
148	13	SWMU 27 BURNING GROUNDS-EXPLOSIVE BURN PAD 13	SWMU 27	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
149	13	SWMU 28 BURNING GROUNDS-EXPLOSIVE BURN TRAYS	SWMU 28	ACTIVE	N/A	N/A
150	13	SWMU 29 BURNING GROUNDS-EXPLOSIVE BURN TRAYS	SWMU 29	ACTIVE	N/A	N/A
151	13	SWMU 30 BURNING GROUNDS-EXPLOSIVE BURN TRAYS	SWMU 30	ACTIVE	N/A	N/A

ATTACHMENT H - Summary of Pantex Future Environmental Liabilities

Number	Waste Management Group (WMG)	DESCRIPTION	SWMU/AOC Number	2005 TCEQ Closure Status	Closed on	2005 TCEQ RCRA Risk Closure
152	13	SWMU 31 BURNING GROUNDS-EXPLOSIVE BURN TRAYS	SWMU 31	ACTIVE	N/A	N/A
153	13	SWMU 32 BURNING GROUNDS-EXPLOSIVE BURN TRAYS	SWMU 32	ACTIVE	N/A	N/A
154	13	SWMU 33 BURNING GROUNDS-EXPLOSIVE BURN TRAYS	SWMU 33	ACTIVE	N/A	N/A
155	13	SWMU 34 BURNING GROUNDS-EXPLOSIVE BURN TRAYS	SWMU 34	ACTIVE	N/A	N/A
156	13	SWMU 35 BURNING GROUNDS-EXPLOSIVE BURN TRAYS	SWMU 35	ACTIVE	N/A	N/A
157	13	SWMU 36 BURNING GROUNDS-EXPLOSIVE BURN TRAYS	SWMU 36	ACTIVE	N/A	N/A
158	13	SWMU 37 BURNING GROUNDS-LANDFILL 1	SWMU 37	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
159	13	SWMU 38 BURNING GROUNDS-LANDFILL 2	SWMU 38	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
160	13	SWMU 39 BURNING GROUNDS-LANDFILL 3	SWMU 39	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
161	13	SWMU 40 BURNING GROUNDS-LANDFILL 4	SWMU 40	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
162	13	SWMU 41 BURNING GROUNDS-LANDFILL 5	SWMU 41	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
163	13	SWMU 42 BURNING GROUNDS-LANDFILL 6	SWMU 42	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
164	13	SWMU 43 BURNING GROUNDS-LANDFILL 7	SWMU 43	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
165	13	SWMU 44 BURNING GROUNDS-LANDFILL 8	SWMU 44	Soil Closure Acceptable Risk under BG HHRA	09/30/06	RRS 3
166	13	SWMU 45 BURNING GROUNDS-BURN CAGES	SWMU 45	Soil Closure Acceptable Risk under BG HHRA	09/30/06 (03/04/97)	RRS 3
167	13	SWMU 46 BURNING GROUNDS-BURN CAGES	SWMU 46	Soil Closure Acceptable Risk under BG HHRA	09/30/06 (03/04/97)	RRS 3

ATTACHMENT H - Summary of Pantex Future Environmental Liabilities

Number	Waste Management Group (WMG)	DESCRIPTION	SWMU/AOC Number	2005 TCEQ Closure Status	Closed on	2005 TCEQ RCRA Risk Closure
184	N/A	SWMU 134: 11-29, SILVER RECOVERY OPERATIONS	SWMU 134	Administrative Closure	09/19/01	RRS 1
185	N/A	SWMU 142 LABORATORY HOOD AND FILTER SYSTEMS (24 BLDGS)	SWMU 142	Administrative Closure	09/19/01	RRS 1
186	N/A	SWMU 76 FS-18	SWMU 76	Administrative Closure	09/19/01	RRS 1
187	N/A	SWMU 77: FS-23 FILTER/EXHAUST SYSTEM	SWMU 77	Administrative Closure	09/19/01	RRS 1
188	N/A	SWMU 83: BLDG 4-8, CONTAINER STORAGE	SWMU 83	Administrative Closure	09/19/01	RRS 1
189	N/A	BLDG 11-9 STORAGE	Unit 40	CLOSED	09/20/02	RRS 1
190	1	SWMU 59 LANDFILL 8 (Duplicate of SVS 5)	SWMU 59	Administrative Closure	06/27/03	RRS 1
191	5	SWMU 100: WASTE ACCUM 12-42	SWMU 100	Administrative Closure	06/27/03	RRS 1
192	5	SWMU 104: WASTE ACCUM 12-82, ASSEMBLY BAYS	SWMU 104	Administrative Closure	06/27/03	RRS 1
193	5	SWMU 105: WASTE ACCUM 12-84, ASSEMBLE BAYS	SWMU 105	Administrative Closure	06/27/03	RRS 1
194	6/7	SWMU 137: 12-41, PAINT SHOP WASTEWATER TANK	SWMU 137	Administrative Closure	06/27/03	RRS 1
195	6/7	SWMU 99: WASTE ACCUM 12-41, SPRAY PAINTING	SWMU 99	Administrative Closure	06/27/03	RRS 1
196	6/7	SWMU96: WASTE ACCUM 12-21, GAS LAB EAST	SWMU 96	Administrative Closure	06/27/03	RRS 1
197	8	SWMU 90: WASTE ACCUM 12-9, HALL GROUND FLOOR	SWMU 90	Administrative Closure	06/27/03	RRS 1
198	8	SWMU 91: WASTE ACCUM 12-9, SOLVENT SHED	SWMU 91	Administrative Closure	06/27/03	RRS 1
199	8	SWMU 94: WASTE ACCUM RAMP 12-R-13	SWMU 94	Administrative Closure	06/27/03	RRS 1

PRIME

ATTACHMENT H - Summary of Pantex Future Environmental Liabilities

Number	Waste Management Group (WMG)	DESCRIPTION	SWMU/AOC Number	2005 TCEQ Closure Status	Closed on	2005 TCEQ RCRA Risk Closure
213	N/A	SWMU 65 LANDFILL 14 (Duplicate of SVS 6)	SWMU 65	Administrative Closure	06/27/03	RRS 1
214	N/A	SWMU 88: WASTE ACCUM 11-41,COMPRESSOR BLDG	SWMU 88	Administrative Closure	06/27/03	RRS 1
215	N/A	SWMU 98: WASTE ACCUM 12-38, SOLVENT STORAGE FOR CHEM LAB	SWMU 98	Administrative Closure	06/27/03	RRS 1
216	8	SWMU 109: OUTSIDE SUMP RELEASES FROM BLDG 12-68	SWMU 109	CLOSED	04/30/04	RRS 2
217	8	SWMU 110: 12-68 ELECTROPLATING WASTE RETENTION BASIN (Interior Moat)	SWMU 110	CLOSED	04/30/04	RRS 2
218	8	SWMU 5/03a: DRAINAGE DITCH 12-68	SWMU 5-03a	CLOSED	04/30/04	RRS 2
219	8	SWMU 5/03b: DRAINAGE DITCH 12-18	SWMU 5-03b	CLOSED	04/30/04	RRS 2
220	N/A	SWMU 136: SUBSURFACE LEACHING SYSTEMS, BLDG 12-59	SWMU 136	Soil Closure with Uncertainty Management		RRS 3
221	8	SWMU 5/03c: DRAINAGE DITCH 12-9	SWMU 5-03c	CLOSED	04/30/04	RRS 2
222	8	SWMU 5/03d: DRAINAGE DITCH 12-10	SWMU 5-03d	CLOSED	04/30/04	RRS 2
223	N/A	AOC 7b: SULFURIC ACID SPILLS (12-4)	AOC 7b	CLOSED	04/30/04	RRS 2
224	N/A	SWMU 4: BLDG 11-50, DRAINAGE DITCH	SWMU 4	Soil Closure with Uncertainty Management		RRS 3
225	N/A	Building 12-1 Laundry Sump	AOC	CLOSED	04/30/04	RRS 2
226	N/A	FS-1 UNLINED LANDFILL/LANDFILL 18 NORTH OF FS-10	UN-1a	Administrative Closure	07/29/04	RRS 1
227	N/A	SWMU 5/15a & 5/15b DRAINAGE DITCH PLAYA 4	SWMU 5-15 a & b	Soil Closure with Uncertainty Management		RRS 3
228	N/A	SWMU 62 LANDFILL 11	SWMU 62	Administrative Closure	07/29/04	RRS 1

ATTACHMENT H - Summary of Pantex Future Environmental Liabilities

Number	Waste Management Group (WMG)	DESCRIPTION	SWMU/AOC Number	2005 TCEQ Closure Status	Closed on	2005 TCEQ RCRA Risk Closure
229	N/A	SWMU 58 LANDFILL 7	SWMU 58	Soil Closure with Uncertainty Management		RRS 3
230	N/A	11-7A PAD (Unit 41)	SWMU 79a	CLOSED	03/28/05	RRS 1
231	N/A	11-7B PAD (Unit 42)	SWMU 79b	CLOSED	03/28/05	RRS 1
232	N/A	SWMU 64 LANDFILL 13	SWMU 64	Soil Closure with Uncertainty Management		RRS 3
233	11 North	DENUDED AREA NEAR PLAYA #1 (SVS 1)	UN-7/SVS 1	CLOSED	04/25/05	RRS 2
234	N/A	SWMU 66 LANDFILL 15	SWMU 66	Soil Closure with Uncertainty Management		RRS 3
235	N/A	SWMU 69: FIRING SITE 4	SWMU 69	ACTIVE	N/A	N/A
236	N/A	SWMU 7: PLAYA 2	SWMU 7	Soil Closure with Uncertainty Management		RRS 3
237	N/A	FS-11 HE Dumpster Area	FS-11	CLOSED	04/25/05	RRS 2
238	N/A	SWMU 106: WASTE ACCUM 16-1, VEHICLE MAINTENANCE FACILITY	SWMU 106	CLOSED	04/25/05	RRS 2
239	N/A	SWMU 72 FIRING SITE 10	SWMU 72	ACTIVE	N/A	N/A
240	N/A	SWMU 11: SURFACE IMPOUNDMENT IN ZONE 5, BLDG FS-16	SWMU 11	CLOSED	04/25/05	RRS 2
241	N/A	SWMU 74 FIRING SITE 21	SWMU 74	ACTIVE	N/A	N/A
242	N/A	SWMU 75 FIRING SITE 22	SWMU 75	ACTIVE	N/A	N/A
243	N/A	SWMU 139: PHOTOPROCESSING LEACHING BED AT FS-10	SWMU 139	CLOSED	04/25/05	RRS 2
244	N/A	SWMU 140: OLD SEWAGE TREATMENT PLANT	SWMU 140	CLOSED	04/25/05	RRS 2
245	N/A	SWMU 78 FS-24 SUMP COLLECTION SYSTEM	SWMU 78	ACTIVE		N/A
246	N/A	SWMU 5/10 DRAINAGE DITCH AT OSTP	SWMU 5-10	CLOSED	04/25/05	RRS 2
247	N/A	SWMU 5/14 DRAINAGE DITCH TO PLAYA 2	SWMU 5-14	CLOSED	04/25/05	RRS 2
248	N/A	SWMU 53: TEMPORARY HIGH EXPLOSIVE BURN SITE	SWMU 53	CLOSED	04/25/05	RRS 2

ATTACHMENT H - Summary of Pantex Future Environmental Liabilities

Number	Waste Management Group (WMG)	DESCRIPTION	SWMU/AOC Number	2005 TCEQ Closure Status	Closed on	2005 TCEQ RCRA Risk Closure
249	N/A	SWMU 9: PLAYA 4	SWMU 9	The SWMU will not be evaluated for final closure until the CORE has completed their investigation. Final assessment is deferred pending completion of the RFI by all PRPs (04/25/05).		
250	N/A	SWMU 63 LANDFILL 12	SWMU 63	CLOSED	04/25/05	RRS 2
251	N/A	UNNUMBERED ZONE 7 LANDFILLS	UN-11/SVS 6	Soil Closure with Uncertainty Management		RRS 3
252	8	SWMU 102: WASTE ACCUM 12-68, BATCH MASTER	SWMU 102	Administrative Closure	5/29/1997 & 6/27/2003	RRS 1

ATTACHMENT H - Summary of Pantex Future Environmental Liabilities

Risk Reduction Standard Criteria

- RRS 1: The site is not contaminated and therefore, no risk to people or the environment exists (no further action is needed for RRS 1 sites) due to industrial activities at the site. Sample results are less than background for naturally occurring compounds or below the laboratory detection limits for non-naturally occurring compounds. The laboratory detection limits are defined by the RRR and are called practical quantitation limits (PQLs).

- RRS 2: The site contains low levels of contamination. Sample results for one or more compounds exceed RRS 1 action levels (ALs). The sample results fall below comparison values that are similar to background values or are considered to protect people and the environment. These comparison values are called RRS 2 action levels. NNSA may elect to clean up sites that exceed the ALs, so that concentrations are reduced below the ALs. Once a site meets the RRS 2 ALs, no site cleanup is required, and the contaminant levels are recorded on the deed for the property.

- RRS 3: The site contains levels of contamination above the RRS 2 ALs. These sites require further evaluation to determine if risk to people and the environment may occur. This highly complex evaluation uses available data from the site to determine the level of risk posed by the contamination. Typically RRS 3 sites are evaluated within a risk assessment as defined in the RRR. Where unacceptable risk (as defined by the Risk Reduction Rule) occurs, cleanup levels are determined in the risk assessment, and cleanup methods are determined through a corrective measures study.

The program completed all Pantex Resource Conservation Recovery Act Facility Investigations that were approved by the State of Texas with concurrence of the EPA. Approval of the Baseline Risk Assessment is expected in FY07. The Pantex Corrective Measure Study, where different techniques and remediation strategies will be considered, has been submitted for regulator approval. In the regulatory sequence, Pantex will move through their Record of Decision with EPA at the completion of the Corrective Measures Study. Prior to completion of the Record of Decision (ROD), a Federal Facilities Agreement must be negotiated between EPA and Pantex. Following the ROD, Pantex will move on to the Corrective Measures implementations and renegotiation of the Compliance Plan with the State of Texas, leading to long-term monitoring. Ultimately, the ER program is scheduled to be moving into Long-Term Environmental Stewardship in FY 2008. From that point, the ER program at Pantex will focus on the operations, maintenance and monitoring of corrective measures.

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Administrative Support Facility - continued

Projected Annual Operating Costs:
Because this project will replace 10 aging administrative facilities, a reduction in annual operating costs is expected. A Life Cycle Cost Analysis will be performed in the near future.

Project Site/Facility Space Utilization:
The proposed location is currently in Zone 12 North. Other siting options will be evaluated in the near future. The current operations occupy approximately the same square feet as the proposed new facility.

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: Building 12-44 Production Cells Upgrade Phase II (5 Cells) (RTBF)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Program Director
Robert D. Cole, BWXT Pantex Program Manager

Federal and Contractor Project Manager(s):
To Be Determined

Project Description:
This information sheet is provided to support the additional funding requirements as noted in the Proposed Project section of this document.

The Building 12-44 Production Cells Upgrade Phase II (5 cells) provides required upgrades to two additional cells. Phase I has completed construction on three cells and is currently in the start-up process. The Phase II cell modifications will increase operating capacity to meet future requirements based on weapon complexity, projected workload, and the Life Extension Program (LEP) activities.

To handle the workload of the future and be a responsive plant for the future, the Pantex Plant facilities need to be maintained and ready for changing weapon design necessary in the 2030 Vision.

Current Proposed/Actual Project Schedule:

Critical Decision -0 (CD-0) Approval	2nd Quarter FY 2002
Critical Decision -1 (CD-1) Approval	3rd Quarter FY 2003
Critical Decision -2 (CD-2) Approval	3rd Quarter FY 2004
Critical Decision -3 (CD-3) Approval	1st Quarter FY 2005
Critical Decision -4 (CD-4) Approval	4th Quarter FY 2010

Project Justification (Program Requirements):
The need for the proposed project is workload driven. Workload projections show an increase, creating insufficient cells to accommodate operations with conventional high explosives. These upgraded cells will provide additional capacity to meet future LEP work requirements.

The workload requirements were identified based upon current and projected plant missions based on the Ten Year Site Plan (TYSP) and NNSA Stockpile Stewardship Program. If the cells are not upgraded, it will reduce the site's capacity and capability to meet the LEP requirements.

Alternatives Developed/Available to Meet Program Requirements:
No Action
This alternative does not provide the additional capacity required for the projected workload. A cell has unique structural properties that allow safe operations with conventional high explosives. All cells are fully utilized. There is no structure that is an acceptable substitute for a cell. There are no other cells or facilities at Pantex that can be converted for cell required production work. Cell 1 is currently non-operational. This is **not** a viable alternative.

Construct New Production Cell
This alternative builds two new cells inside the Zone 12 MAA area. This is **not** a viable alternative.

Building 12-44 Production Cells Upgrade Phase 2 (5 cells) - continued

Proposed Funding Profile ($ x 1000):

[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
OPC	$1,871	$371	$200	$300	$200	$400	$400					
PE&D	$1,410	$1,410										
LI	$41,965	$12,465	$7,500			$22,000						
Total (TPC)*	**$45,246**	**$14,246**	**$7,700**	**$300**	**$200**	**$22,400**	**$400**					

*Parametric planning estimate only. Numbers do not constitute baseline.

Projected Annual Operating Costs:
This project will not increase operating costs.

Project Site/Facility Space Utilization:
This project does not add square footage to the site.

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: Building 12-44 Production Cells 1 and 8 Upgrade (RTBF)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Program Director
Robert D. Cole, BWXT Pantex Program Manager

Federal and Contractor Project Manager(s):
To Be Determined

Project Description:
The Building 12-44 Production Cells 1 and 8 Upgrade provides for the installation of a task exhaust system, replacement of dehumidifiers, Heating, Ventilation, and Air Conditioning (HVAC) equipment, hoists, Radiation Alarm Monitoring System (RAMS), and modifications to the blast doors to allow nuclear explosive weapon systems to be worked in the cell. Cell 1 will also include the remediation of tritium and mercury and replacement of the fire system. Cell 8 will also include the removal of the existing robot and shelving system. These modifications will increase operating capacity to meet future requirements based on weapon complexity, projected workload, and the Life Extension Program (LEP) activities.

To handle the workload of the future and be a responsive plant for the future, the Pantex Plant facilities need to be maintained and ready for changing weapon design necessary in the 2030 Vision.

Current Proposed/Actual Project Schedule:

Critical Decision -0 (CD-0) Approval	4th Quarter FY 2007
Critical Decision -1 (CD-1) Approval	4th Quarter FY 2008
Critical Decision -2 (CD-2) Approval	1st Quarter FY 2011
Critical Decision -3 (CD-3) Approval	4th Quarter FY 2011
Critical Decision -4 (CD-4) Approval	1st Quarter FY 2015

Project Justification (Program Requirements):
The need for the proposed project is workload driven. Workload projections show an increase, creating insufficient cells to accommodate operations with conventional high explosives. This upgraded cell will provide additional capacity to meet future LEP work requirements.

The workload requirements were identified based upon current and projected plant missions based on the Ten Year Site Plan (TYSP) and NNSA Stockpile Stewardship Program. If the cell is not upgraded it will reduce the site's capacity and capability to meet the LEP requirements.

Alternatives Developed/Available to Meet Program Requirements:
No Action
This alternative does not provide the additional capacity required for the projected workload. A cell has unique structural properties that allow safe operations with conventional high explosives. All cells are fully utilized. There is no structure that is an acceptable substitute for a cell. There are no other cells or facilities at Pantex that can be converted for cell required production work. Cell 1 is currently non-operational. This is **not** a viable alternative.

Construct New Production Cell
This alternative builds two new cells inside the Zone 12 MAA area. This is **not** a viable alternative.

Building 12-44 Production Cells 1 and 8 Upgrade - continued

Proposed Funding Profile ($ x 1000):

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OPC	$6,677	$200	$1,400	$500	$500	$400	$700	$700	$1,177	$1,100		
PE&D	$9,226			$5,000	$4,226							
LI	$38,297						$25,000	$13,297				
Total (TPC)*	**$54,200**	**$200**	**$1,400**	**$5,500**	**$4,726**	**$400**	**$25,700**	**$13,997**	**$1,177**	**$1,100**		

*Parametric planning estimate only. Numbers do not constitute baseline.

Projected Annual Operating Costs:
This project will increase operating costs by $420,000. This cost is attributed to converting Cell 1 to a production cell.

Project Site/Facility Space Utilization:
This project does not add square footage to the site.

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: CCTV Enhancement Project (S&S)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Project Director
Robert D. Cole, BWXT Pantex Project Manager

Federal and Contractor Project Manager(s):
To Be Determined

Project Description:
To help position security at Pantex for the 2030 Vision, this project provides for installation of a Closed Circuit Television (CCTV) system in all bays and cells in Zone 12 MAA. The system will be standalone (not connected to the Argus Security System) and will be classified. The system will be digital, using networked TCP/IP cameras, Digital Video Recorders, high-speed switches, and a single mode fiber backbone (new fiber will be required). Coverage of the cameras should include the personnel entry areas, material transfer areas, and the entire bay or cell. The system should utilize state-of-the-art Intelligent Video Assessment System (IVAS) Technology with "through the lens" motion detection. The video output of the system will be monitored at the CAS/SAS and modifications to the consoles may be needed to accommodate the monitors. The cameras should be low light and the lighting in the bays and cells modified to always leave lights turned on. The cameras may need to be explosion proof and radiation hardened. The system may require indications of tampering, both locally and remotely. At least one camera in the bay/cell should be covert equipped with audio monitoring capabilities. These upgrades and enhancements will allow Protective Force personnel the opportunity to plan for and train to the new threats as identified in the new Design Basis Threat Document while complying with the DOE Orders, Manuals, and Standards, and meet the protection programs as identified in the site approved SSSP. Since the terrorist attack in the United States on 11 September 2001, the Protective Force must have support facilities that address the increased requirements.

Current Proposed/Actual Project Schedule:

Critical Decision -0 (CD-0) Approval	4th Quarter FY 2008
Critical Decision -1 (CD-1) Approval	4th Quarter FY 2009
Critical Decision -2 (CD-2) Approval	4th Quarter FY 2011
Critical Decision -3 (CD-3) Approval	4th Quarter FY 2012
Critical Decision -4 (CD-4) Approval	3rd Quarter FY 2015

Project Justification (Program Requirements):
These projects will fulfill requirements described in DOE M 470.1, DOE M 470.4-2 Change 2, the Pantex SSSP, and DOE O 470.3A Design Basis Threat (DBT). These upgrades and enhancements will allow Protective Force personnel the opportunity to plan for the new threat as identified in the new Design Basis Threat while complying with the DOE Orders, Manuals, and Standards, and to meet the protection programs as identified in the site approved SSSP. New terrorists weapons and tactics now require Protective Force personnel that are better armed, equipped, and trained to protect the nation's nuclear weapons stockpile. These upgrades/enhancements are consistent with the Energy Secretary's strategic initiatives to:

- Upgrade security at key facilities;
- Identify, hire, and train specialized security contingents to guard Pantex's high-priority nuclear assets;
- Ensure a modern, efficient force that meets future threats; and
- Provide programs that train the Protective Force and test their readiness to respond to any threat to the site.

Alternatives Developed/Available to Meet Program Requirements:
Continue Protective Force operations with facilities designed to handle pre 9/11 threats and staffing.

CCTV Enhancement Project - continued

Proposed Funding Profile ($ x 1000):

Funding Type	Total Cost	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
OPC	$8,600		$500	$1,700	$1,000	$1,000	$500	$1,200	$1,200	$1,500		
PE&D	$5,700				$3,300	$2,400						
LI	$45,300							$25,100	$20,200			
Total (TPC)*	**$59,600**		**$500**	**$1,700**	**$4,300**	**$3,400**	**$500**	**$26,300**	**$21,400**	**$1,500**		

*Parametric planning estimate only. Numbers do not constitute baseline.

Projected Annual Operating Costs:
The completion of this project will increase operating, maintenance, and utility costs by approximately $770,000 per year.

Project Site/Facility Space Utilization:
This project will have no net increase in the plant square footage. This project will free up no square feet.

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: Component Evaluation Facility (RTBF)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Project Director
Robert D. Cole, BWXT Pantex Project Manager

Federal and Contractor Project Manager(s):
Montrell Harris, Federal Project Manager
Michael Green, BWXT Pantex Project Manager

Project Description:
This information sheet is provided to support the additional funding requirements as noted in the Proposed Project section of this document.

The proposed Component Evaluation Facility (CEF) at the Pantex Plant will consolidate and increase capability and capacity of existing technologies, and provide space for new technologies required for surveillance and re-qualification of weapons.

Capabilities at the CEF will include the ability to conduct concurrent operations on multiple stockpile weapon types on a non-interference basis, to completely disassemble and inspect any insensitive-high-explosive weapon, and sufficient facility capacity to house, test, and operate new weapon diagnostics developed in the Enhanced Surveillance activities of the Engineering Campaign. The CEF will consist of a 71,000 square foot, 7 bay facility complex, and a 4,300 square foot connecting ramp.

Current Proposed/Actual Project Schedule:

Critical Decision -0 (CD-0) Approval	4th Quarter FY 2004
Critical Decision -1 (CD-1) Approval	2nd Quarter FY 2008
Critical Decision -2 (CD-2) Approval	4th Quarter FY 2009
Critical Decision -3 (CD-3) Approval	1st Quarter FY 2011
Critical Decision -4 (CD-4) Approval	1st Quarter FY 2016

Project Justification (Program Requirements):
The proposed new Component Evaluation Facility will provide the Pantex Plant the capabilities and capacities to re-qualify, re-certify, and inspect weapons and components as directed by the NNSA. The CEF will provide facilities, capabilities and capacities that will support known mission requirements. Capacity requirements were derived from programmatic direction documents using the Pantex workload model.

Alternatives Developed/Available to Meet Program Requirements:
There are no known technical alternatives for this project. Use of existing facilities capable of accepting the operations planned for the Component Evaluation Facility is unacceptable. According to future workload projections, all existing bays will utilize multiple shifts for planned operations.

Component Evaluation Facility - continued

Proposed Funding Profile ($ x 1000):

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OPC	$12,700	$1,830	$530	$800	$750	$750	$750	$750	$750	$750	$2,000	$2,940	$100	
PE&D	$22,000	$1,984	$2,500	$6,551	$7,000	$3,965								
LI	$137,000							$50,000	$50,000	$37,900				
Total (TPC)	**$172,600**	**$3,814**	**$3,030**	**$7,351**	**$7,750**	**$4,715**	**$750**	**$50,750**	**$50,750**	**$38,650**	**$2,000**	**$2,940**	**$100**	

*Parametric planning estimate only. Numbers do not constitute baseline.

Projected Annual Operating Costs:
The completion of this project will increase operating, maintenance, and utility costs by approximately $4,500,000 per year.

Project Site/Facility Space Utilization:
This project will add 75,600 square feet at the Pantex Plant. A waiver to obtain banked square feet from another DOE Site will be required.

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: Compressed Air Refurbishment (RTBF)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Project Director
Robert D. Cole, BWXT Pantex Project Manager

Federal and Contractor Project Manager(s):
To Be Determined

Project Description:
The scope of this project is to replace and upgrade existing compressed air equipment and provide additional back up capabilities. It also provides for contingency planning for component or facility failure and increases reliability of the compressed air system. The project will accomplish the following:

- Replace the existing Centac air compressor in Building 12-123
- Upgrade the controls on the existing west dryer in Building 12-123
- Provide a temporary installation of an air compressor connected to the main air piping in Zone 12 North. This allows for uninterruptible air for shop and production activities in Zone 12 North during the replacement of the air compressor in Building 12-123
- Upgrade the monitoring and compressor controls for Zone 12
- Provide a temporary installation of an air compressor connected to the main air piping in Zone 11 during replacement of the air dryer in Building 11-58
- Upgrade piping in Building 11-58 to provide for isolation of the facility
- Purchase a new after cooler, dryer, filter assembly, and connecting hoses that are "portable" to support the temporary installation of compressors.

Current Proposed/Actual Project Schedule:

Critical Decision -0 (CD-0) Approval	4th Quarter FY 2010
Critical Decision -1 (CD-1) Approval	4th Quarter FY 2011
Critical Decision -2 (CD-2) Approval	3rd Quarter FY 2013
Critical Decision -3 (CD-3) Approval	4th Quarter FY 2014
Critical Decision -4 (CD-4) Approval	3rd Quarter FY 2016

Project Justification (Program Requirements):
The replacement of the compressor in Building 12-123 requires temporary splitting of the Zone 12 compressed air system between Zone 12 North and Zone 12 South. The compressor provides air to Zone 12 North and Zone 12 South. Zone 12 North requires compressed air for instruments, maintenance, machine shops, tooling manufacturing, Metrology operations, environmental controls, and other processes. Zone 12 South requires compressed air for fire systems, environmental controls, lifting fixtures, and other assembly and disassembly processes. During the splitting of the system, a temporary compressor will provide compressed air for the operations in Zone 12 North.

The compressor and equipment in Building 11-58 provides air to Zone 11. Operations in Zone 11 require compressed air for fire systems, environmental controls, lifting fixtures, instrument air, and other processes. Replacement of the air dryer in Building 11-58 requires the compressor that services Zone 11 to be shut down. During the replacement of the dryer, a temporary compressor will provide compressed air for the operations in Zone 11. Upgrading the compressed air piping in Building 11-58 will provide isolation of the building, increase reliability of the system, and provide contingency in the event of component failure. Without this project the plant compressed air network will not support Pantex by 2030.

Alternatives Developed/Available to Meet Program Requirements:
Do Nothing
Compressed air is required for weapon and support operations. There is no substitute. This is **not** a viable alternative.

[redacted]

[redacted]

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: FICAM Equipment Replacement (RTBF)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Project Director
Robert D. Cole, BWXT Pantex Project Manager

Federal and Contractor Project Manager(s):
To Be Determined

Project Description:
The objective of this project is to provide state-of-the-art replacement of all FICAM equipment located in Pantex Plant bays and cells. This includes replacing and/or redesigning alpha and tritium continuous air monitors (CAMS), replacing evacuation alarm units (EAUs), replacing radiation alarm monitoring systems (RAMS), and modification and/or replacement of support equipment servicing multiple locations. All the production facilities inside the Material Access Area (MAA) plus a few satellite locations will receive upgraded CAMs, EAUs, and/or RAMS new equipment or upgraded existing system. The computer system for collecting and transmitting monitor conditions must be modernized as well as the status monitors in Buildings 12-122, 12-130 and 12-37. The systems must be replaced minimizing interrupted production schedules and downtime. This project will replace cable with fiber optic as needed to reduce interference. The FICAM equipment require upgrade from time to time to assure the infrastructure is maintained for today and the Complex 2030 Vision.

Current Proposed/Actual Project Schedule:

Critical Decision -0 (CD-0) Approval	4th Quarter FY 2007
Critical Decision -1 (CD-1) Approval	4th Quarter FY 2008
Critical Decision -2 (CD-2) Approval	4th Quarter FY 2010
Critical Decision -3 (CD-3) Approval	4th Quarter FY 2011
Critical Decision -4 (CD-4) Approval	3rd Quarter FY 2015

Project Justification (Program Requirements):
This equipment monitors potential radiation contamination to assure personnel safety. Replacement parts for the existing Alpha and tritium CAMs are no longer available from their manufacturer. There are components and subsystems in the current monitoring systems that are obsolete and if they fail the system will require a redesign before it can go back into service.

The Code of Federal Regulations: 10CFR835: 403 requires monitoring air born radioactivity when exposure may exceed more then 40 DAC hours in a year, when respirators are required to protect against radionuclides, and to detect and provide warning of dangerous levels of airborne radioactive material. The electronics used in the existing alarm system are based on technologies developed in the 1970's and upgraded in the late 1990s. The need to replace the FICAMs at Pantex is documented in the *FY03 BWXT Pantex Technology Plan* as a sunset technology requiring replacement and in the *Vital Safety System Operability/Reliability Assessment* published November 6, 2003. If a vital component supporting a system or systems fails, shutdown of the operating bay or bays is required and production in that bay/cell stops.

Alternatives Developed/Available to Meet Program Requirements:
According to the Code of Federal Regulations, Production Technicians cannot work in a bay or cell without a working monitoring system. The manufacturer does not support maintenance of the existing FICAM system, thus, maintaining the existing system to the NNSA and the Pantex Plant's requirements is not possible. Replacement of the systems is the only acceptable solution.

High Explosives (HE) Component Fabrication and Qualification Facility – continued

Alternatives Developed/Available to Meet Program Requirements:

Do Nothing

Continue to operate in existing facilities without significant changes to the facilities. State-of-the-art quality test equipment cannot operate reliably without improving the facility heating, ventilating, air-conditioning and controls to provide improved tolerances needed to obtain more accurate data. In addition, operations will remain in multiple facilities, causing operational inefficiencies, higher energy consumption, and risk of unwanted waste. These old facilities continue to rely on administrative, rather than engineered safety and environmental controls while energy loss continues. This is **not** a viable alternative.

Use Other Existing Facilities

The modern high explosive facilities at Pantex are either fully utilized or have plans for complete utilization; therefore, there are no suitable facilities available. This is **not** a viable alternative.

New Construction

Construct a new facility required to modernize non-nuclear manufacturing, testing, and qualification of nuclear weapon explosives and explosive components to support the LEPs and DOE research in the 21st century. This **is** a viable alternative.

Use Temporary Facilities

Fabrication and qualification functions will continue at Pantex indefinitely; therefore, temporary buildings are not considered for this permanent high explosive function. This is **not** a viable alternative.

Use Other Plants or Contractors

The Final Programmatic Environmental Impact Statement for Stockpile Stewardship and Management, page S-52, published by the United States Department of Energy and dated September 1996, stated that Pantex will supply the HE fabrication activities for the nuclear weapons complex. Moving this activity away from the Pantex Plant violates the Record of Decision. This is **not** a viable alternative.

Proposed Funding Profile ($ x 1000):

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OPC	$14,700			$250	$1,700	$600	$600	$400	$700	$850	$2,900	$6,700
PE&D	$8,925					$6,400	$2,525					
LI	$105,100								$80,000	$25,100		
[illegible]	**$128,725**			**$250**	**$1,700**	**$7,000**	**$3,125**	**$400**	**$80,700**	**$25,950**	**$2,900**	**$6,700**

*Parametric planning estimate only. Numbers do not constitute baseline.

Projected Annual Operating Costs:

The anticipated annual maintenance and utility costs are projected to remain approximately the same annually; however, a reduction in operating costs is expected because of more efficient operations. Cost savings resulting from vacating Building 11-20 are not included. Building 11-20 is a historically significant facility and will not be demolished.

Project Site/Facility Space Utilization:

The proposed location is in Zone 11, between Buildings 11-51 and 11-20, on the southwest side of the interior perimeter road. The current operations occupy approximately 40,000 square feet. The proposed new facility is approximately 32,000 square feet. Building 11-20 is a historically significant facility and cannot be demolished; therefore the HE Component Fabrication and Qualification facility will result in a net increase in Plant square footage of approximately 10,000 square feet.

High Explosive Formulation Facility - continued

Proposed Funding Profile ($ x 1000):

Funding Type	Total	PY	CY	BY	BY+1	BY+2	BY+3	BY+4	BY+5	BY+6	BY+7	Beyond
OPC	$8,700		$400	$1,000	$1,000	$1,500	$600	$600	$600	$2,000	$1,000	
PE&D	$9,300				$6,000	$3,300						
LI	$79,000							$50,000	$29,000			
Total (TPC)	**$97,000**		**$400**	**$1,000**	**$7,000**	**$4,800**	**$600**	**$50,600**	**$29,600**	**$2,000**	**$1,000**	

*Parametric planning estimate only. Numbers do not constitute baseline.

Projected Annual Operating Costs:
This project improves the efficiency of Formulation operations as well as reduced downtime. Because of the increase in square footage required for increased batch sizes, facility maintenance and utility costs are expected to increase approximately $430,000 per year. When the Life Cycle Cost (LCC) Analysis is performed operational efficiencies will be further evaluated.

Project Site/Facility Space Utilization:
This project will move formulation operations out of 50,500 square feet and a new building is estimated to require 73,200 square feet, resulting in an increase of 22,700 square feet. The increase in square footage is required for the capability for blending large batches of high explosives.

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: High Pressure Fire Loop (HPFL) Storage Tanks & Pumps (RTBF)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Project Director
Robert D. Cole, BWXT Pantex Project Manager

Federal and Contractor Project Manager(s):
To Be Determined

Project Description:
The purpose of the HPFL Storage Tanks & Pumps Project is to provide a reliable water supply for the fire protection system. This system supports Weapons Operational Facilities, HE Manufacturing and Infrastructure operations. This project will replace the 15-24 & 15-25 HPFL storage tanks, pumps and pump houses (15-24A & 15-15A). These water storage tanks supply water to the fire suppression to mitigate the consequence of a fire event and thereby prevent fires from progressing to more severe events. The HPFL is designed to provide water at a pressure, flow rate, and quantity to meet the demands of the fire suppression system. These tanks support these requirements.

The project also includes the demolition of the existing tanks and associated buildings once the new facilities are operational.

Current Proposed/Actual Project Schedule:

Critical Decision -0 (CD-0) Approval	4th Quarter FY 2011
Critical Decision -1 (CD-1) Approval	4th Quarter FY 2012
Critical Decision -2 (CD-2) Approval	3rd Quarter FY 2014
Critical Decision -3 (CD-3) Approval	4th Quarter FY 2015
Critical Decision -4 (CD-4) Approval	4th Quarter FY 2017

Project Justification (Program Requirements):
This project is for the life cycle replacement of the existing tanks & pumps. This helps maintain the infrastructure today as well as for the 2030 Vision.

Alternatives Developed/Available to Meet Program Requirements:
No other alternatives have been developed.

Proposed Funding Profile ($ x 1000):

Funding Type	Total	FY [illegible]	FY [illegible]	FY [illegible]	FY 2011	FY 2012	FY [illegible]	FY [illegible]	FY [illegible]	FY [illegible]	FY [illegible]
OPC	$6,500				$400	$1,500	$500	$300	$1,500	$2,000	$300
PE&D	$3,750						$3,750				
LI	$22,150									$22,150	
Total (TPC)*	$32,400				$400	$1,500	$4,250	$300	$1,500	$24,150	$300

*Parametric planning estimate only. Numbers do not constitute baseline.

Projected Annual Operating Costs:
This project is a replacement of existing assets; therefore, there is no expected change to operating costs.

Project Site/Facility Space Utilization:
This project will result in a net of zero square feet.

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NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: High Pressure Fire Loop (HPFL) Zone 11 (RTBF)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Project Director
Robert D. Cole, BWXT Pantex Project Manager

Federal and Contractor Project Manager(s):
To Be Determined

Project Description:
The purpose of the HPFL project is to provide a reliable fire protection system to support HE Manufacturing and Infrastructure operations today and into the Complex 2030 Vision. The HPFL is a Safety-Class System as defined in the Authorization Basis and its Critical Safety function is to support the fire suppression systems to mitigate the consequence of a fire event and thereby prevent fires from progressing to more severe events. Supplying the necessary amount of water to the fire suppression systems performs this function. 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. Additionally, this project will minimize DOE's risks associated with failures and maintenance by the system.

Current Proposed/Actual Project Schedule:

Critical Decision -0 (CD-0) Approval	4th Quarter FY 2009
Critical Decision -1 (CD-1) Approval	4th Quarter FY 2010
Critical Decision -2 (CD-2) Approval	3rd Quarter FY 2012
Critical Decision -3 (CD-3) Approval	4th Quarter FY 2013
Critical Decision -4 (CD-4) Approval	3rd Quarter FY 2017

Project Justification (Program Requirements):
Failures in the existing system have increased over the past several years. Three failures have occurred since 1995 in just the Zone 11 system. The latest of these failures occurred in July 2002. Because of the lack of cathodic protection, failures are expected to increase.

Alternatives Developed/Available to Meet Program Requirements:
No other alternatives have been developed to upgrade the Zone 11 HPFL.

Proposed Funding Profile ($ x 1000):

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OPC	$14,500			$200	$1,500	$400	$400	$300	$2,500	$3,000	$3,200	$3,000
PE&D	$6,900					$6,900						
LI	$51,400								$22,000	$19,400	$10,000	
[illegible]	**$72,800**			**$200**	**$1,500**	**$7,300**	**$400**	**$300**	**$24,500**	**$22,400**	**$13,200**	**$3,000**

*Parametric planning estimate only. Numbers do not constitute baseline.

Projected Annual Operating Costs:
This project is a replacement of an existing asset; therefore, there is no expected change to operating costs.

Project Site/Facility Space Utilization:
This is a utility type project and does not affect the site square footage.

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NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: Non-Destructive Evaluation and Gas Laboratory Replacement DSW (Other Defense Programs)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Project Director
Robert D. Cole, BWXT Pantex Project Manager

Federal and Contractor Project Manager(s):
To Be Determined

Project Description:
Construct a facility to house the non-Special Nuclear Material (SNM) X-ray activities and the Gas Lab operations including environmental aging. This facility includes separate operating areas; inert operations and explosive activities.

Current Proposed/Actual Project Schedule:

Critical Decision -0 (CD-0) Approval	4th Quarter FY 2010
Critical Decision -1 (CD-1) Approval	4th Quarter FY 2011
Critical Decision -2 (CD-2) Approval	4th Quarter FY 2013
Critical Decision -3 (CD-3) Approval	4th Quarter FY 2014
Critical Decision -4 (CD-4) Approval	4th Quarter FY 2017

Project Justification (Program Requirements):
Safeguards and Security Program
The design and construction of the proposed new facility will provide the Non-Destructive Evaluation and Gas Laboratory with a facility that satisfies security through its design rather than administrative controls. The facilities housing these operations were constructed for World War II conventional bomb loading and do not meet the intent of state-of-the-art secure facilities. Material Compatibility Containers restrict efficient staging and processing of materials. The building traffic flow arrangement adds unnecessary administrative controls to the operations. Meeting new requirements is challenging and incrementally more expensive for each new security advance implemented. This facility exchanges antiquated facilities for an improved infrastructure today and into Complex 2030.

Health and Safety Program
The existing High Explosive (HE) Non-Destructive Evaluation (NDE) operations are located in (b)(2)High , which was constructed in 1945. This facility is inadequate for operations by modern safety standards and does not utilize engineered controls to ensure personnel and operational safety. Safety in the current facilities depends on administrative controls, and in some cases there are no controls available as described below:

- The main corridor through (b)(2)High is the primary transportation route for movement of explosives from one area of the plant to another and is also the primary route for the movement of personnel. This exposes the unprotected Gas Lab and the personnel in the facility to the potential of an inadvertent explosion while explosives are being moved down this corridor.
- Reduced explosive limits are required in these buildings to comply with the current Department of Energy (DOE) Explosive Safety Manual for Class II level of protection for this type of structure. Administrative controls consisting of building evacuation, manually placed rope and cone barricades, and off shift operations when X-raying large explosive items are required whenever processing an explosive item that overloads a bay. Explosive processing occurs routinely, thus creating inefficiencies in normal operation.
- The roof contains asbestos contamination and lead brick used to shield the X-ray bays is considered to be obsolete, and a potential contaminant.
- Ventilation in the Gas Lab does not meet OSHA Laboratory Standard 29 CFR 1910.1450.
- Task exhausts are needed for the gas chromatographs to comply with 29 CFR 1910.1450.
- Increased safety risks occur in the compatibility testing section of the Gas Lab due to packaging and sample preparation in a different building from the compatibility chambers used for aging.

Non-Destructive Evaluation and Gas Laboratory Replacement – continued

- The building design will eliminate both administrative controls for personnel and the requirement to work off shift and weekends in order to comply with explosive limits.
- The design will minimize transporting explosives to and from buildings.
- The new facility design will accommodate the appropriate environmental control for laboratory operations.
- A vault will provide adequate storing of one-of-a-kind X-rays.
- Administrative areas will meet Pantex Plant and the General Services Administration (GSA) guidelines.
- The new facility design accommodates appropriate laboratory controls to eliminate contaminated or switched samples.

This **is** a viable alternative.

Do Nothing

This alternative will not improve operations or personnel safety by replacing administrative controls with engineered controls. The following constraints will remain:

- Explosive limits have been reduced to the point that the staging bay has an explosive limit of 10 pounds. The operating NDE X-ray bays have such a small explosive limit that their operations are performed on swing shift when other operations are shutdown and personnel are not in the area.
- Much of the expensive Gas Lab gas chromatographs and mass spectrometers are installed in what used to be the building corridor.
- Support equipment for the gas chromatographs is in a hallway of the building.
- Radiography operations do not meet current radiation or explosive design requirements and must use administrative controls to protect personnel.

This is **not** a viable Alternative.

Proposed Funding Profile ($ x 1000):

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OPC	$12,000		$500	$2,500	$800	$800	$500	$700	$2,000	$4,200
PE&D	$7,800				$4,200	$3,600				
LI	$84,300							$25,000	$59,300	
Total (TPC)*	**$104,100**		**$500**	**$2,500**	**$5,000**	**$4,400**	**$500**	**$25,700**	**$61,300**	**$4,200**

*Parametric planning estimate only. Numbers do not constitute baseline.

Projected Annual Operating Costs:

The projected annual operating costs are not expected to significantly change from the current costs; however, by consolidating operations, additional work output is anticipated.

Project Site/Facility Space Utilization:

This project will move non-destructive evaluation operations out of 49,700 square feet and a new building is estimated to require 48,000 square feet. This is a reduction of 1,700 square feet required for NDE/Gas Lab functions.

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NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: Operations Systems Development & Integration Project (Non-Facility & Infrastructure Project)

Federal and Contractor Program Manager(s) or Sponsor(s):
James B. Bynum Federal Program Director
BWXT Pantex Program Manager

Federal and Contractor Project Manager(s):
Garry H. Watson, BWXT Pantex Project Manager

Project Description:
The MRP II software technology used at Pantex is now more than 25 years old and is obsolete, thus limiting the ability to technically support this system.

In addition to providing the MRP II functionality for Pantex, several other production-related systems have been custom written in the CAS (Computer Associates Software). Those systems include:

- Record of Assembly/Record of Disassembly (ROA/ROD) Data Collection – This is the method used to collect information for Record of Assembly and Record of Disassembly that is then transmitted to the Sandia National Laboratory database.
- Variables Data Collection – Weapons data collection and transmittal to meet Design Agency reporting requirements.
- Non-Conform System – Currently, this system identifies, documents, and dispositions Non-Conforming materials from assembly, disassembly, or material operations.
- Move Right System – This system is the material control system that identifies facility material limits, carries part characteristics, and implements Technical Safety Requirements associated with the movement of materials at the Pantex Plant.
- Tooling System – The tooling inventory system provides life cycle management of production tooling including expiration dates and requirements for inspection, maintenance, and calibration.

These production-related systems will have to be transitioned to other software as well.

This project, although software driven, is not solely to replace software and go about business as usual. New software will require changes to how the business is done, such as changes to processes. Some of the functions may be able to be transitioned into other systems already in place at BWXT Pantex. This transition will require changes to procedures as well as training to all involved personnel, whether the move is to new or existing software. Procedures, Software Quality Analysis, and training will be a large portion of the time, cost, and scope of this project.

In order to meet the production requirements of 2030, it is essential that the production activities be supported by a state of the art technology including advanced planning and integrated scheduling. In order to meet this need, the production systems must be transitioned from CAS into other software.

Current Proposed/Actual Project Schedule:

Critical Decision -0 (CD-0) Approval	4th Quarter FY 2007
Critical Decision -1 (CD-1) Approval	4th Quarter FY 2008
Critical Decision -2 (CD-2) Approval	TBD
Critical Decision -3 (CD-3) Approval	TBD
Critical Decision -4 (CD-4) Approval	TBD

Project Justification (Program Requirements):
The Pantex Plant is a key site in the Nuclear Weapons Complex with the primary challenge of maintaining an aging stockpile. The U. S. Department of Energy (DOE) Strategic Plan identifies an objective to "maintain confidence in the safety, reliability, and performance of the nuclear weapons stockpile without nuclear testing." This objective is realized through the efforts and accomplishments of the DOE Stockpile Stewardship and Management Program (SSMP). Processes to compensate for the absence of nuclear explosives testing are being developed by the design agencies, and BWXT Pantex is working with them to provide the required data. This project improves the administrative efficiency of Pantex by providing a complex computing system that absorbs data and then provides it to the administrative personnel for improved decision making capability. An updated system is necessary to continue maintaining this plant for today and for the Complex 2030 Vision.

[redacted]

Operations Systems Development & Integration Project – continued

Projected Annual Operating Costs:
This project will initially increase operating costs during implementation by the cost of the project. Once implemented, operating costs will decrease due to a more efficient system. It is estimated that maintenance costs for the system(s) will decrease by $250,000 or more per year.

Project Site/Facility Space Utilization:
This project does not add square footage to the site.

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: Protective Force Facilities Upgrade and Enhancement Project (S&S)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Project Director
Robert D. Cole, BWXT Pantex Project Manager

Federal and Contractor Project Manager(s):
To Be Determined

Project Description:
This project provides for upgrades and enhancements to the infrastructure support facilities at BWXT Pantex for the Protective Force operations today and into the 2030 Vision of NNSA. These upgrades and enhancements will allow Protective Force personnel the opportunity to plan for and train to the new threats as identified in the new Design Basis Threat Document while complying with the DOE Orders, Manuals, and Standards, and meet the protection programs as identified in the site approved SSSP. Since the terrorist attack in the United States on 11 September 2001, the Protective Force must have support facilities that address the increased requirements.

Engagement Simulations Systems (ESS) Facility
Construct a 4,000 square foot pre-fabricated metal building with 10' ceiling for staging, maintenance, issue, and return of multiple integrated laser engagement systems, dye-marking cartridge systems, and other such systems. This facility requires two 10' x 15' offices, restroom facilities for men and women, a small 12' x 20' x 10' armory (12" concrete walls and roof and a class VI vault door with combination lock) capable of handling 150 ESS firearms, a small 12' x 20' secure staging area for blank ammunition, and alarmed doors throughout the facility.

Physical Fitness Obstacle Course Building
Construct a 10,100 square foot addition to the Physical Training Facility (b)(2)High using same type of construction materials. This addition will include the following:

- 8,300 square foot addition for an indoor physical fitness obstacle course
- 1,150 square foot addition for an aerobics workout room
- 650 square foot equipment room

New Towers in Zone 4 and 12 (b)(2)High
Construct five new security towers to replace Station (b)(2)High (Building (b)(2)High), Station (b)(2)High (Building (b)(2)High), Station (b)(2)High (Building (b)(2)High), Station (b)(2)High (Building (b)(2)High), and Station (b)(2)High (Building (b)(2)High). These towers have reached their useful life and need replacing. These new towers will be approximately 500 square feet each and will have the latest enhancements similar to the towers developed and installed at the BWX Facility in Lynchburg, VA.

Building (b)(2)High Upgrade (fire fighter's drill tower)
Upgrade the fireman's drill tower (Building (b)(2)High) to optimize observation and provide cover/protection against small arms. Upgrades to this facility include adding ballistic and armor plating attachments with gun ports to railing on each side and re-enforcing the railing on top of the building.

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: Protective Force Live Fire Ranges Upgrades and Enhancement Project (S&S)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Project Director
Robert D. Cole, BWXT Pantex Project Manager

Federal and Contractor Project Manager(s):
To Be Determined

Project Description:
This project provides for upgrades and enhancements to the live fire ranges at Pantex so that they can be maintained in good condition up through the Complex 2030 Vision. The project will allow BWXT Pantex Protective Force and Office of Safeguards Transportation (OST) personnel to have adequate training facilities for the new firearms' and detection equipment added for implementation of new Design Basis Threat. Since the attack in the United States on 11 September 2001, the Protective Force and Office of Safeguards Transportation have adding enhanced firearms and detection systems to counter the new threat. The following upgrades and enhancements address the infrastructure needs of the range complexes.

Building – Range 1

- (b)(2)High

Range 3

- (b)(2)High

Building Firearms Training & Tactics Facilities Ranges 4 –9

- (b)(2)High

All live fire ranges are joint usage between the BWXT Pantex Protective Force and the Office of Safeguards Transportation Couriers.

Protective Force Portal Upgrade and Enhancement Project - continued

Replace Station (b)(2)High

Construct a 180 square foot hardened guard station located on the west side of the current BN5A Argus Access Control Booth. This new station will have a vehicle trap on the west side with the operating controls identical to the controls in Station (b)(2)High This new facility will house the Security Police Officers inspecting vehicles entering/exiting Zone 12 North. The roadway through the station requires modifications to allow oversized vehicle to enter/exit the station without posing safety concerns to the station operator, pedestrians, and other vehicles.

West Gate Entrance (Building)

(b)(2)High

East Gate Entrance (Building)

(b)(2)High

Current Proposed/Actual Project Schedule:

Critical Decision -0 (CD-0) Approval	4th Quarter FY 2009
Critical Decision -1 (CD-1) Approval	4th Quarter FY 2010
Critical Decision -2 (CD-2) Approval	4th Quarter FY 2012
Critical Decision -3 (CD-3) Approval	4th Quarter FY 2013
Critical Decision -4 (CD-4) Approval	3rd Quarter FY 2016

Protective Force Portal Upgrade and Enhancement Project - continued

Project Justification (Program Requirements):
This project will fulfill requirements described in DOE M 470.4-2, the Pantex SSSP, and DOE O 470.3A Design Basis Threat (DBT). These upgrades and enhancements will allow Protective Force personnel the opportunity to better search for and detect special nuclear material; search for and detect contraband; and provide alternate access to critical areas during security and safety emergencies. New terrorists weapons and tactics now require Protective Force personnel to be more proficient in detecting threats and responding to subsequent security emergencies. These upgrades/enhancements provide for the Energy Secretary's strategic initiatives to:

- Upgrade security at key facilities;
- Identify, hire, and train specialized security contingents to guard Pantex' high-priority nuclear assets;
- Ensure a modern, efficient force that meets future threats; and
- Provide programs that train the Protective Force and test their readiness to respond to any threat to the site.

Alternatives Developed/Available to Meet Program Requirements:
Continue operations with facilities/portals that were designed to meet pre-9/11 threats. If security system equipment or operations are impaired in any manner, the appropriate compensatory measures are employed. This is manpower intensive.

Proposed Funding Profile ($ x 1000):

OPC	$10,100			$300	$1,600	$1,000	$1,000	$850	$1,200	$1,750	$2,400	
PE&D	$7,100					$4,100	$3,000					
LI	$71,000								$43,000	$28,000		
	$88,200			**$300**	**$1,600**	**$5,100**	**$4,000**	**$850**	**$44,200**	**$29,750**	**$2,400**	

*Parametric planning estimate only. Numbers do not constitute baseline.

Projected Annual Operating Costs:
The completion of this project will increase operating, maintenance, and utility costs due to the addition of new facilities by about $90,000 per year.

Project Site/Facility Space Utilization:
This project will have a net increase in the plant square footage by an estimated 4,965 square feet. This project will free up 775 square feet and require an additional 5,740 square feet. BWXT Pantex assumes equalizing the reduction of excess facilities associated with new construction will be balanced by disposal of excess square footage at other NNSA sites as approved by NNSA.

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NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

(b)(2)High

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NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: Security Perimeter Intrusion Detection & Assessment System (PIDAS) Upgrade (S&S)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Project Director
Robert D. Cole, BWXT Pantex Project Manager

Federal and Contractor Project Manager(s):
To Be Determined

Project Description:
This information sheet is provided to support the additional funding requirements above the current Integrated Construction Program Plan (ICPP) (11/06) as noted in the Proposed Project section of this document.

(b)(2)High

Security Perimeter Intrusion Detection & Assessment System (PIDAS) Upgrade - continued

(b)(2)High

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: Sewer Collection System Manhole Refurbishment (RTBF)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Project Director
Robert D. Cole, BWXT Pantex Project Manager

Federal and Contractor Project Manager(s):
To Be Determined

Project Description:
This project will survey approximately 70 manholes in the sewer collection system and refurbish as needed. This project also includes plugging approximately 10 deteriorated manholes with crushed rock or filler and using topsoil to cover older abandoned sewer lines.

Current Proposed/Actual Project Schedule:

Critical Decision -0 (CD-0) Approval	4th Quarter FY 2008
Critical Decision -1 (CD-1) Approval	4th Quarter FY 2009
Critical Decision -2 (CD-2) Approval	4th Quarter FY 2011
Critical Decision -3 (CD-3) Approval	4th Quarter FY 2012
Critical Decision -4 (CD-4) Approval	2nd Quarter FY 2014

Project Justification (Program Requirements):
This project will survey approximately 70 manholes that have exceeded their design life and refurbish the manholes to excellent condition. The replacement of the manholes is required to maintain personnel safety. The deteriorated manholes create a hazard for personnel, including Texas Tech farmers who maintain operations on leased land. This project assist in maintaining the Pantex Plant in good condition and striving to maintain this plant into Complex 2030.

Current and projected Plant missions from the Ten Year Site Plan (TYSP), NNSA Stockpile Stewardship Program, and the Utilities 20 Year Plan identified the program requirements. Program requirements are not expected to change or be impacted by upcoming activities or decisions.

Alternatives Developed/Available to Meet Program Requirements:
Do Nothing
This project is required to sustain an asset nearing the end of its service life. There is no municipal sewer system available; therefore, the Pantex Plant sewer system must remain operational and safe. This is **not** a viable option.

Proposed Funding Profile ($ x 1000):

Funding Type	Total Estimated Cost	Prior Years	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
OPC	$2,310		$375	$375	$250	$110	$400	$600	$200			
PE&D	$1,575				$1,000	$575						
LI	$7,800							$7,800				
Total TPC*	**$11,685**		**$375**	**$375**	**$1,250**	**$685**	**$400**	**$8,400**	**$200**			

*Parametric planning estimate only. Numbers do not constitute baseline.

Projected Annual Operating Costs:
This project is a rehabilitation of an existing asset; therefore, there is no expected change to operating costs.

Project Site/Facility Space Utilization:
This project does not change the site square footage.

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NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: Steam Distribution System Upgrade (RTBF)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Project Director
Robert D. Cole, BWXT Pantex Project Manager

Federal and Contractor Project Manager(s):
To Be Determined

Project Description
This project will upgrade the steam distribution system at the Pantex Plant. Distribution system refurbishment replaces all valves, expansion joints, steam trap stations, support structures, support hardware, system and facility pressure reducing stations, pressure relief valves, insulation, and lagging. All condensate return units require replacement with pressure powered type pumps. All non-process steam traps will be piped to condensate return units To achieve the 2030 vision, Pantex must maintain its steam distribution system in good condition today as well as in 2030.

Current Proposed/Actual Project Schedule:

Critical Decision -0 (CD-0) Approval	4th Quarter FY 2010
Critical Decision -1 (CD-1) Approval	4th Quarter FY 2011
Critical Decision -2 (CD-2) Approval	4th Quarter FY 2013
Critical Decision -3 (CD-3) Approval	4th Quarter FY 2014
Critical Decision -4 (CD-4) Approval	2nd Quarter FY 2017

Project Justification (Program Requirements):
Upgrade to the steam distribution system will enhance the safety of the system with more precise process control, will maintain the integrity of the pressurized systems, and reduce burn potentials with correction of insulation deficiencies. The upgrade will minimize air emissions, reduce energy consumption, reclaim natural resources (water), and will maintain highly reliable steam service to the plant programmatic and mission demands.

Program requirements were identified based upon the current and projected plant missions identified in the Ten-Year Site Plan (TYSP) and NNSA Stockpile Stewardship Program. Changes in plant mission, site infrastructure, regulatory requirements, funding, and policies all depend on the program requirements and project development. Condition Assessment Surveys, expected life cycle data, historical maintenance data, current and expected air quality and water conservation permits and policies, and changes in regulatory requirements for industrial and storm water discharge permits also affect program requirements and project development.

Projected increases in programmatic activities will place additional demands and requirements on the existing system. In addition, future regulatory constraints for air emissions and condensate discharge will limit the capacity of steam production. Failure of this mission essential support system will have a detrimental impact to programmatic activities.

Alternatives Developed/Available to Meet Program Requirements:
Do Nothing
Steam is required to support operations and no other source exists at the Pantex plant. There is no municipal facility nearby. The steam plant and distribution system requires a life cycle upgrade to remediate degradation due to aging and to upgrade technology for energy efficient operations. This is **not** a viable alternative.

Steam Distribution System Upgrade - continued

Proposed Funding Profile ($ x 1000):

Funding Type	Total	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
OPC	$7,150				$400	$1,500	$450	$525	$300	$625	$3,000	$350
PE&D	$4,700						$2,500	$2,200				
LI	$41,900									$20,800	$21,100	
Total TPC*	**$53,750**				**$400**	**$1,500**	**$2,950**	**$2,725**	**$300**	**$21,425**	**$24,100**	**$350**

*Parametric planning estimate only. Numbers do not constitute baseline.

Projected Annual Operating Costs:
Modernizing ongoing operations will result in a projected 7.5 percent reduction or $150,000/year in fuel, water, and electrical cost based on current pricing.

Project Site/Facility Space Utilization:
This project does not affect the site square footage.

Steam Production Facility Upgrade - continued

Alternatives Developed/Available to Meet Program Requirements:

Do Nothing

Steam is required to support operations and no other source exists at the Pantex plant. There is no municipal facility nearby. The steam plant and distribution system requires a life cycle upgrade to remediate degradation due to aging and to upgrade technology for energy efficient operations. This is **not** a viable alternative.

Proposed Funding Profile ($ x 1000):

Funding Type	Total	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
OPC	$5,200			$300	$910	$400	$420	$920	$2,000	$250		
PE&D	$2,200					$2,200						
LI	$11,900								$11,900			
Total (TEC)	**$19,300**			**$300**	**$910**	**$2,600**	**$420**	**$920**	**$13,900**	**$250**		

*Parametric planning estimate only. Numbers do not constitute baseline.

Projected Annual Operating Costs:

Modernizing ongoing operations will result in a projected 7.5 percent reduction or $150,000/year in fuel, water, and electrical cost based on current pricing.

Project Site/Facility Space Utilization:

This project does not affect the site square footage.

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: Ultraviolet (UV) to Infrared (IR) Detector Upgrade (RTBF)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Project Director
Robert D. Cole, BWXT Pantex Project Manager

Federal and Contractor Project Manager(s):
To Be Determined

Project Description:
This project replaces the existing Ultraviolet (UV) flame detection systems (including controllers) in Buildings (b)(2)High (b)(2)High with new controllers and Multi-Spectrum Infrared (IR) detectors. It also replaces the control equipment for the flame detection releasing system in Building (b)(2)High In addition, it provides for an evaluation of the flame detection systems (including detectors and controllers) in Buildings (b)(2)High to determine the appropriate flame detection system (IR or UV) for facility operations.

The project will include the development of system design documentation, safety basis documentation, and Authorization Basis documentation revisions. The project also includes all associated readiness and start-up activities.

Relationship to other projects:
This project and the Fire Alarm System Replacement project both use the fire alarm control panels installed by the Fire Alarm System Replacement project to monitor the flame detection releasing systems. The existing fire alarm control panels will monitor any new flame detection releasing system installed by dry contacts in the same manner as the existing systems. In addition, the IR detectors installed by the Infrared Deluge Fire Alarm Upgrade Project for Building (b)(2)High are reusable.

Current Proposed/Actual Project Schedule:

Critical Decision -0 (CD-0) Approval	4th Quarter FY 2007
Critical Decision -1 (CD-1) Approval	4th Quarter FY 2008
Critical Decision -2 (CD-2) Approval	4th Quarter FY 2010
Critical Decision -3 (CD-3) Approval	4th Quarter FY 2011
Critical Decision -4 (CD-4) Approval	2nd Quarter FY 2014

Project Justification (Program Requirements):
The existing UV detectors in the Material Access Areas (MAA) are only capable of detecting Moderate Heat Release Rate (HRR) categories of fire. In addition, obstructions caused by process equipment and material block the coverage provided by the UV detectors in the MAA facilities. BWXT Pantex Fire Protection Engineering evaluated the current IR detector performance and documented the performance in EJC-01-19, X3300/X3301/R Detection System Performance. The evaluation concluded that the capabilities of the IR detection system had superior advantages over UV detection system based on the ability of IR detectors to detect low HRR categories of fire. An IR detection system reduces the unattended combustible stand off distance from the bay walls from 6.5 feet to 3 feet, allowing a 3.5 foot increase in work area on each side of the bay. Additionally, the IR detectors have a greater cone of coverage based on the detection distance, which results in reduced loss of coverage due to shadows.

In addition to the enhanced performance, Detector Electronics Corporation (Det-Tronics) announced in May 2002 current modular based UV controllers will be phased out of production. Det-Tronics indicated that the drastically revised 2003 flame detection Factory Mutual approval standards for controller modules, such as in use at Pantex, will not meet Factory Mutual approval as required by NFPA 72, *National Fire Alarm Code.* Det-Tronics will retain manufacturing capability for new components not approved by NFPA 72 for approximately five years. Additionally, Det-Tronics indicated they have ample quantities of sub-component parts able to service and repair existing components for ten years. The manufacturer of the existing UV detection system at Pantex has supported the system for approximately 20 years; however, a fire alarm programmatic vulnerability will exist if not addressed in a timely manner.

Ultraviolet (UV) to Infrared (IR) Detector Upgrade - continued

A letter received from Randy Durick, Detector Electronics Corporation, to BWXT Pantex, dated January 28, 2002 resulted in a review of current safety basis and authorization basis documentation. The review identified and derived the program requirements for a system replacement based on product availability. The project must be complete before FY2012 when replacement parts become unavailable or the manufacturer's ability to repair antiquated components no longer exists.

There is a moderate risk for the program requirements to change or increase scope based on continuous improvement and growth of requirements and expectations with respect to quality, authorization basis, manufacturing, and system engineering. Examples include recent plans or actions taken in the following: Software Quality Assurance Program requirements, Multi-Unit Processing in bays/cells, Safety Class Design Descriptions, Readiness/Start Up activities, development of Authorization Basis requirements for explosives facilities, etc.

The flame detection system is a safety class system. The operability of the flame detection system is required for operations to continue based on current Authorization Basis requirements, or Process Safety requirements. If the systems cannot be maintained operable then manufacturing operations could be interrupted or cease. These modifications are necessary to provide parts availability to maintain the system and to continue to maintain the infrastructure at Pantex in good condition to support the Complex 2030 Vision.

Alternatives Developed/Available to Meet Program Requirements:
There are no alternatives identified to maintain the level of protection of current requirements for affected operations.

Proposed Funding Profile ($ x 1000):

OPC	$6,425	$200	$2,700	$800	$600	$325	$400	$650	$750			
PE&D	$13,284			$7,500	$5,784							
LI	$107,091						$57,000	$50,091				
Total TEC*	**$126,800**	**$200**	**$2,700**	**$8,300**	**$6,384**	**$325**	**$57,400**	**$50,741**	**$750**			

*Parametric planning estimate only. Numbers do not constitute baseline.

Projected Annual Operating Costs:
This project is a modernization of an existing system; therefore, there is no net change in operating costs.

Project Site/Facility Space Utilization:
This project does not affect the site square footage.

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet
Pantex Plant

Project Title/Site: Water Secondary Distribution Upgrade (RTBF)

Federal and Contractor Program Manager(s) or Sponsor(s):
Johnnie F. Guelker, Federal Project Director
Robert D. Cole, BWXT Pantex Project Manager

Federal and Contractor Project Manager(s):
To Be Determined

Project Description:
This project will refurbish the secondary water distribution system, including replacement of 33 miles of distribution line and components, upgrade Plant water metering to the latest technology, and upgrade backflow prevention devices. To achieve Complex 2030 Vision, upgrade of the Pantex secondary water distribution system is required.

Current Proposed/Actual Project Schedule:

Critical Decision -0 (CD-0) Approval	4th Quarter FY 2009
Critical Decision -1 (CD-1) Approval	4th Quarter FY 2010
Critical Decision -2 (CD-2) Approval	3rd Quarter FY 2012
Critical Decision -3 (CD-3) Approval	4th Quarter FY 2013
Critical Decision -4 (CD-4) Approval	4th Quarter FY 2017

Project Justification (Program Requirements):
Upgrade to the secondary water distribution system will enhance the safety of the system with more precise control, reduction of leaks and improved metering.

Alternatives Developed/Available to Meet Program Requirements:
No other alternatives have been developed to refurbish or upgrade the water secondary distribution system.

Proposed Funding Profile ($ x 1000):

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OPC	$7,400			$300	$2,000	$1,075	$325	$300	$1,000	$1,000	$1,000	$400
PE&D	$6,900					$6,900						
LI	$58,800								$18,000	$15,000	$25,800	
[illegible]	**$73,100**			**$300**	**$2,000**	**$7,975**	**$325**	**$300**	**$19,000**	**$16,000**	**$26,800**	**$400**

*Parametric planning estimate only. Numbers do not constitute baseline.

Projected Annual Operating Costs:
This project is a modernization of an existing system; therefore, there is no expected change to operating costs.

Project Site/Facility Space Utilization:
This is a utility type project and does not affect the site square footage.

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Project Descriptions
(Alphabetical Order)

(b)(2)High **Production Storage Facility Replacement**

Project constructs Building (b)(2)High replacement. Building (b)(2)High is a warehouse constructed in 1942 using wood columns, trusses, and roof. The dry environment has made the timbers brittle, and termites continue to bore into the timbers. A new facility is the result of a responsive infrastructure replacing a facility to improve the operation of the Plant. This project improves the efficiency of Pantex Plant.

(b)(2)High **Refurbishment**

This project refurbishes Building (b)(2)High, which includes interior painting, floor restoration, mechanical equipment (chillers, pumps, and dehumidifiers), electrical lighting and panel boards. Maintaining the Pantex Plant provides a responsive infrastructure to support operations of the plant.

(b)(2)High **Cafeteria Remodel**

This project refurbishes vacated cafeteria and provides usable space for user offices and break area.

(b)(2)High **Facility Upgrades**

This project refurbishes Building (b)(2)High, which includes painting, carpeting, replacing windows, sealing exterior, and upgrading conference rooms. Building was constructed in 1953 and requires upgrades for administrative personnel.

(b)(2)High **Central Computer Facility UPS Upgrade**

Project installs backup power system for the Central Computing Facility. Continuous power backup allows for continued operation of all production computer and communication systems, preventing data loss, hardware damage, and reduced recovery time.

(b)(2)High **Argus Access Booth**

This project provides for automated access control for Fire Department and Emergency Operations Center personnel. Access will reduce the response time of critical personnel for Operations Center drills and incident response operations.

(b)(2)High **Deferred Maintenance (DM) Reduction**

Project corrects deferred maintenance deficiencies within this mission critical facility. This facility supports DSW mission.

(b)(2)High **Deferred Maintenance (DM) Reductions**

This project corrects $250,000 in deferred maintenance deficiencies within these buildings. This project corrects deficiencies in the machine that support production.

Project Descriptions
(Alphabetical Order)

(b)(2)High **Outdoor Lighting Modification**

The project addresses lighting of exterior walkways around Building (b)(2)High

(b)(2)High **Protective Force Renovation Project**

The renovation of (b)(2)High directly supports the 05 DBT Implementation Plan. It consolidates several of the Security functions, thereby allowing Security to vacate facilities currently planned for demolition.

(b)(2)High **Roof Repairs**

This mission critical facility incurred storm related roof damage. Maintaining this facility supports the DSW mission.

(b)(2)High **Chiller Replacement**

An existing chiller associated with production facilities will be replaced to improve reliability and capacity as well as reducing the deferred maintenance backlog by $574,000. Projects like this one provide a responsive infrastructure by upgrading facilities to support the energy savings for the plant.

(b)(2)High **)oor Modifications**

Automated door openers will be installed on the cargo doors in this building to address safety concerns. The door openers will enhance safety.

(b)(2)High

This system maximizes storage capacity in this facility while reducing personnel exposures to radiation.

(b)(2)High **Humidity Control**

Environmental sensitive operations in this facility have been impacted by humidity variances. This project will address climate variances to support operations.

(b)(2)High **Physical Training Facility Expansion**

The Protective Force has out grown the existing physical fitness training area. With personnel growth due to the terrorist attacks of 9/11 and the implementation of the 05 Design Basis Threat, the facility is not longer capable of handling the numbers of people who must meet the fitness standards associated with the respective Code of Federal Regulations and DOE Orders. With the implementation of the Elite Force initiative from Secretary Bodman, security police officers must also meet a higher level of fitness. The current facility, in conjunction with the increased number of people, creates unsafe work out conditions. This expansion is necessary for safety concerns and to support new protection requirements for the national security interests at Pantex.

Project Descriptions
(Alphabetical Order)

(b)(2)High **Fire Station Repairs**

The fire station is experiencing structural failure. This project will conduct an investigation to determine the cause of the failure and recommend repairs and corrective actions.

(b)(2)High **Security Locker Facility**

This project provides construction of a new Locker Room Facility required to support the increase in Protective Force personnel as a result of 05 DBT requirements.

(b)(2)High **Security Operations Facility**

This project provides construction of a Protective Force Muster Room, Armory and administrative offices required to support the increase in Protective Force personnel as a result of 05 DBT requirements.

(b)(2)High **Replace Deareators**

The deareators on the central steam distribution systems at Pantex Plant are past their useful life and need replacing. This project replaces the deareators removing oxygen from the make-up water.

(b)(2)High

(b)(2)High **Range Facility Equipment Storage Expansion**

The current (b)(2)High equipment storage facilities are insufficient to handle the support equipment for training and provide proper protection. This expansion will provide the storage necessary to house the training equipment and supplies for the new firearms and related equipment to support the 05 DBT and the new DOE Orders.

Administrative Support Facility

To achieve the Nuclear Weapon Complex of the future, many Pantex administrative facilities require replacing. Administrative facilities are quickly becoming antiquated and have reached or are nearing the end of their useful life. Office facilities are currently located throughout Zone 12 North. Operational efficiencies are expected with the construction of the Administrative Support Facility.

Project Descriptions
(Alphabetical Order)

Applied Technology Facility
This project provides for the consolidation of office space in Zone 11. This consolidation will facilitate the disposition of the following buildings: (b)(2)High

Building

(b)(2)High

To handle the workload of the future and be a responsive plant for the future, the Pantex Plant facilities need to be maintained and ready for changing weapon design.

Building

(b)(2)High

Building (b)(2)High **Pipe Shop Exterior**
Project provides for the removal and replacement of the exterior building element of Building (b)(2)High. The replacement will reduce energy consumption. This is an infrastructure improvement to help extend the useful life of this facility.

Building (b)(2)High **Roof Replacement**
Project is proposed to be executed under the FIRP Program NWC Roof Asset Management program. Project replaces the deteriorated roof membrane.

Central Command Federal Agent Facility
This facility, funded by the Office of Secure Transportation (OST), is planned to be located west of the existing facility. The one-story building will office up to 200 personnel. Building (b)(2)High will be converted into a training facility to permit the user additional training area in the existing building and administrative area in the

Project Descriptions
(Alphabetical Order)

Corrective Measures Design & Construction – Irrigation System and Retention Ponds
This project is to design and construct a system to return the Perched groundwater to the natural state.

Corrective Measures Design & Construction – Perched Aquifer Dewatering by Playa 1
This project designs and constructs a system to address environmental concerns.

Data Center HVAC Upgrade
The HVAC system in the data center is over 30 years old and has exceeded its design life expectancy. This project upgrades the HVAC system for the current heat loads and distributions.

Deferred Maintenance (DM) Mechanical Task 1 & 2 – Phase 1
Scope includes equipment such as compressors, condensate return units, air handling and condenser units, and heat pumps. This helps bring the infrastructure of the plant into good condition and continue to keep it maintained in good condition throughout its useful life.

Deferred Maintenance (DM) Mechanical Task 1 & 2 – Phase 2
In Phase 2, Pantex Plant will replace mechanical equipment in the following facilities: 11-28, 11-38, and 11-51. The project will address compressors, condensate return units, air handling and condenser units, and heat pumps. This is to help bring the infrastructure of the plant into good condition for the Complex 2030 vision.

Demolish Building 10-2
This project provides for the demolition of Building 10-2. The demolition of this building reduces footprint at Pantex.

Demolish Building 11-30
This project provides for the demolition of Building 11-30. The demolition of this building reduces maintenance costs of an aged facility.

Demolish Building 12-24E
This project provides for the demolition of Building 12-24E. The demolition of this building reduces maintenance cost and improves operating efficiencies.

Demolition of 11-7
This project provides for the demolition of 11-7. The demolition of this building reduces maintenance cost and improves safety.

Project Descriptions
(Alphabetical Order)

Demolition of 11-10 & 11-26
This project provides for the demolition of Buildings11-10 and 11-26. The demolition of these buildings reduces maintenance costs, plant footprint, and deferred maintenance.

Demolition of 11-27, 11-29, 11-54, 11-54A, 12-2B, 12-75A
Demolition of 11-27, 11-29, 11-54, 11-54A, 12-2B, and 12-75A is funded with this project. The demolition of these buildings reduces maintenance costs, plant footprint, and deferred maintenance.

Demolition of 12-3, 12-3L, 12-R-3
This project provides for the demolition of 12-3, 12-3L, 12-R-3. The demolition of these buildings reduces maintenance costs, plant footprint, and deferred maintenance.

Demolition of Building 12-9
This project provides for the demolition of Building 12-9. Preparation and Design was performed by RTBF. The demolition of this building reduces maintenance costs, plant footprint, and deferred maintenance.

Demolition of Building 12-9A
This project provides for the demolition of Building 12-9A. The demolition of this building reduces maintenance costs, plant footprint, and deferred maintenance.

Demolition of Building 12-R-9A
This project provides for the demolition of Building 12-R-9A. The demolition of this building reduces maintenance costs, plant footprint, and deferred maintenance.

Demolition of Building 12-14
This project provides for the demolition of Buildings 12-14. The demolition of this building reduces maintenance costs, plant footprint, and deferred maintenance.

Demolition of Buildings 12-97 & 9-3
This project provides for the demolition of Buildings 12-97, & 9-3. The demolition of these buildings reduces maintenance costs, plant footprint, and deferred maintenance.

DIAMONDS FOLAN
This project installs classified computer drops in various locations to support transition to this system. The DIAMONDS system will be used to transmit and share weapons data between the NNSA and the DOD.

Project Descriptions
(Alphabetical Order)

Electrical Distribution System Upgrade
This project addresses areas of the electrical distribution system that are of questionable reliability due to potential code non-compliance, aging, and/or unavailability of spare parts. This project includes upgrades to substations and equipment with potential National Electrical Code violations to provide protection from ground faults and line surges. This upgrade also replaces deteriorating overhead electrical power lines, and replaces a few essential facility generators that have operational and maintenance problems due to their age, obsolescence, and difficulty in obtaining replacement parts.

Electrical Task Part 2
The objective of this project is to provide for the replacement of transformers and electrical primary and secondary feed, and automatic transfer switches that have exceeded their design life and require replacement.

Elite Force Training Facility (EFTF) Expansion
The current EFTF has allowed Pantex to conduct basic training in areas that cannot be replicated in the real world. With the implementation of Secretary Bodman's Elite Force initiative and the new DOE Manuals, training and qualifications have become more stringent and intense. Protective Force Personnel (PFP) must become more aggressive and enhance their training and tactics. An expansion to the existing facility provides a location where security police officers can train 24/7 without impacts from inclement weather. The security police officers train with realistic simulated firearms reducing the risks associated with duty firearms and ammunition. Realistic training is conducted in a more cost effective, and much safer environment.

Emergency Lights
Project provides for an upgrade to the emergency lights in production areas of the plant.

Energy Savings Performance Contract (FY07, FY08) Support
Project supports construction activities associated with Energy Savings Performance Contract (ESPC). The ESPC provides enhanced engineered controls and equipment to conserve energy. Energy-saving measures include: installation of new energy-efficient lighting, control systems in hearting and air-conditioning systems, and repair of steam systems.

Environmental Controls Upgrade – Mechanical
This project provides for the replacement of existing environmental equipment used to control the temperature and humidity standards for production equipment and tooling calibration. These modifications will eliminate recurring problems with maintaining temperature and humidity levels required calibrated tooling and equipment used for production activities.

Project Descriptions
(Alphabetical Order)

devices, and cathodic protection for the valves and connection rings will be installed on new pipeline.

HE Pressing Facility
This project will provide a new facility that will replace the existing aging pressing facilities. This facility will allow Pantex to meet the future requirements to support changing weapon complexity, projected workload, and LEP activities. This project provides a modern non-nuclear facility for the manufacturing, testing, and qualification of nuclear weapons explosives and explosive components. This facility includes contact and remote manufacturing operations as well as destructive testing, non-destructive testing, inspection, and acceptance of explosive components. This facility is essential to support the LEPs and provides responsive infrastructure for the future.

High Explosive Component Fabrication & Qualification
This project provides a modern non-nuclear facility for the manufacturing, testing, and qualification of nuclear weapons explosives and explosive components. This facility includes contact and remote manufacturing operations as well as destructive testing, non-destructive testing, inspection, and acceptance of explosive components. This facility is essential to support the LEPs and the Complex 2030. This new facility combines Physical Properties Testing including: HE & non-HE, sensitivity, aging, conditioning, universal testing using various speeds, creep testing, friction testing, and fabrication of hardware, electronics and welding.

High Explosive Formulation Facility
This project consists of the design and construction of a new High Explosives Formulation Facility (HEFF). The HEFF will be located on the Northwest side of Zone 11 next to the High Explosive Pressing Facility. This facility will develop and manufacture high explosives for the DOE weapons complex and mock explosives for specialty projects. This facility will provide Pantex with large batch synthesis production up to 10,000 pounds and all formulation production capabilities for main charge explosives up to 10,000 pounds per year in support of continuing stockpile weapons programs and future programs.

High Pressure Fire Loop - Zone 12 South MAA
The High Pressure Fire Loop piping in the Zone 12 South Material Access Area will be replaced with high-density polyethylene pipe as needed. Cathodic protection will be installed on all ferrous material in contact with soil. This project will reduce production downtime related to HPFL failures and improve the reliability of the fire loop.

High Pressure Fire Loop (HPFL) Storage Tanks & Pumps
The purpose of the HPFL Storage Tanks & Pumps replacement project is to provide a reliable water supply for the fire protection system. This system

Project Descriptions
(Alphabetical Order)

HPFL Pipe Replacement – Building (b)(2)High
The high pressure fire loop has experienced a number of leaks in recent years. This project replaces the pipe leading from the main to the riser in Building (b)(2)High with high density polyethylene pipe.

Install Sidewalks Group 2 & 3
Additional sidewalks are being constructed in several locations to improve employee safety. This project will improve plant safety.

Loading Dock Repair
This project will replace the dock levelers and repair deteriorated concrete at a production stores warehouse loading dock.

Medical Facility Upgrade
The medical facility is about 40 years old and in need of improvements. The asbestos in the building needs removal, the electrical system upgraded, non load bearing walls rearranged, an addition added to the west side of the building, fire wall penetrations (including installation of fire doors), and increased storage to free up the pre-operation/treatment areas.

Narrow Band Radio Facility Over-temperature Monitor And Alarm
The over temperature monitor and alarm will provide 24 hour a day monitoring for the Narrow Band Radio System. To ensure that radio communications are not interrupted, and that expensive radio and computing equipment is not damaged or destroyed, a remotely monitored over temperature alarm system will be installed in the Narrow Band Radio Facility. Narrow band radio capability is required to maintain communications for Environmental Safety and Health, Maintenance, Security, and local area law enforcement and emergency services.

Narrow Band Radio System
Upgrading the narrow band radio system will help to ensure that the Fire and Security organizations have the resources necessary to meet their business requirements, providing communications with area law enforcement and emergency agencies (DOE M 470-4-2). The upgrade, which is reliant on the completion of the Network and Telecommunications Upgrade, will add VHF repeaters to boost the signal between Pantex and off-site agencies.

NDE/Gas Laboratory
This project is to provide a new facility for Non-destructive Evaluation (NDE), Gas Analysis Laboratory activities, and the materials compatibility testing functions. The existing WW II facilities need to be replaced to provide NDE and Gas Laboratory activities with energy efficient operations and HVAC controls that reduce downtime and improve laboratory equipment efficiency. The old facilities will be replaced by modern laboratory and x-ray operations. The current facility does not meet the intent of state-of-the-art secure facilities. The Gas Laboratory

Project Descriptions
(Alphabetical Order)

is not in a laboratory environment and is inadequate for operations by modern safety criteria. The method of chemical handling is cumbersome and X-ray film is not provided the environmental requirements the manufacturer or the CFR recommends.

Network and Telecommunications Infrastructure Upgrade
Project consists of a network of fiber, junction boxes, pedestals, and hardware devices providing classified and unclassified network services, voice communications services, and some fire alarm monitoring at the plant. The network and telephone cable upgrade will replace degraded cabling and provide assurance against hardware failures, lower maintenance costs, and heighten reliability of operations. The upgrade will help to assure that there is sufficient cable to support current capacity as well as expected growth, and accommodate the growth of technological advancement across the plant. Newer cable will provide current technology that is reliable and versatile.

North Electrical Substation
This project is to evaluate this major substation at Pantex and perform the necessary maintenance to put the substation in good condition. This work is to maintain the substation to maintain a responsive infrastructure on the Pantex Plant.

NWC Ramp (Additional Support)
The NWC Ramp project is a life extension program for facilities and infrastructure roofing systems. Facilities are selected in conjunction with NWC Roof Asset and Management prioritization of NNSA roofing assets. Funding within this project will be utilized for the site support of the construction activities at Pantex.

NWC Ramp Roofing Support (FY09)
Project is a life extension program for facilities and infrastructure roofing systems. Facilities selected in conjunction with NWC Roof Asset Management prioritization of NNSA roofing assets. Funding within this project will be utilized for the site support of the construction activities at Pantex.

NWC Roofing (FY06)
NWC roofing is to repair or replace roofing components as necessary on Pantex Plant structures. This project is related only to the Nuclear Weapons Complex (NWC) at the Pantex Plant. The roofs at Pantex must be kept in good repair to maintain buildings. The following are buildings targeted for roof maintenance with FY 2006 funding: Buildings 11-38, 12-R-40 and 11-17.

NWC Roofing (FY07)
NWC roofing is to repair or replace roofing components as necessary on Pantex Plant structures. This project is related only to the Nuclear Weapons Complex (NWC) at the Pantex Plant. The roofs at Pantex must be kept in good repair to

Project Descriptions
(Alphabetical Order)

maintain buildings. The following are buildings targeted for roof maintenance in FY 2007: Buildings 11-22, 11-R-8, 11-R-42, 12-1, 12-6, 12-52AE, 12-52E, 12-17B, 12-17F1-4, 12-19F1-4, 12-63A and 12-63E.

NWC Roofing (FY08)
Project is a life extension program for facilities and infrastructure roofing systems. Facilities selected in conjunction with NWC Roof Asset Management prioritization of NNSA roofing assets. Funding within this project will be utilized for the site support of the construction activities at Pantex. The roofs at Pantex must be kept in good repair to help maintain buildings. Targeted Buildings are 12-121, 12-128, 11-R-8 and 11-R-13.

Operations Systems Development & Integration Project
The Material Requirements Planning (MRP II) software technology used at BWXT Pantex is obsolete. This software is 25 years old thus technical support of the system is limited. This project not only purchases software but also some hardware, personnel training, procedure writing, and transitioning of some functions into other systems.

Paint Bay Modifications
This project installs a hoist and catwalk in the paint bay. The installation will reduce operating costs for some JTA operations. It will also improve safety by providing easier access for maintenance of the paint booth.

Physical Training Facility
This project is to provide a new facility to house a large classroom, CBT training, and offices to support additional personnel & training required as a result of 2005 DBT implementation. NNSA has contracted with the U.S. Army Corp of Engineers for construction of this facility.

Production Storage II
This project supports construction of an office and small parts warehouse. This will replace Building 11-7; constructed in 1942 using wood columns, trusses, and roof. The dry environment has made the timbers brittle, and termites continue to bore into the timbers. A new facility will reduce operating costs.

Production Stores Warehouse Replacement
This project replaces a 50 year old warehouse used by Production Stores.

Property Control Warehouse Replacement
The existing warehouse is in a deteriorated WWII era structure. This project will replace the existing facility with one employing modern construction materials and technology. It will allow demolition of Building 10-9.

Project Descriptions
(Alphabetical Order)

Protective Force Facilities Upgrade and Enhancements
This project provides for upgrades and enhancements to Protective Force facilities. These upgrades enhance the capability of the Site to meet the DBT, support new DOE Orders and allow for lifecycle replacement of aging Security facilities.

Protective Force Live Fire Ranges Upgrades and Enhancement Project
This project provides upgrades and enhancements to the live fire ranges. These upgrades provide the Protective Force personnel a safe environment for conducting realistic training in support of the DBT and new DOE Orders.

Protective Force Portal Upgrade and Enhancement
This project provides for lifecycle upgrades and enhancements to the access/egress Protection Force Stations/Portals. Several critical security systems have been in place for approximately 15 years and are reaching the end of their service life. It allows 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.

Rail System DM Reduction
This project removes approximately 12 miles of rail no longer in service at Pantex. Historic rail cars on site are being distributed to the National Atomic Museum in Albuquerque, New Mexico and to the Amarillo Railroad Museum. Once the cars are removed, a contractor will remove the track. Construction cost will be offset by salvage value of steel and cross ties. Removing the Pantex rail system reduces the total deferred maintenance at Pantex by about $31,800,000.

Rehab Roads
Project will rehabilitate selected roads in Zone 11 and 12. Existing pavement is cracked and weathered allowing unwanted vegetation, and freeze / thaw accelerated deterioration of the road surface and road sub-base.

Remove Building 16-10B
This project removes structure 16-10B and reduces the footprint.

Replace Aerators
Aging aerators at the sewage treatment plant will be replaced with solar powered equipment.

Roof Repair Zone 12 Mission Support Phase 1
This project is to fund miscellaneous roof repairs in Zone 12. Buildings currently planned for roof repair are: 12-5B, 12-5C and 12-5A.

Project Descriptions
(Alphabetical Order)

Sealed Insert (SI) Line Relocation
The Sealed Insert Repackaging Line will be relocated to Building (b)(2)High to support continued repackaging and surveillance requirements for Pit repackaging. The move will improve efficiency by consolidating operations.

(b)(2)High

Security PIDAS (Perimeter Intrusion Detection & Assessment System) Upgrade
This project provides for lifecycle replacement of outdated and obsolete PIDAS equipment and sensors with state of the art technology that will enhance the DBT posture and meet all new DOE Orders. Equipment shall meet or exceed all DOE requirements for delay, detection, assessment and response and the requirements in the Safeguards and Security Alarm Management and Control System (SAMACS) specifications for high-consequence applications.

Sewer Collection System Manhole Refurbishment
This project will refurbish active manholes in the sewer collection system. Many of the manholes have exceeded their useful life. Old sewer lines have been abandoned in place and continue to wash out leaving large holes in unexpected locations, creating safety risks for personnel.

Sewer Equipment Refurbishment
This project designs and installs a new chlorination system for Building (b)(2)High Sewer Control Facility for the Waste Water Treatment Facility to reduce the risk of Texas Commission on Environmental Quality discharge permit violations and improve the conservation of water. The project replaces 13 sewer lift stations to accomplish life cycle replacement of pumps, the system control, data acquisition equipment for system operations and monitoring is also planed for replacement. Ten of the thirteen lift stations have exceeded their design life. The sewer infrastructure systems and utilities are required to maintain the system integrity for operations.

FY 2006 Sidewalks
Site initiative to address safe walking surfaces throughout the Plant.

Site Wide Short Circuit Study
This study will analyze the plant's electrical system under normal operating and worst-case conditions. It will also include a field verification and summary of the plant's Service Entrance Arrester and Surge Capacitors for the Explosive

Project Descriptions
(Alphabetical Order)

facilities. The study will begin at the North and South Main Substations; continue through the plant's 12.47kV system, then through the 480V facility transformers to 480V or 208V power distribution panels, branch circuit panel boards, and motor control centers. This study will also include the 12.5kV overhead distribution lines. This study is to evaluate the Pantex electrical distribution system to insure electrical safety and operability to meet the site mission.

SNM Component Requalification Facility
This project upgraded Building (b)(2)High to develop the capability to process pits through recertification and/or requalification. In total, approximately 350 pits per year will require either recertification or requalification to support stockpile maintenance, surveillance, and LEP activities and the production of the Reliable Replacement Warhead (RRW).

Station (b)(2)High High Security Booth
This project provides for automated access control. Project is in direct support of the new DOE Orders and provides enhancements to the DBT posture.

Station (b)(2)High High Security Booth
This project provides for automated access control. Project is in direct support of the new DOE Orders and provides enhancements to the DBT posture.

Station (b)(2)High Vehicle Inspection Traps
This project extends the vehicle traps at the security stations to accommodate enhanced contraband detection techniques and inspection by the Security Force.

Station (b)(2)High Lighting Configuration
This project will reconfigure the lighting to meet all lighting requirements and to provide enhanced lighting to conduct vehicle inspections.

Station (b)(2)High High Security Booth
This project provides for automated access control. Project is in direct support of the new DOE Orders and provides enhancements to the DBT posture.

Station (b)(2)High High Security Booth
This project provides for automated access control. Project is in direct support of the new DOE Orders and provides enhancements to the DBT posture.

Station (b)(2)High Security Camera Installation
This project provides for installation of a CCTV system in stations (b)(2)High to enhance security. The CAS/SAS will monitor the video output of the system consoles.

Station (b)(2)High High Security Booth
This project provides for automated access control. This project is in direct support of the new DOE Orders and provides enhancements to the DBT posture.

Project Descriptions
(Alphabetical Order)

Steam Distribution System Upgrade
This project will refurbish and upgrade the steam distribution system. Upgrades will maintain highly reliable steam service to Plant programmatic and mission demands and will minimize air emissions, reduce energy consumption, and reclaim natural resources. The steam distribution infrastructure systems and utilities are required to maintain the system integrity for operations.

Steam Production Facility Upgrade
This project will refurbish and upgrade the steam production facility. Upgrades will enhance the safety of the system with more precise process control, will maintain the integrity of the pressurized systems, and reduce burn potentials with correction of insulation deficiencies. The viability of mainline utility systems are required to meet Complex 2030 initiatives.

Storage Tank Inspections
Petroleum storage tanks require inspection to determine their condition and any repairs needed. These inspections and the following corrective actions will ensure compliance with environmental protection criteria.

Surrogate Tactics and Training Facility (STTF)
The Elite Force initiative issued by Secretary Bodman, the new Tactical Doctrine, and the new Protective Force Manual require more intensive training for protective force personnel to achieve higher skill levels for the site's protection strategy. In addition, these requirements documents recommend that this training be conducted in the production areas of the site. The documents also allow for the use of surrogate facilities in lieu of training in the production facilities. This project will provide a surrogate training facility where mockups of production bays, cells, and staging magazines can be replicated. This concept eliminates the operational impacts to production and the safety concerns associated with training in production or staging buildings.

Technical Support Facility
This project constructed a new office facility in Zone 12 North. Construction has been completed allowing for footprint consolidation at Pantex.

Telephone Switch Replacement
Replacement of the telephone switch will help to assure reliability of the telephone system, support the growth of communications technology, and provide capacity needed to accommodate emerging technologies. The telephone switch is the primary means of voice communications at the plant will exceed its anticipated life expectancy of fifteen years by FY 2009. Also as the equipment ages, maintenance costs increase, as does the risk of service outages.

Project Descriptions
(Alphabetical Order)

Telephone System Power Upgrade
This project provides the equipment and electrical modifications to permit expansion of the private branch exchange (PBX) capacity now restricted by the present power system. Pantex is at risk for unplanned outages, resulting in loss of communication to the Operations Center, Security, and Fire Alarm Systems, which could result in shutdown of Plant operations. Mainline communication system must maintain operability and system integrity for mission operations.

Terracing Project
Install terraces in two fields on the west side of the plant. These terraces are to reduce storm water erosion in these fields.

Tester Design Facility Construction
This project constructed a new 14,000 square foot facility to consolidate Tester Design into one facility.

Ultraviolet to Infrared Detector Upgrade
This project will replace existing UV detection systems in Buildings (b)(2)High with IR detection systems. The flame detection releasing system control equipment will be replaced in Building (b)(2)High. The UV detection system will be upgraded to a new UV or IR detection system as appropriate for the application in Buildings (b)(2)High. These modifications are to address an aging system and parts availability and reliability. Systems are required for operability in mission critical facilities.

Water Chlorinator
Project to provide safety enhancements associated with the handling of chlorine gas at the water treatment facility.

Water Secondary Distribution Upgrade
This project will refurbish the secondary water distribution system, including replacement of 33 miles of distribution line and 1,000 components, upgrade Plant water metering to the current system controls and monitoring technology, and upgrade backflow prevention devices.

Water Valve & Pipeline Replacement
This project addresses identified leaks in the deteriorated lines and valves feeding Building (b)(2)High

Wire Lines for Zone 11
To support paperless production operations for receiving and transmitting information throughout the Pantex Plant additional wire lines from Zone 12 to the facilities in Zone 11 are required. The Site is positioning their technologies for more cost-effective operation and aligns with the HE Center of Excellence in high explosive development, manufacturing, and testing to meet the DOE 2030 vision.

Project Descriptions
(Alphabetical Order)

Zone 4 Guard Tower Enhancements
This project provides for lifecycle upgrades and enhancements to Buildings (b)(2)High at BWXT Pantex for the Protective Force operations. The resistance of the structures outside walls will be improved and all glass will be replaced with improved bulletproof glass. These upgrades and enhancements support the DBT and new DOE Orders.

Zone 4 Mission Dependent (Erosion Control and Approaches)
Replacement of deteriorated and unsafe concrete magazine approaches as well as erosion control at additional magazines. This helps maintain the Pantex Plant and maintain it in good condition for the 2030 vision.

Zone 4 Mission Dependent – Replace Earth Overburdens
This project replaces the earth overburden on the structures in Zone 4. This helps maintain the Pantex Plant for safe operations.

Zone 4 Replace Magazine Vent Piping and Caps
This is to replace the vents and caps on the Zone 4 magazines where they are worn out.

Zone 4 Richmond Magazine Upgrade (6)
This project consists of the design and construction to replace six Richmond Magazines (RM) in Zone 4 Material Access Area (MAA). This project also extends the fire protection into the magazines and upgrades the security system. The workload at the Pantex Plant is increasing the need for SAC weapon magazines and also additional SNM staging. Building these Modified Richmond Magazines will permit weapons to occupy the SAC magazines currently staging SNM and allow more efficient staging of SNM in the new Richmond Magazines. Relocating SNM into the new Richmond Magazines improves the capacity for efficiently staging SNM components in Zone 4.

Zone 4 West Approaches & Door Modifications
This project repairs or replaces the concrete approaches and upgrades structural doors and frames in the magazines in Zone 4.

Zone 11 Classified Wiring installation
To support classified paperless production operations for receiving and transmitting information throughout the Pantex Plant additional wire lines from Zone 12 to the facilities in Zone 11 are required. The Site is positioning their technologies for more cost-effective operation and aligns with the HE Center of Excellence in high explosive development, manufacturing, and testing to meet the DOE 2030 vision.

Attachment K - Requested Small Projects above FYNSP Targets
NNSA Facilities and Infrastructure Cost Projection Spreadsheet
RTBF/Operations of Facilities/Materials Disposition/Security Infrastructure for Pantex Plant
($000s)

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	HPFL Pipe Replacement - Building (b)(2)High				E	Safety	2,500										
2	HPFL Pipe Replacement - Building				E	Safety	4,000										
3	HPFL Pipe Replacement - Building				E	Safety	4,000										
4	FY07 Fire Alarm Panel Replacement				E	Safety	5,000										
5	Seismic Upgrades (b)(2)High				E	Safety	2,000										
6	Facility Upgrades				E	Capability	TBD										
7	HPFL Load-in Replacement Projects				E	Safety		8,000									
8	Fire Dept. Floor & HVAC Repair				E	Safety		3,000									
9	Install Sidewalks - Group 2				E	Safety		1,000									
10	FY08 Misc. DM Reduction Projects				E	DM		3,000									
11	Demolish Building (b)(2)High		211	-3,500	E	DM		1,250									
12	Remove Building		-	-1,206	E	DM		250									
13	FY08 Misc. Electrical Safety Enhancements				E	Safety		1,500									
14	Loading Dock Repair				E	Capability		750									
15	Install Sidewalks - Group 3				E	Safety		1,000									
16	Water Chlorinator				E	Safety		350									
17	Replace Aerators				E	Environment		500									
18	Paint Bay Modifications				E	Capability		700									
19	Central Computing Facility Foundation Repair				E	Safety		250									
20	Range 9 Bullet Trap Replacement[1]				E	Capability		750									
21	Station 711(b)(2) Vehicle Inspection Traps[1]				E	Security		1,055									
22	Stations (b)(2)High Security Camera Installation[1]				E	Security		215									
23	Station (b)(2)High Lighting Configuration[1]				E	Security		75									
24	(b)(2) Outdoor Lighting Modification[1]				E	Security		377									
25	FY08 Fire Alarm Panel Replacement (b)(2)High				E	Safety		3,000									
26	Demolish Building		165	-3,600	E	DM		600									
27	Zone 11 Classified Wiring Installation				E	Capability		4,000									
28	Manufacturing Resources Planning (MRP II) System Upgrade					Capability		2,500									
29	HPFL Load-In Replacement Projects				E	Safety			8,000								
30	FY09 Fire Alarm Panel Replacement				E	Safety			4,000								
31	FY09 Misc. Electrical Safety Enhancements				E	Safety			1,500								
32	FY09 Misc. DM Reduction Projects		1,000		E	DM			3,000								
33	FY09 Misc. Safety Enhancements				E	Safety			1,000								
34	FY09 Misc. Infrastructure Modifications				E	Capability			1,000								
35	FY09 Misc. Envir. Protection Enhancements				E	Environment			1,000								
36	Demolish Building (b)(2)High		119	-4,520	E	Safety			750								
37	Narrow Band Radio System				E	Capability			TBD								
38	Network and Telecommunications Infrastructure Upgrade				E	Capability			TBD								
39	Telephone Switch Replacement				E	Capability			TBD								
40	Plant Telephone System Upgrade				E	Capability			TBD								
41	Narrow Band Radio Facility Over-temperature Monitor and Alarm				E	Capability			TBD								
42	HPFL Load-In Replacement Projects				E	Safety				8,000							
43	FY10 Fire Alarm Panel Replacement				E	Safety				4,000							
44	FY10 Misc. Electrical Safety Enhancements				E	Safety				1,500							
45	FY10 Misc. DM Reduction Projects		1,000		E	DM				3,000							
46	FY10 Misc. Safety Enhancements				E	Safety				2,000							
47	FY10 Misc. Infrastructure Modifications				E	Capability				1,000							
48	FY10 Misc. Envir. Protection Enhancements				E	Environment				1,000							
49	Demolish Buildings (b)(2)High		-		E	Safety				2,000							
50	HPFL Load-In Replacement Projects				E	Safety					8,000						
51	FY11 Fire Alarm Panel Replacement				E	Safety					4,000						
52	FY11 Misc. Electrical Safety Enhancements				E	Safety					1,500						
53	FY11 Misc. DM Reduction Projects		1,000		E	DM					3,000						
54	FY11 Misc. Safety Enhancements				E	Safety					2,000						

[1] Estimate based on Security budget request.
Note all estimates are Rough Order of Magnitude

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Attachment K - Requested Small Projects above FYNSP Targets
NNSA Facilities and Infrastructure Cost Projection Spreadsheet
RTBF/Operations of Facilities/Materials Disposition/Security Infrastructure for Pantex Plant
($000s)

Number	Project Name	Project Cost History	Total Estimated Cost	Total Cost of Completed Phases	Program Work Type	Program Work Type	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
1	Infrastructure Capital Equipment				GPE	Capability	1,300	1,200	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
2	Special Tooling Capital Equipment				GPE	Capability	1,900	1,900	1,300	1,100	1,000	1,000	1,000	1,000	1,000	1,000	1,000
3	Replace Non-Destructive Test Equipment				GPE	Capability	4,200	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
4	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
5	Other 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
6	Special Purpose Vehicles				GPE	Capability	1,000	2,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
	GPE Subtotal						14,400	13,100	13,300	13,100	13,000	13,000	13,000	13,000	13,000	13,000	13,000
TOTAL ABOVE FYNSP							35,600	102,992	48,550	52,100	64,711	64,500	66,300	50,500	55,500	60,000	55,500

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Pantex Plant Building List

Building ID	Building Use		
		1942	264
		1942	1,555
		1944	1,568
		1942	1,555
		1942	1,555
		1944	1,555
		1944	1,555
		1942	1,555
		1958	4,537
		1944	1,555
		1944	1,555
		1944	1,555
		1942	1,555
		1942	1,555
		1942	1,555
		1942	1,555
		1942	1,555
		1942	1,555
		1942	1,555
		1942	1,555
		1942	1,555
		1942	1,555
		1942	1,555
		1942	1,555
		1942	1,555
		1942	1,555
		1942	1,555
	(b)(2)High	1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555
		1944	1,555

Pantex Plant Building List

[redacted]		
	1944	1,555
	1944	1,555
	1944	1,555
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
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	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
(b)(2)High	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1965	1,183
	1975	375
	1978	375
	1978	392
	1991	164
	1980	283
	1990	515
	1989	676
	1996	497
	1996	497
	1985	454

Pantex Plant Building List

	1985	1,572
	1987	64
	1987	64
	1987	118
	1987	255
	1987	160
	1987	160
	1987	593
	1988	916
	1989	181
	1989	182
	1989	182
	1989	182
	1989	182
	1989	182
	1989	182
	1989	182
	1989	235
	1990	505
	1990	556
	1993	156
	1994	170
	1994	10,194
	1994	11,827
	1994	10,220
	1994	79
	1994	79
	1994	79
	1994	79
	1994	207
	1994	79
	1994	79
	1994	79
	1994	79
	1994	79
	1994	79
	1994	78
	1994	79
	1994	207
	1994	78
	1994	79
	1994	78
	1994	79
	1994	79
	1994	79
	1994	79
	1994	79
	1994	79
	1994	79
	1994	79
	1994	78
	1994	79
	1994	79
	1994	282
	1994	79

(b)(2)High

Pantex Plant Building List

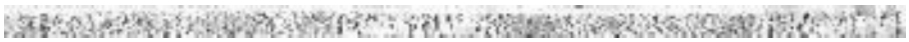
	1994	79
	1994	79
	1994	182
	1994	182
	1994	236
	1994	90
	1994	90
	1994	160
	1994	77
	1994	127
	1994	75
	1994	223
	1994	76
	1994	236
	1994	223
	1994	154
	1998	436
	1998	436
	1998	97
	1997	118
	1996	118
	1997	489
	1997	489
	1996	158
	1998	235
	1990	116
	1995	138
	2001	160
(b)(2)High	2001	160
	2003	1,442
	2004	19,086
	2004	630
	2005	239
	2005	160
	2006	160
	2006	391
	2006	669
	2006	669
	2007	859
	2007	165
	2007	165
	2007	165
	1944	4,558
	1942	16,524
	1986	638
	1942	18,766
	1942	10,516
	1942	9,446
	1942	33,700
	1942	922
	1942	7,675
	1942	140
	1942	5,960
	1967	2,334
	1985	43

Pantex Plant Building List

Building		
	1942	431
	1942	9,371
	1970	1,028
	1988	43
	1988	91
	1942	1,538
	1942	1,014
	1942	17,086
	1942	453
	1942	403
	1942	140
	1942	1,122
	1942	1,140
	1961	861
	1942	7,004
	1971	5,138
	1970	1,843
	1971	4,315
	1975	2,222
	1950	2,018
	1945	7,210
	1978	121
	1966	3,217
	1966	52
	1965	1,029
	1945	101
	1966	119
	1966	4,019
	1966	102
	1966	169
	1984	30,978
	1981	12,021
	2002	8,982
	1981	265
	1983	3,130
	1984	3,595
	1998	15,182
	1999	579
	1999	263
	2000	2,509
	2005	31,819
	2005	344
	1942	2,480
	1942	1,639
	1942	4,605
	1942	4,326
	1942	3,492
	1942	948
	1942	4,674
	1942	2,300
	1942	267
	1945	7,015
	1945	2,016
	1944	3,895
	1984	3,776

(b)(2)High

[redacted]



Pantex Plant Building List

	1986	12,077
	1985	59
	1984	115,191
	2003	224
	1984	5,792
	1987	49,707
	1978	375
	1978	375
	1978	375
	1979	120
	1991	2,051
	1986	889
	1980	303
	1986	5,733
	1984	2,579
	1984	5,788
	1983	9,896
	1986	5,839
	1986	5,839
	1986	5,839
	1986	5,839
	1986	2,327
	1986	2,324
	1986	64,449
	1984	4,372
	1984	5,398
	1984	5,823
(b)(2)High	1989	20,848
	1988	99,984
	1992	75,716
	1988	200
	1988	201
	1986	480
	1986	5,448
	1988	12,724
	1986	10,058
	1987	1,825
	1989	982
	1988	7,970
	1988	7,439
	1988	6,571
	1990	2,231
	1993	1,372
	1994	48,015
	1993	6,239
	1990	18,310
	1989	855
	1988	229
	1991	2,321
	1993	49,159
	1991	7,147
	1992	2,023
	1998	558
	1991	127
	1997	12,104

[redacted] [redacted]

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Appendix 1, Pantex Funding Targets

PANTEX FUNDING TARGETS ($ x 1,000) [1]							
PROGRAM	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
DSW							
LIFE EXTENSION PROGRAMS	43,594	29,758	29,651	27,874	26,849	27,250	27,931
STOCKPILE SYSTEMS	25,594	34,749	31,472	32,750	33,650	34,582	35,445
RETIRED WEAPONS SYSTEMS	29,180	23,358	19,720	19,721	15,648	15,900	16,298
STOCKPILE SERVICES/ PRODUCT. SUPPORT / RRW	69,364	79,155	81,819	85,970	84,526	86,154	88,308
DSW TOTAL	***167,732***	***167,020***	***162,662***	***166,315***	***160,673***	***163,886***	***167,982***
CAMPAIGNS							
HE/ASSEMBLY READINESS	17,188	8,263	9,258	8,857	13,606	10,109	10,361
ADAPT	2,457	700	1,883	1,922	1,973	1,976	2,025
ENHANCED SURVEILLANCE	2,995	2,831	2,877	2,818	2,841	2,900	2,973
CAMPAIGNS TOTAL	***22,640***	***11,794***	***14,018***	***13,597***	***18,420***	***14,985***	***15,359***
RTBF							
OPERATIONS OF FACILITIES	96,124	95,012	99,191	101,493	104,587	106,652	109,319
PROGRAM READINESS	4,618	4,238	4,741	4,872	5,084	5,185	5,314
CONTAINERS	4,860	4,885	4,947	5,084	5,264	5,367	5,502
STORAGE	8,515	8,560	8,827	9,066	9,373	9,557	9,796
LINE ITEM CONSTRUCTION	6,551	39,300	35,000	45,482	30,000	0	0
RTBF TOTAL	***120,668***	***151,995***	***152,706***	***165,997***	***154,308***	***126,761***	***129,931***
FIRP	25,937	35,110	34,509	39,977	40,986	42,056	43,024
FIRP LINE ITEM	9,574	4,400	4,000	0	0	0	0
SECURITY (CYBER & PHYSICAL)	126,468	154,775	136,089	148,156	163,938	180,896	185,057
SECURITY LINE ITEM	0	0	1,500	6,000	4,175	0	0
OTHER DP (WIR & OST)	7,391	6,561	6,761	6,709	6,924	7,077	7,401
REIMBURSABLE	4,000	4,000	4,000	4,000	4,000	4,000	4,000
MD	5,000	6,000	6,000	6,000	6,000	6,000	6,000
EM (ER + D&D) [2]	23,726	12,411	0	0	0	0	0
EM (RTBF LTS) [2]			4,481	4,575	4,672	4,779	4,889
GRAND TOTAL	***513,136***	***554,066***	***526,726***	***561,326***	***564,096***	***550,440***	***563,643***

[1] Budget data for DSW, Campaigns, RTBF, FIRP, Other DP, Security, and MD (including Line Item targets) are consistent with the site splits distributed by NA133 February 9, 2007. The site split is based on FY 2008 Congressional Budget adjusted for the 3% HQ reserve. Current Work Authorization for RTBF Ops of Facilities is $104,500, and is reflected in this TYSP. Current Work Authorization for FIRP is $19,287, and is reflected in this TYSP.

[2] EM program is scheduled to transfer to Long Term Stewardship in FY 2008. Beginning in FY 2009, Long Term Stewardship (LTS) responsibilities will rest with the site landlord.

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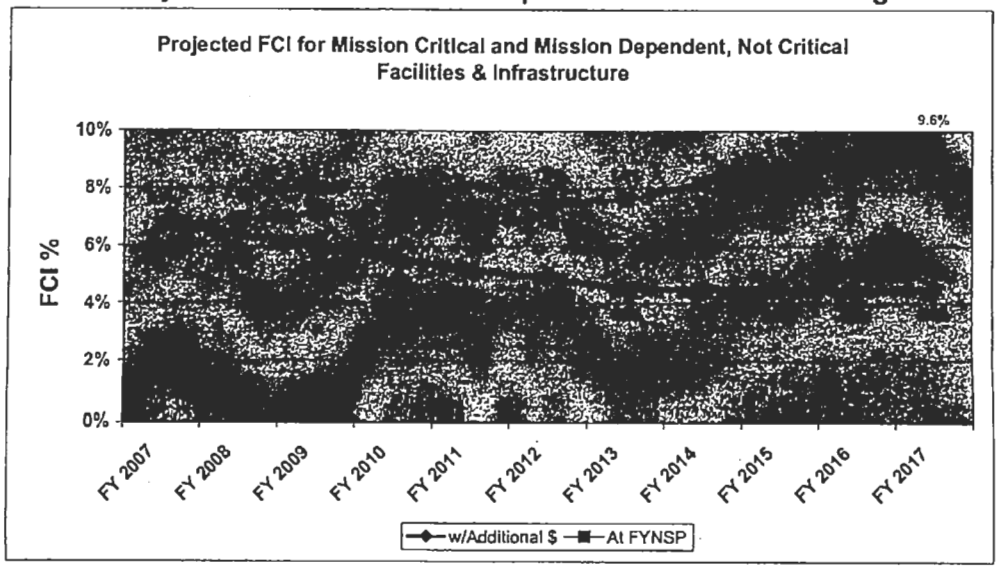
Projected FCI w/Additional Required Maintenance Funding



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