NNSA

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Ten-Year Site Plan
FY 2008 - FY 2017

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Executive Summary

The FY08-FY17 Ten-Year Site Plan (TYSP) for Los Alamos National Laboratory provides vital input for planning to meet the National Nuclear Security Administration's (NNSA) commitment to ensuring the United States (U.S.) has a safe, secure, and reliable nuclear deterrent. The Laboratory is a prominent contributor to the NNSA's missions through its programs and campaigns that develop unique science, design, engineering, testing, and manufacturing capabilities required for long-term stewardship of the stockpile.

Management of the Laboratory transitioned from the University of California (UC) to Los Alamos National Security, LLC (LANS), a team composed of Bechtel National, Inc., the University of California, BWX Technologies, Inc., and Washington Group International, Inc. in June 2006. This TYSP, the seventh annual submittal, marks the first submittal under the LANS Laboratory management team.

The Laboratory management team is aware of the role of the TYSP as an integrated planning tool, not only for NNSA to plan funding for site activities, but for the institution itself to develop a future physical infrastructure that will meet its ongoing needs. To this end, Laboratory management committed to make targeted infrastructure related improvements and changes to operations and management that prepare the Laboratory for major challenges in its future. Laboratory management will continue to measure progress against these commitments.

"The logic begins with NNSA's Strategic Plan"... "(The TYCSP then) becomes our baseline upon which lower-level tactical plans, funding requests, and key decisions are made." – LANS Proposal, July, 2005

LANS Management Objectives:

- Ensure long term viability of the Laboratory Weapons Program and Science Base through targeted investments in long term weapons research
- Ensure improvement of physical infrastructure stewardship through facility condition improvement, execution of maintenance, and integration of key infrastructure objectives
- Transform the Laboratory to a more sustainable site by aggressively reducing footprint, shutting down and removing poor, failed or otherwise unsustainable facilities and structures
- Meet Laboratory commitments to construct and startup the Chemistry and Metallurgy Research Replacement (CMRR) project
- Follow through on Safeguards and Security commitments to ensure a safe and secure laboratory that can be sustained in the long term
- Support NNSA as a lead contractor in the transformation and integration of the Nuclear Weapons Complex under Complex 2030
- Complete compliance requirements of the New Mexico Consent Order

Major Challenges

Four major challenges that affect the future of the Laboratory are themes addressed throughout this TYSP and will be addressed in future TYSP's.

Stewardship of the Physical Infrastructure - The Laboratory management team is managing a site with much of the physical infrastructure aging, obsolete and inadequate for the current and planned missions. This TYSP discusses the Laboratory's strategy to create a more responsive physical infrastructure for the site through an aggressive set of initiatives that eliminate investment in high cost, low value facilities; revitalize remaining facilities; and construct new facilities essential to site missions. An example is an initiative to dramatically reduce the site facility footprint, eliminating some of the worst facilities at the site and freeing up recapitalization and maintenance funding for investment in the remaining facilities. The end result will be a physical infrastructure that can be sustained with projected levels of future funding and that will support the continuing mission needs of the institution.

Enhanced Laboratory Security – At the completion of management transition, the Laboratory management team was well aware that it was inheriting a site with a history of security management issues; and was committed to enhancing the general security posture. Immediately, Laboratory management initiated a process for upgrading Laboratory security that was focused on five areas: processes and policies, organization, infrastructure, tools, and people. A recent serious security breach highlighted the need for an even more aggressive schedule to implement the Laboratory's enhanced security initiative, particularly the cyber-security upgrades. From a physical infrastructure standpoint, the Laboratory is taking an aggressive approach to plan and execute projects integral to the enhanced security posture. Projects discussed in this TYSP range from a strengthened security perimeter infrastructure to address a changing Design Basis Threat (DBT) to the pilot installation of new technology to enhance classified media management.

Complex 2030 Transition - The Complex 2030 scenario is being discussed by NNSA to address the challenge of assuring the long term safety, security, and reliability of today's Cold War stockpile. This TYSP directly addresses the Laboratory's plans and processes for achieving a physical infrastructure that is sustainable and an integral part of the smaller stockpile discussed in Office of Defense Programs' Complex 2030 Report. Under Complex 2030, budgets for traditional Laboratory weapons complex missions such as stockpile stewardship will not be growing, as they have in the past. At the same time, the Laboratory sees a substantial growth in areas such as threat reduction, homeland security and basic sciences and is in a strong position to support the science and technology base essential for long-term national security. This Laboratory supports NNSA's Complex 2030 vision and recognizes its leadership role in the consolidation and revitalization efforts for development and stewardship of the future stockpile.

> ***"(The Complex 2030 Infrastructure)...will be robust, fully capable, and sufficiently flexible to fix technical problems in the stockpile and be able to respond to adverse geopolitical change... be smaller, more efficient, and designed with safety and security in mind. It will be fully integrated with uniform business practices, and risks will be managed effectively." – Office of Defense Programs, National Nuclear Security Administration, Complex 2030, October 2006***

Environmental Management - The Laboratory is currently focused on bringing site legacy environmental impacts into compliance with New Mexico and Federal environmental laws and regulations, most specifically the Consent Order signed March 1, 2005, that addresses legacy contamination at the site and the Federal Facilities Compliance Agreement (FFCA) addressing storm water pollution management. Under the established schedule, all Consent Order requirements (i.e., investigations, evaluations and corrective measures) must be completed by December 2015 with stipulated penalties on certain deliverables if the Laboratory does not meet the prescribed schedule. To meet the longer term stewardship requirements of the FFCA and other environmental management commitments beyond the Consent Order, the Laboratory is establishing a Long-Term Environmental Stewardship program that will implement a defined set of systematic monitoring and environmental management processes as well as continued environmental facilities and infrastructure upgrades that assure continued compliance for the Laboratory's duration.

Future State

Highlights of the Laboratory's approach to address the Complex 2030 challenge include the following:

- Constructing the CMRR, a new research facility that will consolidate Special Nuclear Material (SNM) Analytical Chemistry, Material Characterization (AC/MC), actinide research and development capabilities and SNM storage capabilities. The CMRR will support plutonium operations at the Laboratory, closure of the existing Chemistry and Metallurgy Research (CMR) facility, and the removal of Security Category I/II quantities of plutonium from Lawrence Livermore National Laboratory (LLNL). As such, the CMRR is essential to an effective transition towards the goals of Complex 2030 and, under aggressive Laboratory management, assumes a continued role in the consolidation efforts across the weapons complex.
- Rendering the 2nd axis of the Dual-Axis Radiographic Test (DARHT) facility fully operational to provide stereoscopic and time-sequenced views of hydrodynamic experiments vital to the stockpile stewardship effort in the absence of underground testing
- Refurbishing the Los Alamos Neutron Science Center (LANSCE) as a modern and operationally reliable infrastructure for a variety of experimental physics and stockpile stewardship applications
- Upgrading plutonium facilities at Technical Area-55 (TA-55) to support interim pit production requirements for the RRW program under the Complex 2030 vision

Highlights of Future State

Complex 2030 Weapons Program

- Complete CMRR
- DARHT fully operational
- Refurbish LANSCE
- Upgrade TA-55 plutonium facilities

Long-Term Institutional Development

- Footprint reduction
- Enhanced physical security infrastructure
- Enhanced cyber-security initiative
- Radiological Sciences Institute
- Non-NNSA physical infrastructure
- Upgraded real property management
- Long-term environmental stewardship

Some of the Laboratory's long term institutional development initiatives include the following:

- To meet the requirements of managing the physical infrastructure, the Laboratory is implementing a significant footprint reduction effort over the next two years of approximately 2 million gross square feet of Laboratory facility space. This initiative will build on the ongoing efforts to consolidate nuclear facilities and shutdown aging facilities at the Laboratory; and will eliminate a much greater number of degraded and under-utilized facilities that have a limited value for the future activities and missions of the Laboratory. Completion of the footprint reduction effort will free up funding for maintenance and recapitalization of high valued facilities and infrastructure and will position the Laboratory as a flexible and responsive supplier of research and development services to meet dynamic NNSA and non-NNSA program needs.

- To meet the evolving security requirements of a post-9/11 operations environment, the Laboratory is defining and implementing a physical security posture that is largely insensitive to changes in the site DBT. This process is well under way and will reduce the need for additional security related facilities and infrastructure over the entire TYSP planning horizon.
- The Laboratory is committing to a pilot installation of a Super Vault Type Room (VTR) to demonstrate the concept for consolidating and controlling the use of classified information while using technology to efficiently and effectively enable authorized programmatic access. The Super VTR pilot will serve as a platform from which to launch the Laboratory into a new environment of cyber security operations. This new environment will be at the leading edge, helping to define the Laboratory's cyber security future.
- The Laboratory is involved in several major forward looking physical infrastructure developments outside the Weapons Program. Among the many such efforts are development of the Radiological Sciences Institute (RSI) as an enhanced national capability to support threat reduction research and development activities, a major institutional commitment that addresses one of the Laboratory Director's "Seven Grand (Scientific) Challenges"; and planning support for the Laboratory as the fuel reprocessing facility under the Global Nuclear Energy Partnership (GNEP) next generation enhanced energy security nuclear fuel cycle.
- To meet the requirements for a vital national research and development capability focused on national security, energy, and basic sciences, the Laboratory is in the process of implementing a broad based development of capabilities and infrastructure to service non-NNSA clients in threat reduction, homeland security, energy and basic sciences. As this broader base of operations develops, it allows NNSA the ability to maintain the basic science capabilities needed to carry out future

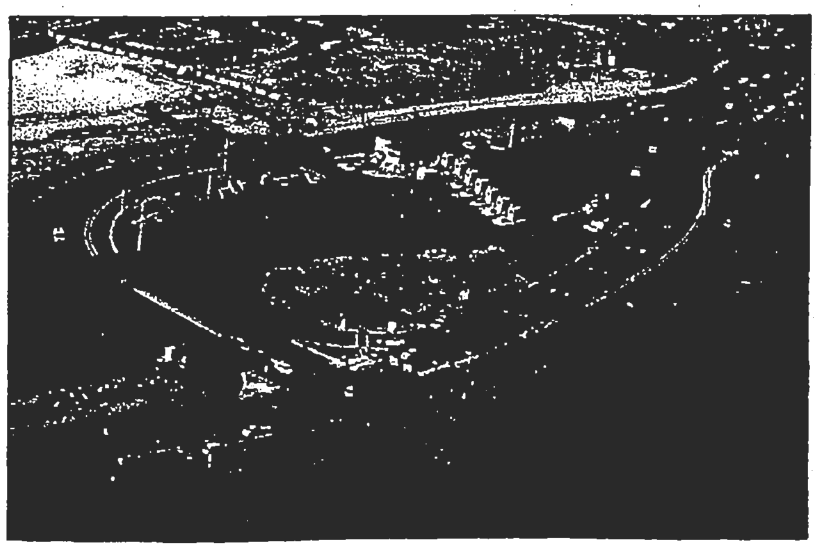

Figure ES-1: The recently completed Security Perimeter Project limits access into the Laboratory's TA-3.

missions and activities at the Laboratory, a primary requirement for effective implementation of Complex 2030 development strategies, and will ensure the Laboratory can robustly respond to Department of Energy (DOE) funding fluctuations in the future.

- The Laboratory is applying a disciplined process to reflect corrective actions from previous external and internal audits and investigations as processes and procedures for continued gain in the quality of stewardship of the site's physical infrastructure. In addition, the Laboratory is focused on implementing best practices for management of facilities and infrastructure by satisfying the requirements and intent of several reference guidelines including Executive Order 13327, Federal Real Property Asset Management; the President's Management Agenda, Real Property Asset Management Initiative; DOE Order 430.1B, Real Property Asset Management; Congressional and DOE real property reporting requirements; and by continuing to follow the recommendations of the National Research Council's Intelligent Sustainment and Renewal of Department of Energy Facilities and Infrastructure. This will enable the Laboratory to transform the current aging facility infrastructure into one that can be maintained within projected resources.
- To meet the requirements for effective long-term environmental management, the Laboratory is implementing a performance-based Environmental Management System (EMS) that meets the requirements of the International Standardization Organization (ISO) 14001 environmental standard. The EMS assures that the eventual requirements of Long-Term Stewardship and the changing requirements of environmental compliance can be met within a single compliance framework and with minimum impact on the ongoing Laboratory weapons program activities. As the Laboratory continues to decontaminate and decommission (D&D) older facilities and construct replacements, the Laboratory's EMS will provide an integrated system to ensure adequate characterization, prevent transfer or mobilization of contaminants in the environment, and ensure that chemical or radiological contaminated materials are not released to the public.

In summary, this TYSP narrates a roadmap that the Laboratory plans to follow over the next 10 year planning horizon. This roadmap ensures new foundation for Laboratory physical infrastructure that will transform the Laboratory from the Post Cold War era of Stockpile Stewardship into the Complex 2030 vision. In this way, the Laboratory can anticipate and be prepared to solve future national security technical challenges.

Table of Contents

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List of Tables

List of Figures

List of Maps

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Acronyms

2M FRI	Two Million Square Feet Footprint Reduction Initiative
AB	Authorization Basis
AC/MC	Analytical Chemistry/Material Characterization
ACO/UK	Accountable/United Kingdom
ACREM	Accountable Classified Removable Electronic Media
ADEPS	Associate Directorate of Experimental Physical Sciences
ADISS	Associate Director of Infrastructure and Site Services
AD	Associate Director
ADCLES	Associate Directorate of Chemistry, Life and Earth Sciences
ADESH&Q	Associate Directorate of Environment, Safety, Health, and Quality
ADEP	Associate Directorate of Environmental Programs
ADNHHO	Associate Directorate of Nuclear and High-Hazard Operations
ADP	Area Development Plan
ADSS	Associate Directorate of Safeguards and Security
ADTS	Aerial Threat Deterrent System
ADWP	Associate Directorate of Weapons Physics
AFDCS	Active Facilities Data Collection System
AIDS	Acquired Immune Deficiency Syndrome
ALARA	As Low as Reasonably Achievable
AO	Administrative Order
AOC	Areas of Concern
AP	Administrative Procedures
Area G	Waste facility in TA-54
Area L	Waste facility in TA-54
ASC	Advanced Simulation Computing
ASCI	Accelerated Strategic Computing Initiative
AUI	Asset Utilization Index
BLM	Bureau of Land Management

BMP	Best Management Practice
BNA	Baseline Needs Assessment
BRASS	Basic Rapid Alarm Security System
BTF	Beryllium Technology Facility
CAIS	Condition Assessment Information System
CAS	Condition Assessment Survey
CD	Critical Decision
CDF	Central Destruction Facility
CEF	Criticality Experiments Facility
CFR	Code of Federal Regulations
CINT	Center for Integrated Nanotechnologies
CME	Corrective Measures Evaluation
CMI	Corrective Measure Implementation
CMMS	Computerized Maintenance Management System
CMR	Chemistry and Metallurgy Research
CMRR	Chemistry and Metallurgy Research Replacement
CO_2	Carbon Dioxide
CoE	Conduct of Engineering
COM	Conduct of Maintenance
ConOps	Conduct of Operations
CPC	Consolidated Plutonium Center
CPV	Current Plant Value
CR	Continuing Resolution
CRMP	Cultural Resources Management Plan
CSA	Canned Subassemblies
CSP	Comprehensive Site Plan
CSSC	Classified Staging and Storing Center
CWA	Clean Water Act

CX	Categorically Excluded
D&D	Decontamination and Decommission
DAF	Device Assembly Facility
DARHT	Dual Axis Radiographic Test Facility
DB	Design-Build
DBT	Design Basis Threat
DBTIP	Design Basis Threat Implementation Plan
DE	Dynamic and Energetic Materials Division
DHS	Department of Homeland Security
DM	Deferred Maintenance
DoD	Department of Defense
DOE	Department of Energy
DoS	Department of State
DP	Defense Programs
DSW	Directed Stockpile Work
EA	Environmental Assessment
ECF	Entry Control Facility
EFCOG	Energy Facility Contractors Group
EIS	Environmental Impact Statement
EM	Environmental Management
EMC	Energetic Materials Characterization
EMS	Environmental Management System
ENV	Environmental Protection Division
EPA	Environmental Protection Agency
EP-CAP	Environmental Programs Corrective Actions Project
ES&H	Environmental, Safety and Health
ESR	Environmental Surveillance Report
ETA	East Technical Area (electrical substation)

EV	Earned Value
F&I	Facilities and Infrastructure
FAaRS	Facility Assessment and Ranking System
FATMAN	Facility management system
FCI	Facility Condition Index
FFCA	Federal Facilities Compliance Agreement
FIMS	Facility Infrastructure Management System
FIRP	Facilities and Infrastructure Recapitalization Program
FIRRS	Facilities and Infrastructure Recapitalization Ranking System
FME-DES	Facility Management and Engineering-Design Engineering Services
FOD	Facility Operations Director
FONSI	Finding of No Significant Impact
FRPC	Federal Real Property Council
FSR	Facility Service Request
FY	Fiscal Year
FYNSP	Future Years Nuclear Security Program
G&A	General and Administrative
GIS	Geographic Information Systems
GNEP	Global Nuclear Energy Partnership
GPP	General Plant Project
GSA	General Services Administration
GSAF	Generator Set-Aside Fund
GSF	Gross Square Feet
GTL	Genomes To Life
HAR	Hazard Analysis Report
HCI	Historical Cost Index
HE	High Explosive
HEDP	High Energy Density Physics

HIV	Human Immunodeficiency Virus
HQ	Headquarters
HR/WC	Hazard Reduction/Wing Closure
HS	Office of Health, Safety, and Security
HSWA	Hazardous and Solid Waste Amendments
HVAC	Heating, Ventilating, and Air-Conditioning
IAEA	International Atomic Energy Agency
IC	Intelligence Community
ICF	Inertial Confinement Fusion
ICPP	Integrated Construction Program Plan
IER	Integrated Environmental Review
IGPP	Institutional General Plant Project
IN	Office of Intelligence
INNST	Institute for Nuclear Non-proliferation Science and Technology
INP	Integrated Nuclear Planning
IP-SMFP	Infrastructure Planning-Space Management and Facility Planning
IP-SPPI	Infrastructure Planning-Site Planning and Project Initiation
IP-DO	Infrastructure Planning Division Office
IPF	Isotope Production Facility
IRB	Infrastructure Review Board
IRNS	Institute for Low-Level Radiological and Nuclear Science
ISMP	Integrated Space Management Program
ISO	International Standardization Organization
ISS	Institutional Site Support
ISSM	Integrated Safeguards and Security Management
K	Thousand
KSL	Kellogg, Brown and Root/Shaw Environmental and Infrastructure/Los Alamos Technical Associates
Kv	Kilovolt

LAMPF	Los Alamos Meson Physics Facility
LAMPRE	Los Alamos Molten Plutonium Reactor Experiment
LANS	Los Alamos National Security, LLC
LANSCE	Los Alamos Neutron Science Center
LANSCE-R	Los Alamos Neutron Science Center Refurbishment
LASO	Los Alamos Site Office
LCO	Limiting Conditions of Operations
LDCC	Laboratory Data Communications Center
LDRD	Laboratory-Directed Research and Development
LEED	Leadership in Energy and Environmental Design
LEP	Life Extension Project
LI	Line Item
LLNL	Lawrence Livermore National Laboratory
LLW	Low Level Waste
LTS	Long Term Stewardship
M	Million
MAR	Major Assembly Release
MC	Mission Critical
MD	Mission Dependent
MDA	Material Disposal Area
MeV	Million electron Volts
MIP	Maintenance Implementation Plan
MLLW	Mixed Low-Level Waste
MR&R	Material Recycle and Recovery
MSL	Materials Science Laboratory
MSS-UI	Maintenance and Site Services-Utilities Infrastructure
MTRU	Mixed Transuranic (waste)
MTS	Materials Test Station

MW	Megawatts
NASA	National Aeronautics and Space Administration
NDA	Nondestructive Analysis
NDE	Nondestructive Examination
NE	Office of Nuclear Energy
NEP	Noise Equivalent Power
NEPA	National Environmental Policy Act
NERP	National Environmental Research Park
NFC	Nuclear Facility Consolidation
NFPA	National Fire Protection Association
NHMFL	National High Magnetic Field Laboratory
NHPA	National Historic Preservation Act
NISC	Non-proliferation and International Security Complex
NMD	Not Mission Dependent
NMED	New Mexico Environment Department
NMED-HWB	New Mexico Environment Department-Hazardous Waste Bureau
NMSSUP	Nuclear Materials Safeguards and Security Upgrades Project
NN	Office of Nuclear Nonproliferation
NNSA	National Nuclear Security Administration
NPD	Normalized Power Difference
NPDES	National Pollutant Discharge Elimination Systems
NPR	Nuclear Posture Review
NPS	National Park Service
NRHP	National Register of Historic Places
NSE	National Security Engineering (facility)
NSF	National Science Foundation
NSSB	National Security Science Building
NTS	Nevada Test Site

NWC	Nuclear Weapons Complex
OECM	Office of Engineering and Construction Management
OMB	Office of Management and Budget
OPC	Other Project Costs
ORNL	Oak Ridge National Laboratory
OS	Office of Science
OSF	Other Structures and Facilities
OUO	Official Use Only
PAD	Principal Associate Director
PADOPS	Principal Associate Directorate of Operations
PADSTE	Principal Associate Directorate of Science, Technology, and Engineering
PADWP	Principal Associate Directorate of Weapons Programs
PBI	Performance Based Incentive
PBS	Project Baseline Summaries
PCB	Polychlorinated Biphenyl
PDCF	Pit Disassembly and Conversion Facility
PE&D	Preliminary Engineering and Design
PEIS	Programmatic Environmental Impact Statement
PEP	Project Execution Plan
PF	Plutonium Facility, also known as TA-55
PGIU	Power Grid Infrastructure Upgrade
PIDADS	Perimeter Intrusion Detection, Assessment, and Delay System
PIDAS	Perimeter Intrusion Detection Assessment Systems
PMC	Pit Manufacturing and Certification
POA	Prevention Opportunity Assessments
PPBE	Planning, Programming, Budgeting and Evaluation
pRad	Proton Radiography
PR-ID	Permits and Requirements Identification

PRS	Potential Release Site
PTLA	Protection Technology Los Alamos
Pu	Plutonium
Q	Quarter
QC	Quality Control
QMU	Quantification of Margins and Uncertainties
R&D	Research and Development
RAD	Responsible Associate Director
RANT	Radioassay and Nondestructive Testing
RCRA	Resource Conservation Recovery Act
Rem	Dosage of an ionizing radiation
RFP	Request for Proposal
RIK	Replacement-In-Kind
RISC	Risk Informed Sustainment Cost
RLUOB	Radiological Laboratory, Utilities and Office Building
RLWTF	Radioactive Liquid Waste Treatment Facility
ROD	Record of Decision
RPV	Replacement Plant Value
RRW	Reliable Replacement Warhead
RSI	Radiological Sciences Institute
RTBF	Readiness in Technical and Base Facilities
RUPS	Rotary Uninterruptible Power Supply
S&M	Surveillance and Maintenance
S&S	Safeguards and Security
SCC	Super Computing Complex (also known as the Metropolis Center)
SCIF	Sensitive Compartmentalized Information Facility
SECON	Security Condition
SFE	Special Facilities Equipment

SHPO	State Historic Preservation Officer
SI/FR	Strategic Investments/Footprint Reduction
SM-43	Old Administration Building
SNM	Special Nuclear Material
SNS	Spallation Neutron Source
SPP	Security Perimeter Project
SRD	Secret Restricted Data
SRS	Savannah River Site
SSP	Stockpile Stewardship Program
SSS	Site Support Services
STA	Southern Technical Area (substation)
STP	Site Treatment Plant
SWEIS	Sitewide Environmental Impact Statement
SWMU	Solid Waste Management Unit
SWSC	Sanitary Wastewater Systems Consolidation (plant)
SWWP	Sanitary Waste Water Plant
TA	Technical Area
TAIZ	Technical Area Isolation Zone
TBD	To Be Determined
TCP	Traditional Cultural Property
TRU	Transuranic (waste)
TS	Top Secret
TSR	Technical Safety Requirements
TWISP	Transuranic Waste Inspection and Storage Project
TYCSP	Ten Year Comprehensive Site Plan
TYSP	Ten Year Site Plan
UC	University of California
UCNI	Uncontrolled Classified Nuclear Information

UGT	Underground Test
U.S.	United States
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
VTR	Vault Type Room
WBS	Work Breakdown Structure
WCRR	Waste Characterization, Reduction, and Repackaging
WETF	Weapons Engineering Tritium Facility
WFO	Work For Others
WIPP	Waste Isolation Pilot Plant
WMD	Weapons of Mass Destruction
WNR	Weapons Neutron Research
WR	Weapons Response Group
WTA	Western Technical Area (substation)
ZLD	Zero Liquid Discharge
ZR	Z Machine Refurbishment

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1.0 Introduction

1.1 Overview

The Los Alamos National Laboratory submits herein its seventh Ten-Year Site Plan (TYSP), the Fiscal Year (FY)08-FY17 TYSP, following the outline of requirements stated in the National Nuclear Security Administration's (NNSA) *FY2008 - 2017 Ten-Year Site Plan (TYSP) Guidance,* dated December 21, 2006. This plan specifically provides strategic planning for the physical complex and includes direct and indirect NNSA funded facilities and infrastructure activities that respond to NNSA near term facility management objectives and the longer term Complex 2030 scenario. The TYSP supports NNSA's planning process. In addition, the TYSP serves as the major integrated plan for the Laboratory's institutional development process, linking physical asset long-range planning and proposed projects with fiscal budget submissions.

Chapter 2 provides a general description of the site that includes physical infrastructure and workforce. Also presented here is a description of current land use, including past and future transfers of land. Also, this section identifies facilities that have received historic designation and discusses the impact of these designations on facilities and infrastructure. Summary maps illustrate the current and future status of buildings, including new construction projects and excess facilities. An overview of the current Laboratory workforce is also provided.

Chapter 3 focuses on mission needs and program descriptions. The role of the programmatic directorates devoted to achieving the Laboratory's mission is presented along with a summary of the Readiness in Technical Base and Facilities (RTBF) Program. For each mission, the linkage between current program, mission drivers and facilities and infrastructure is discussed in Section 3.1. Plans for replacement or recapitalization of Mission Critical (MC) facilities are discussed in Section 3.2. Future NNSA missions, programs, and program requirements are discussed in Section 3.3. Impacts from non-NNSA programs are described in Section 3.4, and a discussion of the role of technology development at the Laboratory is provided. Impacts of non-NNSA programs on weapons activities are discussed in Section 3.5. The role of environmental management activity as it affects the planning for future mission activities and the need for new facilities is discussed in Section 3.3. Finally, facilities and infrastructure impacts in support of information technology demands are discussed in Section 3.6.

Chapter 4 details the overall site plans and recommendations for the next ten years. Planned management of Deferred Maintenance (DM) reduction is addressed in Section 4.1.4, as well as planned investments in maintenance of facilities and infrastructure in Section 4.1.5. Current and future space utilization is described in Section 4.1.2, as well as efforts to eliminate aging and underutilized space in Section 4.1.3. Expanded discussions on sitewide land use planning and management issues (Section 4.1.2.3), and utilities (Section 4.1.7) are included as well as an updated security discussion in Section 4.2.

Chapter 5 discusses the various construction project funding sources and describes in detail the Line Item (LI) projects the Laboratory is planning over the next 10 years. For each of these projects, information on scope, costs, and benefits are provided.

Various attachments provide supporting information as required by the FY08 TYSP Final Guidance. One non-mandatory attachment provides maps with greater detail than those included in the chapters.

1.2 Assumptions

In keeping with the requirements of the NNSA FY08 Final TYSP Guidance, this section discusses key programmatic, budget, and planning assumptions and priorities used in developing the FY08 TYSP.

The Laboratory's primary mission is to develop and apply science and technology to ensure the safety and reliability of the U.S. nuclear stockpile.

Assumptions and priorities that form the key organizing principles for the Laboratory's operations include the following:

- Providing a high level of safety, security, and respect for the environment in all operations and activities
- Transforming the physical infrastructure of the site to a sustainable configuration to support present and future missions
- Taking a lead role in implementing the direction of Complex 2030 in the Laboratory's support of the national security mission
- Development of new science and technology institutes and collaborations, as well as expansion of work with current institute partners to ensure that the Laboratory stays on the leading edge of scientific advancement
- Continuing to provide outstanding science in support of the Laboratory's mission
- Application of best practices on Laboratory business operations and management activities
- Continually improve the level of cooperation with the local NNSA oversight operation
- Increasing support for community partnerships

Primary funding sources integrated in the TYSP in support of the physical plant are RTBF, Facility and Infrastructure Recapitalization Program (FIRP), Institutional General Plant Project (IGPP), other program specific funding, and indirect funding.

Aging facilities and infrastructure, coupled with declining maintenance budgets, will require an aggressive consolidation strategy in the coming years. Closing facilities will dramatically free up maintenance and recapitalization resources to support facilities and infrastructure that are integral to site missions, and reduce the Laboratory's footprint in the years ahead, enhancing the Laboratory's ability to respond to its future national security mission challenges.

Funding targets for the RTBF Operations of Facilities and FIRP projects/activities Cost Projection Spreadsheets are based on those identified by the Future Years Nuclear Security Program (FYNSP).

FIRP funding for D&D will end in FY09. FIRP has been extended to the end of FY13 for recapitalization projects.

Impacts of evolving Design Basis Threat (DBT) are accommodated in the Laboratory's security infrastructure development efforts.

The requirements of the New Mexico Environmental Department (NMED) Consent Order, the requirements of the Federal Facilities Compliance Agreement (FFCA) and other regulatory compliance orders are fully accommodated as institutional regulatory drivers affecting both programs and infrastructure at the Laboratory. The requirements of the Consent Order will be implemented according to the performance baseline submitted to Department of Energy-Environmental Management (DOE-EM) in June, 2006.

National Environmental Policy Act (NEPA) requirements are incorporated into proposed projects at the earliest feasible time. Proposals developed by program and line organizations must comply with NEPA before decisions are made to implement the proposals. Failure to comply with NEPA could lead to adverse consequences for a project, ranging from delays and cost increases to possible litigation and could result in negative environmental, safety, and health impacts.

1.3 Current Situation

The Laboratory is a multidisciplinary research institution engaged in strategic science on behalf of national security.

The Laboratory enhances national security by ensuring the safety and reliability of the U.S. nuclear stockpile, developing technologies to reduce threats from weapons of mass destruction, and solving problems related to energy, environment, infrastructure, health, and global security concerns. Since 1943, the Laboratory has consistently applied state-of-the-art scientific approaches to solving problems of national importance. However, attention to the state of infrastructure and facilities has not kept pace. By the mid 1990's, the Laboratory's physical plant had deteriorated to the point of jeopardizing its long-term ability to fulfill stockpile stewardship objectives.

The Laboratory has the greatest number and the oldest facilities among the three weapons laboratories and the Nevada Test Site (NTS). The cost of operations and maintenance, Integrated Safeguards and Security Management (ISSM), environmental compliance, and other operations for these aging facilities is significant and growing. While real progress has been made in recent years to address this issue, serious concerns and challenges remain. These challenges must be addressed within the context of the Laboratory's facility stewardship, decision making, and integrated physical infrastructure planning. This will enable the Laboratory to provide state-of-the-art and cost-effective solutions to respond to and anticipate future national security needs in a dramatically changing world. To do so, the Laboratory management has developed programmatic and business strategies and has begun long-range planning, both in relation to NNSA Complex 2030 and to the Laboratory as a whole (integrated with Complex 2030), guided by a vision that the Laboratory will be the National Security Science Laboratory of Choice.

Themes and Challenges

Complex 2030

Complex 2030 is the preferred planning option (or scenario) being discussed by NNSA to address the challenge of assuring the <u>long-term</u> safety, security, and reliability of today's Cold War stockpile.

The development of Complex 2030 stems from concerns that the current nuclear weapons complex is not sufficiently "responsive" to address technical problems in the stockpile, or to react to adverse geopolitical changes. Specific concerns include:

- The current inability to produce certain critical components for warheads (e.g., plutonium parts) in sufficient quantities
- The current situation where Category I/II Special Nuclear Material (SNM) is managed at multiple sites that are increasingly costly to secure
- That many site operations are inefficient in terms of the cost and schedule of progress toward critical missions

The NNSA's of Complex 2030 vision document posits that adopting the scenario will result in the "ability to meet national security requirements in timely, cost-effective, and agile manner using people, technical processes, science and technology base, equipment, facilities, and business practices".

NNSA characterizes a more responsive infrastructure as being capable of:

- Maintaining capability to design, develop, and begin production of new or adapted warheads
- Identifying, understanding, and fixing stockpile problems
- Dismantling warheads
- Ensuring warheads are available to augment the operationally deployed force
- Designing, developing, certifying, and beginning production of refurbished or replacement warheads
- Producing required quantities of warheads
- Maintaining capability to perform underground tests if required
- Ensuring an economically sustainable nuclear weapons enterprise
- Demonstrating nuclear competencies that assure allies, dissuade adversaries and protect against technological surprise
- Ensuring capability to compliantly process and dispose of radioactive, hazardous, and other wastes

NNSA is in the process of developing a Programmatic Environmental Impact Statement (PEIS) to assessing reasonable alternatives for continuing the transformation of the nuclear weapons complex. NNSA intends to utilize the PEIS process to "consider environmental impacts of reasonable alternatives to assist in deciding how to best transform the nuclear weapons complex".

Under the Complex 2030 PEIS process, the Laboratory will be evaluated as a potential site for several key features of the more responsive nuclear weapons complex including the Consolidated Plutonium Center (CPC), and the Consolidated Weapons Program SNM Storage site, as well as a possible lead laboratory for consolidating all high explosives Research and Development (R&D), and/or consolidating all Tritium R&D.

If the Laboratory is not selected for the CPC, NNSA will evaluate transfer of Security Category I/II SNM when the CPC becomes operational. Also, NNSA will evaluate changing operations at TA-55 and plutonium support facilities when the CPC becomes operational; and will evaluate the need for maintaining interim plutonium operations.

If the Laboratory is not selected as a consolidated site for high explosives or tritium R&D, NNSA will evaluate transfer of these activities to other Weapons Complex sites.

Aging, Obsolete and Inadequate Facilities

The Laboratory's facilities, built for the Cold War mission of the 1950s and 1960s, struggle to adequately serve today's missions. Although recent LI investments in key facilities such as the Metropolis Center, the Center for Integrated Nanotechnologies (CINT), the new National Security Science Building (NSSB) and the Non-proliferation and International Security Complex (NISC) have helped modernization; the average facility age at the Laboratory is currently more than 31 years, with 35% of the permanent buildings older than 40 years. Over 45% of the permanent buildings are older than 30 years. Approximately 58% of the Laboratory's total facilities square footage is in fair, poor, or failing condition. Only 38% is in adequate, good or excellent condition with the remaining 4% unrated. Significant infrastructure components such as roads, sewer systems, electrical power grids, and structures are in deteriorating condition.

A large percentage of the Laboratory's workforce resides in facilities that are in marginal condition and are frequently overcrowded, a problem that must be successfully resolved for the Laboratory to implement consolidation of nuclear operations and transformation to Complex 2030, as well as to sustain its contribution to other national security and DOE missions that draw on its unique combinations of technical capabilities. Sixteen percent of the workforce is housed in "temporary" structures such as trailers and transportables, the majority of which are more than 10 years old. Approximately 1900 employees are currently housed in dispersed, off-site leased space due to lack of adequate onsite facilities. Overall, these situations lead to diminished productivity and morale, present safety problems, and hinder recruiting and retention of highly qualified staff.

Facility Maintenance

NNSA, along with its sites, has established aggressive corporate goals to stabilize DM by the end of 2005 and reduce DM to industry standards by 2009[1]. In FY03, the Laboratory developed a baseline of DM backlog through Condition Assessment Surveys (CAS). The Laboratory used the information obtained to establish a DM stabilization and reduction plan that was the basis for the Laboratory's request for FIRP funding from Congress. The Laboratory has been making a continuous effort since the start of the FIRP Program to manage and reduce DM at the site. However, to achieve well managed facility and infrastructure configuration over the longer term, facility operations must invest in maintenance at greater levels than in the past. These goals are not consistent with the FYNSP funding profiles for RTBF and FIRP, the primary sources of funding for MC and Mission Dependent (MD) facility maintenance and DM reduction. The RTBF budget is projected to be flat in the out years and the FIRP budget has been roughly half that projected in FYNSP over the last two years.

[1] The goal of reaching well managed industrial facility standards has been interpreted as attaining an average Facility Condition Index (FCI) of less than or equal 5% for MC facilities. The Laboratory provided an additional commitment to reach an FCI of less than 10% for MD and non-Mission Dependent (NMD) facilities

Facility Disposition

A key component of the Laboratory's strategy to lower maintenance and operating costs and reduce DM is to aggressively reduce its facilities footprint. Currently, FIRP is the primary source of funding for non-contaminated facility disposition. As FIRP achieves its NNSA corporate goal of eliminating 3M GSF complex-wide, FIRP funding in this category is expected to be eliminated. Other sources of disposition funding will be needed. In addition, pathways and costs for the wastes associated with facility disposition must be considered in planning for disposition of aging facilities.

Corrective Actions and Strategic Infrastructure Development

To address these challenges, the Laboratory is proactively working to consolidate facilities and build new facilities in support of mission capabilities. This approach includes removing aging facilities no longer needed, consolidating operations with similar processes, replacing temporary structures with permanent facilities, strategically investing in new construction, and preparing excess buildings for demolition.

Over the past three years, the Laboratory has developed a detailed analysis of the cost of operating and maintaining facilities and a prioritization system to fund facilities and infrastructure. The Laboratory has been evaluating and implementing methods to reduce facility costs. Some of these initiatives, such as consolidation projects, require upfront investment to realize significant annual facility savings. With this investment, sustained use of the facilities can be achieved, thereby reducing risk to programmatic delivery. Nowhere are these approaches more evident than in the Laboratory management's current 2 M GSF footprint reduction initiative (2M FRI). In this initiative, the effective footprint of the Laboratory will be reduced by approximately 2 M GSF prior to the end of FY08. This initiative will be implemented by consolidating operations into better facilities, shutting down excess facilities and rendering excess facilities stable for an interim period until disposition funding is obtained. More detail may be found in Chapter 4.

Consistent with the NNSA infrastructure planning scenario, Complex 2030, the Laboratory has been working a strategy to transform the infrastructure at the site to be responsive to changing programmatic and mission needs. The Laboratory is currently divided into five main facility groupings; nuclear, waste, security, science and computing, and non-nuclear facilities. Each grouping requires key infrastructure projects/initiatives to position the Laboratory for the future. Long term use for many facilities is dependent upon reconfiguration and consolidation that will come out of Complex 2030 decisions. Therefore there is some uncertainty associated with facilities past the next 5-10 years.

Significant planning efforts have been underway since 1998 to address the first three facility groupings. Integrated Nuclear Planning (INP) activities were initiated in 1998 to address the consolidation of SNM facilities and reduce security and operational costs. Out of this activity came the Nuclear Facility Consolidation (NFC). Key elements of the NFC are as follows:

- The Chemistry and Metallurgy Research Replacement (CMRR) Project will allow the Laboratory to consolidate Analytical Chemistry and Material Characterization (AC/MC) activities at Technical Area (TA)-55 near the existing plutonium facility

- The Laboratory is committed to vacating the existing Chemistry and Metallurgy Research (CMR) facility in stages until the facility is fully shutdown in the 2015 time frame
- The TA-55 Reinvestment Project, which will revitalize the existing plutonium facility for continued support of the Laboratory's mission, is planned for an FY08 construction start
- To open space within TA-55, the underutilized PF (Plutonium Facility)-41, a special nuclear facility storage building that was never commissioned for various reasons, will be decommissioned and demolished
- The TA-55 Radiography Facility will reduce security risks and lower operating costs
- The Nuclear Materials Safeguards and Security Upgrades Project (NMSSUP) Phase II is the cornerstone of a response to the FY05 DBT and will provide an effective, robust physical security system to support current and future protection strategies and security requirements at TA-55
- In FY06 the Laboratory completed removal of Security Category I/II SNM from the existing TA-18 site; The Laboratory has evaluated options for the future, and is developing a plan for surveillance and maintenance and potential D&D as funding allows

In the area of Science and Computing, both the Los Alamos Neutron Science Center (LANSCE) facility and Metropolis Center have significant upgrades planned or in progress. LANSCE Refurbishment (LANSCE-R) will provide much needed upgrades to the accelerator beam line to provide more reliable and extended operational capabilities. The upgrade to the computing capability with the Roadrunner Platform and associated facility upgrades allow for the next generation of computing at the Metropolis Center.

For the non-nuclear facilities at the Laboratory, General Plant Projects (GPP) and expensed projects address facility consolidation plans that reduce the overall footprint, reduce DM, and improve the condition of facilities, utilities, and infrastructure throughout the site. Many of these facilities will be preparing updated strategic plans with cost/benefit and productivity analyses that support recommendations for new projects, related excess space requests, and migration strategies.

Upgrades to essential infrastructure are being planned and implemented as part of the revitalization of the Laboratory. Examples of these projects include the Power Grid Infrastructure Upgrade (PGIU) funded through FIRP, the Radioactive Liquid Waste Treatment Facility (RLWTF) Upgrade, and the New Transuranic (TRU) Facility that relocates solid waste operations from TA-54 to TA-55.

More recently, the Laboratory had begun new planning activities to consider how scientific issues (including *"Grand Challenges"*), potential developments, and the evolution of national security missions might challenge the Laboratory in both the near and longer term future and also to consider the implications for future Laboratory facility needs. This deliberative activity is ongoing at this time, and is consistent with (and reflects) evolving Complex 2030 planning. The approved and proposed projects in this year's plan are consistent with this analysis, as key elements of the Laboratory's future consolidated and integrated national security technical infrastructure. The planning activities described will further influence future integrated infrastructure planning and TYSPs.

Another Laboratory initiative, beginning within the Weapons Program, is the implementation of new cost recovery methods to address issues brought about by constrained funding for operations of facilities. The current method of cost recovery is not sufficient to augment the base funding streams (RTBF, infrastructure support) for the operations of facilities. In two major areas, Operations of Facilities at TA-55 and Waste Processing, cost recovery alternatives are being piloted in the second half of FY07 with the expectation that an enhanced cost recovery program will be implemented across many other areas by FY09.

In summary, three distinct areas must continue to be addressed to ensure future infrastructure sustainability to meet the mission.

- Implement formal facilities consolidation efforts and cost reduction initiatives to reduce facility footprints, which in turn reduces operating costs and improves safety, security, environmental protection, scientific interactions, and productivity
- Meet corporate DM goals and continue to improve facility management practices to achieve industry standards
- Invest in new construction projects where appropriate and economically feasible, to ensure that the Laboratory can meet Defense Programs programmatic mission needs during the implementation of Complex 2030 and is capable of responding with agility to, and anticipating, future national security mission needs

Each of the areas identified above requires commitments to achieve positive results. The return on investment can be realized through reduced operating costs (maintenance and energy) and increased technical productivity to achieve mission requirements. In addition, each area addresses safety, security, and compliance needs and allows Laboratory facilities to be sustainable over the long-term.

1.4 Changes from Prior Year TYSP

This section provides a basis for plan-to-plan comparability by NNSA and summary changes from the previous year's TYSP. Since the FY07 TYSP was an abbreviated TYSP, the FY08 TYSP must be compared with both it and the FY06 TYCSP for a full comparison.

The new Laboratory management has embraced a number of initiatives with potentially broad impact on the facilities and infrastructure of the Laboratory that are reflected in the FY08 TYSP. These include:

- Implementing the FY03 Design Basis Threat Implementation Plan (DBTIP)-Phase I move to a robust security strategy which will be insensitive to changes
- Committing to significant reductions in the Laboratory's burden of DM

through an aggressive footprint reduction effort

- Forming a science, technology, and principal engineering directorate, and development of Grand Challenges, to galvanize science and engineering at the Laboratory, and to build the future science/engineering base needed to support national security missions
- Committing to broader integrated institutional planning as the basis for future TYSPs
- Committing to support NNSA's Complex 2030 planning process by positioning the Laboratory as a preferred location for weapons complex activities
- Utilizing the Laboratory's science and engineering capabilities to increase effective Laboratory support of broader (e.g. non-NNSA) national security mission areas, in service to the national interest

Specific changes to Attachments include the following:

- *Attachment A-1*, LI Projects reflects the completion of several projects and the addition of several projects, the LANSCE-R and the CMR D&D Project
- *Attachment A-2*, Proposed LI Projects reflects the addition of a number of potential projects that have a high future value to the institution as a basis for attracting new program work and new missions with a broad array of DOE and non-DOE customers
- *Attachments A-3 through A-5* reflect limitations imposed by lowered expectations for RTBF, FIRP, and institutional funding mechanisms in the near term; A-4 does, however, reflect continuation of the FIRP program for recapitalization investments through 2013 versus 2011 in the last TYSP
- *Attachment A-6* reflects the decision by NNSA not to require a minimum percentage of security operations funding to be targeted for security infrastructure
- *Attachment E-1* reflects a lower level of anticipated demolition as planned FIRP investment has been reduced. At the same time, EM planned D&D has been modified to respond to current program plans at TA-21; E-1 also notes significant areas where D&D is needed in the coming years, but without identified funding sources. This includes facilities that must be removed as part of the Laboratory's corrective action Consent Order
- *Attachment G* reflects NNSA and site Weapons Program efforts to re-evaluate and designate MC facilities that support continuing weapons missions at the Laboratory

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2.0 Site Description

2.1 General Site Description

2.1.1 Geographic Setting

The Laboratory and residential areas of Los Alamos and White Rock are located in Los Alamos County in north-central New Mexico, approximately 60 miles north-northeast of Albuquerque and 25 miles northwest of Santa Fe. The approximately 40-square mile Laboratory site is situated on the Pajarito Plateau, which consists of a series of finger-like mesas (ridges) separated by deep east-to-west oriented canyons cut by intermittent streams. Mesa tops range in elevation from approximately 7,800 feet on the flanks of the Jemez Mountains to about 6,200 feet at their eastern termination above White Rock Canyon and the Rio Grande. Plant communities on these mesas range from ponderosa pine forests on the flanks of the Jemez Mountains to piñon-juniper woodlands near the Rio Grande. The climate is moderate with relatively mild winters and summers.

Most Laboratory and community developments are confined to mesa tops. The surrounding land is largely undeveloped, and large tracts of land north, west and south of the Laboratory are administered by the Santa Fe National Forest, Bandelier National Monument, and Los Alamos County. The San Ildefonso Pueblo borders the Laboratory to the east.

The Laboratory is divided into technical areas that are used for building sites, experimental areas, and waste management locations. However, these uses account for only a small part of the total land area. Development is limited by steep slopes and by the need for security and safety buffers because of the work performed.

The DOE/NNSA administers the area occupied by the Laboratory and has the option to completely restrict public access

Figure 2-1: Although the Laboratory is comprised of nearly 40 square miles of land, most Laboratory development is confined to mesa tops.

through the Security Perimeter Posts installed in FY06. However, the public is currently allowed limited access to certain areas of the Laboratory, along State Routes 4, 501, and 502.

2.1.2 Laboratory Resources

The following section discusses the regional ecosystem encompassing the Laboratory and resources specifically at the Laboratory. Information is drawn from the Sitewide Environmental Impact Statement (SWEIS) and supporting documentation.

Regional Ecosystem

Administrative boundaries do not necessarily coincide with ecological boundaries. Laboratory facilities, infrastructure, operations, and impacts (positive, negative, neutral, and undetermined) are immersed in the patterns and processes of a multifaceted regional landscape making up the Pajarito Plateau. Major habitat types and canyon systems are continuous across this plateau, which encompasses jurisdictional boundaries of the Laboratory, Bandelier National Monument, Santa Fe National Forest, Native American Pueblos, and other land management stewards. Seasonal migration routes for elk and deer and foraging or hunting ranges of black bears and mountain lions cross these jurisdictional boundaries.

Canyons

From their narrow, thickly forested beginnings on the flanks of the Jemez Mountains, to their confluence with the Rio Grande, major canyons are associated with the eight major watersheds. The canyons range in depth from about 200 to 600 feet. The sloping, north-facing canyon walls and canyon bottoms are subject to more shading and lower localized temperatures. Consequently, they benefit from higher levels of humidity and soil moisture than the often nearly vertical, south-facing canyon walls, which have more direct solar exposures resulting in hotter and more arid surfaces. These differences in slope, aspect, sunlight, temperature, and moisture cause a dramatic localized shift in major vegetation zones on canyon walls and in canyon bottoms beyond their typical range of elevation. This "canyon-effect" is responsible for fingers of coniferous forest extending down regional canyons.

Watersheds

The regional Laboratory ecosystem has been defined to include eight major watersheds, each of which has significant tributaries. Watersheds draining the

Figure 2-2: A portion of the Laboratory's eastern boundary descends to the Rio Grande.

Jemez Mountains and Pajarito Plateau are tributaries of the Rio Grande, which is the fifth largest watershed in North America. Approximately 11 miles of the Laboratory's eastern boundary borders on the rim of White Rock Canyon or descends to the Rio Grande. The riverine, lake, and canyon environment of the Rio Grande as it flows through White Rock Canyon makes a major contribution to the biological resources and significantly influences ecological processes of the Laboratory region.

Wetlands

The majority of the wetlands in the Laboratory region are associated with canyon stream channels or are present on mountains or mesas as isolated meadows containing ponds or marshes, often in association with springs or seeps.

A 1990 survey (based on interpretation of aerial photographs) identified a total of 39 acres of wetlands within Laboratory boundaries. A 1996 field survey by Laboratory personnel identified an estimated 50 acres of wetlands within Laboratory boundaries, based on the presence of wetland vegetation (hydrophytes).

Currently, about 13 acres of wetlands within Laboratory boundaries are associated with process effluent wastewater from National Pollutant Discharge Elimination Systems (NPDES)-permitted outfalls. In 1999, the effluent from NPDES outfalls, both storm water and process water, was estimated to have contributed 317 million (M) gallons to wetlands within Laboratory boundaries. Effluents are being reduced through a program of outfall reductions. It is expected that some wetlands will shrink and perhaps disappear entirely over time. Between May 24 and August 10, 2005, the US Army Corps of Engineers wetland team re-surveyed all known potential wetland sites at the Laboratory. Thirty wetlands were identified and delineated based on criteria of the 1987 Corps Wetlands Delineation Manual, totaling forty acres.

Major Vegetation Zones

Although watersheds traverse all or part of the elevational gradient, major vegetation zones are organized into elevation- and aspect-defined bands across this gradient. Increasing temperature and decreasing moisture along the 12-mile-wide and 5,000-foot-elevational gradient from peaks of the Jemez Mountains to the Rio Grande result in the formation of six vegetation zones. The six vegetation zones that characterize this regional ecosystem are montane grasslands, spruce-fir forest, mixed conifer forest (with aspen forest), ponderosa pine forest, piñon-juniper woodland, and juniper savannah.

The montane grassland, spruce-fir, and mixed conifer vegetation zones are located primarily west of the Laboratory with little representation on the Laboratory proper. The vegetation zones and associated ecotones provide habitat, including breeding and foraging territory, and migration routes for a diversity of permanent and seasonal wildlife.

2.1.3 Resources for Integration

The resources included here are those that have high potential to be affected by or effect the Laboratory's operations and facilities. In either case, the potential impacts are discussed. Resources that have a lower potential to be affected by the Laboratory's operations, such as geology, are not included.

Air

The quality of ambient air is defined by federal and state regulations. The Environmental Protection Agency (EPA) has set National Ambient Air Quality Standards for pollutants of nationwide concern. These pollutants, known as criteria pollutants, are carbon monoxide, sulfur dioxide, nitrogen dioxide, ozone, lead, and particulate matter. The area around the Laboratory is classified as an attainment area for all six criteria pollutants.

The State of New Mexico has also established ambient air quality standards. DOE/NNSA and Laboratory operations meet all state standards.

Water

Water is a limited resource in the semiarid climate of northern New Mexico. Canyon-bottom streams within Laboratory boundaries are mostly dry, and only portions of some streams contain water year round. Flash floods can occur following thunderstorms. Sediments moved by storm water events from upstream locations, hillsides, or mesa tops occur along the bottom of most Laboratory canyons, and flash floods move these sediments from the canyon bottoms into the Rio Grande.

Figure 2-3: Water is a limited resource in the semiarid climate of northern New Mexico.

Surface Water

Surface water in the Los Alamos area occurs primarily as short-lived or intermittent reaches of streams. Perennial springs on the flanks of the Jemez Mountains supply base flow into the upper reaches of some canyons, but volume is generally insufficient to maintain surface flows across the Laboratory site before they are depleted by evaporation, transpiration, and infiltration. Runoff from heavy thunderstorms or heavy snowmelt reaches the Rio Grande several times a year in some drainages. Effluents from sanitary sewage, industrial water treatment plants, and cooling-tower blowdown enter some canyons at rates sufficient to maintain surface flows for varying distances. Surface water within Laboratory boundaries is not a source of municipal, industrial, or irrigation water, but is used by wildlife that live within, or migrate through, the region.

Storm water and associated sediment transport are the major mechanisms by which contaminants are transported within and beyond Laboratory boundaries. Therefore, management efforts to reduce contaminant migration in the canyons at the Laboratory have historically focused on these transport mechanisms.

Ground Water

The Laboratory and the surrounding communities use ground water for drinking water supplies. Water levels in wells penetrating into the regional aquifer have declined in response to pumping, typically by less than a foot each year.

Like surface water, the presence of ground water is variable. The regional aquifer is the only body of ground water in the region sufficiently saturated and permeable to transmit economic quantities of water to wells for public use. All drinking water for Los Alamos County, the Laboratory, and Bandelier National Monument comes from the regional aquifer. Depth to water in the aquifer, from the ground surface, varies from approximately 1,200 feet along the western boundary of the Pajarito Plateau to approximately 600 feet along the eastern edge of the Pajarito Plateau.

Water in the regional aquifer is under artesian conditions under the eastern part of the Pajarito Plateau near the Rio Grande. The source of recharge to the aquifer is presently under investigation. Recent results of a major, multiyear hydrogeologic study have indicated that there is significant ground-water recharge along the flank of the Jemez Mountains, and there may be more ground water recharge from canyon bottom alluvial ground water than previously believed. Characterization wells have found Laboratory contaminants in perched zones above the regional aquifer and in the regional aquifer. Work continues to increase understanding of the hydrogeologic conditions.

Soils

Several distinct soils have developed in and around the Laboratory as a result of interactions between bedrock, topography, and local climate. Construction activities at the Laboratory can displace these soils, and runoff from parking lots and buildings can cause erosion. In addition, surface contamination can result from open detonations at the firing sites, or from the deposition of contaminants released to the atmosphere from building vents and other operations.

Biological

Though operations at the Laboratory are not expected to result in significant impacts to biological resources, ecological processes, or biodiversity (including threatened and endangered species), operations will continue to release small quantities of contaminants, disrupt natural migration routes, or otherwise disturb local environs.

Figure 2-4: Large game, like the cow elk and her calf seen here, are a common site on Laboratory property.

The lands within and around the Laboratory have diverse, unique biological communities having complex ecological relationships. Plant communities range from urban landscaping to grasslands, wetlands, shrublands, woodlands, and mountain forest, which provide habitat for a wealth of animal life. This richness of animal life includes elk and deer, bears, mountain lions, coyotes, rodents, bats, reptiles, amphibians, invertebrates, and a myriad of resident, seasonal, and migratory bird life. In addition, threatened and endangered species of concern and other sensitive species use Laboratory resources. Because of restricted access to Laboratory lands and management of contiguous Bandelier National Monument for natural biological systems, much of the region provides a refuge for wildlife.

Wildlife

The Laboratory's lands support a diversity of wildlife ranging from state- and federal-listed threatened and endangered species to large and small game populations. A number of regionally protected and sensitive species of concern have been documented on or near the Laboratory's lands. These consist of one federal-listed endangered species, two federal-listed threatened species, 1 federal candidate species, 8 federal species of concern (species that may be of concern to the United States Fish and Wildlife Service (USFWS) but do not receive protection under the Endangered Species Act) and 16 species otherwise

Figure 2-5: The Laboratory's lands support several federal-listed endangered species, such as the spotted owl.

protected or sensitive (mostly state listed species). Operations at the Laboratory may impact these species by removal of key habitat, disturbing these species during breeding seasons, altering hunting and foraging areas, etc. Conversely, these species may impact operations by requiring certain areas to remain undisturbed and restricting the locations for new facilities.

Forest

There are three forest types that occupy the majority of Laboratory acreage: piñon-juniper woodlands, ponderosa pine, and spruce fir forests. Each of these forest types has its own characteristics; however, they all three show effects of fire suppression over the last hundred years coupled with restrictions in grazing by domestic livestock. The most obvious effects have been an increase in overall tree stand densities, continuity, and fuel loading with a concomitant decrease in understory cover. The heavily forested areas have dense stands of unhealthy trees with excessive amounts of standing and fallen dead tree material.

In the last 50 years, this region has seen five major wildfires: the Water Canyon Fire in 1954, the La Mesa Fire in 1977, the Dome Fire in 1996, the Oso Fire in 1998, and the Cerro Grande Fire in 2000. In each case, fire occurred during the late spring or early summer fire season when fire danger was high or extreme. Weather conditions were hot and dry, fuel moisture content was low, and fuel loads were high. Even after these five fires, overall conditions across the Pajarito Plateau are still conducive to wildfire, and as fuel loads regenerate in the burned areas, the probability of the next fire event increases.

Cultural and Historical

Cultural resources are any prehistoric or historic archaeological sites, buildings, structures, districts, or other places or objects (including biota of importance) considered to be important to a culture, subculture, or community for scientific, traditional, or religious purposes, or for any other reason as defined in DOE Policy 141.1. The responsibilities, requirements and methods for managing cultural resources at the Laboratory are presented in the Cultural Resources Management Plan (CRMP).

Ten thousand years of human occupation on the Pajarito Plateau are represented at the Laboratory. The result is a rich and diverse cultural heritage that represents thousands of years of human adaptation to a changing social and natural environment. The cultural resources present within Laboratory boundaries and the region have been classified into three categories: archaeological sites (prehistoric and historic), historic buildings and structures, and Traditional Cultural Properties (TCPs). These three categories of cultural resources are protected variously under state and federal laws, regulations, and executive orders. These include the National Historic Preservation Act (NHPA) of 1966 (as amended) and the Archaeological Resources Protection Act of 1979 (as amended).

Archeological surveys have been conducted of approximately 90% of the land within Laboratory boundaries (with 85% of the area surveyed receiving 100%

Figure 2-6: Prehistoric American Indian cultural resources are located at numerous sites throughout the Laboratory.

coverage) to identify cultural resources. These surveys have identified a variety of archaeological sites, ranging from ancient hunter-gatherer campsites to multi-story Ancestral Pueblo ruins that contain hundreds of rooms. Information on these archaeological sites is maintained in the Laboratory cultural resources database, which is a listing of the cultural sites identified through surveys and excavations recorded over the last decade. The database is organized primarily by site type. Based on beginning of fiscal year 2006 records there are 1,776 prehistoric sites. Of the 1,776 prehistoric sites in the Laboratory database, 537 have been assessed for potential nomination to the National Register of Historic Places (NRHP). Of these, 331 sites are eligible, 114 sites are potentially eligible, and 92 sites are ineligible. The remaining 1,239 sites, which have not been assessed for NRHP eligibility, are assumed to be eligible until a determination can be made.

Cultural resources include all material remains and any other physical alteration of the landscape that has occurred since the arrival of people in the region. Archaeological sites that are present within Laboratory boundaries and on the Pajarito Plateau can be attributed to seven periods: Paleoindian, Archaic, Developmental, Coalition, Classic, Early Historic and Homestead; whereas, historic buildings and structures can be attributed to three periods: Manhattan Project, Early Cold War, and Post Cold War.

The CRMP recommends the establishment of two National Landmark Districts at the Laboratory, based on the integrity, exceptional state, and national significance that these resources have. The "Project Y" Manhattan Project National Landmark would contain five contributing properties: "Trinity Test" V-Site, "Fat Man" Quonset Hut, "Little Boy" Gun Site, "Plutonium Recovery" Concrete Bowl and the "Criticality Accident" Slotin Building. The Ancestral Pueblo National Historic Landmark District would contain four contributing properties: Nake'muu Pueblo, Tsirege Pueblo, Sandia Pueblo and Mortandad Cave Kiva and Sandia Canyon Cave Kiva. In addition, ten potential Los Alamos Archaeology National Register Historic Districts are also identified.

Figure 2-7: Within the Laboratory boundaries, numerous petroglyphs serve as a reminder of the early occupants of the area.

A TCP is a significant place or object associated with historical and cultural practices or beliefs of a living community that is rooted in that community's history and is important in maintaining the continuing cultural identity of the community. TCPs are essential in preserving cultural identity through social, spiritual, political, and economic uses.

An area may have TCP significance depending on a variety of factors, i.e., the site is remembered in prayers or tribal stories, traditional ritual knowledge of the site is passed on to other members of the community, or traditional customs continue to be practiced by members of a community. TCPs that are considered culturally important by traditional communities include shrines, trails, springs, rivers, acequias, plant and mineral gathering areas (also referred to as ethnobotanical sites), traditional hunting areas, ancestral villages and gravesites, and petroglyphs. However, TCPs are not limited to ethnic minority groups. Americans of every ethnic origin have properties to which they ascribe traditional cultural value.

Within the Laboratory's boundaries, there are ancestral villages, shrines, petroglyphs, sacred springs, trails, and traditional use areas that could be identified by Pueblo and Athabascan communities as TCPs. DOE/NNSA and the Laboratory have a program in place to manage on-site cultural resources for compliance with the Native American Graves Protection and Repatriation Act and American Indian Religious Freedom Act. When an undertaking is proposed, DOE/NNSA and the Laboratory arrange site visits by tribal representatives from San Ildefonso, Santa Clara, Jemez, and Cochiti Pueblos to solicit their concerns and comply with applicable requirements and agreements. Provisions for coordination among these four Pueblos and DOE/NNSA is contained in formal agreements called accords that were entered into in 1992 for the purpose of improving communication and cooperation among federal and tribal governments. According to the DOE compliance procedure, American Indian tribes may request permission for visits to sacred sites within Laboratory boundaries for ceremonies.

The history of the modern Laboratory has been divided into three periods:

Manhattan Project (1942-1946), Early Cold War (1946-1956) and Late Cold War (1956-1990). Laboratory staff identifies and evaluates historic properties constructed between 1942 and 1963 for proposed undertakings. Exceptionally significant facilities less than 50 years of age, including those designated in the SWEIS as Key Facilities, are also evaluated. Of the 324 buildings at the Laboratory that are eligible for listing on the NRHP or will require eligibility evaluations, 264 were built between 1943 and 1963.

2.1.4 Established Natural Areas

DOE/NNSA (and its predecessor organization) recognized the diversity of natural resources at the Laboratory and provided particular protection to portions of the Laboratory by taking specific actions.

National Environmental Research Park

The Laboratory is currently designated as a National Environmental Research Park (NERP). This designation, one of four such sites in the U.S., was conferred in November 1976 by the U.S. Energy Research and Development Administration, a precursor to DOE. This designation facilitates self-supported environmental research on the interactions between human-altered systems and adjacent natural systems and is available to individuals and organizations both within and outside the Laboratory.

White Rock Canyon Reserve

The White Rock Canyon Reserve was dedicated by DOE on October 30, 1999. It contains approximately 1,000 acres on the southeastern portion of the Laboratory along the Rio Grande. The objective of the Reserve is to conserve, protect, and enhance the site's biological and cultural resources. Bandelier National Monument will co-manage it together with NNSA with input from Laboratory management, other state and federal agencies, nearby Pueblos, and the local community. A comprehensive resources management plan for the Reserve is planned to be completed by May 2007.

2.1.5 Land

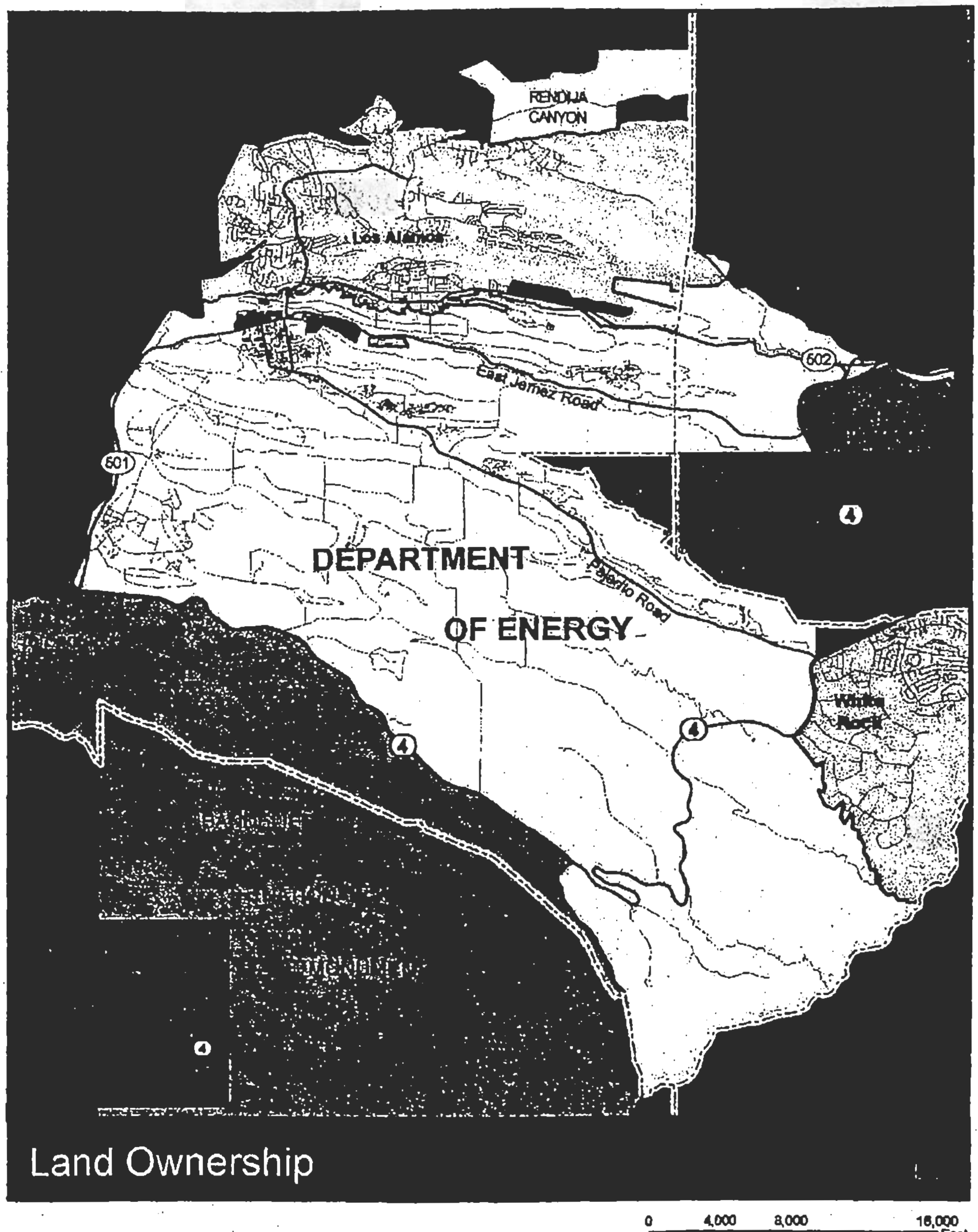
The Laboratory occupies an area approximately 40 square miles (104 square kilometers) of DOE property of which the majority is within Los Alamos County. The remaining portion of Laboratory acreage lies within a small northwestern portion of Santa Fe County which is bordered by San Ildefonso Pueblo property and Bandelier National Monument. A small isolated portion of Sandoval County borders the Laboratory on the east and is composed entirely of undeveloped lands belonging to San Ildefonso Pueblo. Additionally, a small portion of Sandoval County borders the Laboratory on its southwestern boundary. The southern boundary of the Laboratory is bordered by Bandelier National Monument within the County of Los Alamos. Along the western border of the Laboratory is Santa Fe National Forest also within the County of Los Alamos. The residential portion of Los Alamos lies along the northern boundary of Laboratory while White Rock lies along a portion of the southeast boundary.

The DOE owned land is approximately 26,500 acres and includes the Rendija Canyon/Sportsmen Club. The land that is leased to other entities includes the Los Alamos Research Park north of TA-3 and the Icon facility at TA-46 which totals about 189 acres. Private land that is within the DOE boundary includes the Royal Crest Mobile Home Park and the

Los Alamos County ice rink which totals approximately 27 acres The leased land acreage does not include any of the Laboratory leased space in facilities in the communities of Los Alamos and White Rock.

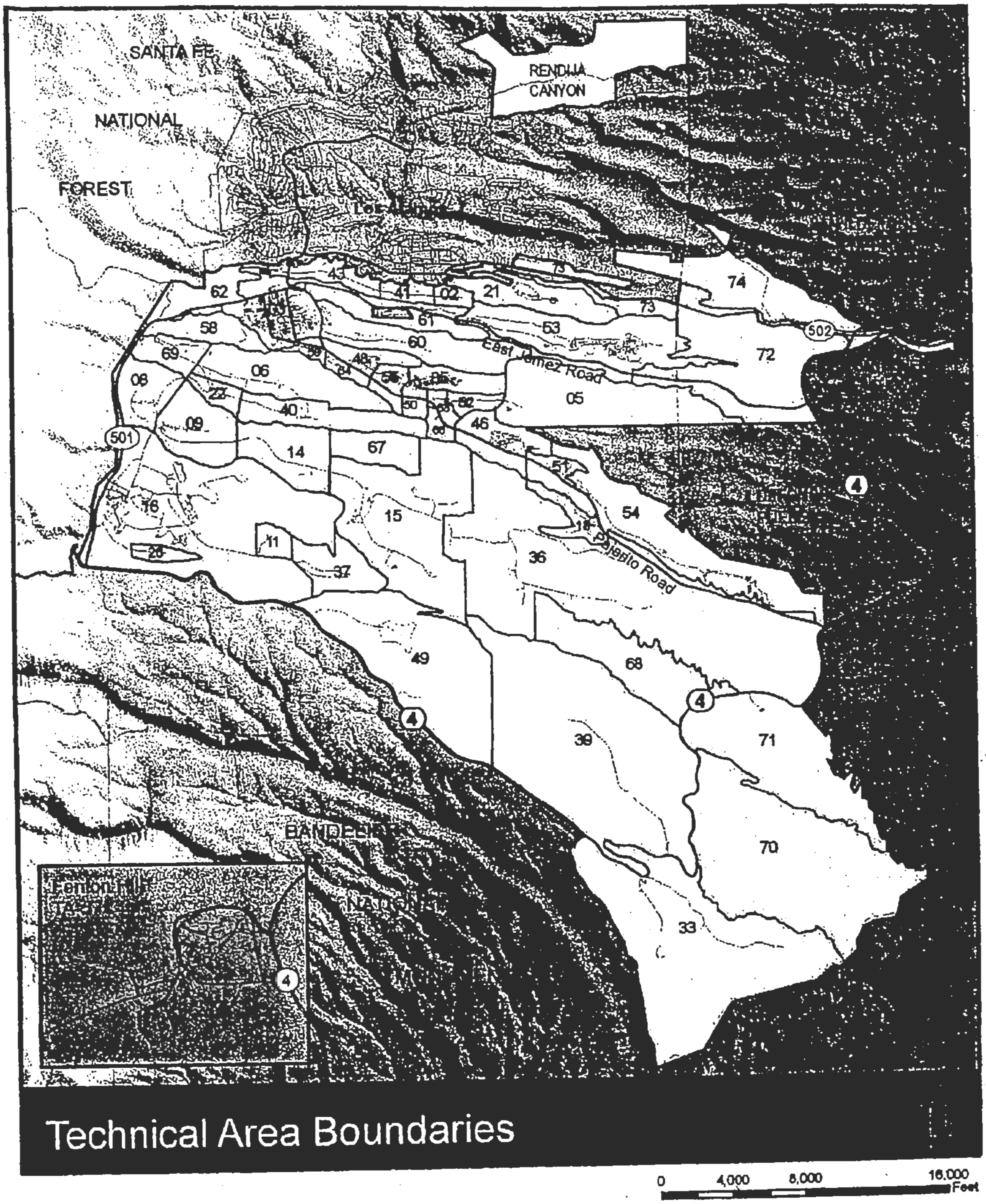
The Laboratory is divided into 49 active and separate TA's with location and spacing that reflect the site's historical development patterns, regional topography, and functional relationships. There are approximately 100 miles of paved roads and an estimated 168 miles of unpaved roads.

Although at a cursory glance there appears to be sufficient land for further expansion at the Laboratory, the majority of it is very difficult to develop given significant physical and operations constraints. For example, over 25% of the Laboratory's acreage consists of slopes that exceed 20%. Adding to the scarcity of developable land is the type of work that the Laboratory performs. Security and safety buffers for defense-related work often require large reservations of land for these programs to continue without adversely affecting surrounding areas. Land ownership and technical area boundaries are shown on the maps in the following pages.



Legend

- Department of Energy
- Bandelier National Monument
- Private Land
- San Ildefonso Pueblo
- U.S. Forest Service
- Leased Land (owned by DOE):
  - -Airport
  - -Landfill and Concrete Plant
  - -Research Park
  - -ICON Facility Land at TA-46
- Private Land (within DOE area):
  - -Ice Rink
  - -Royal Crest Mobile Homes



Legend

- Technical Area Boundary
- Paved Road
- Department of Energy

Transfers of Land

Under the Atomic Energy Community Act of 1955, the federal government provided support for a period of time to towns that were strongly affected by their proximity to nuclear weapons complex sites. The intent of the act was to assist the towns in developing self-governance and self-sufficiency by, among other actions, transferring land.

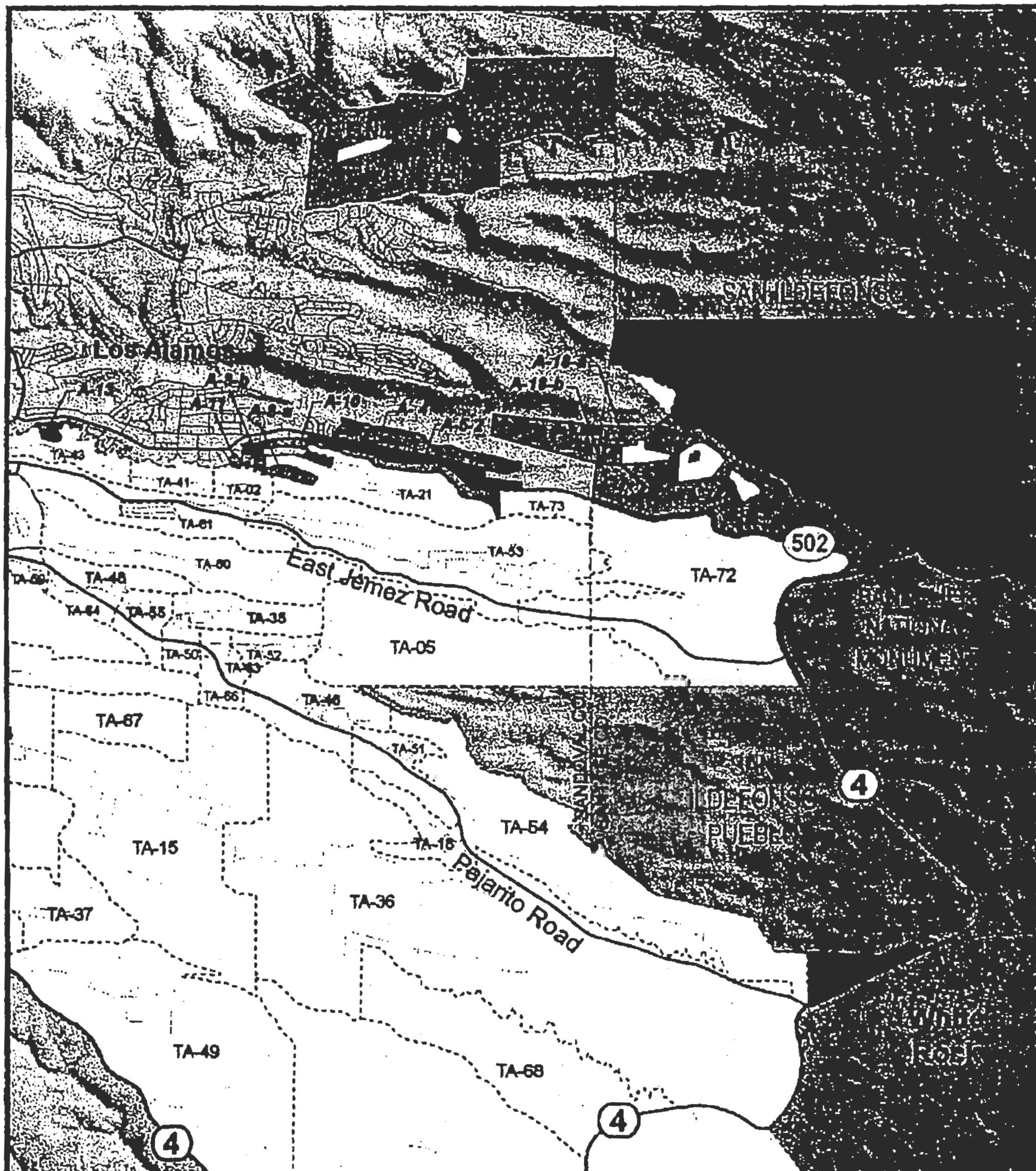
During the 1990s, NNSA's Los Alamos Site Office (LASO), the Laboratory, and representatives of Los Alamos County began discussions regarding the potential transfer of government properties to assist the County in becoming economically self-sufficient. In October 1996, Congress passed legislation terminating the annual assistance payment to Los Alamos County by mid-1997, with a lump-sum termination payment of $22.5M. Also, transfer of municipal functions and installations (water supply system, fire stations, and lease of the airport) began in 1997.

On November 26, 1997, Congress passed Public Law 105-119. Section 632 of the law directs the Secretary of Energy to convey land parcels to Los Alamos County or designee of the County. The legislation also calls for the transfer to the Secretary of the Interior, in trust for the San Ildefonso Pueblo, parcels of land under the administrative control of the Secretary of Energy at the Laboratory.

The tracts will be conveyed or transferred in accordance with the provisions of Public Law 105-119; the tract receipt agreement was between the County of Los Alamos and San Ildefonso Pueblo. The Record of Decision (ROD) was supported by the 1999 Environmental Impact Statement (EIS) for conveyance and transfer of certain DOE land tracts located at the Laboratory.

The tracts must meet the suitability criteria established by the Act before they can be transferred or conveyed. A parcel of land is suitable for transfer if not required for the national security mission before the end of November 2012 (the law was extended 5 years in 2006); if it can be restored or remediated by November 2012; and if it is suitable for historic, cultural, or environmental preservation, economic diversification, or community self-sufficiency. Those tracts not currently suitable for transfer are indicated on the following map.

As of December 2006, ten parcels totaling 164 acres have been deeded to Los Alamos County. These parcels are located in the Los Alamos townsite and White Rock community. Two parcels totaling 2,105 acres, primarily from TA-74, were transferred to San Ildefonso Pueblo. Public Law 105-119 has been extended 5 years to provide additional time for environmental remediation to be completed on potential land conveyance tracts such as TA-21. The new end date for the Land Conveyance and Transfer Project is November 2012. Over the next 18 months eight tracts are planned to be transferred to Los Alamos County. These tracts include: Tract A-4 (Airport Tract), A-8-a (DP Road-1 South), A-10 (DP Canyon), A-11 (DP West), A-13 (LASO Building West), A-14-a (Rendija Canyon) A-18-a&b (TA-74 south). The current status of land transfer is shown on the following map.



Land Transfer

0 4,000 8,000 Feet

Legend

- Transferred
- Currently Not Suitable for Transfer (in accordance with provisions of Public Law 105-119)
- Future Transfer (status as of December 2006)

2.1.6 Buildings

In 1943, development of the Laboratory began with the construction of a little more than 93 thousand (K) GSF of space. At the end of FY06, the Laboratory had approximately 9.5 M GSF of space including leased facilities.

Facilities and Space

While the number of structures changes slightly with time (there is frequent addition or removal of temporary structures and miscellaneous buildings), the current breakdown of structures is 925 permanent structures; 362 temporary structures (trailers, transportables, and transportainers); and 873 Other Structures and Facilities (OSFs) e.g., manholes and utility structures. However, only about 2.3M GSF of space, in 363 buildings, is designed to house personnel in an office environment. In addition to onsite office space, approximately 500K square feet of space is leased within the Los Alamos town site and White Rock community to provide workspace and training facilities for approximately 1,900 people (also see Attachment E-6). All onsite facilities and infrastructure, with the exception of designated structures at TA-21, are owned by NNSA. Structures TA-21-0155, -213 and -220 have been transferred to EM and are currently awaiting Decontamination and Decommissioning (D&D), and removal.

Age and Condition

Overall, 35% of the Laboratory's structures (not including leased or rented space) are more than 40 years old, and 45% are more than 30 years old. As of the start of FY07, the condition of Laboratory facilities from the Facilities Infrastructure Management System (FIMS) database included the following information:

- 10% of the facilities are in excellent condition
- 21% are good
- 7% are adequate
- 21% are fair
- 24% are poor
- 13% are in failing condition
- 4% are not rated

Condition assessment requirements cover a wide range of criteria and standards (e.g., safety, severity, seismic, etc.).

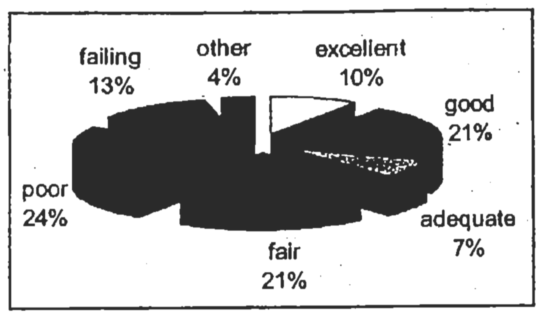


Figure 2-8: Summary of space by condition.

Historic Designation

In compliance with the NHPA, Laboratory buildings, and structures built between 1942 and 1963, or designated in the SWEIS as key facilities, must be reviewed for historical significance. In consultation with the New Mexico State Historic Preservation Officer (SHPO), 163 Laboratory properties have been determined eligible for inclusion on the NRHP, also known as the Register, for their association with significant local, regional, or national events. An additional 161 properties are being considered for Register eligibility and are considered potentially eligible pending review. In general, the Laboratory's Register-eligible properties supported important scientific developments during the Manhattan Project and Cold War years.

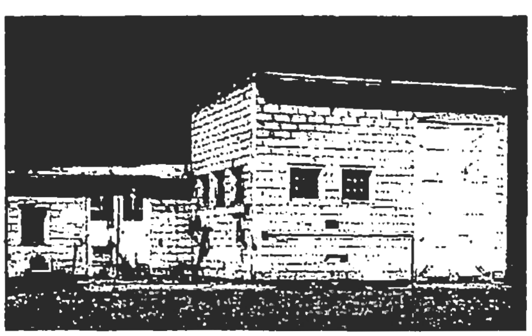
The Historic Facilities map at the end of this section shows both the eligible properties and potentially eligible properties.

Historic Properties Policy and Legislation

Federal historic preservation legislation requires the inventory and identification of significant historic properties. In addition, the most significant examples are evaluated for preservation and adaptive reuse potential. The DOE's Office of History and Heritage Resources has issued guidance over the last several years regarding historic facilities at DOE/NNSA sites. The DOE has identified the most significant remaining Manhattan Project properties at DOE/NNSA sites across the complex and has formally listed them as "Signature Facilities." The Office of History and Heritage Resources has recently requested that each DOE/NNSA site nominate significant Cold War properties for inclusion on DOE's Cold War Signature Facility list. In compliance with the current administration's Preserve America Executive Order, DOE/NNSA site offices are also identifying other historic properties, in addition to DOE Signature Facilities, that would be suitable for "heritage tourism" activities as outlined in the executive order. In addition, the "Manhattan Project National Historic Park Study Act" (S. 1687), signed by President Bush on October 18, 2004, directs the Secretary of the Interior to evaluate the potential for a discontinuous National Park Service (NPS) unit consisting of Manhattan Project era facilities from across the country. The development of this NPS unit would have ramifications for the long-term management of the Laboratory's Manhattan Project Signature Facilities and several other remaining Manhattan Project properties at the Laboratory and in the Los Alamos townsite, such as Fuller Lodge and the Bathtub Row houses.

Manhattan Project Signature Facilities

Manhattan Project Signature Facilities at the Laboratory include the Gun Site complex (TA-8-1, TA-8-2, and TA-8-3) and V Site (TA-16-516 and TA-16-517). These buildings are included in the "Historical Structures" section at the end of Attachment E-1 and have been identified as candidates for long-term retention. Funding opportunities for restoration and maintenance of the Laboratory's Manhattan Project Signature Facilities are being explored.



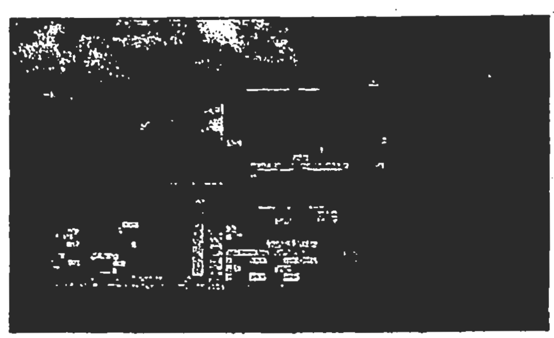


Figure 2-9: The restoration of V-Site, a Manhattan Project Signature Facility, has paved the way for future restoration work at the Laboratory. The photos illustrate V-Site before (left) and after (right) restoration.

Cold War Signature Facilities

A list of Cold War Signature Facilities has not yet been formally adopted by the DOE but is currently being developed by each DOE/NNSA site. Any potential DOE Cold War Signature Facilities on Attachment E-1, Excess Facilities Disposition Plan, are noted as such and are included in the "Historical Structures" section.

Other Significant Facilities

In 2004, five areas at the Laboratory were identified as potential candidates for a Manhattan Project National Historic Landmark District. These facilities include the Manhattan Project Signature Facilities mentioned above and three additional properties: the "Fat Man" Quonset Hut (TA-22-1), the Concrete Bowl plutonium recovery experiment (TA-6-37), and the Slotin Accident Building (TA-18-1).

Although not of National Landmark significance, several key Laboratory properties have been identified as exceptionally significant. These buildings and structures represent important facets of the Laboratory's history and include a small number of representative Manhattan Project and Cold War experimental areas and laboratory/processing facilities. This list also includes perimeter facilities, accessible to the general public, that represent the closed and secret nature of the Laboratory (circa 1942-1957). Key buildings and structures have been identified in Attachment E-1 as candidates for retention along with the Manhattan Project Signature Facilities, the nominees for Cold War Signature Facility status, and the potential National Historic Landmark District.

Impact of Historic Facilities Disposition

Eligibility for the Register does not mean that a building or structure will be preserved. If determined eligible for the Register in consultation with the SHPO, a property identified for D&D can be demolished once measures are developed to resolve any adverse effects to the property. Typical measures focus on architectural and historical documentation and include the compilation of updated as-built drawings, the production of archival quality black-and-white photographs, and the documentation of the property's history and the significance of its role at the Laboratory, often supplemented with historic photographs and oral interviews of former site workers.

The majority of the Laboratory's historic properties are not candidates for preservation and will ultimately be demolished once they no longer support the Laboratory's mission. The demolition of historic properties is carried out after NHPA compliance activities are conducted. The Laboratory's Historic Building Program personnel have worked with D&D staff since the early 1990s to ensure compliance with the NHPA while facilitating the D&D of excess buildings.

Buildings in Attachment E-1 that have been identified as candidates for preservation represent approximately 112K GSF. Square footage for three historic structures in Attachment E-1 (TA-6-37, concrete bowl; TA-12-4, hexagonal firing pit; and TA-33-28, elevated water tower) are not included in the GSF number stated above. A map of historic facilities is shown on the next page.

Preservation In Lieu of Demolition

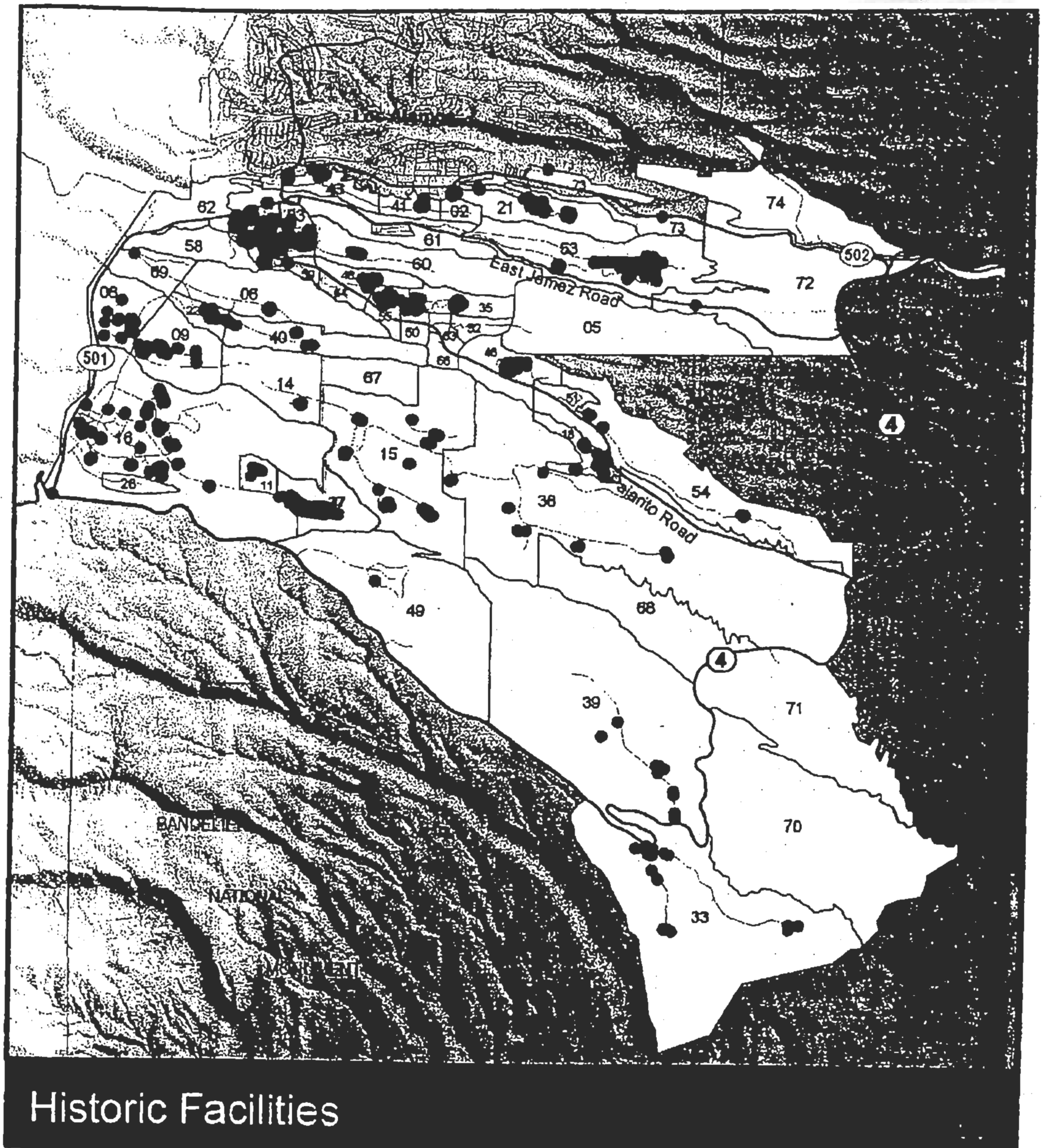
The preservation of many historic facilities would not significantly impact site operations. Many of the facilities to be preserved are located in areas that have already been evaluated for consolidation and revitalization, and retention of historic properties has been incorporated into long-range site plans.

Public tours of historic properties would likely be limited to once or twice a year. Limited-access bus tours of historic facilities conducted in the past have resulted in minimal impacts to site operations. These "windshield" tours have allowed uncleared U.S. citizens to view historic properties located at TA-6, TA-8, TA-16, and TA-22.

Associated Site Costs

Maintenance of historic properties will incur site costs. These, however, can be defrayed through the reuse of historic properties. Potential uses include office space, storage space, museum space, or conference facilities. Remodeling constraints are usually limited to the exterior historic fabric of the property.

When reuse is not an option, federal grants can be pursued to fund restoration or maintenance. For example, the Laboratory's V Site, one of the DOE's Manhattan Project Signature Facilities, was stabilized in 2006 with a Save America's Treasures grant.



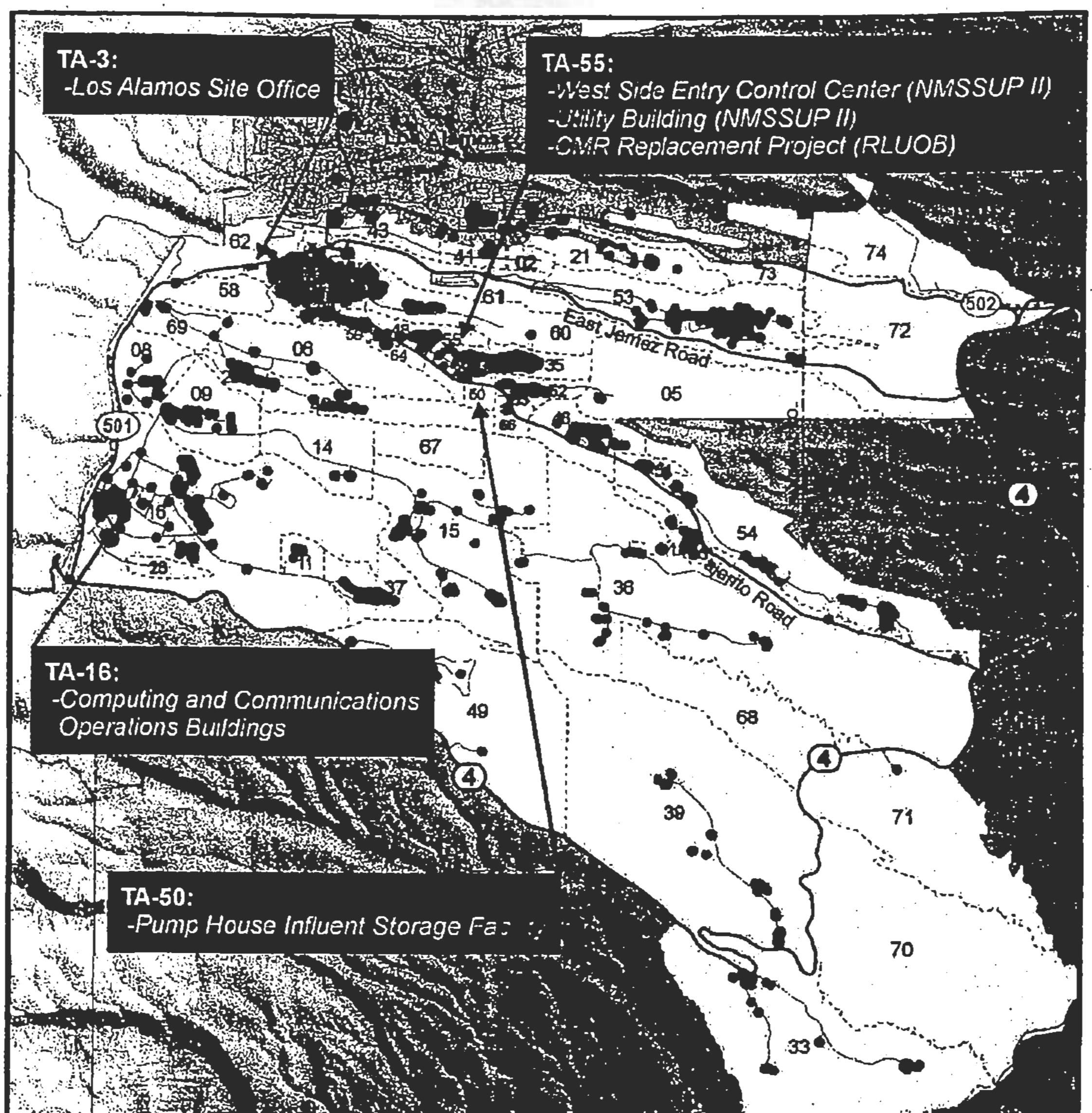
Historic Facilities

Legend

- Technical Area Boundary
- Facility is Eligible for National Register of Historic Places
- Facility is Potentially Eligible for National Register of Historic Places

2.1.7 Current and Future Facility Status

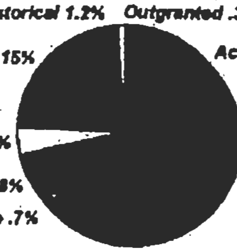
The Facility Status Map, FY 2008 on the following pages shows current active facilities, inactive facilities, excess facilities, outgranted/outleased facilities, and the location of selected new construction projects that will achieve beneficial occupancy in FY08. Many of these facilities will start construction in the near term. At the end of the TYSP planning horizon, the Facility Status Map-2017 shows the active, inactive, excess, outgranted/outleased, and selected planned construction projects that will achieve beneficial occupancy from FY09 through FY17. Maps with greater detail may be found in Attachment H. Funding profiles for the projects may be found in Attachment A, and a summary of GSF added by year is provided in Attachment E-2.



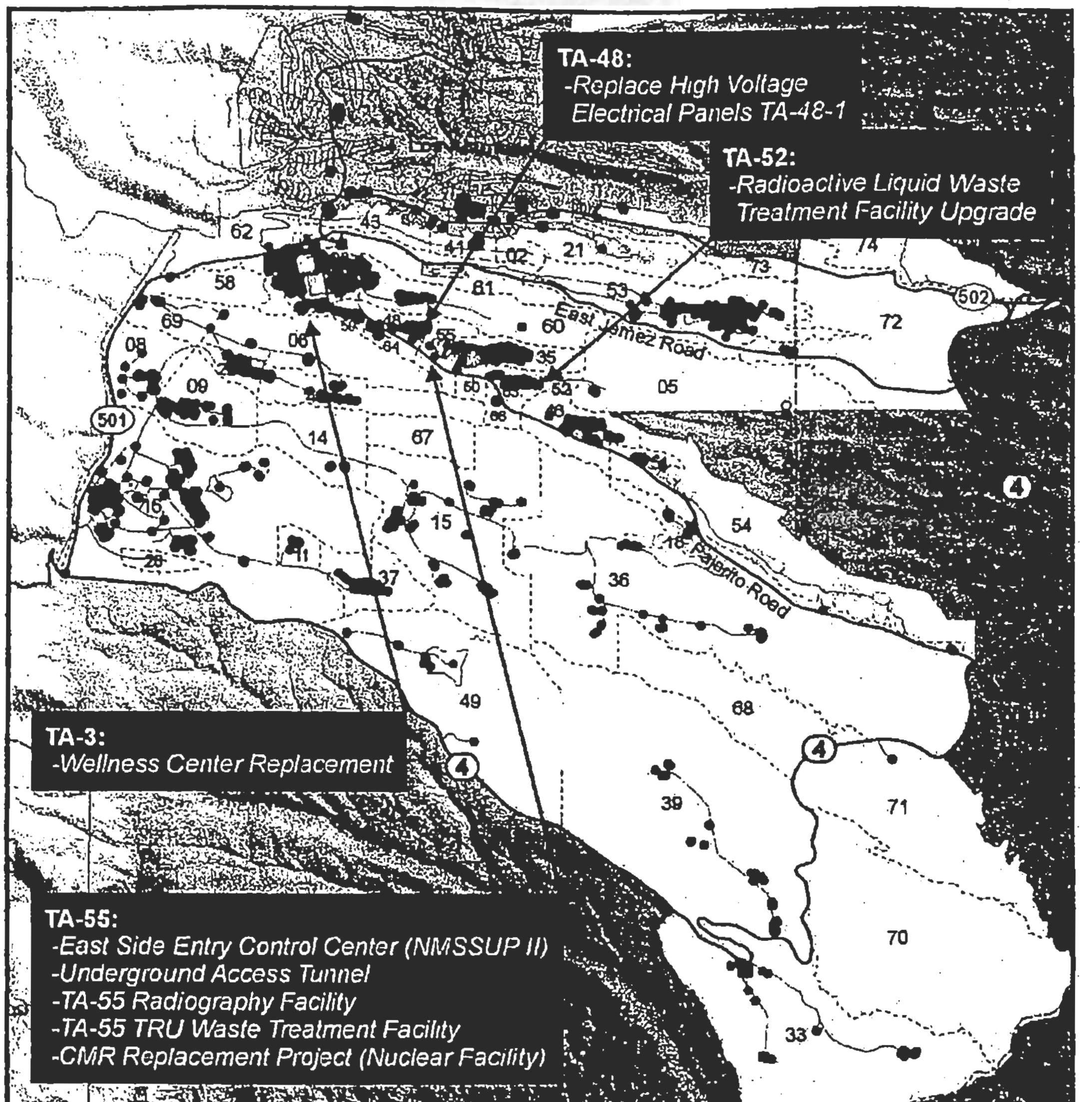
Facility Status, FY 2008
Overview of New Construction (Footprint Added)

Legend

- New Construction (Footprint Added)
- Active Facility
- Inactive Facility
- Future Excess Facility
- Excessed Facility
- Historic Structure
- Outgranted/Outleased Facility



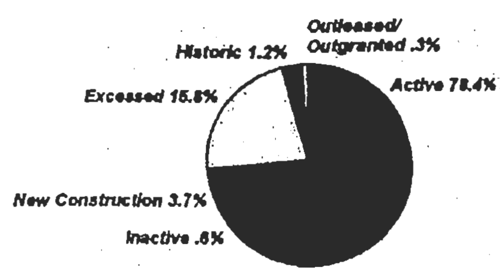
NOTES:
-Historic Structures are not to be demolished in accordance with Attachment E-1.
-New Construction (Footprint Added) is in accordance with Attachment E-2.



Facility Status, FY 2017
Overview of Proposed Future Construction (Footprint Added)

Legend

- New Construction (Footprint Added)
- Active Facility
- Inactive Facility
- Future Excess Facility
- Excessed Facility
- Historic Structure
- Outgranted/Outleased Facility



NOTES:
-Historic Structures are not to be demolished in accordance with Attachment E-1.
-New Construction (Footprint Added) is in accordance with Attachment E-2.

2.1.8 Workforce

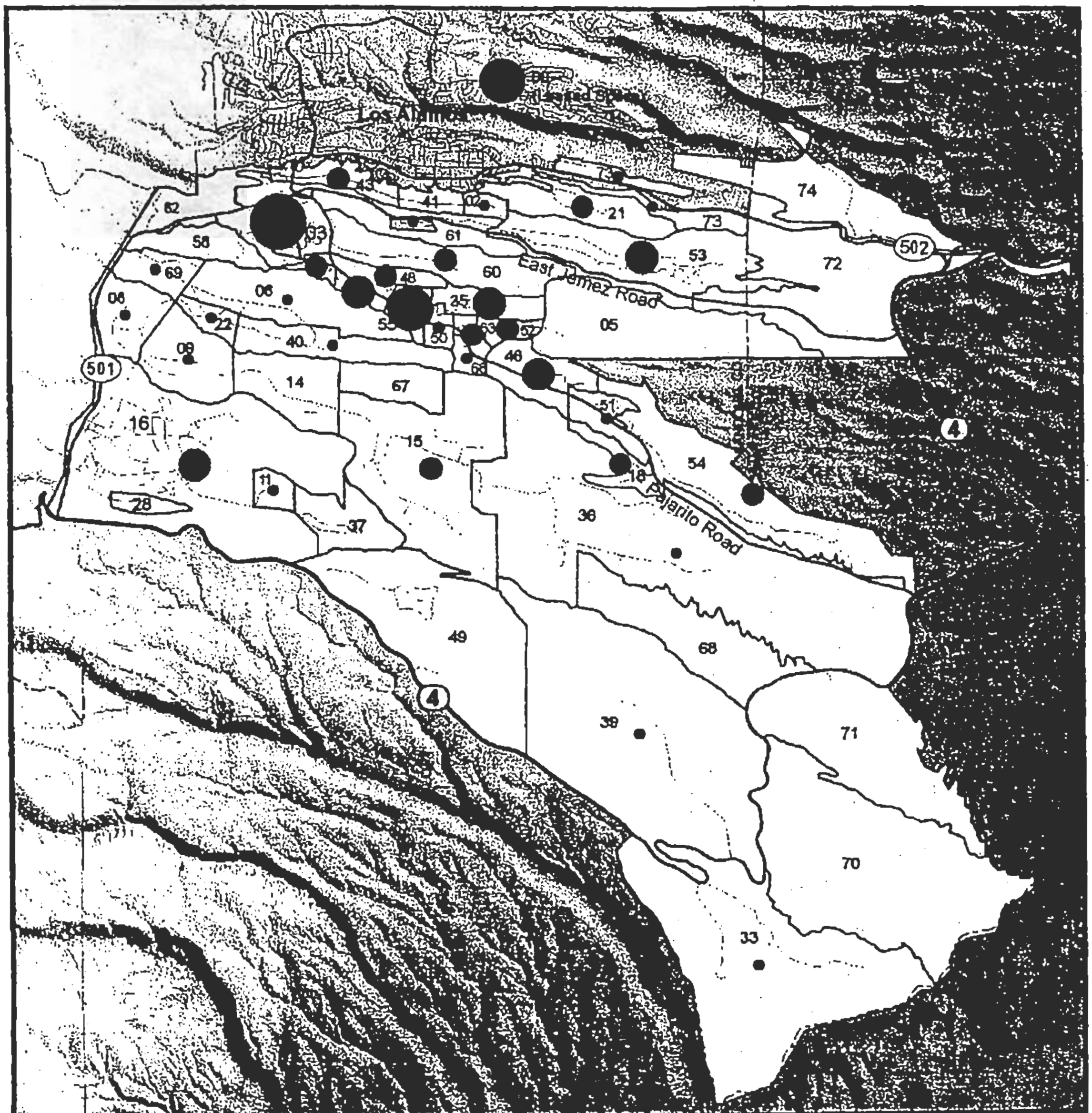
The Laboratory's affiliated workforce includes employees of the prime contractor, Los Alamos National Security, LLC (LANS), and its subcontractors, of which the major employers are the Support Services Subcontractor—Kellogg, Brown and Root/Shaw Environmental and Infrastructure/Los Alamos Technical Associates (KSL) and Protection Technology Los Alamos (PTLA). The Laboratory employs both technical and non-technical supplemental labor, or staff augmentation contractors. These are limited term assignments (six months to two years) where the personnel are employed by subcontractors but are managed by LANS line managers. Students from high school to graduate level are also employed in a variety of positions, and their numbers increase greatly during the summer months. Table 2-1 presents the breakdown of personnel by employer as of September 30, 2006. The map on the following page shows population distribution by TA.

On September 30, 2006, 514 employees were engaged on a limited term, staff augmentation basis. The maximum term of employment for these employees is two years. As shown in Table 2-1, another 653 staff augmentation employees were on-site working through subcontractors. To maintain a stable workforce and a sound financial policy, on June 12, 2006 Laboratory management announced that an in depth study will be conducted to review the use of all supplemental labor and that all staff augmentation requests will be frozen until the review is complete. By January 30, 2007, the number of limited term employees had dropped to 470, and the number of staff augmentation employees had dropped to 532. A map showing the population of employees by technical area is on the following page.

Table 2-1: Laboratory workforce as of September 30, 2006

Employment Category	Personnel	Percent of Workforce
LANS Employees	8632	61%
Limited Term	514	4%
LANS Students	1,242	9%
Guests/Affiliates	1,113	8%
KSL	1,320	9%
PTLA	565	4%
Supplemental Labor*	653	5%
TOTAL	14,039	100%

*This number does not include task order contractors.



Workforce Population by Technical Area

Legend

Technical Area Boundary

Department of Energy

• 1 - 150 • 151 - 400 ● 401 - 700 ● 701 - 1420 ● 1421 - 6640

0 4,000 8,000
Feet

2.2 Site Maps

Maps have been included within relevant sections of Section 2.1 and more detailed maps can be found in Attachment H.

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3.0 Mission Needs and Program Descriptions

3.1 Current Missions and Programs

The Laboratory is a multi-program scientific laboratory within the NNSA, a semi-autonomous entity within DOE. The Laboratory was managed and operated for DOE by the University of California (UC) for over 60 years. Starting in June 2006, LANS took over management and operation of the Laboratory. In addition to changing the organization's structure of the Laboratory, LANS management has begun additional, integrated long-range planning, both in relation to Complex 2030 and for the Laboratory as a whole.

Because of its combination of technical strengths, the Laboratory's contribution to national security has evolved to encompass important elements of other defense, homeland security, energy security, and science missions in addition to its core stockpile stewardship mission supporting the U.S. nuclear deterrent. In support of its missions and to enable it to continue to anticipate and rapidly respond to emerging national security needs, the Laboratory maintains, sustains, and pursues broad, multi-disciplinary programs in basic science, including important contributions to DOE science goals.

The Laboratory is a national security laboratory developing and applying science and technology to:

- Ensure the safety, security, and reliability of the U.S. nuclear deterrent
- Reduce global threats
- Solve other emerging national security challenges

The Laboratory's missions and corresponding goals and priorities must respond to and anticipate national security requirements in a dramatically changing world. The programmatic and business strategies to carry out these missions are derived directly from a vision that the Laboratory will be the national security science laboratory of choice; contributing to stockpile stewardship, strategic defense; threat reduction, homeland security, energy security, and science underpinning health.

To execute its missions with increased effectiveness, as noted earlier LANS changed the Laboratory's organizational structure. Since certain high-level changes affect how the TYSP discussion of missions and programs is presented, they are briefly described here.

There are three Principal Associate Directorates which are as follows:

- Weapons Program (PADWP)
- Science, Technology, and Engineering (PADSTE)
- Operations (PADOPS)

Each Principal Associate Director (PAD) coordinates and integrates the activities of Associate Directorates (AD) and have lead responsibility for major programs. PADWP is both responsible for the Weapons Program across the Laboratory and for a set of line organizations that execute core functions of that mission. PADSTE is responsible for science and energy programs at the Laboratory, but has a larger institutional line role as a capability organization, i.e. its line organizations contain a major fraction of the scientific and engineering capabilities that support all Laboratory missions and programs, including a large portion of the Weapons Program and certain weapons facilities. Thus (for example) the stockpile stewardship program is executed and weapons facilities are operated, by both PADWP and PADSTE organizations. PADOPS is responsible for providing infrastructure, project, and nuclear/high hazard operations services and capabilities across the Laboratory. PADOPS also provides the environment safety, health and quality functions for the Laboratory, as well as, all safeguards, and security functions.

3.1.1 Current Missions and Programs—Weapons Programs

The Laboratory is committed to meeting its core mission: nuclear weapons stockpile stewardship. This commitment includes support for required stockpile Life Extension Projects (LEP), Pit Manufacturing and Certification (PMC), Reliable Replacement Warhead (RRW) options, a technically sound basis for certification science, and the experimental campaigns necessary to meet stewardship requirements.

The Laboratory is working with NNSA to develop stockpile stewardship into the mature, sustainable, and agile program necessary to support the current stockpile and respond to any future nuclear requirement. It is through this comprehensive capability that the Laboratory will establish itself as a fully capable element of the nation's responsive defense infrastructure. Goals for this evolving program include ensuring a sustainable weapon certification capability, providing limited but flexible manufacturing capability in support of NNSA needs, establishing and demonstrating the capability to extend the life or modify existing weapons, and if requested, exploring new concepts.

PADWP has programmatic responsibility for the entire nuclear weapons program at Los Alamos. PADWP creates, integrates, and maintains a sustainable program using resources from across the Laboratory. Its chief responsibilities include setting priorities for the $1.2 billion nuclear weapons program, providing cost-benefit analysis and risk management, tracking and ensuring execution of weapons activity plans with consistency across the institution, and ensuring long-term support of division capabilities that are the foundation of the nuclear weapons program. The directorate balances the stockpile and predictive science programs, allocates required resources, and ensures technical quality of programs and deliverables.

Despite major weapons budget cuts and uncertainties during FY06, the weapons program met all key mission deliverables. There were a number of major accomplishments within the weapons programs, including the following:

- Execution of Krakatau and Unicorn subcritical experiments
- Completion of the RRW design proposal
- Removal of all Category I/II SNM from TA-18
- Production of a total of 29 Development and Qualification Pits

The following describes the Laboratory's anticipated FY07 activities and workload in support of stockpile stewardship.

Directed Stockpile Work

The goal of Directed Stockpile Work (DSW) is to ensure that the nuclear warheads in the U.S. nuclear weapons stockpile are safe, secure, and reliable. This goal is achieved by developing solutions to extend weapon life, identifying and correcting potential technical issues; refurbishing warheads; conducting evaluations to certify warhead reliability and to detect potential issues; conducting scheduled maintenance; and dismantling warheads retired from the stockpile. The Laboratory's current DSW workload includes the following activities:

- Conduct design, testing and manufacturing activities for the B61, W76, W78, and W88 in accordance with established schedules
- Complete certification/qualification activities required to certify the B61 and W76 in accordance with established schedules
- Complete ground tests and issue test reports required to support the W76-1 certification
- Meet site specific requirements to perform surveillance for the B61, W76, W78, and W88 warheads; this work includes analysis of surveillance data covering monitoring and BMP plans, input to RRW disassemblies and inspections, rebuilds build and deliver components, and perform flight & lab tests in accordance with established schedules
- Issue Annual Assessment Reports and Director's Annual Assessment letters for the B61, W76, W78, and W88; identify and complete continuous activities necessary for supporting current/future assessments
- Implement the transition for the B61, W76, and W78 consistent with the stockpile transformation evaluation strategy
- Conduct hydrodynamic tests in accordance with the National Hydrodynamic Test Plan and develop the FY07 Joint National Hydrodynamic Test Plan
- Create an integrated set of plans that are tied to NNSA 2030 Vision and Mission Objectives
- Support activities resulting from the down-select decision for RRW
- Complete the actions required to bring the Pit X-ray Computed Tomography System into operation for surveillance testing
- Conduct and complete FY07 activities as negotiated with the Office of Transformation/Responsive Infrastructure Team

Science Campaign

The goal of the Science Campaign is to develop improved capabilities to assess the safety, reliability, and performance of the nuclear physics package of weapons without further underground testing; enhance readiness to conduct underground nuclear testing as directed by the President; and develop essential scientific capabilities and infrastructure. This includes providing capabilities to support annual assessment and certification of the LEP, planned RRW designs, and to improve response times for resolving significant findings and certifying warhead replacement components that meet the goals of responsive infrastructure. The Science Campaign is principally responsible for the development of Quantification of Margins and Uncertainties (QMU), which is the methodology that applies scientific capabilities to stockpile certification issues, and to communicate certification findings in a common framework. The Laboratory's current Science Campaign workload includes the following activities:

- Dual Axis Radiographic Test Facility (DARHT) dual-axis multi-pulse radiographic capability available to the National Hydrotest Program
- Assess ability to reproduce the full Underground Test (UGT) data sets for a representative group of nuclear tests with consistent set of models
- Publish documented plan to reduce major source of uncertainty based on FY10 certification capability
- Deliver a report with results from the strongly coupled plasma experiment addressing a fundamental process in dense plasma energy balance
- Develop sub critical experiments, validation experiments, and uncertainty qualification plans and execute preparation and experiments in the plans
- Validate necessary physics, material, models, and simulation techniques in secondary design codes
- Deliver integrated strategy for plutonium (Pu) characterization, scaled experiments, and manufacturing in the context of certification
- Support coordinated Lawrence Livermore National Laboratory (LLNL) and Laboratory plans for activities at the NTS including Pu experiments
- Complete assessment of an improved two-dimensional energy balance model, developed through the use of small-scale experiments, high energy density experiments, and reanalysis of UGTs
- Complete planned FY07 High Energy Density Physics (HEDP) activities in support of platform development, diagnostics calibration, and target fabrication and metrology; implement elements of the National HEDP Diagnostics Calibration Plan

Engineering Campaign

The goal of the Engineering Campaign is to provide validated engineering sciences and engineering modeling and simulation tools for design, qualification, and certification; improved surety technologies; radiation hardening design and modeling capabilities; microsystems and microtechnologies; component and material lifetime assessments; and predictive aging models and surveillance diagnostics. The Campaign provides the Nuclear Weapons Complex (NWC) with modern tools and capabilities in engineering sciences to ensure the safety, security, reliability and performance of the current and future nuclear weapons stockpile and a sustained engineering basis for stockpile certification and assessments throughout the lifecycle of each weapon. The Laboratory's current Engineering Campaign workload includes the following activities:

- Complete experiments for characterizing the kinetics of a W76-1 abnormal thermal environment
- Complete an Enhanced Surveillance stockpile aging assessment report to support the annual assessment process
- Complete aging and lifetime assessments to support the W76-1 LEP certification
- Provide initial assessment to support RRW design options for sufficient longevity of materials and components
- Assess the viability of advanced imaging diagnostics for Canned Sub-Assemblies (CSA)s in support of

stockpile transformation and surveillance

- Install prototypes of next generation materials qualification or performance diagnostics at the plants
- Assess viability of Noise Equivalent Power (NEP) sensor technologies in support of stockpile transformation and surveillance
- Advance the next-generation initiation system to improve nuclear detonation safety for RRW and/or LEPs
- Develop technologies and bracket the "technical feasibility" of a multi-point surety concept

Inertial Confinement Fusion Ignition and High Yield Campaign

The goal of the Inertial Confinement Fusion Ignition and High Yield (ICF) Campaign is to develop Laboratory capabilities to create and measure extreme conditions of temperature, pressure, and radiation, including thermonuclear burn conditions, approaching those in a nuclear explosion, and conduct weapons-related research in these environments. The ICF Campaign supports the Stockpile Stewardship Program (SSP) by developing experimental capabilities and executing experiments to examine phenomena at physical conditions approaching those in a nuclear weapon. The Laboratory's current ICF Campaign workload includes the following activities:

- Complete the first "Z" Machine Refurbishment stewardship experiment
- Begin first integrated ignition experiments
- Specify laser irradiance requirements
- Complete Trident Laser Enhancement project to increase the Laboratory's Trident Laser short pulse capabilities
- Place facility requirements for FY10 ignition experiments under configuration management

Advanced Simulation and Computing Campaign

The goal of the Advanced Simulation and Computing (ASC) Campaign is to provide leading edge, high-end simulation capabilities to meet weapons assessment and certification requirements, including weapon codes, weapons science, platforms, and computer facilities. The ASC Campaign enables Stockpile Stewardship by: delivering validated weapons simulation tools with more accurate physical models and better numerical approximations; integrating the ASC tools into a QMU certification and assessment methodology; developing the ability to quantify confidence bounds on the uncertainty of results; and providing the necessary computing capability to code users. The ASC tools simulate device performance to ensure that systems in the stockpile meet all performance and surety requirements, as well as stockpile-to-target sequence and the entire weapons lifecycle. The Laboratory's current ASC Campaign workload includes the following activities:

- Complete modern baseline of all enduring stockpile systems with ASC codes
- Accounting for both simulation and experimental uncertainties, assess ability to reproduce the full UGT data sets for a representative group of nuclear tests with consistent set of models

- Publish documented plan to reduce major source of uncertainty based on FY10 certification capability
- Release Crestone and Shavano Project Codes
- ASC code development capability for attribution using radchem
- Implementation of new mix model for improved predictive capability
- Secondary verification and validation assessment supporting W76-1 LEP certification
- Engineering verification and validation assessment for an RRW Manufacturing Process
- Limited availability of Roadrunner capacity system for selected stockpile applications
- Develop and deploy Tripod capabilities for capacity computing environment

Pit Manufacturing and Certification Campaign

The goal of the PMC is to restore the capability and capacity to manufacture pits of all types required for maintaining the projected nuclear weapons stockpile. Within the PMC, three subprograms make unique contributions. The Pit Manufacturing subprogram objective is to manufacture limited quantities of pits that meet all quality requirements for entry into the stockpile and to develop a limited pit manufacturing capability at existing Laboratory facilities. The Pit Certification subprogram objective is to confirm the nuclear performance of a W88 warhead with a Laboratory-manufactured pit by the end of FY07 without nuclear testing and to establish a basis for certification processes for future replacement pits. The Pit Manufacturing Capability subprogram objective is to establish the capability to manufacture replacement pits, other than the W88, by developing and demonstrating processes applicable to either existing Laboratory facilities or a long-term pit manufacturing facility. The Laboratory's current PMC Campaign workload includes the following activities:

- Issue a Major Assembly Release (MAR) for the W88 system with a Laboratory-manufactured pit
- Begin type 126 pit manufacturing capability
- Complete installation of 2nd T-Base lathe in Plutonium Facility (PF)-4
- Complete Armando Assessment and Post Shot Report
- Complete installation of equipment and qualification of processes that mitigate single point manufacturing vulnerabilities
- Achieve a Qualification Engineering Release and submit a W88 pit for diamond stamping by established deadlines
- Complete analysis evaluating alternatives for consolidating Category I/II activities within TA-55/PF-4
- Complete installation of the interim radiography capability
- Complete Unicorn and Krakatau Assessment Reports
- Release the baseline for the Laboratory-built pit
- Develop RRW pit process development plan and evaluate casting approaches

Readiness Campaign

The goal of the Readiness Campaign is to develop and deliver design-to-manufacturing capabilities to meet the evolving and urgent needs of the stockpile. The Readiness Campaign serves its customer base with technology that contributes to faster implementation of new requirements, reduction in cycle times, less waste, leaner manufacturing (fewer components or processing steps); and an enabled workforce. The Laboratory's current Readiness Campaign workload includes the following activities:

- Develop capability to manufacture alternate detonator systems for firing site use and potential future weapon system applications
- Complete activities for the Defect Free Manufacturing and Assembly Project
- Develop and demonstrate archiving and retrieval of digital radiography data in compliance with applicable standards
- Demonstrate capability for producing an automated Hazard Analysis Report (HAR)
- Collaborate with Y-12 to demonstrate feasibility of casting technology and establish a base for demonstrating performance equivalency between cast and wrought processes

Weapons Infrastructure

A major portion of the Laboratory's infrastructure supports Laboratory nuclear weapons work. The future state for this weapons infrastructure is being developed through funding sources including the RTBF program and FIRP. Through investments made by these programs over the last several years, the Laboratory is making progress.

RTBF ensures that the right facilities and infrastructure are in place to manufacture and certify the 21st century nuclear weapons stockpile and that the Laboratory is implementing the technologies and methods necessary to make construction, operation, and maintenance of WP facilities safe, secure, and cost effective. The RTBF program provides the physical and operations infrastructure required to conduct the scientific, technical, and manufacturing activities of the SSP. The RTBF program is oriented at maintaining facilities and technologies in an appropriate condition so they are not limiting factors in accomplishing the NNSA Defense Programs (DP) missions.

FIRP invests in the existing infrastructure to curb the effects of facility aging. Through investments in recapitalization and utility LI construction, the Laboratory's DM backlog is being reduced. Investments in facility disposition are eliminating excess facilities, thereby reducing risk and associated surveillance and maintenance costs.

To achieve the weapons infrastructure vision, cost-effective investments in the Laboratory's infrastructure, workforce, facilities, and technologies must be made through effective program management. The Laboratory must deliver and maintain safe and secure facilities for performing and delivering the requisite levels of science and technology associated with maintaining the safety and reliability of the nuclear weapons stockpile. The Laboratory must also provide the balance of the physical and intellectual infrastructure underpinnings necessary to support the goals and mission of NNSA.

The scope and annual budget available for the Laboratory's Weapons Infrastructure activities include the following:

- Operations of Facilities ~$300M - The majority of RTBF directly funds facilities to a state of "mission capable," ready to perform programmatic tasks in support of DSW and the Campaigns
- RTBF funds also support Material Recycle and Recovery (MR&R), Program Readiness, and Special Projects (~$25M). MR&R is targeted at reducing SNM holdings
- RTBF Construction ~$75-$200M (projected budget) supports major projects, including the CMRR, RLWTF Upgrade, and Radiography (see Attachment A-1)
- FIRP ~$50M – Reduction of the DM backlog and disposition of excess facilities; the annual FYNSP budget for the Laboratory is approximately $50M or greater, however, actual appropriations in FY06 and FY07 were roughly half that

NNSA, along with each site within the complex, has established corporate goals directed at DM reduction and improved facility management practices. The corporate goals were established to mitigate the risk to missions associated with aging facilities and ultimately the failure of systems and facilities. These goals include stabilizing DM by the end of FY05, aggressively reducing DM to within industry standards by the end of FY09, and improving maintenance practices, with an emphasis on enduring mission essential facilities, such that the deteriorated facility condition seen in the last 10 years will not be repeated.

Current FYNSP projections show that actual RTBF and FIRP annual buying power has been and will continue to be reduced from FY07-FY13, which will create a condition that is contradictory with NNSA Headquarters (HQ) mandates to increase funding of maintenance activities and aggressively reducing DM. As a result, some weapons related missions may be at risk unless programmatic expectations are reduced and aggressive facility management actions are taken.

The Laboratory has developed a strategy for the Weapons Programs physical infrastructure to carry the site into the future and to provide consistency with the developing NNSA Complex 2030 vision. The strategy includes the following primary components:

- Nuclear Facility Consolidation
- Improved Program/Project/Facility Management
- DBT security measure implementation
- Strategic Investments and Footprint Reduction (SI/FR)

NFC is ongoing and critical to increase program efficiency, improve security, and reduce footprint and operating costs. Key ongoing activities include the following:

- Relocate CMR AC/MC from TA-3 to TA-55; the CMRR Project is the near-term centerpiece of the Laboratory's nuclear consolidation effort; currently the Radiological Laboratory, Utilities, and Office Building (RLUOB), the first phase of CMRR is under construction and design of the nuclear facility and equipment is in progress

- Relocate Pu radiography from TA-8 to TA-55; this project promotes efficiency in both security and programmatic operations and is currently in the conceptual design phase
- Upgrade/maintain critical facilities at TA-55 and TA-50 to support current and future missions; this includes the TA-55 Reinvestment Project that upgrades the existing infrastructure supporting the Plutonium Facility; RLWTF Upgrades Project that replaces the current radioactive liquid waste treatment facility at TA-50, and a new TRU facility to improve the handling, characterization and packing of solid nuclear waste for shipping to approved disposal facilities offsite
- The nuclear facility consolidation focused on the Pajarito Corridor in the area of TA-50 and TA-55, also allows consolidation of physical security assets; this will be accomplished through the FY05 DBT security measure implementation and NMSSUP Phase II which allow for security infrastructure consolidation of capabilities and more flexibility
- Also under consideration is the relocation or consolidation of Pu 238 Missions; the Laboratory continues to support DOE/NNSA planning efforts in this area

The Laboratory continues to improve facility/project/program management. Management of the weapons infrastructure was fortified during FY07 by fully implementing the national Work Breakdown Structure (WBS). There is a concerted effort to develop schedules that more accurately depict how individual work elements are accomplished as opposed to a straight line estimate through the year. This enhancement of earned value management tools is aimed at improving efficiencies in both real property maintenance and other elements within RTBF.

Another area being addressed within the Weapons Infrastructure Program is full cost recovery for the operations and maintenance of facilities. This cost recovery approach is discussed in detail in Section 3.5.

In the area of security and DBT implementation, a variety of investments are being made and activities are underway. This includes implementing security measures associated with meeting the FY03 DBT which were completed in FY06. Planning and strategy development to meet the FY05 DBT are complete and implementation scheduled to begin in FY10. FY03 DBT response investments include the recently completed NMSSUP Phase I which provides upgraded communications and alarm systems; the completion the FY03 Security Perimeter Project (SPP) which provides improved site access and control; execution of the Red Net Infrastructure Expansion Project which improves computer security at the site; and initiation of NMSSUP Phase II planning scoping.

A continuing initiative for the PADWP-Weapons Infrastructure Office is SI/FR. Due to the age and condition of the Laboratory infrastructure and current resource constraints, the Laboratory must invest its funding wisely into enduring facilities and infrastructure (strategic investment) and eliminate those facilities and infrastructure not required for the long-term (footprint reduction). This requires implementing a dedicated effort that the Laboratory initiated in FY05.

Funding for this effort included \$13.5M in FY05, \$9M in FY06 and \$9M in FY07.

Constrained budgets in FY06 and FY07 forced the Laboratory to fund at a lower level than is desired. However, for the Weapons Program infrastructure, the initiation of the Institutional Site Support (ISS) funding from HQ, aimed at supporting SI/FR projects will help to offset this shortfall. Future years funding for SI/FR is planned to be about \$18M per year and each year facilities must provide proposals to compete for this funding.

A formal prioritization process aids the selection of projects. Projects will only be funded if they demonstrate a return on investment, reduce risk, improve safety and security and/or increase program efficiencies. SI/FR projects supported with ISS funding are included in Attachment A-3. Examples of SI/FR Projects include CMR wing closures, radiography, and waste management. Examples of footprint reduction projects include equipment moves that support consolidation efforts and disposition projects.

The Laboratory's radiography strategy includes discontinuing nuclear operations at TA-8-23 and relocating pit radiography to TA-55. In the near-term this includes the development of interim pit radiography capability at TA-55 using lower energy machines while the long-term capability LI project can be developed and executed within FYNSP constraints. High explosive (HE) radiography operations will continue at TA-8-23 in support of hydros.

Waste management is a critical support function for the enduring Laboratory missions. The overall strategy is to maintain reliable program support with compliant, cost-effective operations. Key waste management initiatives include the following:

- Supporting programs by improving reliability with increased facility investment
- Minimizing waste generation to reduce the environmental impacts and control cost
- Legacy waste work-off to improve safety and reduce cost
- Relocating and consolidating TA-54 waste facilities so Area G Zones 1-3 and Area L can be closed under the Consent Order
- TA-55 generation of fully characterized TRU waste

Many of the above initiatives are consistent with complex transformation and positions the Laboratory to be responsive to future Complex 2030 decisions. These decisions will drive consolidation of non-nuclear facilities and activities at the Laboratory. Many of the facilities that support non-nuclear activities formulated consolidation plans in the early 2000's and some projects were executed. However, budget constraints have limited full implementation. Some progress will continue to be made through the strategic investment/footprint reduction program, but major transformation in this area will hinge upon Complex 2030 decisions.

3.1.2 Current Missions and Programs—Science, Technology, and Engineering

From the science, technology, and engineering perspective, the Laboratory is an experimental, materials-centric capability that integrates experimental activities with exceptional theory, modeling, and high performance computing to address its missions. The

Laboratory's broad and flexible science and technology base underpin the nuclear weapon program as well as other national defense technology requirements.

To perform its mission the Laboratory must sustain a set of core capabilities, including:

- Nuclear weapons science and technology
- Theory, modeling, and high-performance computing
- Advanced material science
- Complex experimentation and measurement
- Actinide science
- Physics, nuclear science, plasmas, and beams
- Bioscience and biotechnology
- Earth and environmental systems

These core capabilities are applied to national security missions including stockpile stewardship, energy security, and threat reduction. Those distinct mission/business lines gain mutual benefit, leverage, and synergy through these capabilities.

PADSTE is a capability organization, as well as leading the science and energy programs and institutional science capability development at the Laboratory. In the first role, PADSTE develops science and technology, and applies facilities and expertise in support of all of the Laboratory's missions. Many of the core capabilities described above reside in the PADSTE. The directorate coordinates the activities of four ADs (Experimental Physical Sciences; Theory, Simulation, and Computation; Chemistry, Life, and Earth Sciences; and Engineering and Engineering Sciences) that are directly responsible for the successful execution of applied mission programs including nuclear weapons, threat reduction, and other national security missions.

For example, PADSTE capabilities and technology developments help to address critical Stockpile Stewardship needs including QMU uncertainty reduction, certification, life extension, RRW, and manufacturing questions. PADSTE capabilities also help develop technologies to address homeland security and threat reduction needs, and are essential for full utilization and full exploitation of the Roadrunner computational platform.

In its programmatic leadership role, PADSTE leads the Laboratory's broad national security mission in energy security (civilian nuclear programs, fossil energy, and alternative energy and infrastructure programs), as well as all Office of Science (OS) programs the Laboratory. In addition PADSTE manages certain work for others including the Department of Health and Human Services National Institutes of Health. The total estimated science and energy program activity for FY07 is approximately $190M.

Civilian nuclear programs include support for advanced nuclear fuel cycles and the Global Nuclear Energy Partnership (GNEP) (including new fuel synthesis and measurement of nuclear data), science associated with nuclear waste repositories, and production of medical isotopes for DOE customers. Fossil energy programs include application of broad scientific, measurement, and modeling capabilities to address Carbon Dioxide (CO_2) sequestration. Alternative energy and infrastructure programs include R&D in fuel cells and hydrogen storage, superconductivity for increased energy efficiency and reliability, and the modeling and simulation of infrastructure for energy security. Through the DOE OS, the Laboratory conducts long-term, national-security-inspired, fundamental science. These often high-risk and high-payoff efforts enable remarkable discoveries and tools that transform our understanding of energy and matter and advance the national, economic, and energy security of the United States (U.S.). OS research is frequently proposal-driven but includes ongoing roles in neutron scattering research, nanoscience and technology, genomics and the Joint Genome Institute, and the application of multi-disciplinary research to key components (including ocean and sea ice) of both national and international efforts to model global climate. Work for others has included modeling Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) and Influenza, atomic-scale simulations of the ribosome, and simulation of potential influenza pandemics. A few recent accomplishments and FY07 expectations for these programs are discussed below.

PADSTE also leads institutional science capability activities including the Laboratory Directed Research and Development (LDRD) program, Institutes, and Technology Transfer. PADSTE supports the continued excellence of the Laboratory in meeting national security challenges by fostering innovation and creativity by the staff, by supporting and enhancing the scientific reputation of the Laboratory through a vigorous basic research program and by serving as a gateway from the scientific world to industry and academia through collaborations with government laboratories, universities, and industry.

Since part of PADSTE's mission is to advance knowledge across a broad range of scientific disciplines, it also promotes basic and applied research toward solving complex scientific and technological problems related to national security missions in collaboration with other Directorates. PADSTE is currently leading the development and articulation of Grand Challenges to help strengthen science and engineering across the Laboratory and develop the science and engineering base for both future NNSA and non-NNSA programs.

The PADSTE Directorate operates a number of science and engineering facilities vital to national security as well as to science missions. Notably this includes LANSCE, the Laboratory's top experimental science facility priority, which supports NNSA (as an MC facility), OS, and Office of Nuclear Energy missions (NE) (the latter also including medical isotope production). In addition PADSTE manages the Laboratory's components of the National High Magnetic Field Laboratory (NHMFL) and the newly completed CINT, the High-Temperature Superconductivity Technology Center, and the Stable Isotope Resource. LANSCE, CINT, and the NHMFL are major national scientific user facilities operated for DOE and the National Science Foundation (NSF), supporting well over a thousand user visits to the Laboratory annually. The combination of these facilities has broad program impact across the Laboratory's missions and is central to its materials strategy. Access to the facilities is available to qualified members of the national and international science and engineering community.

In addition to LANSCE, PADSTE Directorate operates or has line management responsibility for several other NNSA/DP MC facilities described in section 3.2 of this Plan. They include the Sigma facility, the Materials Science Laboratory (MSL), the Beryllium Technology Facility (BTF), Trident, and the CMR facility.

In FY06, science and energy programs had important accomplishments including:

- Successful completion of the LANSCE National User Facility 2006 run cycle, supporting ~650 user visits
- Completion of construction (Critical Decision (CD)-4a), initial Laboratory commissioning, and user program start-up at CINT
- The 100-Tesla magnet at the NHMFL, the word's most powerful pulsed, nondestructive magnet, was commission and produced scientific data
- Completed the 50th microbial genome since the Laboratory began finishing (finishing uses computational and chemical reactions to complete and correct genome sequences) for the Joint Genome Institute
- Developed non-platinum, non-corroding fuel cell electrodes
- Provide the first empirical data on actinide solubility and behavior in brine at the Waste Isolation Pilot Project (WIPP) facility
- Developed and fabricated experimental TRU fuel pellets for the Advanced Fuel Cycle program
- Discovered a new way that boundary layer clouds are involved in La Nina and El Nino ocean temperature oscillations
- Supercomputer modeling of the spread of pandemic influenza in the U.S. and the efficacy of potential mitigation strategies

In FY07, anticipated activities include the following as an illustrative set:

- Operation of the user and scientific research programs at LANSCE, CINT, and NHMFL
- Completion of the construction project (CD-4b) at CINT, and transition to full user operations
- Deployment of the Atmospheric Radiation Measurement Portable Atmospheric Laboratory (which contributes to understanding global climate) to the German Black Forest (initially deployed in Niger in FY06)
- Implementation of the "Normalized Power Difference (NPD) Gamma" experimental apparatus at the Spallation Neutron Source; apparatus successfully used at LANSCE to measure the parity-violating gamma asymmetry in FY06
- Anticipate receiving CD-1 approval for the neutron Electric Dipole Moment experiment
- Continue research in carbon management including unconventional fuels
- Continued delivery of Sr-82 and other medical isotopes under agreements between healthcare industry and DOE, and other support to the isotope program
- Continued support of the GNEP
- Complete scientific studies in environmental radionuclide transport and other issues as information for the Yucca Mountain license application
- Development of the Laboratory discovery of 'carrier multiplication'

(production of multiple charge carriers from a single photon) using nanocrystal quantum dots, to enhance the efficiency of solar cells

- Underground Radio™, a breakthrough in underground digital and wireless communications, to be tested at Yucca Mountain site

3.1.3 Current Missions and Programs—Threat Reduction

The Associate Directorate of Threat Reduction (ADTR) supports the Laboratory's national security mission, developing and applying mission-driven science and technology to reduce the threat from weapons of mass destruction, proliferation, and terrorism, and to solve national problems in homeland defense, intelligence, and infrastructure. On behalf of the Laboratory, the Directorate executes a broad portfolio of programs for NNSA and other sponsors, including:

- Preventing, detecting, assessing, and responding to threats of proliferation and/or use of weapons of mass destruction by nations or sub national groups
- Providing technical innovation and leadership for U.S. arms-control and nonproliferation initiatives, and
- Providing analyses and advanced technologies to protect the nation's critical infrastructure

More broadly, the ADTRs work includes programs to counter nuclear, biological, and chemical terrorism; programs to encourage cooperative threat reduction; activities to promote national and international nuclear safeguards and security; efforts toward threat monitoring and analysis; and related research. These programs contribute to dissuading and deterring possible threats, particularly threats from weapons of mass destruction (WMD). Research and development on behalf of the DoD and other agencies is aimed at defeating enemies. These activities range from developing technologies to detect and defeat terrorists to inventing cutting-edge science to support and equip military forces.

The scientific and technical basis of the Directorate's research and development capabilities is strengthened through a Work-For-Others (WFO) program, including the DoD, the Department of Homeland Security (DHS), the Department of State (DoS), the Intelligence Community (IC), the National Aeronautics and Space Administration (NASA), and others.

The Directorate's programmatic budget for FY06 was $643M, with NNSA/NA-20 the largest sponsor at $245M. In support of the above efforts, approximately two-thirds of the ADTR program budget is executed in the ADTR line organizations, and the remaining one-third is executed in other technical directorates at the Laboratory. ADTR programs have opportunities for significant growth, reflecting national security emphasis in nonproliferation, homeland security, and related areas.

Major facilitiesin ADTR include the NISC, and a number of other, older structures at multiple sites throughout the Laboratory. Continued success in the threat reduction mission will require investments in new facilities and refurbishment of existing facilities.

3.1.4 Current Missions and Programs—Environmental Programs

Associate Directorate of Environmental Programs Overview

The Associate Directorate of Environmental Programs (ADEP) consolidates selected environmental and waste services operations under a program structure that directly links mission responsibility, funding, and mission product delivery. Like ADTR, the ADEP Director reports directly to the Laboratory Director. ADEP is responsible for two mission areas: Compliance with the Consent Order addressing legacy contamination to soil and groundwater and providing radioactive and hazardous waste services to all Laboratory operations on site (funded by NNSA/RTBF). Each mission area contains several major projects or programs.

Consent Order

Under the Consent Order mission, ADEP executes the DOE/EM-funded program that dispositions 6,905 cubic meters of legacy waste, decommissions and decontaminates 450,000 square feet of legacy, process-contaminated facilities, addresses 765 legacy contaminated sites and remediates or establishes compliant monitoring for the groundwater affected by past Laboratory contaminant releases. The goal is to remediate the Laboratory's legacy environmental impacts to satisfy the requirements of Federal and New Mexico regulations, and most specifically the Consent Order and the FFCA.

The Laboratory's DOE/EM-funded program is divided into three components (referred to as Project Baseline Summaries (PBS) and formally tracked by EM): Remediation, D&D, and Legacy Waste Disposition. This program has a DOE Order 413.3A-compliant integrated life cycle baseline, published June 15, 2006, and expected to be validated in FY07. This baseline addresses and is fully compliant with all the findings of the EM/NNSA Independent Cost Estimate conducted in August of 2005. The program is to be completed in 2015. Total estimated cost to completion is approximately $1.49 billion. The program schedule is constrained by specific deliverables listed in the Consent Order. Upon completion of EM-funded disposition of legacy waste and remediation of contaminated sites, funding for Long-Term Stewardship (LTS) of clean-up sites and groundwater and for any future remediation requirements will be requested of NNSA/DOE.

The Consent Order replaces the corrective action requirements of the Hazardous and Solid Waste Amendments Module of the Laboratory's Resource Conservation Recovery Act (RCRA) Hazardous Waste Facility Permit. The Consent Order contains legally enforceable requirements for addressing the Laboratory's Solid Waste Management Units (SWMU) and Areas of Concern (AOC), and is the framework for investigation and remediation of contamination resulting from historical releases of hazardous waste and hazardous constituents at the Laboratory. It includes specific technical requirements and schedules, both of which may be modified with NMED approval, for conducting and completing investigations, corrective measures, and required documentation. Under the current schedule, all Consent Order requirements (i.e., investigations, evaluations and corrective measures) must be completed by December 2015. In addition, the Consent Order contains stipulated penalties on certain deliverables if they do not meet the prescribed schedule.

In general, the phases of Consent Order implementation include investigation, corrective measures evaluation, and final corrective measure implementation. Each site (i.e., Material Disposal Area (MDA), SWMU and AOC) has a specific schedule for each phase of implementation.

The initial phase of activities covered by the Consent Order is investigation. This can be followed by immediate interim corrective measures or a Corrective Measures Evaluation (CME) phase. Selection of a final corrective measure is followed by corrective measure implementation. After this a site is considered clean either to a specific regulatory standard (residential use, industrial use, etc). Corrective measures fall in one of two categories within the RCRA permit; either complete without controls, or complete with controls. Measures completed with controls are transferred to the LTS program for monitoring and maintenance.

The total scope of work required for each contaminated site will be determined by the results of each phase of the Consent Order as applied to that individual MDA, SWMU and AOC site. The extent and cost of these activities will depend on NMED's evaluation and response to the Laboratory's investigations, proposed corrective actions, and monitoring results.

Associate Directorate of Environment, Safety, Health and Quality Overview

The Laboratory is under close scrutiny from the public and regulators, both state and federal. Mission operational schedules and costs are dependent on adherence to environmental regulatory requirements. Associate Directorate of Environment, Safety, Health, and Quality (ADESH&Q) provides the technical support for major environmental compliance programs while proactively identifying and mitigating environmental risks to mission programs.

National Environmental Policy Act

The Laboratory incorporates NEPA requirements into proposed projects at the earliest feasible time. Proposals developed by program and line organizations must comply with NEPA before decisions are made to implement the proposals. When proposed Laboratory projects are at a sufficient stage of planning to allow for detailed NEPA analysis, they are subject to review by NNSA to determine the appropriate level of NEPA analysis. The review could result in a determination that the proposed activity was sufficiently analyzed in a SWEIS, another EIS, or an Environmental Assessment (EA). NNSA also could determine that the proposed project is Categorically Excluded (CX) from the requirement to prepare either an EA or an EIS, or it could determine that an EA or an EIS is necessary. The formal NEPA process is implemented during the project planning phase when most of the project specific details are known and must be completed prior to CD-2 unless DOE/NNSA grants a waiver for CD-2.

The Laboratory performs several hundred NEPA reviews each year. Once the NEPA process is completed and a CX, a Finding of No Significant Impact (FONSI), or a ROD has been issued, the project may proceed to detailed design and execution.

Integrated Environmental Reviews

Prior to project initiation and work, the Integrated Environmental Review (IER) provides subject-matter-expert reviews in support of operating groups, facility management personnel, and other DOE and Laboratory organizations and to determine applicable regulatory requirements. The Environmental Protection (ENV) Division in ADESH&Q provides the environmental subject matter expertise to the IER for large-scale projects in order to maintain compliance with environmental requirements.

Resource Conservation & Recovery Act

The Laboratory produces a variety of hazardous wastes, mostly in small quantities relative to industrial facilities of comparable size. RCRA, as amended by the Hazardous and Solid Waste Amendments (HSWA) in 1984, establishes a comprehensive program to regulate hazardous wastes from generation to ultimate disposal. The Laboratory's goal is to conduct operations in a manner that minimizes solid and hazardous waste generation as much as is technically and economically feasible and maintains excellence in matters related to safety, compliance, environment, health, and waste management operations.

Certain operations require a RCRA hazardous waste facility permit. Currently, the Laboratory is operating on a permit that expired in December 1999 but has been administratively extended pending the NMED's processing of applications to renew the permit. Units subject to the permit are located at: TA-54, Area L; TA-54, Area G Transuranic Waste Inspection and Storage Project (TWISP) Domes; Pad 10; TA-54-38; and TA-50-69. Additionally, the Laboratory operates units under interim status at TAs 3, 14, 16, 36, 39, 54, and 55. The Laboratory expects to receive a draft renewal permit in 2007. In FY06, the Laboratory's General Part A RCRA Permit Application was revised to reflect the transfer of co-operator responsibilities from the Regents of UC to LANS effective on June 1, 2006; and to update recent approved unit closures.

Two new facilities are planned that require permit modifications. These include CMRR and the new TRU Waste Facility. The new TRU Waste Facility, as a dedicated hazardous management unit will require a permit prior to beginning construction while the CMRR building can be constructed and put into programmatic service while awaiting the permit. The permit modification requests for both of these new facilities will be submitted to NMED-HWB by August of 2007.

Resource Conservation and Recovery Act Corrective Action

The Consent Order (discussed in detail in 3.1.4.2 Environmental Programs) covers most environmental restoration activities related to investigation, monitoring, and cleanup of legacy contaminated sites but specifically excludes investigations, cleanups, and closures of active sites.

Mixed Transuranic Waste

Substantial quantities of waste currently being managed as Mixed Transuranic waste (MTRU) may be re-characterized as Mixed Low-Level Waste (MLLW). If that occurs, the Laboratory's Site Treatment Plan (STP) will need to reflect management responsibilities over a potentially significant amount of additional materials.

Toxic Substances Control Act

The Laboratory has adopted a goal of being Polychlorinated Biphenyl (PCB) free and continues its efforts to inventory and reduce PCB-containing equipment. The presence of PCB equipment presents an operational liability because of the potential for releases within facilities or to the environment as well as associated regulatory tracking requirements. Aside from some legacy PCB items, the only anticipated PCB waste will be from the ongoing replacement of older PCB-containing fluorescent light ballasts from 16 units of equipment still in operation at CMR, and the possible discovery of previously unaccounted for PCB equipment, such as from D&D of older Laboratory structures. In May of 2006, and in response to the substantially reduced need for on-site PCB disposal, the Laboratory and NNSA voluntarily withdrew the Laboratory's request for reauthorization of PCB disposal at TA-54.

Clean Air Act Title V Operating Permit

Title V of the Federal Clean Air Act Amendments of 1990 required that all states have an operating permit program meeting the criteria established by the EPA. The Laboratory submitted an operating permit application to the NMED and was issued a permit in 2004. A modified permit was issued in 2006. To lower potential air emissions, the Laboratory's application included voluntary fuel limits, production limits and other operational restrictions. These proposed restrictions are now federally enforceable. To demonstrate compliance, the Laboratory submits semi-annual monitoring reports, semi-annual emission reports, and an annual compliance certification report to NMED and EPA.

Clean Water Act and Federal Facilities Compliance Act

The DOE entered into a FFCA and Administrative Order (AO) with the EPA under the Clean Water Act (CWA). The FFCA was issued and signed in February 2005. Implementation of FFCA/AO requirements includes planning and fieldwork to implement the monitoring requirements for SWMUs and AOCs that have moderate to high erosion potential through 2007, as well as to install or improve Best Management Practices (BMP) if the monitored concentrations of contaminants in stormwater runoff exceed water screening action levels. The NMED amended the New Mexico water quality standards in 2005. These standards apply to operational discharges to Laboratory canyons. EPA used the new standards to develop stricter NPDES discharge limits for Laboratory outfalls. The Laboratory's RLWTF is significantly impacted by these new limits. The RLWTF Upgrade LI project will improve facility reliability and process capability in anticipation of these more stringent regulatory requirements.

Each year a revised Storm Water Pollution Prevention Plan for the SWMUs covering monitoring and BMP plans is submitted to EPA for approval. The FFCA will remain in effect until EPA issues an individual NPDES storm water permit for the Laboratory site.

The Zero Liquid Discharge Project

Since 1993, the Laboratory has reduced the total number of controlled liquid outfalls from 141 to the current 17. The existing treatment facilities at the Laboratory cannot meet new effluent limits and State certification requirements of the new permit without construction of advanced treatment facilities. Even with construction of advanced treatment facilities, compliance with these extremely low effluent limits is uncertain. Also, it is anticipated that effluent limits will be set even lower in the future.

The Zero Liquid Discharge (ZLD) Project will assure compliance with the Laboratory's new NPDES Outfall Permit. The ZLD addresses development of a feasibility report to eliminate remaining NPDES outfalls currently discharging to the environment. Additionally, the ZLD will reduce waste streams, reuse of effluent, and conservation of potable water as needed to assure continued environmental compliance with the FFCA.

This project includes evaluating options for eliminating each of the remaining 17 outfalls and selecting the best option for each outfall. Options to be considered include: source elimination; reuse of effluent for cooling water; reuse of effluent for watering of grounds and / or undeveloped areas; evaporation from ponds and / or tanks; evaporation by mechanical evaporators; and, other options as may be appropriate. Funding estimates for each option will form the basis of future funding requests.

Additional Regulatory Requirements

The Laboratory has on-going programs in place to review and facilitate daily operations and proposed projects for compliance with other federal regulatory requirements. Effective and efficient compliance requires appropriate protection and monitoring of natural and cultural resources. In some cases (e.g., Threatened and Endangered Species Act) the Laboratory implements site-wide resource management strategies/plans for maintaining compliance. Improvement of cultural, biological, and natural resource management programs through the implementation of proposals and plans are underway.

Environmental Surveillance & Monitoring

Under DOE Order 231.1, *Environmental, Safety and Health Reporting*, the Laboratory prepares an annual Environmental Surveillance Report (ESR) summarizing the results of environmental monitoring of air, surface water, groundwater, sediments, soils, biota, and foodstuffs.

Environmental Management System

The Laboratory's Environmental Management System (EMS) encompasses all operating divisions and activities of major subcontractors (with appropriate flow-down to subcontractors) operating on site. The EMS applies to all Laboratory "on-site" operations and activities undertaken by Laboratory workers on leased sites. The Laboratory Environmental Stewardship Division holds contractual performance objectives for implementation of the EMS.

The Laboratory operates a certified performance-based EMS using the International Standardization Organization (ISO) 14001:2004 Standard. Certification requires identification of significant environmental aspects, prioritizing those aspects with the greatest risk to mission operations, and developing an action plan to continuously improve environmental performance.

Pollution Prevention

Beginning in FY06, DOE/NNSA pollution prevention goals became directly tied to DOE Order 450.1 and based on the performance of the site rather than simple numerical targets for volume reduction. The intent is to use tools such as Prevention Opportunity Assessments (POA) through the EMS to identify risk reduction opportunities. The Laboratory will continue to track progress on specific waste volume categories: hazardous waste, low-level waste, MLLW, solid TRU waste, EPA Toxic Release Inventory waste, sanitary waste, sanitary material recycling, cleanup/stabilization waste reduction, and affirmative procurement. The Program also operates the Generator Set-Aside Fund (GSAF), an applied pollution prevention program that targets priority waste streams for reduction or elimination.

Revision 2 of DOE Order 450.1 was issued in FY06 and includes new requirements for protecting the environment and enhancing mission accomplishment through incorporation of environmental stewardship in program planning and operational design. The following areas of increased institutional focus have been developed in response to the anticipated DOE policy:

- Green building standards
- Waste volume forecasting
- Pollution prevention requirements in subcontracts
- Solid and liquid radioactive waste minimization
- Upstream process change using POA
- Sanitary waste and construction waste minimization

Resource Conservation

The Laboratory continues to actively pursue resource conservation initiatives aimed at reducing the consumption of water, electricity and vehicle fuel. The Laboratory has established a goal to continue reducing its consumption of water to no more than 30% of the total Los Alamos County groundwater rights. Efforts to reduce consumption of electricity have been focused on improving cooling tower chiller unit efficiency, facilitating the use of Energy Star–compliant computers, and modifying the Laboratory's engineering standards to encourage power conserving building design.

Excess Equipment, Materials and Chemicals

Programmatic work and facility operations, plus associated maintenance actions, generate significant quantities of excess equipment, materials and chemicals. Additionally, much of excess from historical activities at the Laboratory has been stored pending disposition. Per DOE Order 450.1 and DOE Order 580.1 (Personal Property Management), all government purchased items determined to be excess to the current mission(s) must be characterized, tracked in appropriate databases, and properly dispositioned for resale or as salvage, scrap metal, or waste.

3.1.5 Current Missions and Programs—Safeguards and Security

The NNSA Safeguards and Security Program executed at the Laboratory protects the people, materials, information, capabilities, and facilities that enable the Laboratory to achieve its national security and science missions. Working in partnership with Laboratory employees and LASO personnel, the program protects security interests from unauthorized access, theft, diversion, sabotage, espionage or other hostile acts that may cause harm to national security or the health and safety of workers, the public or the environment.

Program objectives include: continually focusing on improvement of ISSM upgrading Laboratory facility security capabilities and performance, and efficient maintenance of the security infrastructure to assure a highly reliable security system.

Essential to the success and effectiveness of the Integrated Safeguards and Security Program is its full coordination with other NNSA programs and production missions to ensure security is built in as the site evolves toward the Complex 2030 vision.

3.2 Mission Critical Facilities and Infrastructure / Linkages Between Facilities and Infrastructure and Mission Needs

By identifying MC facilities and infrastructure, NNSA-HQ and the Laboratory will be able to prioritize maintenance, restoration, and recapitalization activities towards meeting current and future programmatic requirements. During FY06 the Laboratory completed a thorough process, in conjunction with programmatic and line organizations, to "recast" the existing "mission essential" list into the following new Federal Real Property Council (FRPC) categories:

- ***Mission Critical:*** Land or constructed assets deemed necessary to perform the primary missions assigned to a particular site, including any facility or infrastructure predominantly used to perform scientific, production, environmental restoration, or stockpile stewardship and without which, operations would be disrupted or placed at risk
- ***Mission Dependent, Not Critical:*** Land or constructed assets that play a supporting role in meeting the primary missions assigned to a particular site
- ***Not Mission Dependent***: Land or constructed assets that are not in support of the primary missions assigned to a particular site but support secondary missions and/or quality of workplace initiatives.

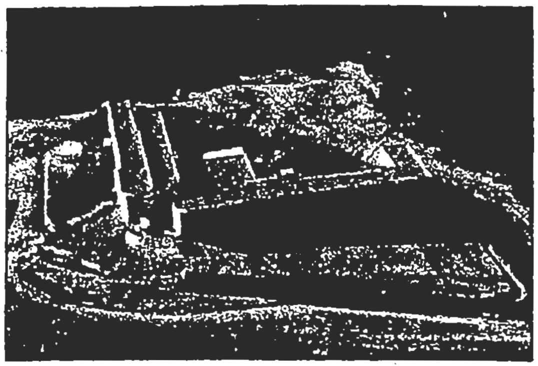
The Laboratory's facility re-categorization yielded a substantially different distribution of facilities and infrastructure from previous years. Thirty-three facilities are now identified as MC, 357 facilities are now identified as MD, and the remaining facilities are Not Mission Dependent (NMD). Of the MC facilities, all but two are direct funded through RTBF; the remaining facilities are either direct funded through campaigns or through institutional funding sources.

Each of the MC facilities has a direct link to specific mission components with a NNSA/DP program sponsor. Following is a discussion of which MC facilities support the elements of stockpile stewardship and the required activities and projects to maintain current capabilities or support new missions.

Directed Stockpile Work

MC facilities for DSW support ensuring that the nuclear warheads and bombs in the U.S. nuclear weapons stockpile are safe, secure, and reliable. Several MC facilities support the DSW activities at the Laboratory.

Dual-Axis Radiographic Test Facility Operations:



The DARHT Facility is used to perform integrated, non-nuclear experiments designed to measure the many complex and dynamic aspects of implosion systems, shock physics, and high-velocity impacts.

The first axis was completed in July, 1999. It delivers a single pulse of 20 million electron volts (MeV) electrons over a 60 nanosecond period to an X-Ray production target. It has been used to carryout the experiments described above.

The second axis was completed and accepted in 2003. Shortly thereafter, electrical and high-voltage problems were discovered. Mitigation of these problems is being executed through an expense-funded project, the DARHT 2nd Axis Refurbishment and Commissioning Project which is scheduled to be completed in May of 2008. When operational, this accelerator will deliver up to four pulses of electrons over a 2 microsecond period. Recently, the Laboratory demonstrated the 2nd Axis accelerator. Consistent with expectations, four distinct pulses, each 60 nanoseconds long and 400 nanoseconds apart, were clearly shown.

After 2nd Axis commissioning, the DARHT facility will then provide stereoscopic and time-sequenced views of hydrodynamic experiments, which are vital to extending the life of aging nuclear components, proving that remanufactured weapon pits are suitable for the stockpile, and validating new simulations that are now the key to certifying weapons safety and reliability in the absence of underground testing.

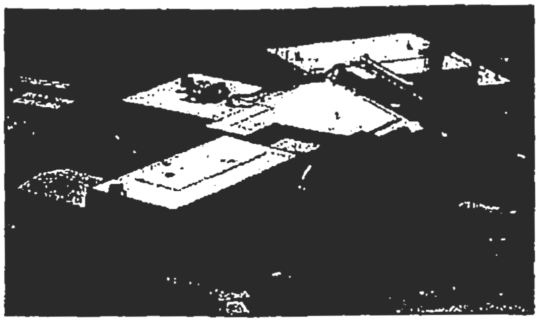
Nondestructive and Environmental Testing Facilities Operations: These facilities provide the capability for component and subsystem environmental testing, including vibration, shock, temperature evaluation, and radiography in both destructive and nondestructive modes.

The shock and vibration testing capability is currently housed at TA-11 in Building 30. This building was constructed in 1959 and is in fair condition. However, it is remotely located, which is not cost efficient for operations. A study will determine the best option to relocate the capability, and potential sites include within TA-16 Building 260 or adjacent to TA-16 Building 411.

HE Radiography: The TA-8 radiography capability is where components with HE components can be characterized. The facility supports the Weapons Response (WR) Group detonator fabrication program, hydrodynamic testing at DARHT, the RRW development, and sub-critical testing at NTS. The TA-8 radiography facility is 55 years old and in failing condition.

A replacement HE radiography facility is required to support current capabilities and future requirements for RRW. This new facility would be located in TA-16 adjacent to the MC assembly facilities.

Weapons Engineering Tritium Facility Operations:



The WETF provides the space to perform research, development, and engineering of gas transfer systems. The facility will play a key role in the development of gas transfer systems for the RRW weapons systems and surveillance of the gas delivery systems in the legacy stockpile. The facility also provides space to store in environmental conditions gas transfers systems to study the aging of these systems in the legacy stockpile. The facility is in fair condition, and no related projects are currently required. An NNSA decision on consolidating tritium functions may impact this capability.

High Explosives Detonation Facilities Operations: These facilities provide the capability to design, develop, manufacture, and test detonator systems.

One consolidation activity under consideration is a Shock and Detonation Physics Facility which would relocate researchers from failing office and lab space at TA-40-1 and TA-40-23 to a new building at TA-22, improving synergy by collocating HE, shock wave physics, and HE systems researchers.

Los Alamos Neutron Science Center Facilities: The LANSCE MC facilities consist of a linear accelerator facility, which is a high-intensity, 0.8 megawatt (MW) proton linear accelerator; the Weapons Neutron Research (WNR) facility, where high-energy, un-moderated neutrons and protons are used for weapons-related basic and applied research; and the Lujan Center, which employs moderated spallation neutrons for condensed matter-science, engineering, and nuclear science research.

The existing LANSCE systems, especially those of the accelerator, are increasingly unreliable, are expensive to operate and maintain, and are reaching the end of their design life. Projects required to ensure continued programmatic activities include the following:

- LANSCE-R: The project is a compilation of facility and infrastructure subprojects that will focus on renovating and modernizing the existing linear accelerator and related systems
- H- RFQ: This project would focus on a new H- injector that is capable of producing approximately twice the peak current as the present injector at a reduced duty factor; the increased beam current will increase the capability of the pRad and Lujan experimental programs
- 1L Target replacement: The 1L target provides spallation neutrons to the Lujan center in support of stockpile stewardship and basic energy research; the existing target is nearing the end of its lifecycle and is plagued with numerous mechanical issues; temporary repairs have allowed for continued operation, but a permanent replacement is required

Science Campaigns

MC Science Campaign facilities are used to develop improved capabilities to assess the safety, reliability, and performance of the nuclear physics package of weapons without further underground testing. MC facilities supporting the Science Campaigns include the following:

High Explosives Science Facilities: Operations: These facilities provide the diverse experimental capabilities needed to synthesize, formulate, shape, and machine small-scale HE components as well as the ability to characterize the fundamental materials properties and behavior, small-scale sensitivity, and performance of new, current, aged, and other high explosives formulations.

Energetic Materials Characterization Facility: The EMC Facility project will design and construct a state-of-the-art facility to conduct energetic material operations and provide capabilities critical to the surveillance, surety, and safety of energetic materials related to the nation's enduring nuclear stockpile and to homeland security needs. This facility will reside in TA-22 and consist of laboratories that perform high-explosives chemistry and small-scale formulation, physical characterization of high-explosives powders and parts; and high-explosives safety testing and quality assurance. Additional office space and material storage will bring efficiency to the operation.

Inertial Confinement Fusion and High Yield Campaign

ICF Campaign facilities are used to develop laboratory capabilities to create and measure extreme conditions of temperature, pressure, and radiation approaching those in a nuclear explosion, and conduct weapons-related research in these environments. MC facilities supporting the ICF Campaign include the following:

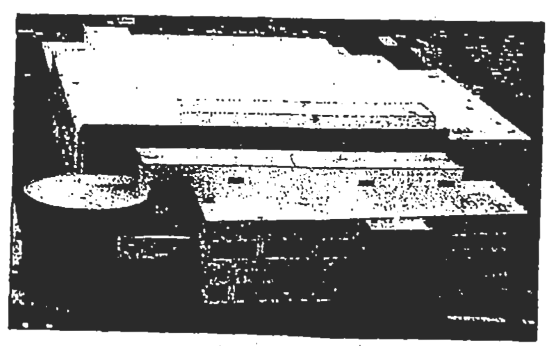
Trident Facility: The Trident facility is used for experiments requiring high-energy laser light pulses, primarily in inertial confinement fusion, high-energy density physics, and basic research. The Laboratory conducts necessary research to experimentally validate the predictive models used to assess and certify the stockpile.

The Trident Laser Enhancement project will increase Trident's short pulse capabilities for radiography of hydrodynamic targets used in the high-energy density physics program. This project is expected to be completed in FY07.

Advanced Simulation and Computing Campaign

The ASC Campaign MC facility provides leading edge, high-end simulation capabilities to meet weapons assessment and certification requirements, including weapon codes, weapons science, and platforms.

Nicholas C. Metropolis Center for Modeling and Simulation:



The Metropolis Center houses the Q supercomputer (with a peak speed of 20 trillion operations per second), which was installed in 2002 and is the major capability system at the Laboratory. During late FY06, the Laboratory began installation of the next generation of supercomputer, Roadrunner. Roadrunner will eventually be able to run a sustained Petaflop (one quadrillion operations per second) application and will significantly increase capacity computing cycles for stockpile stewardship.

A second electrical upgrade for the Metropolis Center is designed and awaiting NNSA Headquarters' approval to proceed. This upgrade will provide an additional 2.4 MW of power that is needed for the third phase of Roadrunner scheduled to be installed in January, 2008.

Pit Manufacturing and Certification Campaign

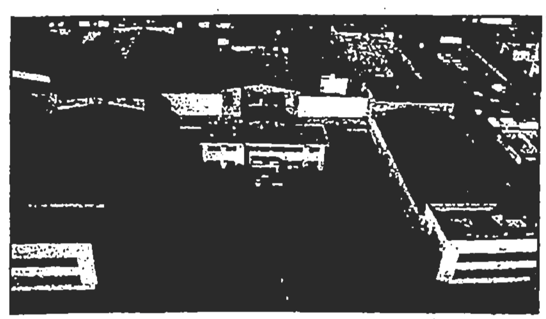
MC facilities for the PMC Campaign support restoration of the capability and capacity to manufacture pits of all types required for the nuclear weapons stockpile.

TA-55*:* Activities in support of pit manufacturing, surveillance, and certification activities housed at TA-55 include plutonium casting, fabrication, machining, and metallurgy laboratories; plutonium recovery; metal preparation; and destructive analysis and Nondestructive Analysis (NDA) laboratories. There is also a SNM storage vault.

The facilities and infrastructure at TA-55 is entering the life cycle stage when major systems are reaching the end of their useful lives. The following is a number of projects in the TA-55 area that will enable continued operation to meet programmatic requirements.

- TA-55 Reinvestment Project: This project will revitalize aging and obsolete electrical, mechanical, safety, facility controls and other selected systems
- TA-55 Radiography: This facility will house high-energy and medium energy x-ray systems to examine sealed nuclear components; this facility is critical for the Pit Manufacturing and Certification Campaign as well as surveillance programs
- NMSSUP Phase II: This project will upgrade and replace the existing physical security system at TA-55 to address the new protection strategy requirements and deteriorating physical security infrastructure
- RLWTF Upgrade: This project will construct a new facility to improve the RLW treatment capability at TA-50; the new facility will provide increased reliability and process capability to meet projected regulatory requirements for discharge
- TRU Facility: This project will provide a replacement facility to process and ship newly generated TRU waste to WIPP; the Consent Order requires that the Laboratory's existing TRU waste processing capability, located in TA-54, be closed by 2012

Chemistry and Metallurgy Research Facility:



The CMR facility serves as the primary facility for a broad spectrum of actinide, metallurgical, and materials properties testing systems of radiological components in PMC Campaigns for Category III material levels. The CMR building houses significant nuclear materials capabilities in support of programs at TA-55 including analytical chemistry, metallography, and R&D for science-based stockpile stewardship and surveillance programs.

The CMR Facility currently operates on a "run-to-replacement" philosophy in anticipation of the CMR Replacement (CMRR) project completion. At current levels of use, significant investments in the maintenance of the CMR facility's infrastructure will still be required in order to keep the CMR open until CMRR is certified operational.

The CMR will require strategic investments to reduce operating risk. The current AB will expire around 2010, and the Laboratory has initiated efforts to invest in Hazard Reduction/Wing Closure (HR/WC). The new CMRR is not expected to be fully operational until the 2013-14 time frame with the RLUOB opening in the 2009-10 time frame. Some capabilities at CMR can be moved into RLUOB and into PF-4 before 2010, thereby reducing hazards at CMR, but it is expected that some capabilities will need to be retained at CMR. The initial planning efforts for HR/WC allows for the consolidation of activities from Wings 2, 3, 4 and 5 into Wings 7 and 9, RLUOB and PF-5. Execution of HR/WC in FY05, 06 and 07 will lead to closure of Wing 4 in late FY07 or early FY08. The reduced risk profile will be needed to support an assumed conditional AB operating environment beyond 2010 until the new CMRR is fully operational.

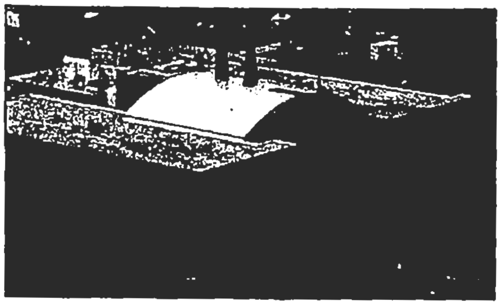
The CMRR will construct new facilities at TA-55 to house the existing CMR building capabilities and consolidate Security Category I/II laboratory work in a single area, including TA-55 radiography, to minimize the transfer of nuclear material within the complex. The project consists of two buildings, a combination radiological laboratory, utility, and office building and a Security Category I/II, Hazard Category II laboratory building. Construction of the radiological building has begun.

Beryllium Technology Facility Operations: The BTF provides the only technical capability within DOE for non-nuclear component fabrication and beryllium research and development. Operations at the BTF include alloy development, foundry operations, inspections, and nondestructive testing, joining, machining, metallography, mechanical testing, and powder operations.

The BTF is currently in good condition, and no related projects are currently required or planned, other than the Cartridge Filter House (GPP) project scheduled to be completed in FY07.

Sigma: Sigma supports large, multi-disciplinary technology base in materials fabrication science. This facility is used mainly for materials synthesis and processing, characterization, fabrication, joining, and coating of metallic and ceramic items. Other SSP activities supported by Sigma include DSW and the Science Campaigns. The Sigma facility is a candidate for replacement due to its age and poor condition. Options for a replacement facility are currently being studied.

The Materials Science Laboratory:



The MSL supports four types of experimentation: materials processing, mechanical behavior in extreme environments, advanced materials development, and materials characterization. The MSL is in excellent condition, and no related projects are currently required or planned.

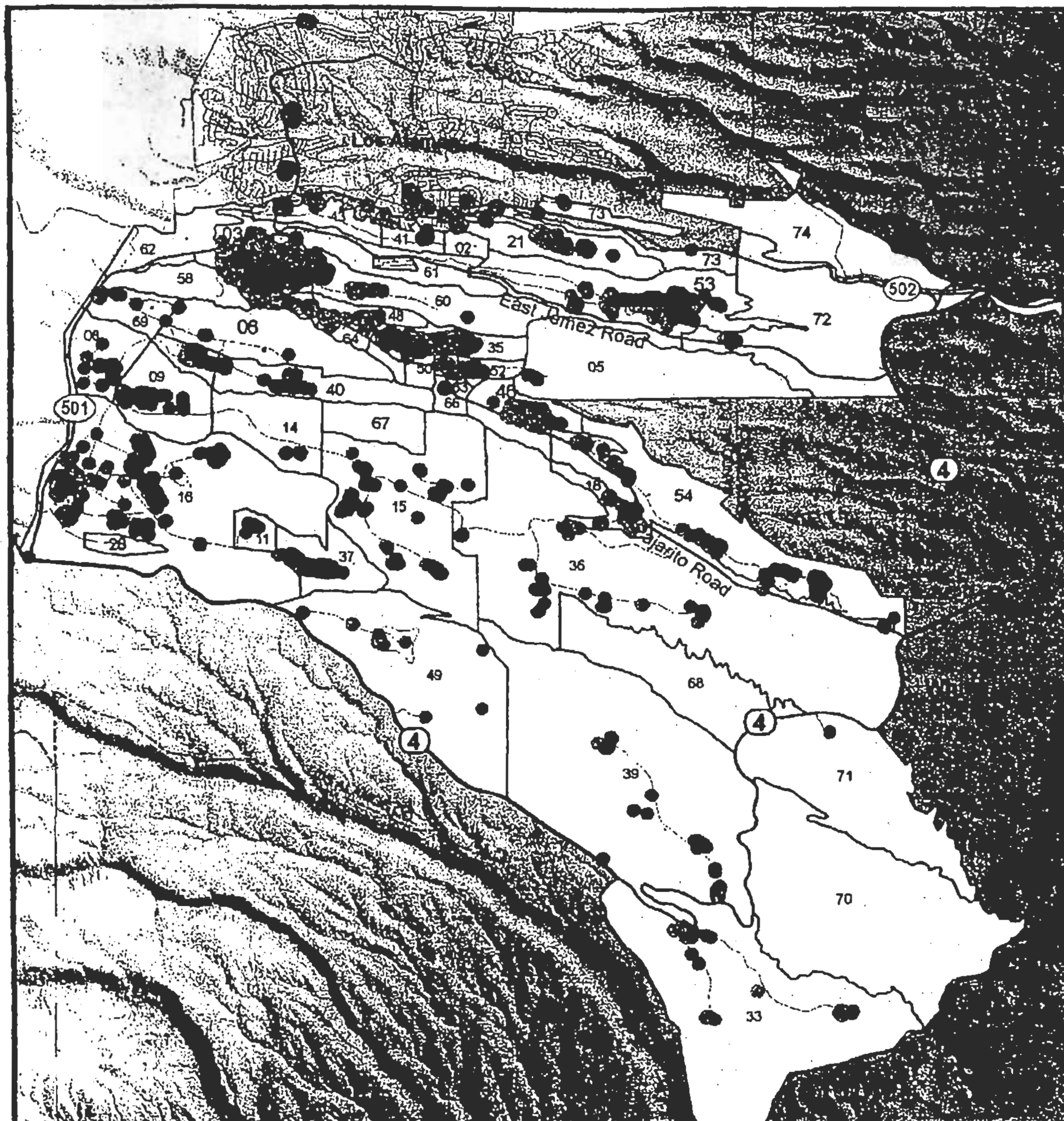
Another project required to support the PMC Campaign is the Weapons Manufacturing Support Facility. This project will consolidate metals fabrication, radiological component machining and inspections, and advanced manufacturing technology development from the existing shops facilities in TA-3. Additional supported capabilities include joint test assemblies, sub-critical experiments, and hydrotests. Design is anticipated to begin in 2011.

All of the Laboratory's facilities are being evaluated for the projected longevity of mission need. Enduring facilities are those facilities with mission needs extending beyond 10 years while proposed excess facilities have a mission need of less than 10 years or are temporary structures in "poor" or "failing" condition. Consequently, investment in the enduring facilities will be prioritized with the length of mission need as the main factor.

Attachment G contains the Laboratory's approved list of MC facilities.

Table 3-1: Summary Mission Critical GSF by Program

Program	GSF
Directed Stockpile Work	696 K
Science Campaigns	6 K
Inertial Confinement Fusion and High Yield Campaign	13 K
Advanced Simulation and Computing Campaign	369 K
Pit Manufacturing and Certification Campaign	1,098 K
TOTAL	2,182 K



Mission Critical Facilities

0 4,000 8,000 16,000 Feet

Legend

Mission Critical Facility
Mission Dependent Facility
Not Mission Dependent

3.3 Future NNSA Mission, Programs, Workload and Impacts

The Laboratory's projected future PADWP missions are defined by NNSA strategic/transformation planning, fiscal guidance and direction. The SSP will require continued use of the existing and planned production and research, development, and testing facilities to support DSW and Campaign deliverables. Over the next 10-20 years, the Laboratory will exercise its unique facility, equipment, and personnel resources to provide the following capabilities required to ensure that nuclear weapons are safe, secure, and reliable:

- Design, development, and assessment of nuclear weapons
- Manufacturing, surveillance, and disposition of nuclear weapons components
    - Plutonium components
    - Uranium components
    - Tritium production and processing
    - High explosives materials and components
    - Nonnuclear components
- Assembly and disassembly of nuclear weapons
- Science and technology base to support the Nation's nuclear deterrent

These capabilities will predict performance and support design and production at the Laboratory and within the NWC for the warhead refurbishment programs, limited life component production and surveillance, and pit manufacturing and certification.

In addition to these ongoing missions, the Laboratory's weapons infrastructure will have to address several challenges and evolving programmatic needs within the nuclear weapons program. Key among these is the potential expanded manufacturing mission. Additional needs include the emerging security environment, experimental programs, and consolidation of critical NWC capabilities.

3.3.1 Future NNSA Missions and Programs—Weapons Programs

Complex 2030

The 2001 Nuclear Posture Review (NPR) directed a change in the structure of the nuclear deterrent to adjust the change in the nature of the threat. The NPR called for the following:

- Changing the size, composition, and character of the nuclear stockpile in a way to reflect that the Cold War is over
- Achieving a credible deterrent with the lowest-possible number of nuclear warheads consistent with our national security needs
- Transforming the NNSA complex into a responsive infrastructure that supports the specific stockpile requirements and maintains the essential US nuclear capabilities needed for an uncertain future

In response to the NPR, NNSA developed a planning scenario that sets out their vision for the nuclear weapons complex of 2030. The scenario consists of four over-arching long-term strategies:

1. In partnership with DoD, transform the nuclear stockpile through development of RRW, refurbishment of limited numbers of legacy designs, and accelerated dismantlement of the Cold War stockpile

2. Transform to a modernized, cost-effective nuclear weapons complex
3. Create a fully integrated and interdependent nuclear weapons complex, and
4. Drive the science and technology base essential for long-term national security

The sections below outline how the Laboratory, in the near term, is supporting Complex 2030. Long-term, The Laboratory will continue to support Complex 2030 but that support is contingent upon key decisions that affect the overall nuclear weapons complex.

Design and Assessment Capabilities

The Laboratory and LLNL are engaged in a competitive study of the RRW. The RRW will provide an alternative to refurbishing existing warheads. This may result in a series of designs that have reduced life-cycle costs, improved surety, and a more simple design that could be easier to manufacture and certify for use without underground testing. If the RRW mission is assigned to the Laboratory, a significant development and manufacturing development program would be anticipated.

Manufacturing, Surveillance, and Disposition Capabilities

The future stockpile is projected to be smaller and less diverse, leading to changes in the associated production requirements. These production requirements are currently being analyzed. The Laboratory is responsible for key nuclear components within the majority of active weapons systems. Most notably, TA-55 provides the only fully functioning plutonium facility used for R&D and pit manufacturing capability with the NWC. Although a new CPC is planned to be operational by 2030, TA-55 represents the only pit manufacturing capability until that time.

The Laboratory, through existing capabilities and planned nuclear facility consolidation and construction activities, has established a stable weapons infrastructure to meet near-term manufacturing needs and is poised to provide additional capacity for expanded pit production missions (for an accelerated RRW or current warheads) over the long-term. Ongoing or planned projects within the FYNSP include the following:

- CMRR
- RLWTF Upgrade Project
- TA-55 Radiography Facility
- TA-55 Infrastructure Reinvestment Project
- TA-18 Early Move
- Criticality Experimental Facility (CEF)
- TRU Waste Facility, and
- NMSSUP Phase II

Many of these projects are described in detail in Attachment A-1. Through these efforts, the Laboratory has provided NNSA with a means to address current requirements yet remain flexible and responsive to pending stockpile evaluations and associated decisions on future nuclear facilities.

Capability Consolidation

NNSA has been evaluating the capabilities within the complex to align limited current and projected resources against priority program needs. Results of these analyses have regularly included proposals to eliminate or reduce redundant capabilities within the complex. The NWC capabilities associated with tritium, HE, and computing have been cited as opportunities for consolidation. Because the Laboratory has both R&D and production capabilities in these areas, potential changes to the mission assignments should be expected. Tritium capabilities also reside at LLNL and Savannah River Site (SRS). LLNL and Pantex have HE facilities. However, a certain base HE capability is required at the Laboratory and that capability is deteriorating. The Laboratory will continue to implement its HE consolidation plan, but investments may be required to stem the deterioration and provide the base capability for the long-term. NNSA and the Laboratory are determining the best means to balance and optimize available resources to support program needs within these key capabilities. This may result in additional changes to key tritium, HE and computing facilities at the Laboratory.

All of the aforementioned challenges and evolving programmatic needs are being analyzed to provide planning scenarios and options to DOE, NNSA and the Laboratory. Through these evaluation processes, NNSA and the Laboratory can optimize current investments and maintain flexibility to reduce risk and respond to dynamic program needs.

Weapons Infrastructure

Consistent with NNSA's planning scenario for the NWC for 2030, The Laboratory has developed a path forward for the facilities and infrastructure needed to support the weapons program mission in the near term and potential options for the future. Projects, potential projects and a time line for this path forward is shown in Figure 3-1.

This path forward is consistent with strategies provided in other areas of this chapter but expand to consider options that may be considered in the future depending on decisions made by NNSA with respect to Complex 2030 and capability consolidation. In the near term, this is defined by NFC including upgrades to waste facilities, investments in the security infrastructure and refurbishment and upgrade of science (LANSCE - Refurbishment and computing (Roadrunner Platform)) infrastructure. Progress in these areas, must continue in order to bridge the gap between the present and the future state of the Laboratory and the weapons complex.

In the future, options need to be available for the Laboratory to respond to key decisions that NNSA will make with respect to:

- Consolidated Nuclear Production Center with Consolidation of Security Category I/II SNM
- Complex Reconfiguration/ Consolidation on:
  - High Speed Computing
  - Tritium
  - HE Science
  - Firing Sites

Decisions on these capabilities will drive the scope of projects proposed in Attachment A-2 including the Weapons Manufacturing Support Facility, EMC Facility, Non-nuclear Facility Consolidation, and the National Security Engineering (NSE) Facility.

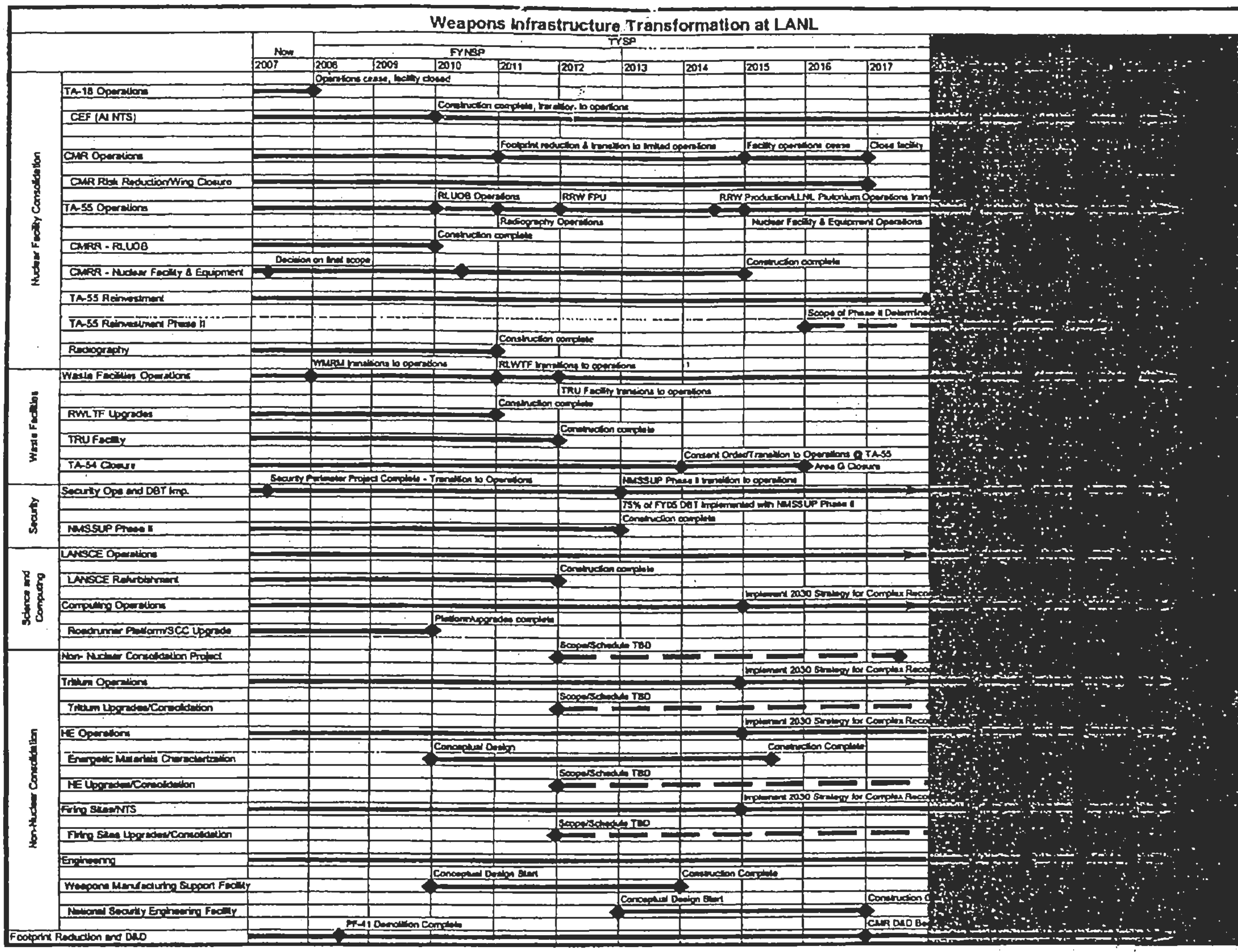


Figure 3-1: The Laboratory's path forward in response to NNSA's Complex 2030 Plan

3.3.2 Future NNSA Missions and Programs—Science, Technology, and Engineering

In addition to the capabilities just described, it is important to address other elements necessary for future NNSA mission success.

LANSCE is a multi-program user facility that provides critical support to DP and other DOE programs. Proton radiography is a key capability that provides unique data contributing to the understanding and prediction of the physics and performance of nuclear weapons. Although the Lujan Center for neutron scattering is operated as an OS user facility (Section 3.5), the Lujan Center also supports PADWP missions, for example, characterizing components to enable responsive manufacturing. LANSCE also provides unique nuclear data for programmatic uncertainty reduction. Research involving LANSCE will remain an important magnet to attract and develop physical-science personnel.

LANSCE has been identified in the Complex 2030 Plan with the intention of being operated as a national, shared user facility. However, it cannot be sustained long-term without a significant upgrade. Without it, the Laboratory mission as well as DOE mission delivery would suffer significantly. The LANSCE-R project has been approved to upgrade key accelerator systems in support of long-term facility viability (Attachment A-1). LANSCE-R will be completed over the next decade, while generally sustaining user operations through scheduled completion of equipment installation and construction activities. Implementation of LANSCE-R will allow LANSCE to successfully support requirements and be a responsive capability for PADWP mission needs.

Other PADSTE facilities and capabilities will continue to provide direct support to the NNSA mission in the future. PADSTE organizations operate and enable high-performance computing systems, software, and visualization, develop computational science for PADWP and other applications, and are critical to the successful procurement and use of the new Roadrunner advanced-architecture platform.

In other examples, materials science and engineering facilities and capabilities will continue to support hydrodynamic testing at DARHT, life extension, and the RRW. Actinide science capabilities at the Laboratory remain an important resource enabling NNSA mission delivery. A range of experimental and theoretical capabilities will continue to be necessary to make critical contributions to QMU and science-based prediction of complex systems for nuclear weapon stewardship and threat reduction. Target fabrication, simulation, and laser facilities will continue to contribute to the National Ignition Campaign. Chemistry and geoscience capabilities will continue to support both PADWP and ADTR missions with capabilities for measurement, analysis, and attribution.

Working with all technical elements of the Laboratory, PADSTE is facilitating internal efforts to help chart the scientific course of Laboratory capabilities needed to support the Laboratory's future national security missions. These efforts are ongoing, but are expected to be further reflected in future TYSPs as well as internal planning and investments. Planning activities include technical development of the scientific "Grand Challenges" identified by Laboratory management in the *Los Alamos Science Business Plan*. PADSTE planning activities also include consideration of a broad mission-driven, long-term vision for the Laboratory technical infrastructure consistent with NNSA and the Laboratory Complex 2030 planning and anticipated future national security mission needs.

Ongoing strategic planning activities point toward a future Laboratory site that places much more of the Laboratory's capabilities in secure enclaves within the TA-3 security perimeter area and within the Pajarito Corridor. LANSCE and several other activities would continue to operate in existing remote areas.

Detailed planning is still necessary to refine a vision of the future site and the path to it. In principle this reduced, revitalized, and refocused Laboratory site will be more cost effective and sustainable. It will also be more secure, more agile, and because of increased ease of interaction among its capabilities, be technically productive to meet future national security needs.

3.3.3 Future NNSA Missions and Programs—Threat Reduction

ADTR will continue to support NNSA and the Laboratory's national security mission, developing and applying mission-driven science and technology to reduce the threat from weapons of mass destruction, proliferation, and terrorism, and to solve national problems in homeland defense, intelligence, and infrastructure. With the national focus on issues of non-proliferation, intelligence, defense, and overall homeland security, ADTR is likely to see programmatic growth in the future. However, in line with the expected relatively flat DOE and NNSA budgets in out years, the NNSA portion of this growth will be targeted to specific areas of expertise at the Laboratory, and is not expected to show significant growth in the near-term. In FY06, new funding for threat reduction from NNSA and DOE totaled $238M; nuclear nonproliferation programs totaled $188M, weapons programs $33M, and other DOE (including the Offices of Intelligence (IN), Nuclear Energy (NE), and Homeland Security (HS)) $17M.

Two specific and related areas where significant growth can be expected involve the laboratory's capabilities to provide end-to-end solutions for national security sponsors. The first area concerns the development of improved intelligence, surveillance, and reconnaissance technologies and systems applied to a broader range of critical national security needs for customers within NNSA as well as DoD and IC. The second calls for the expansion of information analysis products and tools to provide actionable intelligence designed to address identified threats for a similar customer set from the plethora of data. Both will require investments in staffing, the concomitant classified computing infrastructure, and in increased light laboratory and Sensitive Compartmentalized Information Facility (SCIF) space.

More generally, the workload and impacts of the threat reduction NNSA programs are tied to the future direction of NNSA programs. The Laboratory has moved Security Category I/II SNM and associated program work from TA-18 to NTS or to other Laboratory locations. Likewise, the Laboratory is moving the remaining Category III/IV SNM and associated programmatic work from TA-18 to other locations at the Laboratory. Several facilities at the TA-18 site are being considered for reuse as a security force training complex. Those facilities that are not reused will remain on Attachment E-1 to be dispositioned in the future. The loss of TA-18 for Category III/IV SNM work increases the need for modern facilities at the Laboratory in which to work with Category III/IV nuclear materials, for safeguards and other mission areas.

Many of the facilities into which the Security Category III/IV SNM and programs have been moved are near the end of their useful life and need to be replaced. Therefore there is a growing need for the proposed Radiological Sciences Institute (RSI). In addition, although Category I/II materials stored at TA-18 have been removed, some nonproliferation programs that use these materials (particularly safeguards training) can not currently be conducted at NTS. The proposed RSI for Associate Directorate of Weapons Physics (ADWP) and ADTR also addresses this need.

A new national program, the GNEP, may also grow significantly, with a need for radiological and light laboratory and office space to support attribution and safeguards efforts. Similarly, the Laboratory's role in the Pit Disassembly and Conversion Facility (PDCF) program may require specialized laboratory space, depending on the scope and content of the program at the Laboratory. The ability of NNSA's nonproliferation programs to fund infrastructure investments will be a significant challenge in coming years.

3.3.4 Future NNSA Missions and Programs—Environmental Programs

Associate Directorate of Environmental Programs

Several environmental responsibilities as the EM program is conducted and after it is completed. The Laboratory will request funding from NNSA/DOE for D&D of process contaminated facilities and RCRA closure of all facilities interfering with remediation, removal of infrastructure, relocation of essential facilities whose location interferes with remediation, and maintaining TRU waste processing facilities in warm standby. According to the EM baseline project plan, EM will fund remediation of all accessible contaminated sites according to the Consent Order schedule. Remediated sites with significant residual contamination, and the groundwater monitoring system (and if required, active groundwater treatment system) will be transferred to the LTS program. LTS monitoring and maintenance requirements will be documented in the Laboratory's legally-enforceable RCRA operating permit. ADEPs LTS program will perform monitoring and maintenance, and if necessary, additional remediation according to the RCRA operating permit and subsequent negotiations with NMED and NNSA.

The Laboratory will request funding for inaccessible, or "active" contaminated sites that are still required to accomplish the NNSA mission (e.g. active firing sites) when the EM program has completed its mission (2015).

In cases where NNSA or other programs' mission activities must disturb legacy-contaminated sites, ADEP will provide subject matter experts to work with the NMED to define regulatory required scope as a result of the disturbance. This required scope is likely to include acceleration of the characterization and/or remediation of the site. Those activities however must be funded by the institutional projects.

NNSA is also responsible for maintaining Laboratory hazardous and radioactive waste processing and disposition facilities. Many of these facilities are beyond their design life. The RLWTF at TA-50 has experienced several system failures over the past few years. Many waste facilities were constructed before Code of Federal Regulations (CFR) 10CFR830 nuclear safety, and 10CFR835 quality requirements were established and now operate under interim authority; these facilities must be replaced with facilities compliant with DOE requirements. Transuranic Waste Characterization, Reduction, and Repackaging (WCRR) and Radioassay and Nondestructive Testing (RANT) facilities are the lead example. NNSA is planning/implementing new or upgraded waste facilities to support its mission operations during the next ten years.

3.3.5 Future NNSA Missions and Programs—Safeguards and Security

The 9/11 terrorist attacks dramatically changed the way in which we look at threats to Laboratory assets and security interests. As a result, significant investments have been made over the past several years to complete NMSSUP Phase I, implement security strategies to defeat the 2003 Amendment to the DBT, build access control stations including the SPP, and initiate NMSSUP Phase II to provide a more robust security system. These enhancements, in combination with nuclear facility consolidation projects, enable the site to counter the challenges of today's and future security environments while at the same time overcoming site-specific threats defined by NNSA. Consolidation of materials from other sites and preparation for potential expansion of the site's weapons mission are also anticipated. The proposed operation of major science assets as national user facilities may also drive the need for integrated and flexible security systems and practices.

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

While the Laboratory is primarily an NNSA site, non-NNSA programs are important aspects of the Laboratory's national security mission set. In addition they also provide financial support for facility operations, in several cases with direct benefit to sustaining capabilities used by NNSA. Finally, the growth of non-NNSA mission programs is a crucial element of the Laboratory's strategy to sustain workload in the science base under Complex 2030.

Non-NNSA contributions toward facility operations take the form of a slightly higher infrastructure support overhead rate for usage of general purpose facilities and a cost offset to WP for use of special purpose facilities.

For general purpose facilities, costs of facility operations and maintenance are allocated to NNSA and non-NNSA programs on the basis of labor costs expended within these facilities (as determined by periodic analysis). Due to the higher proportional usage of general purpose facilities by non-NNSA programs, a 1.5% infrastructure support rate is charged to non-NNSA programs. For use of special purpose facilities, a 2.5% (of labor costs) special purpose facilities usage fee is assessed to non-NNSA programs and credited to the RTBF program. These facility support collection mechanisms enable a financial synergy that is beneficial for all programs where they coexist.

Additionally, non-NNSA programs contribute to institutional infrastructure initiatives in direct proportion to the magnitude of the program. Centralized infrastructure service costs—costs which are equally applicable to NNSA and non-NNSA programs alike—are allocated to programs on the basis of programmatic labor using a rate consistent between the program types. One such institutional area is the payment of utility costs, which includes a level of utility reinvestment as noted in the Facility and Infrastructure (F&I) Cost Projection Spreadsheet. Without the inclusion of non-NNSA programs, a higher level of NNSA investment would be required to sustain the facilities and infrastructure.

In addition to facility operations investments, there is also planned construction investment from sources other than what is included in the Integrated Construction Program Plan (ICPP), RTBF, and FIRP. Refer to the Non-RTBF/FIRP Cost Projection Spreadsheet in Attachment A-5, which also includes non-NNSA construction investment.

3.4.1 Future Non-NNSA Missions and Programs—Science, Technology & Engineering

PADSTE experimental, theoretical, and computational capabilities previously described in 3.1 will continue to be essential to support broader national security needs, including threat reduction and energy security initiatives, and other issues of national importance. The Laboratory anticipates potential growth and development in a number of these non-Defense Programs (DP) mission areas that will continue to provide synergy with and help strengthen its capabilities for multiple national security missions. For example, it is foreseeable that energy security and climate/environmental issues will grow in emphasis as national security issues for the U.S. and for DOE in particular.

LANSCE will remain an important facility for non-NNSA missions as well as for weapons programs. In addition to the DP activities at LANSCE, this facility supports notable technical facilities principally supported by OS, the Lujan neutron scattering center user facility and NE, the Isotope Production Facility. With a decision to execute the LANSCE-R project, we anticipate additional evolution of OS and NE activities at LANSCE. The OS has asked the Laboratory to offer a strategic plan for the Lujan Center, including new and enhanced instrumentation within the Center to complement the future operation of the Spallation Neutron Source (SNS) at Oak Ridge National Laboratory (ORNL). That plan is being developed in coordination with SNS and others, including consideration of the Laboratory's national security needs. In a separate development, future expansion of NE activities is anticipated through the construction of a Materials Test Station utilizing the high-power LANSCE beam. A decision to pursue that LI is currently pending. The Materials Test Station (MTS) would help test potential advanced fuels for NE.

In the longer term, the Laboratory may also propose consolidated user/visitor 'portal' facilities that could be located near to the LANSCE site, outside the security perimeter project, to improve the interaction of users/visitors with multiple (NNSA and non-NNSA) user facilities and capabilities at the Laboratory.

The Laboratory has previously described plans for a Science Complex to provide new mission-related basic and applied science facilities, and to facilitate removal of older, poor, or failing space. The need for this Science Complex remains, and increases in urgency as the facilities currently supporting this important set of mission-related staff continue to age. The Laboratory is continuing to explore alternative financing methods in support of traditional construction mechanisms such as congressional line-item or GPP funding as a means to address the indirectly funded infrastructure.

The Los Alamos Science Complex will consist of two buildings, one classified and one unclassified, totaling 402,000 GSF, and will house approximate 1,400 scientific staff members from across the Laboratory. This new multi-disciplinary, state-of-the-art infrastructure will be Leadership in Energy and Environmental Design (LEED) Silver certified and highly cost effective. The Laboratory is preparing a detailed operating lease proposal package for NNSA review beginning in FY08.

Energy programs are anticipated to be of ongoing importance at the Laboratory, as energy security, reducing carbon emissions, and climate modeling will remain significant national and DOE priorities. The Laboratory will continue to play a leading role in aspects of the GNEP and in advanced fuel cycle issues, in such areas as simulation, fuel research, nuclear data, and safeguards. The proposed MTS at LANSCE has been discussed earlier.

In addition, Wing 9 of the CMR building will need to remain in operation to support NE activities until such time as refurbished, replacement facilities can be developed. Laboratory facilities will also continue to contribute to other aspects of energy security programs including modeling of energy infrastructure; alternative energy sources; fuel cell research, innovation, and development; research and analysis for carbon storage and sequestration; and technologies for fossil fuels and energy efficiency.

Cooperative agreements with energy supply and technology industries also contribute to US energy security. The Laboratory will remain a center for research in the origins and applications of high-temperature superconductors.

Biological science basic research will remain a significant element of Laboratory programs, both for DOE and through WFO, and enables threat reduction applications. In addition to Laboratory contributions to genomics research, for example, the Laboratory contributes to work on HIV/AIDS, Influenza, and computational biology. The Laboratory has submitted a proposal for a Genomes to Life (GTL) National Bio-energy Research Center in response to a current Request for Proposal (RFP). This proposal would use a systems biology approach, high-performance computing, and broad experimental and theoretical expertise from the Laboratory and partners to seek major advances in the production of biofuels through basic research.

As noted earlier, PADSTE is facilitating internal efforts to help chart the scientific course of Laboratory capabilities needed to support The Laboratory's future national security missions, including non-DP missions. These efforts are ongoing, but are expected to be reflected in future TYSPs as well as internal planning and investments.

3.4.2 Future Non-NNSA Missions and Programs—Threat Reduction

ADTR will continue to support the Laboratory's national security mission, developing and applying mission-driven science and technology to reduce the threat from WMD, proliferation, and terrorism, and to solve national problems in homeland defense, intelligence, and infrastructure. With the national focus on issues of non-proliferation, intelligence, defense, and overall homeland security, ADTR is likely to see programmatic growth in the future, especially in the WFO area. Much of ADTR's work-for-others programs are closely complementary to our NNSA mission and programs. In FY06, new funding to ADTR from WFO sponsors totaled $175M, including $38M from DHS.

As noted previously, two specific and related areas where significant growth can be expected involve the Laboratory's capabilities to provide end-to-end solutions for national security sponsors. The first area concerns the development of improved intelligence, surveillance, and reconnaissance technologies and systems applied to a broader range of critical national security needs for customers within NNSA as well as DoD and the IC. The second calls for the expansion of information analysis products and tools to provide actionable intelligence designed to address identified threats for a similar customer set from the plethora of data. Both will require investments in staffing, the associated classified computing infrastructure, and in increased light laboratory and SCIF space. In some cases, ADTR anticipates that WFO customers will fund refurbishment of existing facilities, through GPP projects.

3.4.3 Future Non-NNSA Missions and Programs—Environmental Programs

Associate Directorate of Environmental Programs

ADEP directorate implements the Laboratory's EM-funded program that addresses legacy waste and contamination. This program is mandated by the Consent Order, the FFCA, and DOE Orders.

The Consent Order is a compliance agreement for the remediation of Laboratory sites contaminated with legacy hazardous materials subject to the RCRA. In addition, the Laboratory is subject to DOE/NNSA requirements for the remediation of sites contaminated as a result of radioactive releases. Since most contaminated sites have both radioactive and hazardous constituents, the Consent Order schedule most often determines the remediation baseline schedule.

A separate FFCA between LASO, the Laboratory, and the EPA addresses contamination transported from contaminated sites (called SWMUs) by storm events.

Signing the Consent Order established a legally-enforceable set of requirements and clean-up schedule for the EM-funded program responsible for remediating legacy contamination at the Laboratory.

Remediating contaminated sites also requires NNSA-funded closure, D&D, and in some cases, relocation of NNSA facilities that prevent access to contaminated sites. Closure involves de-inventorying, deactivation, and if required, RCRA closure of NNSA facilities. In most cases relocation requires re-establishing an operational capability at another location, e.g. opening a new low-level waste disposal pit at TA-54, Zone 4 or relocating the low-level waste compactor from Area G. These activities will be funded by NNSA; the specific program that will provide the funding is still to be determined.

NNSA funds warm standby costs for waste facilities necessary to complete the EM mission. This division of responsibility is documented in a 1998

EM-NNSA memorandum that defined legacy waste as all waste generated prior to October 1, 1998 and that transferred responsibility for future NNSA program waste generation from NNSA to EM.

ADEP has organized project teams to execute the EM program: The legacy TRU Waste Disposition Project dispositions legacy waste, the TA-21 Closure Project performs D&D and remediation at that site, the Corrective Actions Project does D&D and remediation at all other Laboratory legacy sites, the Water Stewardship Project monitors and remediates surface and ground water as required by the Consent Order and FFCA.

Since 2001 the Laboratory EM programs have operated without an Office of Engineering & Construction Management (OECM)-validated integrated project baseline for its three projects (remediation, D&D, and legacy waste disposition). Each year the Laboratory EM program would develop and execute an annual work plan based on the then-current DOE/EM five year funding plan for the Laboratory. In 2006 the Laboratory developed a performance baseline that is in the process of being validated by OECM. The new baseline completes EM remediation at the Laboratory by 2015, complying with the Consent Order. However, the cost to complete Laboratory EM scope (2007-2015) is $1.491 billion which is $814 M more than is budgeted in the EM budget plan.

While the Laboratory EM baseline was being developed during the FY07 budget cycle, the Office of Management and Budget (OMB) reduced the Laboratory EM Remediation project budget by $50M citing that the Laboratory did not have a validated baseline for its EM work. This resulted in a $50 M reduction in the President's 2007 budget request. The House of Representatives approved the reduced budget, the Senate restored the $50 M. For the first 4.5 months of FY07, the Laboratory has been funded by a continuing resolution that limits spending to FY06 carryover plus a fraction of the lower of the Senate and House budgets. Consequently, the remediation project doesn't have sufficient funding to meet the requirements of the Consent Order after February 2007.

3.5 Impacts of Non-NNSA Programs on Weapons Activities Mission Accomplishment

In previous sections in this chapter, discussions have been provided on work performed at the Laboratory outside of the NNSA mission set. This includes work within the directorates PADSTE, ADTR, ADEP, and the Associate Directorate of Safeguards and Security (ADSS). In general, a synergy exists between the NNSA missions and the non-NNSA missions because the capabilities needed for one enhance the capabilities needed for the other. In the past, these programs have been integrated such that the deliverables associated with each mission have been met as required. The expectation is that this integration will be sustained in the future.

As budgets have flattened, requirements have increased and buying power has decreased, the challenge to maintain facilities in a safe, secure and compliant manner has grown. Funding from traditional sources (RTBF and various institutional support accounts) is currently not adequate to support required infrastructure/facility operations and investments at key Laboratory facilities and meet increased program deliverables/ commitments. Future funding projections show a continued flat budget, so programs must be incentivized to adjust their operating practices to reduce/balance risk, cost and program deliverables.

Currently, non-NNSA programs pay approximately $10M (16%) towards the cost of maintaining NNSA facilities. As previously noted, the Laboratory apportions costs associated with facility maintenance to NNSA and non-NNSA programs based on the percentage of program labor costs. For small programs that use limited space or have limited used of specialized equipment, it is expected that this method is adequate.

However, for larger sized programs, this may not be an adequate method of full cost recovery. Laboratory facilities are aging and operating costs are rising. In addition, significant capital and operating investments are required to upgrade/replace facilities (i.e. address long-term life cycle costs). These increased operating and program requirements demand increased total budgets, and the current method does not adequately fund the requirements. Therefore, efforts are underway to explore additional methods of cost recovery to supplement the maintenance offset currently used.

Future cost recovery is a mechanism to equitably apportion costs to programs and increase total funds available to support infrastructure/facility operations and investments. The basic requirements of the cost recovery model the Laboratory will implement include:

- Costs will not be borne by solely a static 'capability maintenance' program
- Facility operation and waste generation costs must be appropriately distributed to all programs operating within the facility thus driving desired behavior
- The model will be easy to modify as programs move in and out of the facility over time

Other alternatives for cost recovery are being investigated through two pilot programs. One program will utilize a space recharge on facility use at TA-55 and CMR. The other program will apply a recharge for processing of radioactive waste. Discussions are currently underway with senior Laboratory management and with programmatic sponsors. Subject to those approvals, implementation for the two pilots will begin in the second half of FY07. If successful, implementation at other areas of the Laboratory could occur by FY09.

An example of the need for cost recovery is the preservation of National capabilities in Wing 9 of the CMR Building. The hot cell operations in Wing 9 provide a unique capability for many different programs. The cost to maintain this capability is high. Wing 9 may be one facility for which a revised cost recovery methodology may be implemented.

3.6 Facilities and Infrastructure Impact in Support of Information Technology

Secure Information Technology

Without nuclear testing, numerical simulations have become our only means of integrating the many complex processes that take place in a thermonuclear weapon. Large-scale calculations are now our primary tools for estimating the nuclear yield and evaluating the safety of the aging weapons in the stockpile. Aging effects introduce small three-dimensional defects that undermine the symmetries physicists and engineers invoked when they designed new weapons. The continued certification of the safety and reliability of the aging stockpile depends on our ability to perform highly complex, three-dimensional computer simulations. Enormous enhancements in both computational speed and memory are needed. We estimate that assessing the safety and performance of the stockpile will require computational power 100,000 times greater than that required to design new weapons.

The Nicholas C. Metropolis Center for Modeling and Simulation was completed in 2002 with this goal in mind. This facility and its associated information infrastructure—the high-speed networks, workstations, visualization centers, interactive data analysis tools, and collaborative laboratories—support the SSP. With its roots in Accelerated Strategic Computing Initiative (ASCI), the Metropolis Center is enabling us to fulfill our prime stewardship mission: to ensure the safety, reliability, and performance of the nation's nuclear weapons stockpile without nuclear testing.

The Metropolis Center was originally outfitted with the utilities required to operate the first supercomputer installed in the facility, the "Q" machine. Several electrical/mechanical upgrades have been accomplished within the facility in support of more recent supercomputers like Lightning and Roadrunner. Several additional upgrades are being planned to accommodate future supercomputer requirements.

Unclassified Information Technology

The fundamental challenges facing science and national security in upcoming decades revolve around data. From satellite-based sensors to medical imaging devices, automated collection of terascale data is becoming standard, and generation of petascale simulation data is close at hand. Incremental improvements on today's techniques will not be sufficient to process, model or analyze these data sets. In applications from video tracking to biothreat detection, the size and complexity of the data rules out offline storage. Real-time and automated processing is the only acceptable approach, with data collection adaptively coupled to automated information extraction.

Current unclassified supercomputer resources are located within the Laboratory Data Communications Center (LDCC). They include a small version of Roadrunner and a Linux cluster called Coyote. Infrastructure improvements are being planned to keep power and cooling capabilities commensurate with new unclassified supercomputer requirements. These include the installation of a Rotary Uninterruptible Power Supply (RUPS), a new 900-ton chiller, and a pair of chilled water towers.

In addition, the Laboratory is proposing a National User Facility for Information and Data Sciences. The User Facility will provide the computational power, resources, and workforce skills needed to address the large-scale data challenges marking the frontiers of innovation to serve the nation. By leveraging existing expertise and strengths in large-scale computation and classified/sensitive data analysis, the Laboratory will solve significant research and development needs among government agencies, academia, and industry. The Laboratory will distinguish itself as the Laboratory-of-choice in information and data sciences for the DOE Complex and for the nation.

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4.0 The Plan

4.1 Planning Process

Historically, the facility and infrastructure planning process that supports the TYSP has focused on physical assets that support the Laboratory's weapons complex missions and operations. This planning process has been an element of Laboratory strategic planning that includes NNSA and Laboratory requirements, and input from other plans to define facilities needed to accomplish the Laboratory's mission. Laboratory strategic planning processes have been applied to individual programs by individually responsible Laboratory organizations.

Four levels of planning build upon each other to achieve scientific and operational excellence. These levels are represented as mission objectives, permit to operate, operational plans, and supporting plans. The TYSP has also been aligned with Laboratory policies and procedures that provide expectations for operations. Figure 4-1 shows the relationship of the TYSP to other elements of the Laboratory process.

Figure 4-1: The Laboratory's institutional planning

As part of the transition to new Laboratory management under LANS, the institutional planning process that is documented in the TYSP changed dramatically. Laboratory management has committed to transform the TYSP into a guiding facility management tool that integrates infrastructure planning and documentation into a single source document that is the blueprint and baseline for execution of facility management. The Laboratory Director has stated the desire that the TYSP represent an institutional perspective and a strategy document for how to make investments in Laboratory facilities and infrastructure over time. This commitment was strengthened during a management assessment of the TYSP process conducted by LANS as part of the Oversight Plan commitment (LANS Functional Management Assessment, Ten Year Site Planning Process: 19-21 September 2006, FM-06-04-OP). The Functional assessment recommended improvements to TYSP development processes and adoption of the TYSP as a site-wide planning tool.

Drivers for the current upgrade to the institutional planning process at the Laboratory include the following:

- There is a need for improved coordination and institutional participation during development of the TYSP, particularly the coordination of future Laboratory needs with the management of facility and infrastructure footprint and condition
- Consistency should be maintained between the TYSP and the various NNSA and DOE planning documents that constitute the basis for facility and infrastructure planning at the Laboratory; other planning documents

: the RTBF Implementation
he FIRP Implementation Plan,
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managers. As currently
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the Principal Associate
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g; and the Principal Associate
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the Deputy Laboratory
Iajor infrastructure strategy
nt and decision making will
in the IRB; (fed by data
the integrated infrastructure

process). Facility and infrastructure management data developed and coordinated through the IRB will provide a more dynamic source of data than the current TYSP development process in which data are collected and fed back once a year through a call for information. The IRB will ensure consistency between other NNSA and DOE deliverables (FIRP Implementation Plan, RTBF Implementation Plan, ICPP, etc.).

Defined by and implemented through the IRB, the new process will:

- Align strategic plans under development by the nuclear weapons, threat reduction, science, technology and engineering organizations
- Identify and evaluate potential requirements for maximizing the Laboratory's value in the weapons complex under the Complex 2030 scenario
- Be used to identify and respond to requirements for competing activities with other DOE supported science laboratories for non-weapons missions
- Account for and respond to changing budgetary inputs throughout the fiscal year
- Provide assistance in managing circumstances where integrated multi-program Laboratory concerns must be matched with those of the guidance given by NNSA
- Reflect broader planning, going beyond what is documented in the TYSP

4.1.1 Facilities and Infrastructure Overview

Per the Facilities Infrastructure Management System (FIMS) database at the start of FY07, the Laboratory currently consists of approximately 9.5 M GSF of space, of which 8.5 M are in permanent, government owned buildings, .5 M are trailers and temporary structures, and .5 M are in leased facilities. Laboratory facilities include office space, laboratories, storage, and miscellaneous structures.

Laboratory structures are a mix of buildings dating from the 1940's Manhattan Era (1943 to 1946) through major revitalization construction completed at TA-3 in the last decade. The overall square footage of the Laboratory has increased steadily over the past 60+ years; however, there were surges in construction at fundamental transition stages in the Laboratory's history. An outline and timeline of current facilities and infrastructure is given below. Additional details on historic buildings can be reviewed in Section 2.1.6.

The following is an overview of the major historical eras in which the Laboratory has developed and the impacts that shaped the buildings and infrastructure:

Manhattan Project

During the Manhattan Project (1943-1945) hundreds of primarily wooden and metal structures where built to military standards using rapid construction techniques. These new structures supplemented several dozen buildings and infrastructure from the Los Alamos Ranch School, which previously operated at the site.

During the 1950s, the Laboratory relocated key administrative and

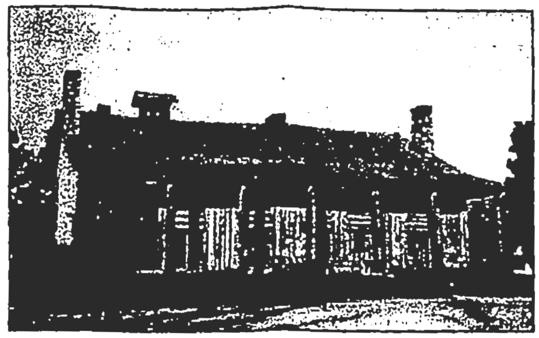


Figure 4-2: Fuller Lodge is one of the few remaining Ranch School buildings which was also utilized during the Manhattan Project

scientific facilities from the townsite to South Mesa. This was a significant event that promoted the development of the existing downtown commercial area and allowed for the future development of TA-3.

A handful of the Manhattan Project laboratory and research buildings remain, primarily located at more remote technical areas on the site. Almost all of these buildings are now designated as historically significant and efforts have been taken to stabilize and/or restore the structures. Unfortunately, some of these designated buildings were destroyed during the Cerro Grande Fire.

There are also a limited number of log homestead buildings and other structures

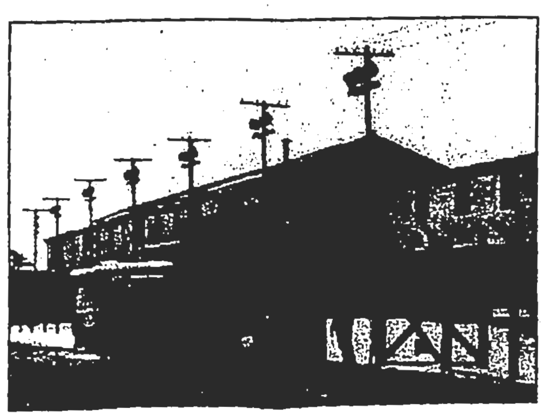


Figure 4-3: Main Tech Area security fence and guard station of the Manhattan Era (circa 1944)

located on the site, which date from the early 1900's. Many of these homestead era buildings were completely burned during the Cerro Grande Fire, while the remaining few are retained and protected as historical structures.

Post War

At the close of World War II, the Los Alamos site was demobilized and many senior scientists returned to their pre-war responsibilities. Work continued at a slower pace, but by the summer of 1946 two additional "Fat Man" type bombs were tested in Operation Crossroads at a location named "Bikini Atoll" in the Marshall Islands. This became a transition time for the Laboratory as it moved from a war effort function to a permanent weapons laboratory. By 1948, new types of fission weapons were being tested during the Sandstone tests. The Laboratory continued to design fission bombs into the 1950s. Work evolved around the military style buildings and infrastructure that had been put in place during the Manhattan Project. However, new buildings and building types were beginning to evolve.

Figure 4-4: Metal structures being constructed at TA-21 DP West, Post War Era (circa 1945)

Cold War

With the detonation of the first hydrogen bomb, "Mike", in 1952 at Eniwetok, the Laboratory entered into the thermonuclear age. It was during this time that the Laboratory expanded and vacated the Manhattan town-site, in favor

Figure 4-5: Administration Building built in 1956 during the Cold War Era

of relocating the complex across Los Alamos Canyon. This is the present site of TA-3, which is still the central core of Laboratory operations. The 1950's saw a significant introduction of new buildings, typically constructed out of cast-in-place concrete and new infrastructure systems were installed. The concrete designs suited the requirements of the time and reflected a heavy industry style that continued for decades. This surge in construction during the 1950's was in response to the early years of the Cold War. New construction became more moderate through the 1960's, at a time when above ground testing was banned by the 1963 Limited Test Ban Treaty. During the 1960's and 1970's, the Laboratory continued to focus on thermonuclear design and the Cold War continued. By the end of the 1960's new complexes were being planned. The construction of the Los Alamos Meson Physics Facility (LAMPF), now renamed LANSCE, was completed in 1972, significantly adding to the Laboratory's square footage and infrastructure. The facility is located on the lower south rim of Los Alamos Canyon. The facility is now over 30 years old. At about the same time the TA-55 plutonium facility was completed to replace the aging TA-21 facilities.

In the early 1980's, another construction surge occurred, which is associated with an era often termed the "Second Cold War" (1980 to 1985). Buildings retained their concrete theme, but more esthetics were pursued in style and form. Existing infrastructure was becoming dated which required some revitalization and expansion. This surge receded until the effective end of the Cold War, which officially concluded in 1989. Underground testing also declined steadily until all explosive nuclear testing ended in 1992, although the Comprehensive Test Ban Treaty was not ratified.

Stewardship and Non-Proliferation

Over the past decade, the Laboratory has transitioned into new missions, while maintaining nuclear weapons design and research as the central focus. National security attentions in the areas of Nuclear Stockpile Stewardship, Threat Reduction, and Nuclear Non-Proliferation have expanded as well as work in basic science. This has been reflected in the construction of new facilities in recent years. At TA-3 new buildings have replaced aging or inefficient structures and new construction at TA-55 has been required for operations. New building styles have been introduced. Metal frame with stucco or metal finishes, in a contemporary vein are more representative. The NSSB introduced a mid-rise window-wall design that is unique to the complex. Many of the more recent construction projects exhibit building technologies that employs steel superstructures and light-gage metal framing.

Leasing also makes up an important part of the Laboratory's overall property profile. As a significant participant in the

Figure 4-6: The MST office building is an example of steel frame and stucco construction that is more representative of the current Stewardship Era

local lease market, the Laboratory currently maintains annual leases that over 500,000 square feet. The leases are predominantly office space, located in Los Alamos County. Leasing has been a relatively steady element in meeting Laboratory space requirements over the past decade. For more detailed information, please refer to Section 4.1.3.2., Leased Space.

In addition, the Laboratory does grant some property leases to other entities, including the Research Park site at TA-3 and the Icon Facility at TA-46.

4.1.2 Real Property Asset Management

The Laboratory's approach to effective property management is based on:

- Comprehensive and accurate property data bases

- Regularly scheduled and detailed facility assessment reporting
- Space assignments based on utilization factors
- Cost-Benefit and Life-Cycle analysis on proposed projects
- Management organization to support highest and best use strategies

Property Data

The Infrastructure Planning-Space Management and Facility Planning (IP-SMFP) Group manages the Laboratory's real property databases which include: Active Facility Data Collection System (AFDCS), FIMS, FATMAN (Facility Management System) and Archibus (the computer-based facility management program). The Laboratory's real property databases are updated routinely and resources are currently being applied to address data integrity and data integration between databases.

IP-SMFP uses the real property databases to report on and assess baseline facility information, condition assessments, DM, and other property issues. In addition, the Infrastructure Planning-Site Planning and Project Initiation (IP-SPPI) Group uses a Geographic Information System (GIS) to link infrastructure data with geographic information, to map and analyze current and proposed conditions.

Space Assignments

The allocation of space is conducted through IP-SMFP. Directorates are allocated space, based on facility occupancies, which in turn is managed by individual ADs. Space utilization is reported quarterly and used by management to assess against space request needs. Presently, the Laboratory is operating at approximately a 90% utilization rate. More detail on utilization can be found in Section 4.1.2.2.

Cost-Benefit and Life-Cycle Analysis

Proposed projects for renovation, new construction and/or infrastructure upgrades are reviewed for cost/benefit and life cycle analysis. IP-SPPI has produced document studies concerning the economics of leasing versed constructing facilities. The Facility Management and Engineering-Design Engineering Services Group (FME-DES) produced a study on the life-cycle cost of various structural building types. Such studies are at times conducted internally; however, it is normally a function of the design process on larger construction projects. The level of detail of the analysis is normally provided by the architectural/engineering consultant and is subject to the specific contract terms and project conditions. Project managers have some discretion in effecting material/equipment selection. In a Design-Build (DB) contract, more latitude is available to the DB contract team and enforcing high quality life-cycle decisions related to building materials and equipment must become contractual conditions.

4.1.2.1 Condition

Condition Assessment Survey

The Laboratory relies on the CAS process to assess the condition of physical facilities, systems, and supporting infrastructure. The program is deficiency based, meaning that inspections and associated interviews with facility management staff and cognizant system engineers focus on deficient systems, recapitalization needs (Replacement-In-Kind (RIK)), and modernization requirements. The process supports the mission(s) of each facility asset and supporting infrastructure at the site. Before a request for funding is submitted, deficiencies are documented and aggregated into project-level definitions and reported to the FIRP Program Manager and the responsible Facility Operations Director (FOD) for validation. This process provides a suitable basis for asset-management decisions for both mission essential and balance of plant facilities.

Condition Assessment Survey Process and Inspection Frequency

The Laboratory has a limited in-house CAS inspection capability. Qualified inspectors may be subcontracted to perform inspections. When scheduled, trained inspectors in the primary technical disciplines (mechanical, electrical, architectural, and civil/structural) will conduct field assessments of fixed assets. These non-intrusive assessments will capture visually evident deficiencies.

A systematic and efficient process for CAS inspections has been developed at the Laboratory. Inspections are coordinated through the responsible FOD and planning staff. CAS inspectors interview the responsible maintenance manager, system engineer, and other facility management staff to collect facility and system condition data. These interviews capture the "corporate knowledge" (such as maintenance, recapitalization, and modernization needs) that otherwise would not be evident to the inspector. Results from these interviews are entered into the CAIS2000 database.

In FY05, CAS records for facilities were assessed to determine which deficiencies had been corrected. Utility systems were also re-inspected at this time. DOE Order 430.1B requires that all real property condition assessments be performed at least once within a 5-year period. All MC assets were -inspected again in FY04 for new DM. Inspection of MC facilities is planned for FY07 through FY09. MD and non-mission dependent (NMD) facilities are planned to be inspected in FY08 through FY09 pending identification of funding.

Status of the CAS Process

In December, 2004, a CAS procedure was issued that implements the DOE Order 433.1, Maintenance Management Program for DOE Nuclear Facilities, and DOE Order 430.1B, Real Property Management, requirements for assessing the physical condition of Laboratory facilities. This process incorporates the requirements of the CAS Program and the Zone Inspection Program. These programs ensure that the material condition of Laboratory facilities and assets are maintained in a manner that supports safe and reliable plant operations. The procedure for this process will be implemented for all future inspections of DM. In addition, a CAS inspector training and qualification process has been developed to ensure the skill level of inspectors meets expectations. Training has also been provided to facility management and maintenance staff on the new web-based version of CAIS to improve the accessibility of CAIS data.

CAIS Data Management and FIMS Interface

The Laboratory's CAS data resides in the DOE Condition Assessment Information System (CAIS) database. Before being entered into the CAIS database, CAS inspection data must undergo review and validation. Inspectors perform a peer review during each inspection. After draft entry into the database, the Laboratory CAS Program Administrator reviews the inspection data. In addition, the responsible Group Leader performs an independent review and is the data approval authority.

Each year near the end of the Fiscal Year, a cost and status snapshot is made of all the CAIS records as part of a required annual upload of DM totals for all real property assets listed in the DOE FIMS. This upload of data is validated by comparing FIMS reports and the reports from the CAIS database to ensure that totals for DM match between the databases. Additionally, the DM totals for some assets are manually checked between the FIMS and CAIS databases to ensure the integrity of the upload.

The Laboratory uses CAIS and FIMS data to prioritize facilities for maintenance funding and reinvestment in support of mission priorities. For example, FCI data is provided to the FODs and maintenance managers as part of annual maintenance planning and budgeting.

FY07 CAS Summary

The DOE realignment of MC facilities includes 9 MC facilities with a poor or failed condition. These facilities are as follows:

Poor Condition

- 03-0066, Sigma Building
- 16-0410, Assembly Building
- 53-0003, LANSCE Accelerator Building
- 53-0007, LANSCE/WNR Building

Failed Condition

- 08-0023, Betatron Bldg
- 09-0033, Lab Bldg
- 09-0048, Process Lab
- 40-0005, Firing Point
- 53-0030, Neutron Scattering

LANSCE facilities (53-0003 and 53-0007) are targeted for refurbishment and upgrade funding as part of the LANSCE refurbishment project (LANSCE-R) discussed in Attachment A-1, funded LI projects; although funding for the LANSCE-R project has not been fully identified at this time. Other poor and failed condition facilities may be identified for refurbishment funding depending on the scope and longevity of their weapons program missions. Facilities identified for refurbishment funding will be candidates for DM buydown and will be inspected for DM growth. Facilities not identified for refurbishment funding will be identified for potential excess through the 2M GSF footprint reduction initiative.

In addition, DM data for two facilities have been validated by inspection. As anticipated, new DM was identified since these facilities had not been inspected for approximately 3 years. The DM data provided in Attachment F is based on aging data that should be considered increasingly uncertain as time passes between inspections.

Similar to previous year submittals, the FY08 TYSP Guidance mandates use of inflation factors to project growth in the DM backlog and RPV from year to year in Attachment F. This model and inflation factors should only be considered an estimate of the dollar value of DM of all Laboratory facilities. A number of high priority MC and MD facilities will be inspected during FY07. Routine inspections provide an additional means of maintaining an accurate definition of facility condition and forecast of DM growth.

A Performance Evaluation Plan for the Laboratory includes a measure to improve the FCI for MC and MD facilities by 10% during FY07 over the end of FY06 values. The Laboratory is currently on target to meet this plan.

4.1.2.2. Utilization

Figure 4-7 shows a breakdown of space at the Laboratory by current use. Table 4-1, extracted from the FIMS database, summarizes the percentage of square foot occupancy by building type using several widely applied metrics.

Laboratory space management encompasses all real property owned and/or leased by LANS on behalf of DOE/NNSA. The Infrastructure Planning Office through IP-SMFP manages the Laboratory's space as real property assets to ensure maximum utilization in support of the Laboratory's mission. The Integrated Space Management Program (ISMP) establishes requirements that are implemented for managing space, administering space allocations, managing the occupancy and vacancy of space, managing space changes, excessing space, and reporting space utilization.

The Associate Director of Infrastructure and Site Services (ADISS) is the institutional landlord for all non-nuclear facility space. The Associate Director of Nuclear High Hazard Operations (ADNHHO) is the landlord for Nuclear facilities. IP-SMFP is responsible on behalf of ADISS for overall site

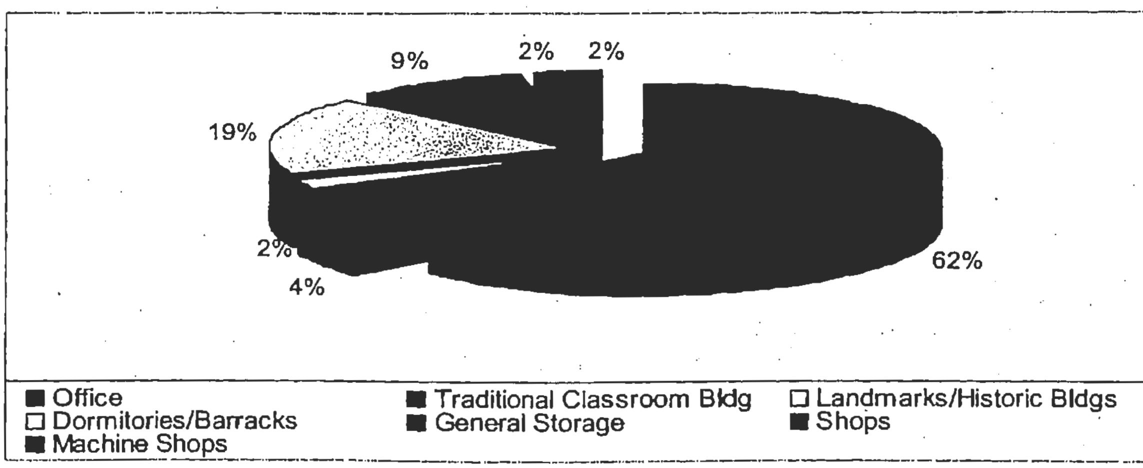


Figure 4-7: Percent of total space by use

Table 4-1: Asset Utilization Index (AUI) (December 2007)

Measures	AUI	FRPC Guidelines	OECM Guidelines
Office	81.41%	70-95%	95%
Laboratory	91.85%	60-85%	90%
Warehouse	97.73%	50-85%	89%
Medical	100.00%	70-95%	90%
All Other Categories	97.47%	N/A	N/A

management. Other Directorates manage the space within their allocation and ensure that overall space management goals and objectives are met at the institutional level.

Additionally, IP-SMFP monitors space management actions across the Laboratory, serves as the Laboratory point of contact for institutional space management issues and works to integrate institutional space issues across associate directorates. IP-SMFP reviews the space allocation for each directorate. Target allocations are developed based on Laboratory space standards, best practices in space management, budget and programmatic objectives and other established criteria. The Laboratory utilizes established General Services Administration (GSA) standards for office and office support spaces, including the method for evaluating the total number of employees housed by each directorate.

Once space is allocated, each associate directorate is responsible for the ongoing management of their space allocation. All space activities, including assignments and/or reassignments, changes in space use, adding new space, excessing space, and siting structures are managed by the directorate and coordinated with IP-SMFP.

The Laboratory, through the IP-SMFP and IP-SPPI groups is developing a comprehensive set of best practices for asset management of the site physical infrastructure. Sources of information and guidance to be used for developing an integrated set of best practices include:

- Executive Order 13327, *Federal Real Property Asset Management*
- President's Management Agenda (PMA), Federal Real Property Asset Management Initiative
- FRPC Data Reporting Requirements
- DOE Order 430.1B, *Real Property Asset Management* (and NA-1 memorandum of March 22, 2004, Implementation of DOE O 430.1B RPAM within the NNSA)
- Defense Programs memorandum of July 18, 2005; *Maintenance of the NNSA Facilities and Infrastructure and Attachment* "NA-10 Maintenance Program Expectations"

The Laboratory is also developing a longer term approach for achieving a sustainable infrastructure as advocated in the National Research Council report, "Intelligent Sustainment and Renewal of Department of Energy Facilities and Infrastructure". In particular, the Laboratory is utilizing a resource allocation approach for recapitalization and sustainment of facilities that balances available funding against required funding for good facility management and the value that the facility brings to ongoing operations. In this way, the Laboratory hopes to achieve a physical infrastructure that can be maintained within projected resources well into the future.

4.1.2.3 Land Use Planning and Management

Land use planning and management is a process based on the Laboratory-wide Comprehensive Site Plan (CSP) from which more detailed Area Development Plans (ADP) and master plans are developed. The CSP is a technical document presenting land use issues, capabilities, and site opportunities and limitations upon which future land use decisions are made. Detailed background information regarding the site is included, such as geographic description, topography, soils, geological, cultural resources, natural resources, facilities, and transportation. The most current CSP was developed in 2000 and subsequently updated in 2001 after the Cerro Grande fire. Future revisions and updates will occur periodically depending upon significant changes in the Laboratory's mission, site conditions, or public policy.

The existing land use map depicts the current status of land use at the Laboratory. The future land use map depicts major land use changes proposed for various locations where growth is anticipated. Proposed construction projects are evaluated against this land use map and follow a formal siting process. Most site issues are resolved through the Permits and Requirements Identification (PR-ID) process that involves both planning and NEPA review. Generally, major land use changes involve ongoing efforts to consolidate Nuclear Materials R&D areas and the expansion of Experimental Science. In addition, the overall site was reduced by the recent transfer of "Reserve" land to Los Alamos County and San Ildefonso Pueblo.

The following 11 land use categories describe the activities at the Laboratory.

Administration—Includes space for Laboratory Management and direct management support as well as local NNSA Offices

Service/Support—Nonprogrammatic technical expertise, support, and services for Laboratory management and employees

Experimental Science—Applied research and development activities tied to major programs

High-Explosives R&D—Research and development of new explosive materials. This land is isolated for security and safety

High-Explosives Testing—Large, isolated, exclusive-use areas required to maintain safety and environmental compliance during testing of newly developed explosive materials and new uses for existing materials. This land also includes exclusion/buffer areas

Nuclear Materials R&D—Isolated, secured areas for conducting research and development involving nuclear materials. This land use includes security and radiation hazard buffer zones. It does not include waste disposal sites

Physical/Technical Support—Includes roads, parking lots, and associated maintenance facilities; infrastructure such as communications and utilities; facility maintenance shops; and maintenance equipment storage. This land use is generally free from chemical, radiological, or explosives hazards

Public/Corporate Interface—Provides link with the general public and other outside entities conducting business at the Laboratory, including technology transfer activities

Theoretical/Computational Science—Interdisciplinary activities involving mathematical and computational research and related support activities

Waste Management—Provides for activities related to the handling, treatment, and disposal of all generated waste products, including solid, liquid, and hazardous materials (chemical, radiological, and explosive)

Reserve—Areas that are not otherwise included in one of the previous categories. It may include environmental core and buffer areas, vacant land, and proposed land transfer areas

Site-wide land use by amount of acreage is shown in Table 4-2 and in the accompanying site maps of Existing and Future Land Use.

A comprehensive summary of environmental remediation, stewardship, and waste management activities at the Laboratory in the years covered under the TYSP planning horizon, is shown in Table 4-5.

Table 4-2: Site-wide Land Use

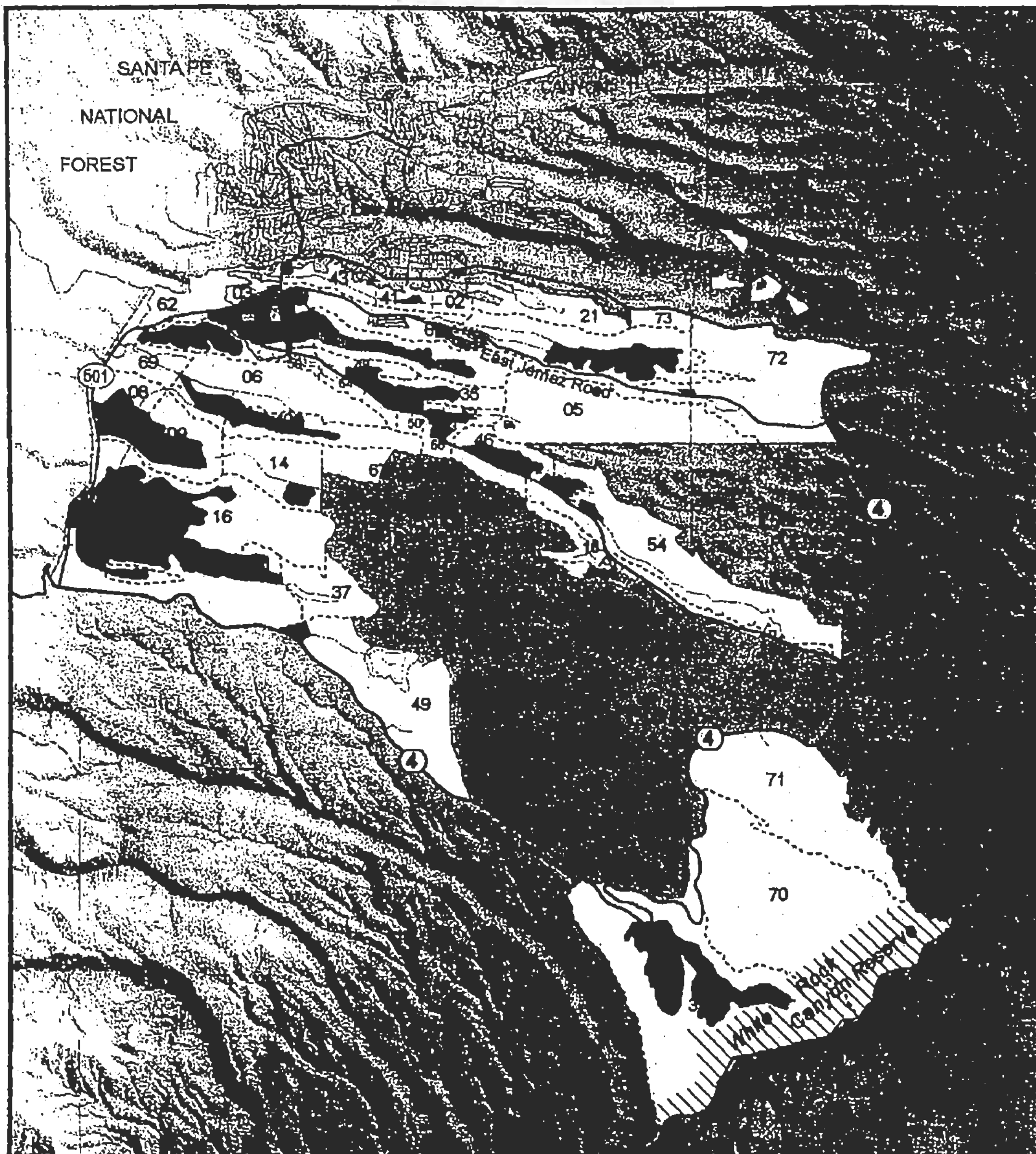
Existing Land Use		Future Land Use	
Land Use Category	**Acreage**	**Land Use Category**	**Acreage**
Administration	23	Administration	16
Service/Support	259	Service/Support	183
Experimental Science	659	Experimental Science	1127
High-Explosives R&D	1,311	High-Explosives R&D	1297
High-Explosives Testing	7,202	High-Explosives Testing	7,202
Nuclear Materials R&D	61	Nuclear Materials R&D	94
Physical/Technical Support	243	Physical/Technical Support	246
Public/Corporate Interface	62	Public/Corporate Interface	68
Theoretical/Computational Science	16	Theoretical/Computational Science	17
Waste Management	226	Waste Management	40
Reserve	16,450	Reserve	14,412
Total	**26,512**	**Total**	**24,702**

Includes Rendija Canyon tract and other leased parcels.

Existing Land Use

Legend

- Administration
- Service/Support
- Experimental Science
- High Explosive R&D
- High Explosive Testing
- Nuclear Materials R&D
- Physical/Technical Support
- Public/Corporate Interface
- Theoretical/Computational Science
- Waste Management
- Reserve



Future Land Use

0 4,000 8,000 16,000 Feet

Legend

- Administration
- Service/Support
- Experimental Science
- High Explosive R&D
- High Explosive Testing
- Nuclear Materials R&D
- Physical/Technical Support
- Public/Corporate Interface
- Theoretical/ Computational Science
- Waste Management
- Reserve

Land Use and Environmental Programs

Legacy environmental contamination impacts land use planning through the capability relocation, D&D, and remediation projects which are necessary to bring contaminated sites into compliance with environmental requirements. Land use is also affected through long-term land-use restrictions that will be placed on contaminated sites where it will not be possible or cost effective to totally remove contamination. The map of Potential Release Sites (PRS) indicates the scope of legacy and ongoing contamination issues that impact land use.

Remediation of Contaminated Sites

Remediation, as prescribed in the Consent Order requires investigation, corrective measures evaluation, and final corrective measure implementation for each PRS. Each site (i.e. MDA, SWMU and AOC) has a specific schedule for each phase of implementation.

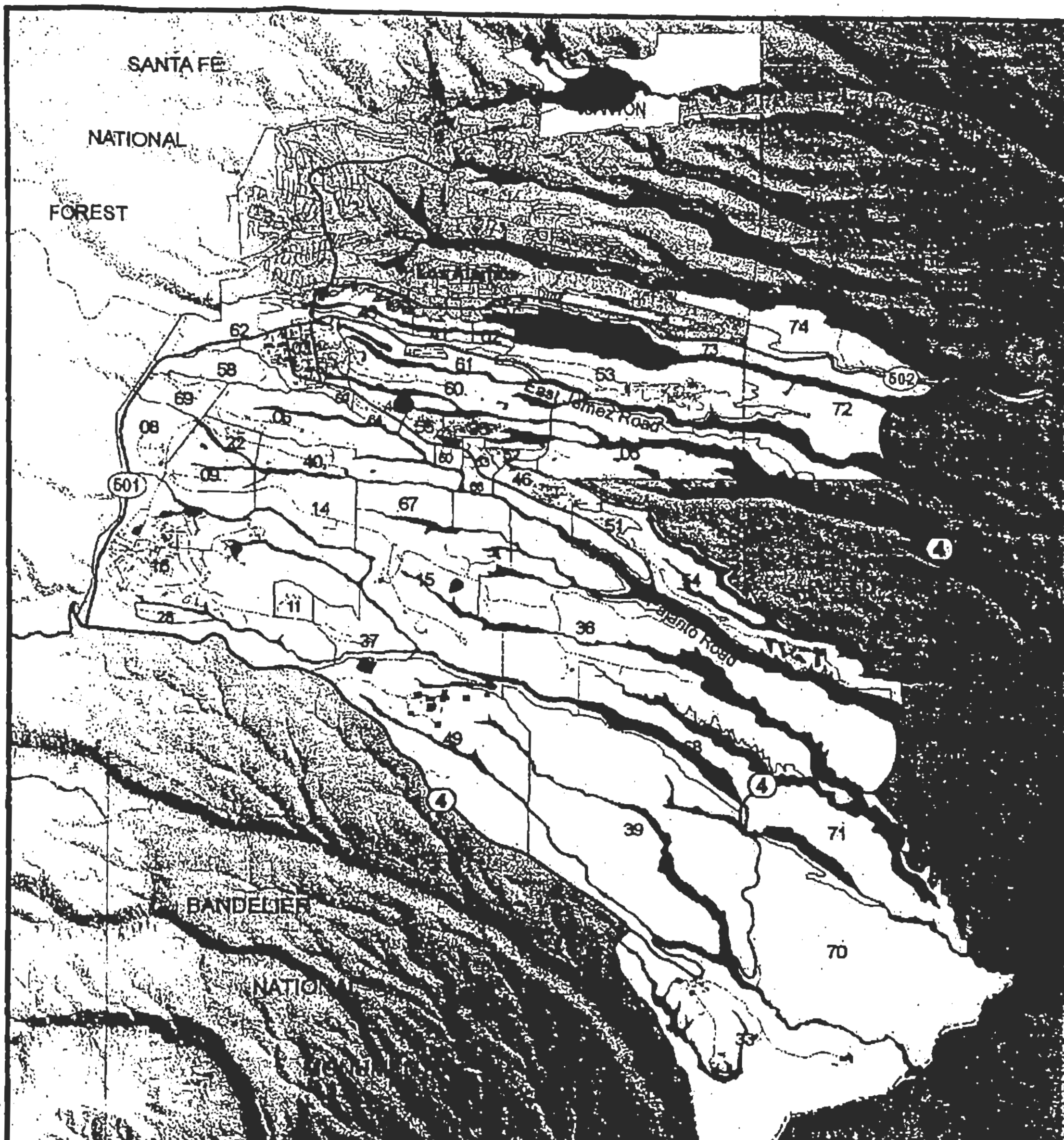
The initial phase of activities covered by the Consent Order is investigation. The major investigation activities include:

- Investigation of canyons within six major watersheds at and around the Laboratory
- Investigation of mesa-top MDAs at TAs-21, 49, 50, and 54
- Completion of ongoing investigations and cleanups begun under the Module VIII section of the Laboratory's RCRA permit
- Investigation of 28 watershed aggregate areas, including all the SWMUs and AOCs contained within them
- Implementation of a comprehensive site-wide groundwater monitoring program

Based on the results of investigations, NMED may require corrective measures to be implemented at a site. Some of the required corrective measures studies were initiated under HSWA Module VIII of the Laboratory's RCRA permit (e.g., TA-54 MDAs G and L). The NMED will determine which other sites require CMEs based on site-specific investigation results.

The CME phase includes identification and evaluation of alternate corrective measures and recommendation of a preferred alternate. This is accomplished through a compliance-driven technical analysis and reporting process with the NMED. Based on the results of CMEs, NMED will propose a corrective measure for a site and, after consideration of public comments, will select the final corrective measure. The selected corrective measure and associated schedule will then become an enforceable part of the Consent Order. Once a corrective measure has been selected, the Laboratory will be responsible for implementing the measure as part of a Corrective Measure Implementation (CMI) process.

The following inset summarizes status and plans for remediation of MDA-G under the Consent Order process.



Potential Release Sites

Legend

——— Technical Area Boundary

⬬ Potential Release Sites and Areas of Concern

Source: Potential Release Sites; Los Alamos National Laboratory, Environment and Remediation Support Services Division, GIS/Geotechnical Services Group, EP2006-0568; 1:2,500 Scale Data; 11 January 2007.

Material Disposal Area G

MDA G is located on Mesita del Buey between Pajarito Canyon to the south and Cañada del Buey to the north. Portions of MDA G began operation in 1957. DOE initially authorized MDA G for the disposal of LLW and certain radioactively contaminated infectious waste, asbestos-contaminated material, and PCBs, and for the temporary placement of TRU waste. Current disposal activities at Area G include only DOE-authorized disposal of LLW and EPA-authorized disposal of PCB waste. RCRA interim status mixed low level and TRU waste are stored in surface structures (domes) erected over many of the subsurface SWMUs. Nine inactive subsurface units (SWMUs) are located within TA-54, Area G, and no longer receive waste.

Site characterization activities were completed in 2005 and an Investigation Report submitted to NMED in September 2005. The NMED approved the Investigation Report but requested modifications and additional characterization boreholes. The results of the human health and ecological assessments determined that MDA G poses no unacceptable risk to human health and the environment. The Corrective Measures Evaluation report, which evaluates alternatives for the closure of the site, will include a recommendation for the final remedy for MDA G. NMED will determine the final remedy. The Consent Order requires that the corrective measure be completed and the MDA G Remedy Completion Report be submitted by 8/31/15.

A total of 209 buildings and structures (approximately 309,667 square feet) require D&D activities to meet closure. Twenty-two of these buildings or structures (approximately 234,414 square feet) will require closure under RCRA and closure can not be initiated until the TRU Waste Disposition Project has removed its waste and relinquished the building/structure to EP-CAP. Of the twelve dome structures requiring RCRA closure, TRU Waste Disposition Project plans to relinquish three structures in FY08, three structures in FY09, four structures in FY10, and two structures in FY11. *In addition, Pit 9, Pit 29, Trenches A through D, and Shafts 200 through 233 received TRU waste that must be retrieved by TRU Waste Disposition Project prior to 2011 in order to complete D&D and implement the final remedy at MDA G.*

In many cases remediation requires that sites be de-inventoried, de-activated, and buildings be removed to provide sufficient access to the contaminated subsurface. The legacy waste disposition project has taken responsibility for de-inventorying and disposition of all TRU waste generated prior to FY99. The DOE EM D&D Program has recognized that process-contaminated facilities at TA-21 and TA-54 inhibit completion of corrective actions under the Consent Order and has taken responsibility for funding D&D of these facilities. Initial funding of $17.7M is identified in FY07 (subject to continuing resolution), but DOE EM HQ has not identified funding targets for subsequent years. The NNSA landlord is responsible for de-inventorying and de-activating all other facilities, including de-inventorying ~ 3,300 drums of post-FY98 TRU waste stored at Area G. Deactivation includes removal of all equipment from facilities and regulatory closure of RCRA-permitted areas within the facilities. The NNSA landlord is responsible for D&D of non-process-contaminated facilities that interfere with remediation. The specific NNSA program responsible for funding these activities is still to be determined. Attachment E-1 lists all facilities requiring D&D and specifically identifies those that require D&D and RCRA closure to support Consent Order mandated remediation. Most of these facilities are located at TA-21 and TA-54.

Remediation of Groundwater

The Laboratory's Water Stewardship Program addresses regulatory requirements for comprehensive groundwater monitoring at the Laboratory. The Consent Order specifically requires the installation and use of an extensive network of groundwater monitoring wells as part of the investigation and corrective action phases. The regulatory requirements for this program are identified in the Consent Order and DOE Order 450.1, Environmental Protection Program, and are as follows:

- Preparation of an Interim Site-Wide Groundwater Monitoring Plan
- Monitoring and sampling of all Laboratory canyons
- Installation of additional groundwater monitoring wells
- Plugging and abandonment of wells no longer needed
- Procedural methods for sampling and analysis
- Specific compliance deliverable schedules

The NMED has notified the Laboratory and DOE NNSA that additional regional groundwater wells may be required in the future. In addition, groundwater remediation projects, previously unanticipated, may also be required. Until the Consent Order is completed, this scope (including groundwater model development) will be proposed to EM for funding.

Based on the best available information, the currently projected funding profile (in thousands) for the overall Water Stewardship Program is provided in Table 4-3. The DOE EM costs for this program are also included in the Environmental Restoration discussion.

Long-Term Stewardship

The Laboratory currently conducts environmental sampling and monitoring through two regulatory programs, the Remediation Program under the Consent Order, and the environmental surveillance program under DOE Order 231.1. Under the Consent Order, the remediation program collects environmental samples to investigate whether hazardous have been released from SWMUs or AOCs across the Laboratory and if so, remediates the sites to cleanup levels appropriate for future land use. In addition, the Consent Order requires the installation and use of an extensive network of groundwater monitoring wells as part of the investigation and corrective action phases of implementation. Environmental sampling under DOE

Table 4-3: Projected Funding for Groundwater Protection Program ($K)

Funding Source	FY04	FY05	FY06	FY07	FY08-15
RTBF/Operations of Facilities	10,000	12,800	3,200	N/A	N/A
Institutional (G&A)	1,400	1,400	2,100	2,100	16,800
DOE EM	3,607	20,776	26,961	39,959	74,213
Groundwater Remediation (EM)	N/A	N/A	N/A	N/A	226,100
TOTAL	15,007	34,976	32,261	42,059	317,113

Order 231.1 includes on-going monitoring of air, water, soils, sediments, foodstuffs, and biota to ensure that current Laboratory operations remain in compliance with environmental laws and regulations. After completion of corrective action activities and after completion of the Consent Order, there will be a need for long-term surveillance of constituents left in place after final remediation. Environmental surveillance will be required to ensure that final remedies remain effective and to ensure that appropriate maintenance activities occur to maintain the effectiveness of final remedies. Required environmental sampling of residual contaminants will be incorporated into the on-going sampling under DOE Order 231.1 of Laboratory operations and will be part of a LTS program.

In accordance with DOE Order 430.1B, LTS includes the physical and institutional controls and other mechanisms needed to ensure protection of people and the environment where DOE (including NNSA) has completed disposition or cleanup (e.g., landfill closures, remedial actions, removal actions, and facility stabilization). This concept includes land-use controls, monitoring, maintenance, and information management. (DOE Order 430.1B, Real Property Asset Management).

The Consent Order includes specific technical requirements and schedules for completing legacy contamination investigations and corrective actions at the Laboratory by December 2015. The cleanup of legacy sites by 2015 is funded through DOE/EM. ADEP has planned an out-year budget baseline of approximately \$ 106 M for LTS activities for the period 2016 – 2070 after the DOE EM mission and Consent Order are completed. This scope will be proposed to NNSA for funding. LTS activities are planned for field surveillance and information management maintenance. Information Management maintenance includes data, GIS and records documentation and reporting for completed sites. Surveillance and Maintenance (S&M) field activities include surface and subsurface monitoring for all remediated sites where the remedy leaves significant residual contamination in place. S&M and Information Management continue until 2070, per DOE guidance. Potential future costs, that are not yet included in the 2016 – 2070 LTS baseline, are costs for planning and implementation of maintenance activities for remedial solutions, for example, a landfill cap, or costs of major actions identified on re-evaluation of the effectiveness of final remedies.

Many contaminated sites will be remediated to industrial use standards. Industrial use is the appropriate future land use for most of the Laboratory as it continues its mission operations. DOE controls access to and use of the Laboratory by implementing institutional and physical controls to minimize the potential for human exposure to contamination. In the event that DOE transfers property to another entity, appropriate deed and use restrictions will be incorporated into the transfer to ensure that specific institutional controls remain in place. The remediation program has developed a summary document of the current and projected future land use of its legacy waste sites by watershed (*Summary of Watersheds Potentially Impacted by the Los Alamos National Laboratory*, July 2006, LA-UR-06-5387).

Remediation of Deferred Sites (after 2015)

Many areas with legacy contamination cannot be remediated by 2015 because they will continue to be operational. These areas are summarized in Table 4-4. They include the Laboratory's active firing sites, the existing system of buried radioactive liquid waste collection lines, as well as many sanitary waste lines that were contaminated during past operation. These sites will remain under NNSA operational control until they become inactive, at which time they will be investigated and, if appropriate, remediated. Approximately 16 firing sites and numerous drainlines are anticipated to remain in use beyond 2015. The responsibility for investigation and remediation of these sites will be transferred to the site landlord (NNSA). Costs have been estimated—$64M for firing sites and $80M for drainlines—but are not yet funded.

Environmental Surveillance and Monitoring

Under DOE Order 231.1, Environmental, Safety, and Health Reporting, the Laboratory prepares an annual ESR summarizing the results of environmental monitoring of air, surface water, groundwater, sediments, soils, biota, and foodstuffs. The ESR summarizes results of the on-site, site perimeter and regional sampling efforts of the Laboratory's Environmental Surveillance and Monitoring program and reports on the previous year's sampling results as well as multi-year trends. Results are discussed in the context of statistical significance and compliance with applicable media-specific environmental protection regulatory requirements.

The Laboratory's Environmental Surveillance and Monitoring program has recently become more narrowly focused on activities that are specifically intended

Table 4-4: Deferred Areas and Related Potential Contamination Release Sites

TA	Description	PRS IDs
TA-06	Firing sites	06-003(a)
	Building	C-06-019
TA-07	Firing sites	07-001(c),07-001(d)
TA-11	Burn site	11-002
	Air gun Impact Area	11-003(b)
	Material disposal area (MDA S)	11-009
	Buildings	11-012(c), 11-012(d), C-11-001
	Firing sites	11-001(a), 11-001(b), 11-004(a), 11-004(b), 11-004(c), 11-004(d), 11-004(e), 11-004(f)
TA-14	Firing sites	14-001(f), 14-002(a), 14-002(b), 14-002(e)
TA-15	Firing sites	15-003, 15-004(a), 15-004(g), 15-006(a), 15-006(b), 15-006(c), 15-006(d), 15-008(f)
TA-36	Firing sites	36-004(a), 36-004(b), 36-004(d), 36-004(e)
TA-39	Firing sites	39-004(a), 39-004(b), 39-004(e)
TA-40	Firing sites	40-006(a), 40-006(b), 40-006(c)
TA-49	Soil contamination	49-008(a), 49-008(b), 49-008(c)

to ensure compliance with new regulatory drivers like the Consent Order and the FFCA/AO. The Consent Order is the principle regulatory driver for groundwater surveillance and monitoring under the implementation of the Laboratory's Groundwater Protection Programs surveillance and monitoring of surface water (particularly storm water) is now dictated by the regulatory requirements of the FFCA/AO. As a result, the scope and costs associated with these aspects of the Laboratory's surveillance and monitoring activities will be directly influenced by the direction and future requirements of these compliance drivers. The Laboratory's surveillance and monitoring is funded through the institution's General and Administrative (G&A) funds. FY07 funding for surveillance and monitoring without surface water costs is approximately $2.7 M.

Waste Facilities

NNSA is responsible for funding all waste facilities at the Laboratory per a 1998 agreement that transferred this mission from EM to NNSA. The Laboratory waste streams are processed and dispositioned by facilities designed to address each stream. Many of these facilities must be relocated from the parts of TA-54 Areas L and G which are being closed under the Consent Order, or are beyond their design lives and require replacement. Consequently, all Laboratory waste facilities require relocation, replacement or major upgrades during the next ten years.

Transuranic Waste Facilities

The WCRR TRU waste repackaging facility and the RANT TRU waste shipping facility are both undergoing RTBF-funded upgrades to be capable of limited term Hazard Category II nuclear facility operations. This is essential because there are no other facilities at the Laboratory capable of processing the 325 drums of above ground, high-activity (greater than 56 plutonium equivalent curies (PE-Ci)) TRU waste for WIPP. When these above ground drums have been successfully processed, the Laboratory will request operating authority to use these facilities to process the 721 below-ground high-activity drums in Trenches A-D at Area G.

TA-54, Area G contains 14 sprung-structure domes that store TRU waste awaiting shipment to WIPP. The fabric exterior of these domes is near or beyond its design life and may have to be replaced. Additional waste is stored below ground above Pit 29, in Pit 9, in Trenches A-D, and in numbered shafts. Area G is a Hazard Category II nuclear facility.

The Decontamination, Volume-Reduction System is an Area G radiological facility designed to repackage large Fiberglass Reinforced Plywood boxes of TRU waste into WIPP-compliant 55-gallon drums and Standard Waste Boxes. This facility will be upgraded to a Hazard Category III nuclear facility so that ~200 higher activity legacy and newly generated (NNSA-owned) TRU boxes can be repackaged.

CMR Wing 9 hot-cells represent a unique capability within the NWC for remote handling activities. The Laboratory is proposing to modify the CMR Wing 9 hot-cells so that the 33 shafts of Remote-Handled TRU waste now stored below ground at Area G can be processed for disposal. These shafts contain one gallon paint cans of TRU waste with surface doses as high as 1000 Rem/hour contact. One of these shafts contains the Los Alamos Molten Plutonium Reactor

Experiment (LAMPRE) which is encased in concrete. The CMR scope of work will be to receive, process, characterize, package, and load the waste into a WIPP shipping container. The CMR will receive a shaft and load horizontally into the hot cell through a ten inch hole in the wall of the cell. The shaft will be cut into two to three foot sections and the waste will be spread and checked for prohibited items. Next, the waste will be characterized and placed into 55 gallon drums until the radiation level of 1000R/hr is reached or the drum is full. The 55 gallon drums will load into a 72-B canister. The canister will be sealed and tested. The canister will be loaded into a 72B cask and certified for shipment to WIPP. The waste will be processed in the last half of FY09 and FY10. CMR estimated modification costs are $5.3 M and will be funded by the EM TRU waste disposition project.

Between FY07 and FY11 the EM TRU Waste Disposition Project will process both legacy and newly generated (post-1998) TRU waste for WIPP. After 2011, the EM project will no longer accept TRU from on-going operations. At this time a new TRU waste disposition capability, the Defense TRU Waste Consolidation Project will have been completed. This will establish a new TRU waste processing capability near the TA-55 and TA-50 waste generating operations. This facility will be designed to process the 800-1000 drums of TRU waste expected from NNSA and other mission operations. It will also be capable of size-reducing and repackaging oversized TRU objects. This facility has received CD-0 approval and is at the 60% conceptual design point.

Low-Level Waste Facilities

Low-Level Waste (LLW) is now disposed in pits and shafts at TA-54, Area G. Once the MDA-G region of Area G is closed, future LLW will be disposed in Zone-4 of Area G. The LLW compactor and radioactive waste characterization and verification facilities currently located at Area G will be relocated to a portion of Area L that is not contaminated and will not be subject to remediation and closure under the Consent Order.

Hazardous and Mixed Low-Level Waste Facilities

These wastes are primarily shipped directly from waste generator less than 90 day storage areas. When they must be consolidated or otherwise processed prior to shipping, they are brought to facilities at TA-54, Area L. This capability will be moved from their present location which must be closed under the Consent Order to another region of Area L.

Radioactive Liquid Waste Treatment Facility (RLWTF) Upgrade

This project will improve the RLW treatment capability at TA-50 by improving reliability and process efficiency to meet projected regulatory requirements for discharge. The existing facility is over 35 years old and many process and facility systems (e.g., electrical; mechanical; Heating, Ventilating, and Air-Conditioning (HVAC)) are at the end of their design life and require upgrades and/or replacement. Design alternatives include eliminating clarification processes and increasing utilization of filtration and reverse osmosis. Another improvement will include on-site evaporation capability. Effluent discharge standards are becoming more restrictive and the upgrades need to take this into account to the extent feasible.

Further, the project will allow for future flexibility and adaptability to future changes in regulatory requirements through the use of modular process treatment equipment and piping configuration. Project alternatives to be considered during the conceptual design phase, which is underway, include renovation of the existing facility and construction of a new facility. Factors to be weighed and carefully evaluated in alternative selection will include the ability to effectively comply with current codes and standards, risks associated with renovation, and the ability to provide future flexibility.

Not included in this RLWTF Upgrade project is refurbishment of the RLW Collection System, much of which is also nearing its design life and already failing. A proposal to begin the design and repair of the failing vaults was not funded in FY07. It is estimated that $14 M will be required between now and FY11 in order to fully revitalize the RLW Treatment capability at TA-50.

Also in the next ten years the existing RLW treatment facility will require upgrades to the electrical and ventilation system in order to remain serviceable as administrative and lab space. And finally, following the transfer of treatment operations to the new facility in 2012, the existing treatment process equipment will have to be decontaminated, and eventually demolished. Estimates have not been generated for either of these final two tasks relating to the long-term disposition of the current TA-50 treatment facility.

Zero Liquid Discharge Upgrade Project

The Zero Liquid Discharge (ZLD) Project will assure compliance with the Laboratory's new National Pollutant Discharge Elimination System (NPDES) Outfall Permit. The ZLD addresses development of a feasibility report to eliminate remaining NPDES outfalls currently discharging to the environment. Additionally, the ZLD will reduce waste streams, and increase reuse of effluent and conservation of potable water as needed to assure continued environmental compliance with the FFCA.

Table 4-5: Summary of Environmental Management Requirements

Requirement/ Project	Authority	Implementation Status	Project Funding $K	Project Timeframe	Funding Status	Impact to Current Facilities	Impact to New Construction
[illegible] Environment Department (NMED) [illegible] Order [illegible]							
Environmental Restoration (including ground water monitoring)	Legally enforceable order	Underway	$884,000	FY07-FY15	$580M budgeted-EM, $304M overtarget requested-EM	Requires access for investigation & remedy implementation	Establishes exclusion areas or requires clean up before construction
Dipose of Legacy TRU	Necessary to implement legally enforceable order	Underway	$435,000	FY07-FY12	$149M budgeted-EM, $286M overtarget requested-EM		
D&D at TA-54 & TA-21 (process-contaminated)	Necessary to implement legally enforceable order	In planning	$39,500	FY07-FY14	$17,000 EM funded in FY07, 2009-2014 funding requested from EM	Facilities at TA-54 & -21 would be removed	N/A
Dispose of FY99-FY11 NNSA TRU Waste	Necessary to implement legally enforceable order	Underway	$24,000	FY07-FY12	Funds requested from RTBF	None	N/A
D&D at TA-54 (non-process-contaminated) facility & infrastructure removal	Necessary to implement legally enforceable order	In planning	$30,076	FY08-FY13	To be requested of NNSA/DOE	Facilities at TA-54 would be removed	N/A
RCRA Closure at TA-54	Necessary to implement legally enforceable order	In planning	$6,821	FY08-FY13	To be requested of NNSA/DOE	None	N/A
Relocation of LLW compactor and radioactive waste characterization and verification activities from MDA G to another location at TA-54	Necessary to implement legally enforceable order	In planning	$10,500	FY08-FY10	To be requested of NNSA/DOE	None	N/A

Table 4-5: Summary of Environmental Management Requirements (continued)

Requirement/ Project	Authority	Implementation Status	Project Funding $K	Project Timeframe	Funding Status	Impact to Current Facilities	Impact to New Construction
New Mexico Environment Department (NMED) Consent Order & EPA FFCA							
Relocation of hazardous waste characterization and verification activities from MDA L to another location at TA-54	Necessary to implement legally enforceable order	In planning	$180	FY08-FY10	To be requested of NNSA/DOE	None	N/A
D&D at TA-21 (non-process-contaminated)	Necessary to implement legally enforceable order	In planning	$6,008	FY07-FY10	To be requested of NNSA/DOE	Facilities at TA-21 would be removed	N/A
Implementation of the FFCA/AO (for surface water monitoring)	Legally enforceable agreement under Clean Water Act	Underway	$43,500	FY05-FY15	Over-target requested from EM ($28.5) and G&A ($15M)	None	TBD
Post-Consent Order, RCRA Operating Permit and post-FFCA NPDES Permit							
Long Term Environmental Stewardship (including groundwaterm monitoring)	legally enforceable order	In planning	$106,103	FY16-FY70	To be requested of NNSA/DOE	None	Establishes exclusion areas or requires clean up before construction
Waste Management Capability Replacement							
Expansion of LLW disposal operations into Zone 4	Operational requirement	In planning	Current funding - $182K. Total project need - $1.8M	FY07-FY08	Current funding will allow approximate 70% completion of Zone 4 site planning and disposal unit design. Current funding will allow no construction	None	N/A
RLWTF Upgrade		Proposed as a line item construction project	$67,000	FY06-FY12	Identified as line item construction project in Attachment A	None	N/A
TRU Waste Consolidation Facility	Necessary to implement legally enforceable order	Approval to begin conceptual design 2nd Quarter FY06	$45,500	FY06-FY11	Identified as proposed Line Item (RTBF) project in FY06 TYCSP	None	N/A

4.1.3 Site Footprint Management

The FY02 Energy and Water Development Appropriation Bill established the requirement that for each site within the DOE complex, the footprint added by construction of new facilities must be offset by the elimination of an equal amount of excess space. Due to existing strategies, the Laboratory has fully supported achieving this requirement. To date, the Laboratory has requested neither an exception nor a waiver to the requirement, and no such request is anticipated. Attachment E documents the accomplished and planned disposition of facilities since FY02 and planned new construction. Notably D&D of some facilities cannot begin until replacement facilities are occupied. This is reflected in the "banked" square footage. A summary of square footage removed from the Laboratory footprint since the turn of the century is shown in Table 4-6.

The quantity of excess facilities had been increasing at the Laboratory for a number of years. This situation escalated in the 1990s because a significant portion of facilities that were constructed in the 1950s for a Cold War mission driver no longer supported modern mission requirements. With the evolution of building codes, Environment, Safety, and Health (ES&H) requirements, and security standards, the adaptation of many of these facilities was often not economically feasible. Although the Laboratory continues to seek adaptive use options for excess facilities, D&D is often the most cost effective solution.

During the early 1990s, some buildings were transferred from DP to EM for demolition, some of which was accomplished. However, in spite of a number of submittals of candidate buildings, no further buildings have been transferred from DP to EM.

From 1998 to 2002 extensive lists of buildings were proposed for removal under a DOE funding initiative, but did not receive funding. Once the Consent Order was signed in March 2005, DOE EM recognized that contaminated and non-contaminated facilities at TA-21 and TA-54 inhibit or prevent investigations or corrective actions in these areas. EM has provided initial funding to begin these efforts. All facilities required to be removed for EM activity are listed on Attachment E-1.

There is an increasing recognition of the risk and cost associated with the growing list of excess facilities at the Laboratory. The principal drivers for initiating aggressive D&D include the following:

- Removal of risk (public, workers, and environment) imposed by excessed facilities; this risk is associated with a potential spread of contamination and/or in the degradation of existing non-functional structures
- Increases in waste disposal costs have been driven by regulatory evolution at a greater rate than inflation, especially

Table 4-6: Summary of D&D totals from 2001 to present

	2001	2002 Archived	2003 Archived	2004 Archived	2005 Archived	2006
GSF Removed	46,779	68,161	136,416	109,586	115,896	77,734
Funding Source	Pre-FIRP	FIRP and other	FIRP and other	FIRP and other	FIRP and other	FIRP and other

considering the metals moratorium. Rising costs associated with postponing D&D will be even more difficult to address in the future when prioritizing against other initiatives

- Abandoned structures limit options to address future mission requirements; sites of demolished structures provide site opportunities for future facilities with minimal environmental issues
- eliminate associated S&M costs

In 1999, DP-10, through RTBF, provided $2M in funding, which was split between S&M of excess facilities and the D&D of 27 small structures. With the same level of funding in FY00, a few more structures were removed, including two contaminated bag houses in the core of TA-3. After the Cerro Grande Fire in May 2000, the Laboratory requested and received approximately $20M to remove debris from damaged and destroyed buildings, in addition to the removal of excess buildings in flood or fire risk areas. The highest profile success was the demolition of the Omega West Reactor. The DP-10 RTBF funding for D&D and S&M budget was $3.8M in FY01 and then $3M in FY02. The FY01 funding accomplished the demolition of the Sherwood complex in the core of TA-3. Beginning in FY03, in accordance with NNSA agreement, RTBF only funded S&M, but FIRP began funding D&D.

From Table 4-6, prior to the FY02 Congressional mandate, the Laboratory demolished 46,779 GSF in FY01. Through the first three years (FY02-FY04) of the mandate, the Laboratory has "banked" or archived 314,163 GSF of removed footprint. Of that total, approximately 200,000 GSF of D&D was funded by FIRP. FIRP-funded demolition has included such high profile projects as the TA-16-220 Complex and the TA-3 Syllac project. The funding received from FY02 through FY06 (post-mandate) will ultimately achieve approximately 461,000 GSF of footprint elimination.

The progression of D&D activities since 1999 is significant because the Laboratory has established both a level of success and expectations for further removal of excess structures. The Laboratory is working to utilize any possible funding source to remove buildings with no further use. Planned funding sources include the following:

- FIRP – FIRP is the most aggressive short-term sponsor in removal of obsolete facilities (mostly non-contaminated) at the Laboratory through the remainder of this decade
- Individual Project Funded – Examples include removal of the TA-53 cooling towers in FY02, over 14,000 GSF by the SPP in FY06, and the planned SM-43 (315,000 GSF) demolition complete in FY10
- Transfer of Process Contaminated Buildings from DP to EM – the Laboratory has continued to work with NNSA to support strategic planning for EM acceptance of facilities at TA-21 and TA-54; DOE/EM has provided $17.1 M in D&D funding in FY07, however these funds are on hold pending completion of the FY07 appropriation; the Laboratory EM program baseline includes D&D of 500,000 square feet of process contaminated facilities; NNSA continues to work with EM to ensure that FY08-FY13 funding is available for this D&D

Two Million Gross Square Feet Footprint Reduction Initiative

The Laboratory is in the process of implementing a significant footprint reduction initiative, the Two Million Gross Square Feet Footprint Reduction Initiative (2M FRI) over the next two years. This effort will result in the shutdown of a number of poor condition under utilized facilities that have a limited value for the future activities and missions of the Laboratory. Completion of the footprint reduction effort will free up funding for maintenance and recapitalization of high valued facilities and infrastructure and will position the Laboratory as a lean purveyor of research and development services to NNSA and non-NNSA customer community.

The majority of facilities shutdown under the 2M FRI will be converted to an interim state in which they can no longer be used to support site activities; but at the same time no longer require substantial surveillance and maintenance funding.

Shutdown will include evacuation and transition of the facility to a "cold, dark, and dry" status. This interim state includes, as needed, all of the following actions:

- Elimination of all but emergency lighting and fire suppression capabilities in the facility
- Perform structural and external repairs required for safe shutdown
- Immobilization of resident contamination in the facility

In the stabilized shutdown condition, there is no longer a need to provide extensive maintenance on other than the emergency systems identified above. Consequently, there is not a need for continued investments in planned maintenance and DM reduction.

Specific benefits associated with the 2M footprint reduction effort include the following:

- Investments in DM reduction for shutdown facilities other than those needed to reach the stabilized shutdown condition can be eliminated; since the investment is made to place the facility in a long term stable condition, in some cases by eliminating DM, the remaining DM on the facility can be eliminated, even though the facility has not been demolished.
- The condition of active facilities and infrastructure at the Laboratory will be significantly improved if the site facilities are prioritized such that those facilities, in the poorest condition, with the lowest utilization, and the least value to on going missions, are preferentially excessed; the resulting effective FCI for MD and NMD facilities would then be improved to less than 10%, even if the Replacement Plant Value (RPV) for shutdown facilities is removed from the calculation; accompanied by modest FIRP investment in MC facilities (less than $30M) an effective FCI less than 5% for MC facilities is attained, even with the assumption that the current CMR facility is removed from the RPV base after 2014
- The effective value of maintenance investments at the Laboratory will be significantly improved; removing all maintenance requirements except for surveillance and maintenance of emergency lighting and fire suppression systems will result in elimination of the current maintenance shortfall between estimated annual required

maintenance and planned maintenance at the site

- Although the potential impact of the 2M FRI on Attachments E (footprint management) and F (DM management) is potentially significant, it is not included in the FY08 TYSP; the 2M FRI is still in an early stage of implementation; a candidate list of facilities has been developed and is due to be finalized by the middle of FY07; plans for transition of facilities to be shutdown are currently under development; as plans for transition of facilities to shutdown state are finalized, they will be included in Attachment E and their impact on maintenance requirements reflected in Attachment F

4.1.3.1 Future Space Needs

The Laboratory continues with its obligation to fully utilize all of its real property assets. As The Laboratory moves forward with its footprint initiative the reduction of current high priced, high DM buildings drives the need for new cost efficient space to house employees as well as support the need for new laboratory and high bay space. The assets will need to be met via a combination of funding methods such as LIs and GPPs. The Laboratory has in the past and will continue to utilize modular office space where needed to address needs for additional office space, and in doing so The Laboratory only leases modular offices to accommodate the needs of operating groups that have duration of less than five years. If needs exceed that time frame other accommodations are sought.

Recent Activities and Goals in Space Management

Effective stewardship of DOE owned and leased space is at the core of the Laboratory's space management goals. These include the optimization of space resources through the continued disposition of excess facilities, implementation of the application of the Facility Assessment and Ranking System (FAaRS). Ground up revitalization of the space management function, process, roles, responsibilities and implementation of the new processes and procedures supporting a space recharge initiative slated for FY09, providing SMFP ability to forecast future space demands leading to increases in the strategic nature of facility planning, delivery, use and data integrity.

Comprehensive Space Management Plan

The groundwork to execute a multi-faceted space management and facility plan is slated for completion in FY07. The Comprehensive Space Management Plan will optimize the utilization of space and improve the facility work environment. New facilities must be balanced with facilities being excessed through the D&D process. Furthermore, the appropriate quantity and quality of leased space must be maintained to provide flexibility in meeting institutional growth and/or attrition.

Facility Assessment and Ranking System

FAaRS is an institution-wide method used to rank and prioritize facilities. FAaRS will provide information as a measurement tool that scores each facility at the Laboratory in several key areas including age, condition, use, and mission support. These criteria are weighted by importance culminating in a disposition rank score. The FAaRS generated recommendation is a key element for facility management decision making, not a determination of final decision.

The FAaRS system is being retooled for use online for improved delivery and use for the institution.

Data Management and Reporting

Having accurate, timely, and accessible facilities data is critical to the successful management of space resources. While data must be used in conjunction with actual observations and consultations, limitations in the data certainly impact effective management of the resources. Over the past three years the Laboratory has made significant improvements to data accuracy and the tools that create information from the data. The Laboratory maintains facility information for DOE/NNSA in the FIMS. Twenty-three critical FIMS data fields are tracked on all real property assets at the building/ property level, from acquisition to archival of removed assets.

FIMS data is reconciled quarterly and reported to DOE/NNSA. In addition to quarterly reports, samples plans are run to validate all 23 critical FIMS fields. This process insures accuracy of the reported FIMS data. Over 805,000 square feet of occupiable facility space have been validated in terms of size, configuration, utilization, and occupancy in this manner.

4.1.3.2. Leased Space

Leased space comprises an essential component of the Laboratory's overall space portfolio. The Laboratory currently houses about 91.5% of its employees in NNSA space, with the remaining 8.5% in leased space. The primary function is to serve as a buffer to mitigate temporary shortages of onsite office space. The Laboratory currently leases approximately 504,000 total square feet at an annual cost of $9M. Office is the primary use for leased space although there are other specialized uses such as training support and museum/workshop space. The Laboratory has made a commitment to maintain lease costs at reasonable market rates. Each leased space contract is reviewed and analyzed six months prior to lease expiration. Options for relocation and consolidation are explored and compared to continued occupancy and lease extension. The NNSA Albuquerque Service Center approves all lease procurements.

4.1.4 Deferred Maintenance Reduction/Facility Condition Index

A primary indicator of the overall health of a facility is the FCI. The FCI for a facility consists of the ratio of DM (the total $ value of maintenance that has been deferred until a future period) divided by the RPV (the total $ cost of replacing the facility). Reducing FCI associated with NNSA's facilities and infrastructure constitutes a visible and measurable long-term viability improvement to the nuclear weapons complex. NNSA committed to Congress in testimony that DM will be stabilized by FY05 and reduced to within industry standards for mission essential facilities and infrastructure by FY09. These commitments are NNSA's demonstration of accountability for the significant resources the Office of Management and Budget (OMB) and Congress are providing to the FIRP Program.

The NNSA established corporate goals for DM reduction at the first Deferred Maintenance Reduction Summit on July 25, 2002. The Deferred Maintenance Reduction Summits established a clear commitment by NNSA HQ, the Field Site Offices and the Management and Operating contractors, to the NNSA corporate goals of DM reduction and an agreed on path forward.

The DM goals established for FY09 were twofold: aggressively reduce the DM backlog for (what were then classified as) mission essential facilities to within industry standards of good to excellent (FCI < 5%); and implement facility management practices such that facility conditions are maintained in the good to excellent condition. The Laboratory's plan for DM reduction relies primarily on the FIRP with some support from LI construction and RTBF strategic investments. Projects for achieving this are shown in Attachment A. Revision of this plan as a result of lower FYNSP funding profiles is described below.

The FY05 goal of DM stabilization was met in that DM showed continuous reduction from FY03 through FY05. However, as shown in Figure 4-8, FIRP funding was significantly reduced in FY06, allowing some DM growth to occur. Attachment F-2 shows DM reduction starting again in FY07 despite additional reductions in FIRP funding.

During FY06 NNSA made a commitment to recategorize facilities from mission essential and non-mission essential to the three levels of mission requirement currently used (MC, MD, NMD); as recommended by FRPC guidelines. In the process, a number of facilities previously considered mission essential were not categorized as MC. During FY07, NNSA expects to reevaluate its corporate goals for all three levels of mission requirement in light of the recent FIRP end date extension to FY13. The Laboratory will evaluate these goals and describe the impact on DM and FCI goals in the TYSP to be developed in FY08.

Attachment F Results

In the first quarter of FY05, the Laboratory submitted the FIRP Congressional Tables which provides a listing of the DM projects and other projects required to meet the FY09 goals. The reduction of DM shown in Attachments F-1 and F-2 are consistent with the projects listed in the FIRP Congressional Tables as modified by the schedules in Attachment A. These

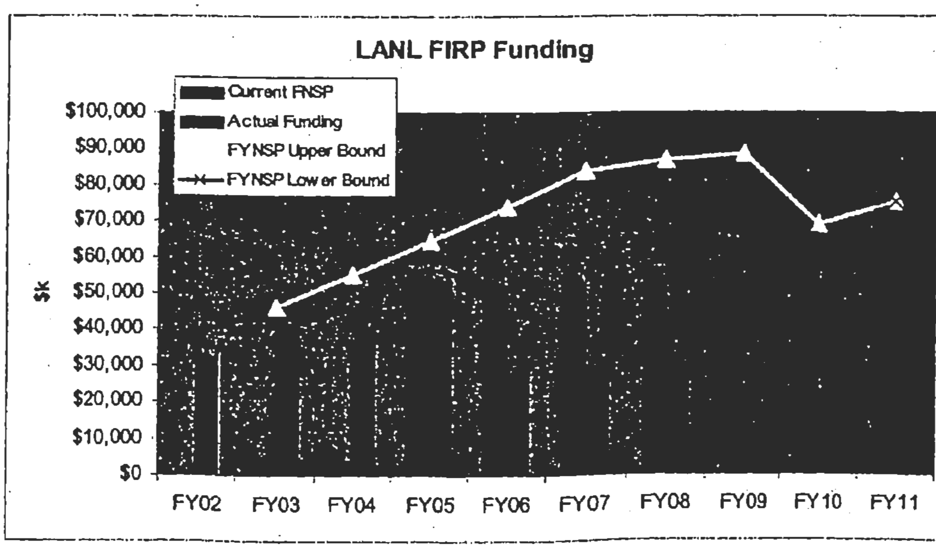


Figure 4-8: LANL FIRP Funding ($1,000s)

projects are drawn primarily from the FY03 DM baseline but do include some projects with DM that is outside the FY03 baseline.

Attachment F-3 shows a continuing decline of the Laboratory's DM from FY03 through FY11. The value of DM rises starting in FY12 as the FIRP program phases out. Due to the reduced forecasts for maintenance budgets, it is not expected that significant DM reduction is achievable from maintenance budgets.

The 2 M FRI discussed above, is presently in the early stages of implementation at the Laboratory; and it's impact has not been fully considered in attachment F.

The sitewide FCI at the end of FY07, as shown in Attachment F-4, is 7%. This value does not take into account the drop in DM and FCI that would be achieved by implementing the 2M FRI.

Attachment F-4 shows that the FCI for MC facilities will be 4.3% at the end of FY07, well below original FY09 NNSA goal of 5%. In FY09, MC facility FCI is projected to be 3.7%. This improvement in MC FCI is attributed to reclassification of many MC facilities to MD. MD facilities are shown to have an end of FY07 FCI of 14.4% and an end of FY09 FCI of 13.2%.

As described in previous TYSPs, the data in Attachment F related to MC facilities is greatly influenced by the non-enduring CMR facility. Its high RPV of $1.9B substantially influences the FCI calculation. The CMRR facility is now shown as becoming operational in FY13-14 timeframe, before CMR is fully taken out of operation.

Attachment F-4 also shows the NMD FCI will be 8.8% at the end of FY07, below the goal of 10% for FY09. In FY09, the NMD FCI is projected to be 8.7%.

Based on October 2006 FIMS data, a summary of facility conditions for MC facilities, based on the FIMS facility condition categories, is shown in Table 4-7.

Table 4-7 illustrates that despite the low aggregate FCI for MC facilities of 4.4%, there remains the concern that approximately 12% are in poor condition and 15% in failed condition. As noted in Figure 4-9, DM begins to rise sharply after 2012 principally due to facility aging effects and the end of FIRP funding in 2013. RTBF funding must be increased as FIRP funding ends or facility conditions will once again degrade, particularly if funding for maintenance remains at low levels compared to required maintenance.

Table 4-7: Facility Condition Index by Mission Dependency

Condition	Mission Critical Facilities
Excellent	33.33%
Good	15.15%
Adequate	6.06%
Fair	18.18%
Poor	12.12%
Fail	15.15%
Total	100%

The impact of the 2M FRI on Attachment F can be estimated based on a target list of facilities that could be included in footprint reduction prioritized on the basis of several factors including facility condition and level of current utilization that affect the value of the facility to ongoing operations. On this basis, MC facilities were removed from the target list as were many facilities, some with

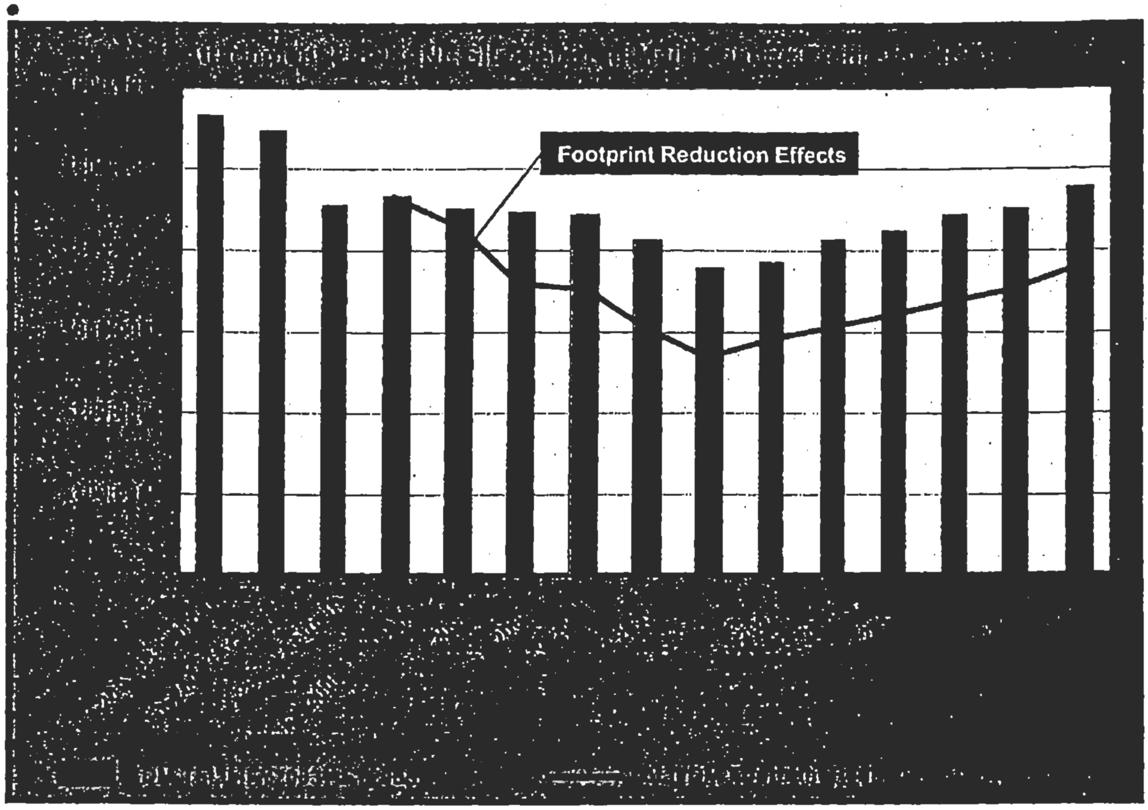


Figure 4-9: Potential Impact of 2M GSF Footprint Reduction Initiative on DM

high DM backlog that cannot be shutdown immediately before replacement physical infrastructure is available. The impact is also based on the assumption that, once a facility is placed in a "cold, dark, and dry" state, the remaining DM for the facility can be removed.

For FY07, the impact is estimated to be a reduction of 400K square feet in footprint, a reduction of \$20M in DM, and a reduction of \$1M in required maintenance. For FY08, the impact is estimated to be an additional 1.6M square feet in footprint reduction, an additional removal of \$80M in DM, and an additional drop of \$5M in required maintenance. The estimated impact of the 2M FRI on DM over the planning horizon of the TYSP is shown in Figure 4-9.

4.1.5 Maintenance

The Laboratory has re-engineered and institutionalized responsible and accountable facility maintenance processes, to maintain the condition of NNSA facilities and infrastructure in accordance with the NNSA goals. The Laboratory is making sincere efforts to reverse past practices that allowed the condition of facilities and infrastructure to deteriorate. An important element is the provision of adequate funding for routine expenditures and needed maintenance and repair.

It is recognized that one effect of new costs observed in the Laboratory's FY07 budget is that direct funding of maintenance for MC and MD facilities is significantly reduced this year (as shown in Attachment F-2). This funding reduction will result in some growth in DM based on the differential between required and planned maintenance. This year, however, several initiatives have been launched to offset negative effects on facility conditions.

The Laboratory has launched a new Conduct of Maintenance (COM) program this year, with clear definitions of roles, responsibilities, authorities, and accountabilities as a keystone for planned improvement. Responsible Associate Directors (RAD) have been identified for all Laboratory facilities. A Maintenance Manager is deployed to each FOD to execute annual maintenance plans in accordance with the Laboratory's COM and associated implementing procedures.

Figure 4-10 depicts the Laboratory Maintenance Management Program, derived from DOE requirements and best management practices. This figure portrays the flow down from DOE maintenance management requirements specified in DOE Orders 433.1 and 430.1B and flowed down through institutional policies and procedures. Detailed maintenance program attributes are described in the Maintenance Implementation Plan (MIP).

As described in the FY07 TYSP, the Laboratory benchmarked its required maintenance budgets with Department of Defense (DoD) facility models of sustainment costs. This benchmarking project resulted in the Risk Informed Sustainment Cost (RISC) model. In the RISC model DoD analytic predictions are modified based on Laboratory and facility specific ranking factors to estimate building specific maintenance budgets. The Laboratory has used this approach refine required maintenance numbers in the Attachment F cost model to input the required maintenance values in FIMS.

The CMR facility is classified with a unique calculation of required maintenance due to its size, low utilization, and the fact that it is in the last years of its effective life. Based on these factors, a target of 0.9% of RPV was calculated by the RISC model for CMR required maintenance. After 2014, the facility will be transitioned into a standby status requiring surveillance at an estimated cost of 0.3% of RPV.

In FY14, the CMRR facility is planned to become operational. The CMRR maintenance budget is projected at approximately 2.5% of RPV to sustain its condition. One of the challenges for the Laboratory and NNSA is to provide the funds necessary to meet this new maintenance funding demand.

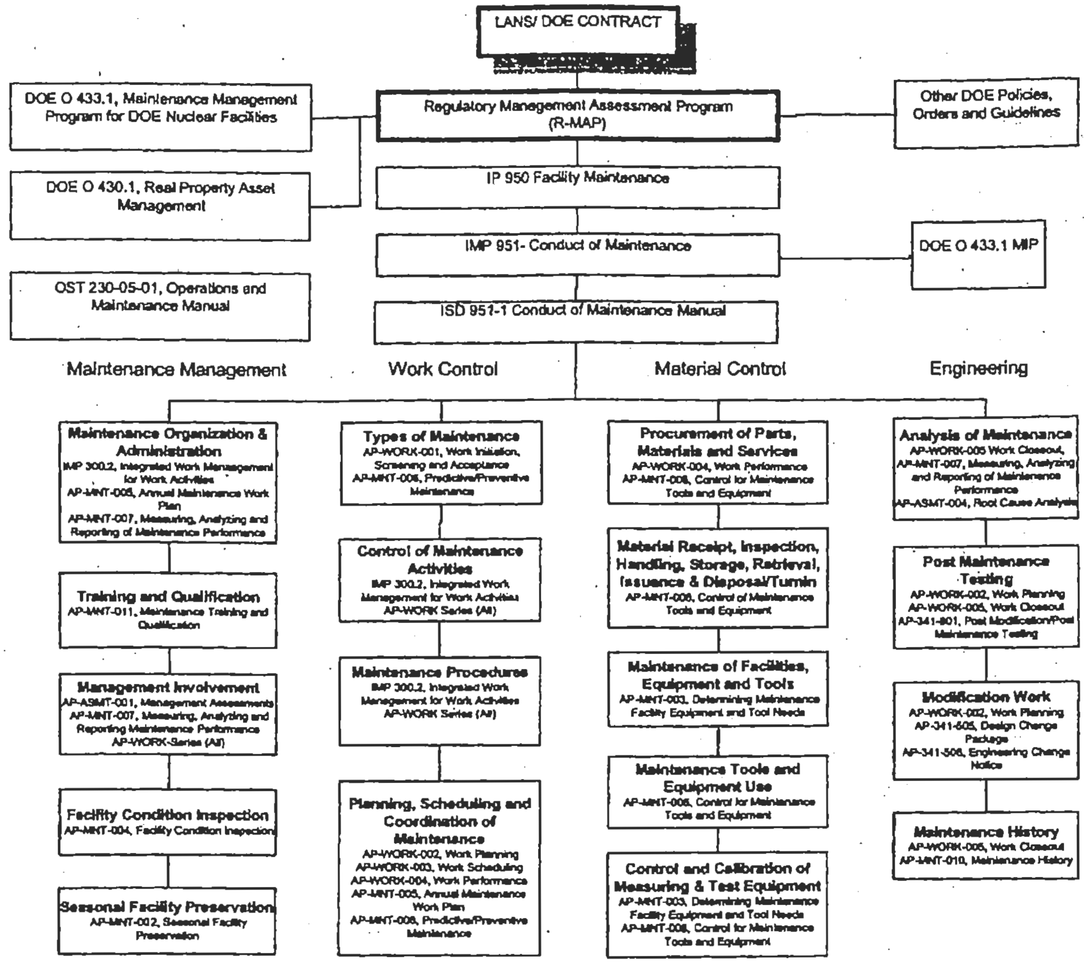


Figure 4-10: Laboratory Maintenance Management Program

Attachment F-2 does not currently reflect a reduction in required maintenance that is anticipated from the 2M FRI. The total reduction in required maintenance from the 2M FRI, as state above, is estimated to be approximately $6M annually. When the target facilities list for footprint reduction is finalized, estimates of annual required maintenance in Attachment F-2 will be reduced to reflect this information.

Planned Maintenance Funding

In FY07, the Laboratory's maintenance budget is $88M, approximately $7M less than the $95M costed during FY06. This budget has been adjusted with a burdening factor applied to local/indirect funds so as to present a common perspective on purchasing power when compared to the direct (RTBF) funds expended for facility maintenance. The direct maintenance budget has been reduced by 20% while the indirect maintenance budget has been increased by 6%.

The FY07 maintenance budget is not strictly speaking comparable to previous year budgets. In FY07, the national RTBF work breakdown structure (WBS) has been used, wherein engineering support is treated differently than in past years.

The FY07 planned maintenance budget represents approximately 1.4% of the Laboratory's RPV of $6.5B. When the CMR facility ($1.9B RPV and its FY07 planned maintenance budget of $5.9M) are removed from the funding analysis, the Laboratory's maintenance budget to RPV ratio rises to 1.8%, or 90% of the NNSA guidance of 2% RPV.

NNSA's guidance on minimum planned maintenance budget is currently under review by DOE-HQ and the Energy Facility Contractors Group (EFCOG). In a memorandum from the DOE Office of Health, Safety, and Security dated December 1, 2006, an EFCOG subgroup has been formed (with Laboratory participation) to review the National Research Council's recommendations on maintenance funding and to recommend improvements.

This FY07 Laboratory maintenance budget results in a gap of $17M from the projected maintenance budget shown in Attachment F-2, limiting the Laboratory's ability to minimize growth of DM. This gap is substantially larger than the FY06 gap of $7.6M. This is a significant challenge for the Laboratory.

FYNSP constraints are expected to result in generally flat maintenance budgets until CMRR becomes operational. Therefore, to reduce the aforementioned maintenance budget gap, the Laboratory must aggressively reduce maintenance needs and increase productivity, which includes the need to significantly reduce the overall site footprint.

In 2006, the Laboratory management team noted the need for maintenance budget productivity as an imperative facility management goal and launched the 2M FRI in response that will result in approximately 20% of current facility space being vacated by 2009.

With required maintenance of shutdown facilities reduced to a surveillance level, remaining maintenance funds can be applied to the care and repair of remaining Laboratory real property assets. Maintenance funding made available through footprint reduction will be transferred to operating facilities with high priority maintenance needs such as DM buydown and other real property investments in support of Laboratory strategic goals.

It is estimated that completion of the 2M FRI will free up additional maintenance funding. Together with the attendant drop of RPV, an ongoing level of sustainment investment closer to 2% of RPV can be achieved across the Laboratory. In the interim, several management initiatives are underway to mitigate impacts of the tight FY07 maintenance budget. Performance-Based Incentives (PBIs) under the Laboratory management contract have been defined to drive improvements in productivity and reductions in overhead spending. Earned Value (EV) concepts have been introduced at the program level and within the Site Support Services (SSS) subcontract to promote this. Maintenance plans are being adjusted to adapt to allocated budgets, with corrective and preventative maintenance actions that address safety and environmental compliance given top priority. Given that a favorable outcome is achieved in facility performance, managers are given incentives to invest any local surpluses into DM activities. Thus, even with aforementioned reductions in maintenance spending, some improvement in facility FCIs are anticipated.

Modification to the SSS contract is expected to improve cost effectiveness and productivity as the Laboratory drives to improve earned value for maintenance and reduce staffing redundancy.

Footprint reduction is not currently planned to result in reduction to planned maintenance budgets. Maintenance funding made available through footprint reduction will be transferred to operating facilities with high priority maintenance needs.

Replacement Plant Value

The Laboratory has used the following methodology to compute RPV since the FY03 baseline was recorded. For the buildings and trailers, the Laboratory uses the RPV square foot model supplied as part of the FIMS software. The one exception is for Category II nuclear buildings. The available models in FY03 were prohibitively low for this calculation so a custom model was produced. This model was based on the CD-0 estimate for the CMRR project. A base square footage cost for this model comes from backing out the appropriate site factor and geographic factor. This base model square footage cost is escalated annually using the published RS Means Historical Cost Index (HCI) each year.

To address local circumstances, the Laboratory produced a series of site factors based on Usage Code categories that were derived as follows. All buildings and trailers were categorized as follows:

- Category II Nuclear Facilities
- Non-Category II Nuclear Trailers - All
- Non-Category II Nuclear Buildings - Series 100 Usage Code (Administrative)
- Non-Category II Nuclear Buildings - Series 200 Usage Code (Institutional)
- Non-Category II Nuclear Buildings - Series 400, 300 & 800 Usage Code (Storage & Misc.)
- Non-Category II Nuclear Buildings - Series 500 Usage Code (Industrial)
- Non-Category II Nuclear Buildings - Series 600 Usage Code (Service)
- Non-Category II Nuclear Buildings - Series 700 Usage Code (Laboratory)

To determine the site factor in each category, the Current Plant Value (CPV) was compared to model costs as follows. Facilities built within the previous 10 years from the analysis (1993 - 2002) were identified in each category. Because of the limited number of Category II Nuclear Facilities, all of the Category II Nuclear Facilities were identified. CPV computes from Acquisition Value escalated to then current value using HCI from RS Means. A raw RPV is computed using the model costs and geographic factors is computed and compared with the CPV to determine an effective Site Factor for each of the analyzed facilities. The final site factor for each category comes from the median value of a fitted log-normal curve to ensure statistical accuracy.

The RPV OSFs is determined using Acquisition Value and Year Acquired to determine the CPV using RS Means HCI as described above. For any OSFs without an acquisition year or value, RPV listed is escalated from year to year based on each annual HCI.

Maintenance Management

A Maintenance Management Plan was submitted to LASO on May 1, 2006. The process to develop this plan was initiated with a workshop in early December 2005. In that workshop, the expectations of NNSA were provided and integrated into the plan. This plan provided a description of the Computerized Maintenance Management System (CMMS) models or process used to determine required maintenance, key performance measures, configuration management process, and prioritization methodology. A summary of these processes is provided below. There is no DOE requirement for a FY07 Maintenance Management Plan.

Key Performance Measures

A performance metrics program is in place to provide feedback on facility work management, maintenance activities, and assessment efforts. The current key performance metrics are:

- Maintenance earned value
- Maintenance backlog
- Corrective and preventive maintenance schedule performance
- Cost estimating performance
- Plan of the week schedule performance
- Maintenance budget costing

Configuration Management

Configuration management is an integrated management program to assure consistency between facility design requirements, the facility physical configuration, and facility documentation. The configuration management process is implemented in the maintenance program through design change processes. Design change modifications are developed to ensure that configuration management of technical baselines for Laboratory facilities is maintained. The FOD has the lead responsibility for the configuration management of the design and the facility configuration for his/her assigned systems.

Prioritization Methodology

A key factor in maintenance program effectiveness is the process to prioritize work. A detailed procedure for priority classification of work requests is included in a procedure that includes a detailed work prioritization matrix that considers importance to safety and need driver. Priorities include:

Priority 1 – Emergency Work, which is initiated at the beginning of an emergency situation and is focused on mitigating the immediate hazard to the point that recovery work can be performed at a lower priority, or extremely urgent programmatic work. Desired completion time is as soon as safely possible.

Priority 2 – Urgent Work, which is to be performed on vital equipment or where a timely recovery of the system function is paramount. Desired completion time is normally within 7 calendar days for Priority 2 work.

Priority 3 – Essential Work, which can be performed within a time frame that is less urgent than Priority 2. Desired completion time is within 6 weeks.

Priority 4 – Routine Work, which has no intrinsic priority.

Preventive, Predictive, and Corrective Maintenance

The Laboratory maintenance program includes a balance of preventive, predictive, and corrective maintenance, which ensures the availability and reliability of facilities and plant equipment important to safe and productive facility operations. The work control process identifies the manpower, materials, and equipment required to perform work and implements ISSM principles and core functions. The work control process uses the graded approach to perform work effectively and safely, work of greater complexity and risk requiring greater level of detail in the work request/work control document.

The work initiation process is supported by the Laboratory Facility Service Requirement (FSR) system which is designed to support maintenance work requests. The FSR provides a mechanism for any Laboratory employee to identify and request work to a facility component or structure which may include technical services, facility repairs, replacement, or modification to real property or programmatic assets. Work requests are coded within the CMMS to distinguish between job types such as preventive, predictive, and corrective maintenance.

All facility maintenance work activities are categorized based on functional impact to the facility (i.e., Work Types: Service, Maintenance, Modification, etc.), and the expected level of planning requirements (i.e., Simple, Standard, or Complex).

Defining the work to be performed and providing appropriate procedures or instructions can reduce maintenance errors and risk of injury to personnel. Planning also reduces delays in accomplishing work by ensuring support items such as special tools, personal protective equipment, and other equipment, and repair parts and materials required to accomplish the work are identified and available when needed. This, in turn, results in increased efficiency and contributes to maintaining a higher level of facility condition as well as assuring worker safety.

At a minimum, the planning work process addresses the following activities:

- Identification / definition of the problem and the work scope
- Identification of personnel hazards, and safe work practices
- Identification of supporting work procedures, drawings, vendor manuals, and maintenance / equipment history
- Identification of needed and available data for use in analysis of maintenance problems
- Procurement of necessary repair parts, materials, tools, and equipment
- Estimated cost and duration of work
- Identification that a Davis-Bacon determination has been made for the work
- Identification of labor and skill requirements for nuclear facility, non-nuclear facility, and subcontractor personnel
- Identification and review of resources, including other tasks scheduled to occur in the immediate area during the same period
- Pre-job As Low As Reasonably Achievable (ALARA) planning with regard to exposure to noise, heat, radiation or other hazards in the area of the work
- Identification of initial conditions and prerequisites, including applicable Technical Safety Requirements (TSR), and Limiting Conditions of Operations (LCOs)
- Identification of Quality Control (QC)

inspection requirements, code requirements, and TSRs

- Establishment of equipment restoration and post-maintenance inspection or testing requirements
- Review of work instructions / work packages for completeness
- Lessons Learned

The Laboratory computerized maintenance management system (CMMS) tools (i.e., Footprints, PassPort) provide management with an accurate status of maintenance planning, including jobs on hold, corrective actions in progress, and outstanding maintenance work.

The work planning process supports the full spectrum of Laboratory facilities and identifies requirements by which any work activity is to be planned and managed. The process follows a graded approach and will support a range of work activities; including but not limited to services, maintenance, modifications, and minor construction.

The work order package format is standardized in a manner that implements DOE requirements and ensures that work instructions are identified in sufficient detail allowing for work to be accomplished safely, effectively, and efficiently, and with minimal delays to ensure maximum equipment availability to perform its intended function in the hands of the user.

Nuclear Facility Maintenance Implementation Plan

Laboratory nuclear facilities have approved Maintenance Implementation Plan (MIP) in accordance with DOE Order 433.1. The Laboratory is on schedule to resubmit the MIP by March 1, 2007 providing a general update and a DOE Order 433.1 implementation schedule integrated with the FOD formality of operations implementation plans described below. The MIP incorporates the work priorities for maintenance discussed previously, as a basis for the allocation of maintenance resources.

Integration of Operations, Maintenance, and Engineering

A strategic goal for FY07 is the integration of the Operations, Maintenance, and Engineering Programs. These institutional programs have issued integrated program policies, procedures, and manuals and have been integrated by:

- Establishing a standardized set of roles and responsibilities
- Virtually linking documents
- Establishing an Integration Web page
- Close communication during the development of the manuals

Conduct of Operations

The Conduct of Operations (ConOps) Manual consists of 18 elements derived from DOE Order 5480.19. The Manual provides a comprehensive set of procedures which are intended to be implemented as written, recognizing that existing compliant implementing procedures at some facilities may not need to be rewritten as revoked to demonstrate compliance. The FOD implementation plans specify the implementation schedule for the ConOps manual in a graded approach for the Laboratory facilities.

Conduct of Maintenance

The institutional Conduct of Maintenance (CoM) program consists of policies, programs, and practices associated with the performance of maintenance, work management, and related activities. The Conduct of Maintenance Implementation Procedures and Institutional Policy establish formally documented procedures for ensuring that the practice of maintenance at the Laboratory meets customer requirements while complying with applicable codes, standards, CFR directives, DOE directives, and efficient business practices. Maintenance program procedures are to be implemented at nuclear facilities via DOE Order 433.1. For Non-nuclear facilities, the maintenance Administrative Procedures (AP) will be implemented using a graded approach in accordance with the Maintenance Manual. Per DOE Order 430.1B, non-nuclear facilities must implement processes supporting condition assessment surveys, work management, preventive, predictive, and corrective maintenance, configuration management, management of maintenance backlogs, and seasonal facility preservation. The FOD implementation plans for nuclear facilities will be integrated into the MIP.

Conduct of Engineering

The Laboratory has adopted Conduct of Engineering (CoE) and is in the process of implementing a CoE program. The CoE program will define the requirements and processes for the practice of engineering at the Laboratory to ensure that engineering and technical activities and work product satisfy requirements, needs, and customer expectations in a safe, secure, and environmentally responsible manner. The CoE program is designed to ensure that engineering and technical work is performed in a context of Laboratory-developed processes which are governed by national codes and standards, and by appropriately trained and qualified personnel. The FOD implementation plans specify the implementation schedule for the CoE program in a graded approach for the Laboratory facilities.

4.1.6 Identification of Replacement-in-Kind Requirements

RIK encompasses the replacement of building subsystems that are such large financial outlays (typically greater than $500K) such that traditional operations and maintenance budgets are adversely impacted when forced to incorporate such expenses. RIK typically includes building subsystems such as roofs, electrical distribution equipment, HVAC equipment, building control systems, and fire protection apparatus. Attachment F-5 specifies the Laboratory's RIK requirements.

4.1.7 Utilities

Maintaining the Laboratory's extensive utility network is an indispensable element of current/future programs, general operations and overall mission goals. Continued development and management of all systems is essential for the continuation of existing programs and adequate service for new programs. Planning an efficient, effective, and durable system, in a coordinated manner across all utility categories is fundamental to providing a flexible but highly cost effective network of services. At this time, a long-range utility planning and coordination is required to avoid significant cost impacts in the provision of utility services on new capital projects. Ownership and distribution of utility services is split between DOE and Los Alamos County. The Facility Management Division's, Maintenance and Site Services - Utilities & Infrastructure Group (MSS-UI) has primary oversight and management responsibility for the various utility systems. Utility systems at the Laboratory include: electrical service, natural gas, steam, water, sanitary wastewater and storm-water systems. Infrastructure also includes: roads and grounds (roads, guardrails, parking lots, curbs and gutters, sidewalks and grounds).

Electrical power is supplied to the Laboratory through a Public Service Company of New Mexico (PNM) 115kV) line from Albuquerque, a DOE-owned 115 kV line from the Norton Substation, and a steam/power plant at TA-3; that is used on an as needed basis. Power at the Laboratory is distributed through 13.2 kV distribution lines connecting to the input side of low-voltage transformers at Laboratory facilities.

The natural gas system includes a DOE-owned high pressure main and distribution system throughout Los Alamos County with pressure-reducing stations at Laboratory buildings.

An active steam system is maintained at TA-3. TA-21's steam system is still operational at this time as efforts are being made to place facilities into "cold, dark, and dry" status.

The water system includes supply wells, water chlorination, pumping stations, as well as transmission lines and storage tanks that are owned and operated by Los Alamos County. On DOE property there are distribution storage tanks and piping systems that are owned by the DOE.

The sanitary wastewater system includes a centralized sanitary wastewater collection system and treatment plant. There are a number of isolated septic tank systems under the control of the local FOD. Table 4-8 provides a summary of Laboratory utilities information by utility type. Utility systems at the Laboratory are serviced by MSS-UI on an "as requested" basis.

Table 4-8: Summary of Laboratory Utilities

Utility System		Approximate Length (miles)
Electrical System	Primary	26.3
	Secondary	113.6
	Total Electrical	**139.9**
Sanitary Wastewater System	Effluent	3.5
	Force Mains	11.0
	Gravity	129.5
	Total Sanitary Sewer	**144.0**
Water System	Distribution	90.3
	Service	16.7
	Total Water	**107.0**
Gas System	Distribution	58.2
	Service	31.8
	Total Natural Gas	**90.0**
Steam System	Steam	6.3
	Condensate	5.6
	Total Steam	**11.9**

General Utility Issues

Utility issues at the Laboratory are both site-wide and utility-specific and are discussed separately by utility type below.

Site Wide System Age

The major issue is deterioration, limited capacity and marginal performance, due to aging and a lack of capital investment in the Laboratory's primary underground utility systems. Modernization of the Laboratory's utility infrastructure has significant strategic importance. The majority of primary underground utilities were installed in the 1950s and 1960s and deterioration of these systems can cause service disruptions, create safety hazards, and impede the Laboratory's ability to develop new and enhanced programs and missions.

Lack of Utility Corridors

A primary issue is a lack of designated utility corridors. Due to past practices of designing utility systems using "straight-line" methodologies there is currently a lack of designated utility corridors. As the Laboratory's facilities and mission have changed and expanded over the years, utility systems have commonly been installed via the shortest route possible and on an as needed basis. The incremental nature of development has resulted in piecemeal retro-fitting of utilities to accommodate expansion. This has created expensive remedial work that is energy inefficient, and has frequently resulted in utility downtime.

The resulting maze of utility lines has led to high development costs for new facility construction. Migrating utilities to planned corridors, in accordance with a long-range plan, will accommodate future expansion more effectively. The Laboratory will also reduce future downtime, eliminate remedial work, and reduce institutional cost, construction costs, and operational costs. Through improved utility planning, the Laboratory will be able to support mission critical work and conduct required expansion in an efficient, flexible, and effective manner which will ultimately attain a higher degree of mission success. The phase-out of FIRP funding will present a significant challenge to continued upgrade of the utility systems. FIRP has been the primary funding source to address utility renovations. As FIRP funding diminishes, replacements funding must come from LIs or IGPPs.

Electrical Power

There are approximately 130 miles of transmission and primary electrical distribution lines at the Laboratory. The Laboratory is supplied with electrical power through a partnership arrangement with Los Alamos County, known as the Los Alamos Power Pool, which was established in 1985. The capacity rating of the pool resources, less losses, is 105 MW and 83 MW in the summer and winter seasons, respectively. Power delivered to the pool is limited by the two existing regional 115 kV transmission lines. Onsite electric generating capacity for the pool is limited to the existing TA-3 steam/power plant, which has an operating capacity of 12 MW in the summer and 15 MW in the winter. Although the Laboratory's electrical power system is in generally good condition, there are specific concerns that require attention. Initiatives to help ensure the capability and sustainability of the electrical system include a new 115kV transmission line, substation replacements, and new transformers and switchgear.

The first ten miles of a new 115kV line and its accompanying substation were completed in early FY07. Work is expected to be complete on renovations to the ETA substation by the end of FY07. However, due to issues with NEPA, the Forest Service, and the BLM the remaining 10 miles of line extension that are required to connect STA to the PNM Norton Substation are stalled for the foreseeable future. This inability to complete the line extension limits the redundancy of the 115 kV transmission system. The installation of a new gas turbine at the TA-3 steam/power plant is scheduled for completion in late FY07. This improvement, plus the refurbishment of the existing units will boost the

Laboratory's generating capacity by an additional 30MW.

Sanitary Waste Disposal System

Sanitary liquid wastes are delivered through dedicated pipelines to the Sanitary Waste Water Plant (SWWP) plant at TA-46. The SWWP has a design capacity of 600,000 gallons per day. Septic tank waste is delivered periodically to the SWWP via tanker truck. After treatment, the liquid is currently recycled to the TA-3 power plant for use in cooling towers or is discharged to Sandia Canyon under an NPDES permit and groundwater discharge plan. The solids are dried in beds at the SWWP and shipped as regulated waste to an approved landfill.

The sanitary wastewater collection system is in poor to satisfactory operating condition, with many miles of aged and obsolete underground piping that needs to be replaced or upgraded. There are areas of the Laboratory served by pumping stations instead of gravity sewers. Replacing these stations with the gravity sewers will increase capacity and upgrade the system, as well as lower maintenance and operating costs. The treatment plant is in excellent operating condition and will adequately accommodate future demand. Maintenance initiatives to help ensure the capability and sustainability of the sanitary wastewater system include installing new gravity lines and upgrading wastewater lines when opportunities are available.

Steam/Condensate System

A sizable portion of heating at the Laboratory (TA-3, TA-21, and TA-43 heating) is provided by steam and distribution and condensate return systems. There is one primary source of steam, the power plant in TA-3, with a capacity of 360,000 pounds per hour. The TA-3 power plant has the capacity to deliver three times the current demand. The plant will accommodate current and future developments in the TA-3 area.

The steam and condensate return systems are primarily underground and in over 20 miles of aging steel piping. Approximately 86% of all the steam underground piping was installed in the 1950s. There are several sections of steam piping, primarily in the manholes, that have a high leak rate and a high amount of corrective maintenance. These need to be replaced. The condensate return system currently achieves a return rate of 50% or less and is in need of upgrades to improve central plant performance. On-going maintenance initiatives will help ensure the capability and sustainability of the steam system in the short term. However improvements to the condensate return lines are critical to the continued long-term operation of the system.

Water System

Before September 8, 1998, DOE supplied all potable water for the Laboratory, Bandelier National Monument, and Los Alamos County. This water was obtained from a DOE groundwater right to withdraw 5,541.3 acre-feet/year (1,806 M gallons/year) from the main aquifer and 1,200 acre-feet/ year from the San Juan/Chama Trans-mountain Diversion Project. On September 5, 2001, DOE conveyed 70% of the entire groundwater right and 100% of the right to San Juan/Chama water to the County.

The Laboratory has a target water consumption of 1,662 acre-feet/year (approximately 541 M gallons/year). Depending on future growth in Laboratory programs and missions, additional water resources may be required. Current water usage is approximately 1,100 acre-feet per year (approximately 358 M gallons per year). This represents a downward trend in water use over the last decade, from 1,400 acre-feet/year (approximately 456 M gallons/year) in 1997.

In 2004 the Laboratory's Site-Wide Water Conservation Plan was issued. In accordance with a key recommendation, an Interim Water Conservation Committee was established and an Acting Water Conservation Officer appointed.

The largest water use requirement for the Laboratory is for cooling towers, which account for approximately 60% of total water consumption. In order to address concerns over future water availability, the Laboratory has completed a project to increase the TA-3 and TA-53 cooling tower concentration cycles from two to six, which creates significant water savings. Other water conservation opportunities that are currently considered for use include the following:

- Greater use of recycled water within the Laboratory
- Use of Los Alamos County wastewater for current and future Laboratory needs
- "Sustainable design" of new facilities to include water-saving fixtures
- Reuse of gray water
- Implementing low water use vegetation in landscaping
- Use of "natural" space cooling versus water cooling
- Complete reuse/recycle for irrigation, cooling, recreation, fire suppression, and recharge

Potable water is obtained from deep wells located in three well fields. This water is pumped into production lines, and booster pump stations lift this water to reservoir storage tanks for distribution. The well fields can easily provide forecasted water demands for the next 10 years. In addition, the water distribution system has been enhanced by the installation of equipment to control line pressures. The Supervisory Control and Data Acquisition (monitoring and alarm) system was completed in FY06. A preventative maintenance program is in place for this system. Although the Laboratory's water system is in generally good condition, there are specific concerns that require attention. Initiatives to help ensure the reliability and sustainability of the water system are implemented on an "as opportunity exists" basis. These initiatives include replacement of water lines, water tank conditional assessments, and conduct of a water leak survey.

Natural Gas

Approximately 80% of the natural gas consumed by the Laboratory is used for heating (steam and hot air), and the remainder is used for electrical production. The electrical generation fills the difference between peak loads, electric transmission curtailments, plant testing, and the electric contractual import rights.

In general, the majority of the natural gas system components and structures are older than their anticipated useful life, with approximately 80% having been installed in the 1950s and 1960s. An aggressive cathodic protection installation and maintenance system was deployed in the late 1980s, and this improved the integrity and condition of the system. However, there are still areas of concern with the natural gas system. Initiatives to ensure the capability and sustainability of the natural gas system include maintenance upgrades to and replacements of gas lines at various TAs as opportunities become available.

Utility Planning

Attachment F-6 includes several critical outyear RIK utility recapitalization projects. The Laboratory has initiated a Utilities Condition Assessment Plan to assess the current and likely future condition of the Laboratory's water, gas, wastewater, electric, and steam outside distribution, collection, and transmission systems. This plan was approximately 80% complete when it was deferred to FY08 due to a lack of funding in FY07. Even though the conditional assessment effort was deferred to out years, the 80% effort over the last four years had yielded adequate assessments to plan future projects to mitigate some of the unplanned outages caused by deteriorated utilities. This was mostly apparent in the water, sewer, gas, and electrical systems. The steam system requires additional assessment due to restart in FY08.

Pending completion of the Utilities Condition Assessment Plan and identification of supportive funding sources, repairs and upgrades are completed on an "as needed" basis in best accordance with good management practices. The plan would include a consolidation analysis and trending of preventative and corrective maintenance observations provided by system engineers and supervisors. Information would be used to plan short and long-range projects to improve all utility systems. Factors to be considered are the future utility system capabilities, potential threats to existing services such as the end-of-operating life issues, maintenance history, and alternative solutions to ensure adequate utility delivery systems.

4.2 Security

Safeguards and Security Overview

The Laboratory Safeguards and Security Program (Security Program) protects security interests from unauthorized access, theft, diversion, sabotage, espionage, or other hostile acts that could cause harm to national security or the health and safety of DOE and contractor employees, the public or DOE property.

Safeguards functions include material control and accountability measures to prevent the misuse of nuclear materials. Security functions include physical protection processes to deter, detect, and respond to threats to nuclear materials and facilities. The security function includes the development and execution of policies, activities, programs, and systems for the protection of nuclear materials, classified information and material, as well as facilities, property, and equipment.

Effective performance of the Security Program mission in the Laboratory's geographically dispersed multidiscipline science and technology environment relies in part on appropriately designed and maintained real property (i.e., facilities and installed equipment) supporting programmatic operations as well as sound management of the infrastructure used by security personnel.

Site Safeguards and Security Plan

Security protection strategies for Laboratory real property assets are summarized in the Site Safeguards and Security Plan and reflect the DBT Policy graded response concept, which responds to the established threat levels for Departmental facilities, materials and operations. Protection strategies range from denial of access or task to order compliance.

TA 55 is the most significant Laboratory facility from a security perspective. The Laboratory has implemented concentric layers of protection for this facility that include access controls, detection and assessment systems, delay mechanisms, and response capabilities. Vaults and VTRs are used for secure material while in use or storage. Elements of these protection strategies include both real property and programmatic real property.

All other facilities at the Laboratory have been designated at a lower threat level by the DOE. Lower threat level facilities are required to maintain security based on existing Departmental directives and commonly accepted business practices. Facility-related elements within this level may include access control and storage structures as well as systems and components that establish, maintain, enforce, or communicate safeguards and security requirements (e.g., postings, fences, barriers, lighting).

As stated above, all Laboratory facilities incorporate security controls in accordance with applicable security directives, including Laboratory engineering standards that define the technical requirements for design, fabrication, construction, repair and replacement for programmatic and facility work.

Security Engineering Standards

Integration of security requirements into construction planning at the site is an important element of effective security performance. The Laboratory Engineering Standards Manual applies to facility design and construction and provides guidance to ensure adequate protection for facility occupants and contents against stipulated threats and other malevolent acts. The mandatory standards guide selection and execution of appropriate security features that are efficient, convenient, maintainable and adequate for future expansion.

Early consideration for and application of the engineering standards ensures that security is built into new construction facilities and remodel/modification projects during initial planning. Early identification and integration of security needs allows selection of the most cost-effective security controls for considerations ranging from topography, vegetation, roadways, pedestrian access, parking, sight lines, and utility access all the way up to high security facility features.

Issuance of the streamlined security directives impact protection requirements for Laboratory facilities, particularly those designated as property protection areas. DOE Orders (470.4 series) and associated manuals are being reviewed for incorporation into the engineering standards as necessary.

Security vulnerability/risk assessment is another critical part of the engineering design process in both existing and new the Laboratory facilities. The requirements and process for assessment and the need to better utilize available resources have been better defined by NNSA because of 9/11. In accordance with DOE Order 413.3, "Program and Project Management for the Acquisition of Capital Assets", the Laboratory performs preliminary vulnerability assessments for capital projects valued at $5M or greater.

Physical Security Enhancements

A number of security enhancements have been implemented to enable the site to counter the challenges of our post-9/11 security environment and site-specific threats defined by the FY03 and FY05 DBT. While the majority of the FY03 DBT-driven enhancements addressed Protective Force weapons systems, vehicles, communications equipment and Protective Force staffing, multiple physical security upgrades have been or are being completed to modernize access control systems and otherwise protect real property assets.

In association with DOE Order 470.3A DBT requirements, the Laboratory has developed a three-tiered site security zoning concept to promote clustering of facilities with similar security needs, which increases the efficiency of the laboratory's security programs and decreases the cost of security for the site. The first tier zone is designated for SNM Category I and other SNM related activities along the "nuclear corridor". The second tier zone is designated for SNM Categories II, III, and IV, Bio-safety Level 3 Biological Select Agent work and classified interests. The third tier is designated for unclassified research operations and support functions. The security zoning concept will be used to select appropriate siting locations for new construction at the Laboratory.

In addition to the permanent access control posts constructed on Pajarito Road, automation of four TA-3 access control points and the removal of two more, the SPP has been implemented to support enhanced protection from vehicle-delivered explosives for facilities throughout the laboratory. The SPP does not eliminate public access between Los Alamos, the Laboratory, and communities in the Jemez Mountains. Rather, it provides mechanisms to implement graded Security Condition (SECON) requirements which are tied to the national threat levels established by the DHS.

Sitewide access control enhancements are being achieved through implementation of an electronic key and core system to replace mechanical systems. Protective force security keys and cores used to protect access to SNM and unauthorized direct access to Top Secret (TS) or Secret-Restricted Data (SRD) classified matter have been replaced. Sitewide replacement of all remaining metal keys with cyber keys is planned in future phases and is contingent upon funding availability.

A new initiative to address Accountable Classified Removable Electronic Media (ACREM) threats and to reduce holdings of hard drives and other media was implemented at the Laboratory's Central Destruction Facility (CDF). The purpose of this facility is to destroy items sent through the Laboratory Burn-It Program and destroy ACREM from the Classified Staging and Storing Center (CSSC). The classification of the items destroyed by CDF includes: SRD, Sigma 15, Secret or Confidential ACO/UK (Accountable/United Kingdom), Unclassified Controlled Nuclear Information (UCNI), and Official Use Only (OUO). Through these enhancements, the destruction facility has the capability to destroy paper, hard drives, zip drives, jazz drives, computer components, thumb drives, computer disks, and various other forms of media.

Security Projects

Planning is underway for a pilot project for the configuration and operation of

VTRs at the Laboratory. This approach will enable the Laboratory to apply the best ideas and closely monitor the results in a test environment before applying them Laboratory-wide.

The concept, "Super VTR", is built on several key features that address the following five thrusts - processes and policies, organization, infrastructure, tools, and people.

This pilot will consolidate and uniformly control the use of classified information while using technology to efficiently and effectively enable authorized, programmatic access. The consolidation will address a major challenge to cyber security at the Laboratory, which has a large number of VTRs distributed across the Laboratory. The Super VTR will build upon the significant investment by the Laboratory in the Red Network expansion project that provides ubiquitous classified network access from individual work stations to the Super VTR. It will be designed to accommodate the broad scope of classified information that the Laboratory utilizes in the performance of its work and will have additional cyber and physical security requirements designed into its operation.

The Laboratory has begun a number of projects under the Nuclear Consolidation Initiative that are not security projects per se but which will result in reductions in the long-term cost of physical security while at the same time enhancing the labs security. These projects include the CMRR Project, the TA-18 Relocation Project (CEF), relocation of plutonium radiography from TA-8 to TA-55 and investments in upgrades and maintenance of critical facilities at TA-55 and TA-50. The Security Program coordinates closely with various project management teams to assure appropriate integration and cost effective security requirements.

The NMSSUP, initiated as an INP activity prior to publication of the 2003 DBT, is intended to address not only security system obsolescence issues but to meet future threats to the labs operations, property, and employees. In FY08, NMSSUP Phase II will begin to upgrade and/or replace existing facilities, perimeter intrusion detection and assessment, access control systems, barriers; enhanced access control systems; delay systems and an aerial threat deterrent system at TA-55.

The Laboratory will complete the Alarm Point Increment Project in FY07 to cut over all remaining Basic Rapid Alarm Security System (BRASS) security elements to the Argus system.

Implementation of the 2005 DBT, which superseded the 2004 DBT, includes four specific security infrastructure projects that have been added to Attachment A-6b.

4.2.1 Security Infrastructure

The concept of mission critical security infrastructure as it applies to the weapons programs, security infrastructure is intended to include real property assets for which loss or failure would significantly disrupt Security Program operations. For the purposes of this report the term "security critical" is used to avoid confusion.

For the purposes of this plan, real property assets considered essential to support the Security Program include security critical facilities and installed equipment necessary to accomplish the primary mission of the program (i.e., protection of SNM and classified matter). Real property is deemed security infrastructure when its establishment or use directly contributes to accomplishment of this mission.

Protective force security posts located within facilities primarily supporting weapons work are considered as security infrastructure although the majority of the facility or its predominant use does not support the Security Program's mission.

Facility and installed equipment elements of protected transmission systems and the following physical security systems are also considered security infrastructure.

- Perimeter Intrusion Detection Assessment Systems (PIDAS)
- Security communication systems including duress systems
- Auxiliary power sources for perimeter intrusion detection, assessment and communications systems
- Systems designed to scan items, personnel and vehicles for the purpose of detecting controlled or prohibited articles (e.g., metal detectors, explosives detectors, SNM monitors and X-ray machines)

Separate from security infrastructure as defined above but important to effective implementation of security are those facility systems, structures and components that establish, maintain, enforce or communicate safeguards and security requirements to Laboratory workers and/or members of the public and that require periodic maintenance.

- Security signs and postings
- Lighting to detect and assess adversaries, reveal unauthorized persons and, at pedestrian and vehicular entrances, permit examination of credentials and vehicles
- Standby lighting systems and backup electrical power systems
- Fences, walls, gates and doors, including operating mechanisms and structural members
- Concrete curbs, sills and similar types of anchoring devices
- Man proofing features
- Barriers that direct the flow of personnel and vehicles through designated entry control portals and deter/prevent penetration by motorized vehicles (e.g., speed reducers, hydraulic bollards and vehicle traps)
- Interior intrusion detection systems, turnstiles, biometric units and badge readers
- Key/core systems including keypad devices and electronic key systems
- Primary and emergency or standby power sources for entry controls

Management and maintenance of security infrastructure and security-related facility systems, structures and components are addressed through all three infrastructure programs: institutional, weapons and security.

The Laboratory performs maintenance in non-direct funded facilities under the sitewide facility management and maintenance processes funded by the institutional infrastructure cost pool. This cost pool provides basic facility operations and routine (preventive and predictive) maintenance of facilities and property that support more than one program (i.e., institutional infrastructure).

General purpose and leased facilities in which Security Program personnel are tenants are operated and maintained through the institutional infrastructure program. Such facilities may be designated as mission critical or as mission dependant security infrastructure facilities, the loss of which could significantly disrupt Security Program operations.

Maintenance and operations needs in general purpose and leased facilities that exceed budgeted institutional infrastructure funding are either deferred or paid for by the Security Program. The Security Program is also responsible for funding programmatically driven maintenance and maintenance that is determined to be in excess of base services provided by the institution.

Maintenance of security-related facility systems, structures and components in DP and other direct funded special purpose facilities is provided in part by the technical programs, RTBF, and FIRP.

Maintenance and operation of security infrastructure such as intrusion detection systems, threat assessment systems, security communication systems and systems designed to scan items, personnel and vehicles defaults to the Security Program and is funded according to their impact on the overall protection strategy if the institutional and weapons infrastructure programs do not conduct required maintenance. However, insufficient definition of security infrastructure and a lack of clearly identified roles and responsibilities have resulted in less than adequate maintenance of some infrastructure elements.

The Security Program has begun working with the institutional and weapons infrastructure programs to categorize security infrastructure at the site and to establish controls to ensure that associated real property considerations such as asset utilization, sustainability and maintenance are effectively identified, prioritized and managed.

Consistent with the institutional direction, the Security Program intends to manage the issue of aging, obsolete and inadequate security infrastructure coupled with declining budgets through consolidation and replacement strategies.

Based on the current needs of the Security Program and the condition of facilities occupied by program personnel, emphasis will be placed on consolidating core operations in permanent facilities and development of strategic investment proposals for new construction to replace facilities in poor condition. New office space will not only provide improved working conditions for Security Program personnel, it will save energy, reduce maintenance costs and offset annual increases in facility operations.

Implementation of these strategies will be challenging as limited funds are available to address Security Program real property needs and budgets are anticipated to decline for the next several years. The program's efforts to improve program/project/facility management processes will be critical to achieving acceptable performance in real property management and maintaining a flexible security infrastructure capable of meeting current and future security needs at the site.

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5.0 F & I Projects / Activities and Cost Profiles

Figure 5-1 shows potential sources of funding for Laboratory projects in the corresponding attachments in which they are discussed.

5.1 Overview of Site Project Prioritization and Cost Profile

This section discusses the Laboratory's prioritization process for facilities and infrastructure projects reported in the Cost Projection Spreadsheets (Attachment A). This section also highlights challenges associated with key projects and their support of NNSA program missions, goals and requirements.

NNSA TYSP Guidance requirements include a requirement to prioritize all NNSA activities presented under the various categories of LI projects (A-1); Proposed LI projects (A-2); RTBF/Operations of Facilities; FIRP projects; Other F&I projects; and Security Infrastructure Projects (A-6). Construction project funding sources for projects described in the Cost Projection Spreadsheets are described in Figure 5-1.

The Laboratory's comprehensive approach to project prioritization for the TYSP attachments incorporates two elements; an IRB charged with providing institutional perspective, consistency, and continuity of purpose towards infrastructure planning, use, and decision making; and 2) integrated prioritization processes that address the relative value

F&I Projects

Line Items (A-1, A-2)
Consistent with Integrated Construction Program Plan direction from NNSA.

RTBF (GPP) (A-3)
Projects for RTBF support the Strategic Initiative and Footprint Reduction strategy developed for weapons infrastructure.

FIRP (A-4)
Projects that improve long-term physical conditions and mission availability as well as address the NNSA infrastructure responsibilities for it's nuclear weapons complex.

Non-RTBF/FIRP Projects

Campaign/DSW Funded (GPP) (A-5)
Projects supporting DP facilities not funded by RTBF and as needed to increase program capacity and capabilities in any DP facilities.

Non-DP (A-5)
Non-DP projects (GPP and Line Items) supported by specific programs.

Institutional General Plan Projects (IGPP) (A-5)
Institutionally funded for institutional benefits.

Security Infrastructure Projects

Security Infrastructure Funding (A-6)
Projects supporting safeguards and security site posture requirements.

Figure 5-1: Construction Project Funding Sources of projects to site missions and the long term sustainability of site capabilities. The IRB guides the integration of infrastructure planning and utilization to help ensure projects are mission-driven and that they maximize efficient use of available resources. It also serves as the decision forum to establish infrastructure priorities, drive infrastructure budget allocations, and support sitewide strategies to optimize use of resources. The IRB ensures Laboratory assets are used, inspected, maintained, recapitalized, and dispositioned according to DOE Orders and Directives and it empowers those entities charged with infrastructure related initiatives such as Footprint Reduction, Facility Stewardship, Integrated Institutional Planning and Infrastructure Safety to facilitate rapid, positive transformation of Laboratory infrastructure and infrastructure services.

The Laboratory uses and will continue to expand the use of integrated prioritization processes as a means of ensuring value based funding of proposed physical infrastructure projects. Integrated prioritization processes address the need for consistent technically defendable bases to evaluate competing projects and investments. Although the precise methodology employed differs for different types of project funding, each process generally

- Establishes the value of assets in terms of mission & life-cycle need
- Allocates asset management and new asset investments based on the mission/life-cycle value
- Accommodates available funding by optimizing the value of prioritizing investments within existing resources, and
- Values safety, environmental, security management concerns directly as impacts on project value

The following describe prioritization processes that are used in the attachments to this TYSP.

Proposed Line Item Projects (A-2)

The IRB is currently adopting a prioritization process for Proposed LI projects (A-2). This Proposed LI prioritization process will supply an institutional as well as program perspective on what is required for completion of present missions and accommodation of future missions at the Laboratory. The Laboratory recognizes that there is a particular need for this capability as transition to the Complex 2030 scenario begins. The prioritization process incorporates elements of the Laboratory adapted FAaRS that has been used to establish the value of existing facilities to Laboratory activities and has been used to assess required maintenance budgets for Laboratory facilities and infrastructure.

RTBF Projects (A-3)

Currently, projects within RTBF (A-3) are prioritized using a methodology that utilizes quantitative measures of cost, benefit, and risk (financial & mission) as a basis for prioritizing projects in a systematic and auditable manner.

This prioritization methodology is based on multi-attribute preference theory. Multi-attribute preference theory provides a logical, consistent basis for solving prioritization problems and is a generalization of cost-benefit analysis. The practical application of multi-attribute preference theory relies on three basic steps. First, the specific objectives of the decision maker are identified and grouped into a set of evaluation categories. Second, the contribution of each of the competing projects to each of the evaluation categories is measured. Finally, the results for each project are aggregated to give a single score, the higher the score, the more value added and appropriate the project is for RTBF funding.

The prioritization process is highly interactive. The concerned parties (decision makers, project managers, etc.) are involved at every step. Although a prioritized list of projects is the final result of the process, other useful results include identification of the contributors to project scores and sensitivity of results to scoring inputs. This same prioritization process can be used for institutionally funded projects (A-5) as well.

Facility and Infrastructure Recapitalization Program (A-4a, A-4b)

Investments under FIRP are prioritized using the Facility and Infrastructure Recapitalization Ranking System matrix (FIRRS) defined in the FIRP Project Execution Plan (PEP) issued September 29, 2006. Within FIRP, projects that are evaluated must be consistent with those provided in the Congressional Tables submitted in November 2004. The project list focuses on the reducing DM captured in the FY03 baseline for MC facilities. Each project is rated, using the FIRRS matrix in categories including Health and Safety, Environmental and Waste Management, Safeguards and Security, and Mission and Investment. Consistent with the FIRRS guidance, the Laboratory prioritizes projects within categories and across categories for a total score. In the case of projects with the same score, ranking was based on the Safety category being the highest and Mission and Investment category being the lowest. In the case of projects with the same score in the same category, ranking was based on secondary category scores.

Physical Security Infrastructure (A-6)

The primary means of prioritizing security related infrastructure projects involves integrating a three-tiered security zone system developed at the Laboratory in response to DOE Order 470.3A DBT requirements. Security enhancements that are needed to meet DOE Order requirements and ensure the reliability of surveillance and protection of the first tier zone, designated for SNM Category I and other SNM related activities, are given the highest priority. Those needed for the second tier zone, SNM Categories II, III, and IV, Bio-safety Level 3 Biological Select Agent work and classified interests, are given the next level of priority while the third tier (designated for unclassified research operations and support functions) receive the lowest priority.

5.2 Significant Project Deletions and Additions

Table 5-1 describes significant project additions and deletions from Attachment A of the FY07 TYSP (> $4M). Table 5-1 is arranged by funding source. The rationale for adding or deleting projects from the Attachment A tables is also given in Table 5-1.

In summary, projects are added;

- To support weapons and non-weapons program future physical infrastructure needs
- Provide for buydown of DM or prevention of DM in the out years after the discontinuance of FIRP

funding, and

- Development of an improved site security posture

Projects are deleted in Table 5-1 due to

- Movement of a project to a different funding source or status
- Completion of project scope, or
- Displacement by a higher priority project

5.3 Facilities and Infrastructure Cost Projection Spreadsheets

The Laboratory accomplishes critical infrastructure development, renovations, and upgrades through LI, GPP, capital equipment, and expense-funded projects. The tables in Attachment A were developed in accordance with DOE/NNSA guidance and format requirements and line organization and program office input. The spreadsheets reflect the prioritized project list and capture all facility and infrastructure-related projects in order of funding type, then by general priority within the funding types. Six spreadsheets are included: LI Projects; Proposed LI Projects; RTBF Funded Projects excluding LIs; FIRP Funded Projects; other/non-NNSA Funded Projects; and Security Infrastructure Projects. Funding profiles are shown for FY08 through FY17. Footnotes provide clarification as requested in the TYSP Guidance.

Table 5-1: Significant Project Additions and Deletions for FY 2008-2017 TYSP

Project Number	Project Name	Addition/Deletion from FY07 TYSP	Reason for Change
Line Item Projects			
LANL-07-019	Support Services Consolidation	Deletion	Project displaced by higher funding priorities
	LANSCE Refurbishment	Addition	Moved from Proposed LI Funding list (Attachment A-2) due to CD-0 signed, December of 2006
	PF-41 Demolition	Addition	Required to be complete prior to initiation of planned TA-55 upgrades projects
11-D-140	ESA Fabrication Facility Replacement	Deletion	Moved to Proposed LI Funding list (Attachment A-2) & modified for consistency with Complex 2030 vision
	Chemistry Metallurgy Research Building (CMR) Demolition	Addition	Complex D&D project requires LI funding to complete
LANL-11-D-140	Weapons Manufacturing Support Facility	Addition	Moved to Proposed LI Funding list (Attachment A-2) & modified for consistency with Complex 2030 vision
	Energetic Materials Characterization Facility	Addition	Supports Laboratory Weapons Program Complex 2030 vision
	Non-Nuclear Facility Consolidation	Addition	Supports Laboratory Weapons Program Complex 2030 vision
	National Security Engineering Bldg	Addition	Supports Laboratory Weapons Program Complex 2030 vision
	Radiological Sciences Institute Phase I (IRNS), Phase II (INNST)	Addition	Supports Laboratory Nuclear Nonproliferation programs need for future LI project
	Physical Science	Addition	Supports Laboratory Non-NNSA programs

Project Number	Project Name	Addition/Deletion from FY07 TYSP	Reason for Change
	Research Complex		need for future LI projects
	Chemical Science and Engineering Laboratory	Addition	Supports Laboratory Non-NNSA programs need for future LI projects
RTBF Projects			
	Outyear Strategic Investments - Funding for strategic investments in WP physical infrastructure upgrades, reprioritized on an annual basis	Addition	Supports Laboratory Weapons Program Complex 2030 vision
	Post FIRP Investments	Funding Level Change	Upgrade in RTBF funding to account for sunset of FIRP funded recapitalizations
	CMR Hazard Reduction and Wing Closure	Addition	First phase of complex D&D project to reduce contamination and place portions of facility in stable shutdown state.
	Outyear Footprint Reduction - Funding for strategic investments in PADWP physical infrastructure footprint reduction, reprioritized on annual basis	Addition	Supports Laboratory Weapons Program Complex 2030 vision particularly the need for nuclear facility consolidation
LANL-05-312	Installation of an Anchor Ranch Gate (TA-22)	Deletion	Project considered in Strategic Investment Initiative
LANL-07-184	Construct Data Systems Facility	Deletion	Project considered in Strategic Investment Initiative
LANL-08-216	Construct LANSCE Lab/Office Building	Deletion	Project considered in Strategic Investment Initiative
LANL-10-185	Construct Shock and Vibration Lab	Deletion	Project considered in Strategic Investment Initiative

Project Number	Project Name	Addition/Deletion from FY07 TYSP	Reason for Change
LANL-10-183	Construct Nuclear Safeguards Training Center	Deletion	Project considered in Strategic Investment Initiative
LANL-11-191	Construct Secure Dissolving Rad Chemistry Building	Deletion	Project considered in Strategic Investment Initiative
LANL-12-194	Construct Central Classified Storage Facility	Deletion	Project considered in Strategic Investment Initiative
Non-RTBF/Non-FIRP Projects			
	TA-15 and -21 Electrical Systems Deficiencies (ME)	Deletion	DM reduction requirement from CAIS database reprioritized down from previous year
LANL-05-427	Construct Classified Detonator Storage Facility	Deletion	Project displaced by higher funding priorities
LANL-06-530	Construct PF-1 Annex Office Building	Deletion	Project displaced by higher funding priorities
	Emergency Response Training Center	Addition	Supports Laboratory need for physical infrastructure to improve emergency response
	Low Level Counting Assays at TA-48	Addition	Supports Laboratory need for support of ongoing program
	Quantum Institute	Addition	Supports Laboratory need for future physical infrastructure to support non-NNSA future missions
	Super Vault Type Room	Addition	Required to demonstrate technical support for improved security posture
	Pajarito Corridor Electrical Substation	Deletion	Project displaced by higher funding priorities
	Road Alignment and Intersection at TA-54	Addition	Supports Laboratory need for physical infrastructure to support future needs

Project Number	Project Name	Addition/Deletion from FY07 TYSP	Reason for Change
	E85 Fueling Station	Addition	Supports Laboratory green initiative
	TA50 Parking Lot	Addition	Supports Laboratory need for physical infrastructure to support future needs
LANL-10-441	Construct Building to Relocate IM-2 and IM-3 Groups	Deletion	Could not be built within current GPP funding limits
	FY03 Design Basis Threat	Deletion	Substantially Complete
	Red Net Infrastructure Expansion Program	Deletion	Substantially Completed
	FY05 Design Basis Threat	Deletion	Defined as 4 specific Physical Security Infrastructure Projects
	Red Net Expansion Program	Deletion	No further funding required
	Brass to Argus Conversion	Deletion	Substantially Completed
	TA-72 Range Expansion	Addition	New Proposed Security Infrastructure Project
	PTLA Indoor Range	Addition	New Proposed Security Infrastructure Project
	PTLA Tactical Range	Addition	New Proposed Security Infrastructure Project
	PTLA Advanced Tactical Range	Addition	New Proposed Security Infrastructure Project
	Alarm Point Increment Project	Addition	Moved from table A-6b to A-6a

Attachment A

The F&I Cost Projection Spreadsheets provide prioritized lists of projected NNSA facilities and infrastructure projects and activities; burdened costs for FY08-FY17; and actual costs for FY06. The projects and activities included in these spreadsheets reflect FIRP funding ending in FY09 (D&D) and FY13 (Construction) and are consistent with the FYNSP and the latest ICPP (dated November 7, 2006).

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Attachment A-1

Approved Line Item Construction Projects

This section presents a review of 12 selected LI projects. Together, these projects represent a substantial investment by NNSA and are absolutely vital to maintain and provide the capabilities necessary for present and future NNSA missions. Most of these projects are currently in the design and planning stages, and the bulk is sponsored by DP and NNSA Facilities and Operations. A summary provided on the following page provides an an integrated cost and schedule summary.

These projects will provide the following fundamental benefits that will be realized over the next 10 to 15 years:

- Contribute to the Laboratory's NFC Goals
- Improve security to protect vital assets against increased threats
- Provide better worker and public safety and protection of the environment
- Revitalize and replace old, unreliable infrastructure, thus reducing operational and programmatic costs through facility consolidation
- Reduce and eliminate the DM backlog
- Improve technical capabilities to satisfy new programs and perform work more efficiently and safely

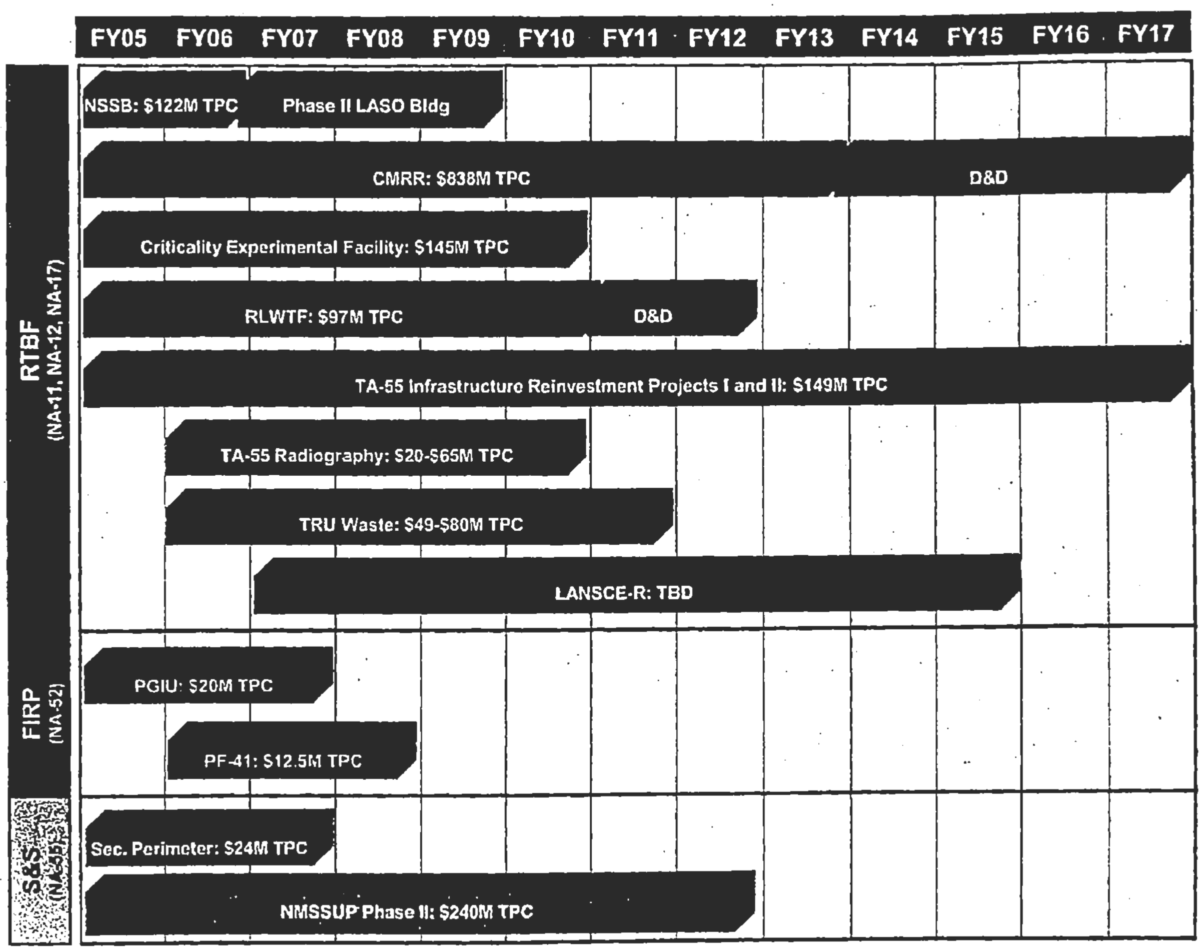
NNSA and the Laboratory are working closely together, developing each project to ensure that the scope, estimated costs, and schedules are integrated with NNSA programmatic drivers and deliverables. This is accomplished through the INP process and the ICPP. Each project is also closely coordinated with NNSA organizational elements, through their corresponding overarching programs, including RTBF, Safeguards and Security (S&S), and FIRP.

Although safety, security, and capability improvements are always an emphasis and goal of the LI program; more efficient use of operating and programmatic funds is also an important objective. The aging (and in many instances unreliable) infrastructure and facility systems require an inordinate proportion of resources and management attention to maintain and operate them appropriately. This situation diverts funds and attention from programmatic activities, the core Laboratory mission. These facility and infrastructure investments, when complete, will result in a more balanced resource allocation and management focus.

Features and Benefits of Selected Line Item Projects

Project	Feature / Description	Benefits: Improved Security	Better Worker & Public Safety	Revitalize Infrastructure & Reduce Ops Cost	Reduce Deferred Maintenance	Improve Technical Capability
RTBF						
National Security Sciences Building	Provides new, modern facility to replace aging SM-43. Houses weapons design, theoretical/computation and management.	X	X	X	X	X
CMRR	New state-of-the-art actinide chemistry and research facility sited at TA-55 to replace existing and aging CMR. TA-55 location will make nuclear operations more efficient and consolidated.	X	X	X	X	X
Criticality Experimental Facility	Relocates specified equipment, special nuclear material, and capabilities from TA-18 to the DAF at NTS. Project includes modifications to the DAF to accommodate new mission capabilities.	X	X	X	X	X
Radioactive Liquid Waste Treatment Facility Upgrade	Upgrades process capabilities to improve capacity, compliance, and waste generation minimization.		X	X	X	X
TA-55 Infrastructure Reinvestment Project	Replacement of aging mechanical, electrical, and other systems will permit facility to manufacture and certify nuclear weapons stockpile more effectively		X	X	X	X
TA-55 Radiography Facility	Install radiography capabilities at TA-55 to support TA-55. This will result in more secure and cost effective NDE of Pu and other nuclear assemblies.	X	X	X	X	X
TRU Waste Facility Project	Provide the required processing, temporary storage, and shipping capability for newly generated TRU waste (replaces TA-54 operations).	X	X	X	X	X
LANSCE-R	Refurbish and revitalize accelerator vital to SSP and R&D programs to improve long-term reliability and operability.		X	X	X	X
CMR D&D	Support complete demolition of the CMR building, including appropriate decontamination activities, physical demolition of the structure, disposal of all waste products generated, and site rehabilitation activities.	X	X	X	X	X
FIRP						
Power Grid Infrastructure Upgrades Project	Construct a third power line to serve the site. This provides a redundant source of power, and eliminates single point failures. The project reduces lost time and costs due to outages, and improves reliability and maintenance.		X	X	X	
PF-41 Demolition	Opens valuable real estate within the PIDAS at TA-55 for potential future projects associated with Nuclear Facility Consolidation by eliminating a facility that is not suitable for nuclear activities and can not be renovated at a reasonable cost for other uses.	X		X	X	
S&S						
Security Perimeter	Establishes physical separation and access controls between public areas and Laboratory core area through vehicle entry/exit control and road realignment.	X	X			
NMSSUP Phase II	Replaces and improves physical security features at TA-55 to respond to new threat scenarios. Project will be fully integrated with Phase I (controls and data backbone).	X		X	X	

Integrated Cost Schedule and Summary. (Amounts rounded to the nearest $1M)[1]



[1] Frequently, project execution schedules differ from DOE budget cycles. The projects listed above, as well as their accompanied descriptions on the following pages, may differ slightly in schedule than the funding profile for each project provided in the A-1 LI Cost Projection Spreadsheet.

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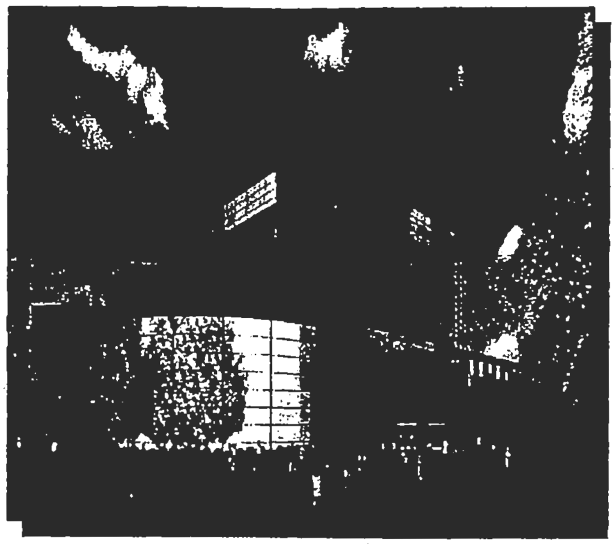
Readiness in Technical Base and Facilities (RTBF) Line Items

Approved Line Item Construction Projects

RTBF projects are sponsored through the Deputy Administrator for Defense Programs, NA-10, and specifically through NA-11, NA-12 and NA-17. The RTBF mission is to ensure that the prescribed facilities and infrastructure are maintained for the manufacture and certification of the 21st century nuclear weapons stockpile. Each of these projects supports that requirement.

National Security Sciences Building (NSSB)/LASO Office Building



NSSB Quick Facts and Status:

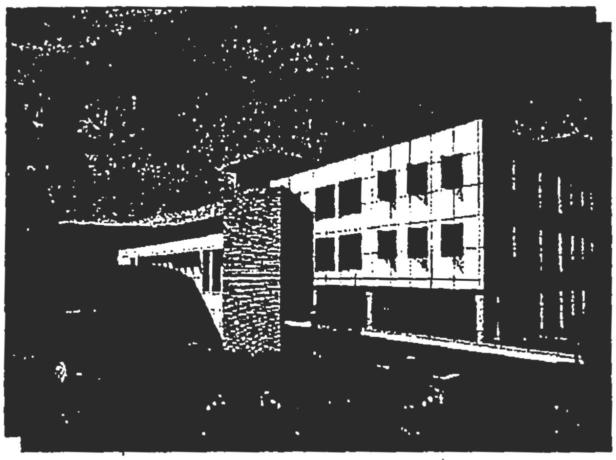
- 275,000 GSF
- Houses ~700 (~9% of total staff)
- TEC = $98M
- TPC = $122M
- Start Design: FY03
- Start Construction: FY04
- Move-in: FY06
- Status: Phase I achieved CD-4 in May 2006, Phase II achieved CD-1/2/3 in December 2006

The highest priority of the SSP is to ensure the operational readiness of the nuclear weapons stockpile. The first phase of the NSSB Project supports this by replacing the 45-year-old SM-43 Administration Building with a new facility fully compliant with current safety requirements. The NSSB Project provides modern, safe, productive facilities for theoretical and applied physics, computational science, program management and general management, all of which contribute to ensuring stockpile readiness. Functional, safety, and security obsolescence of the existing SM-43 building is the impetus for the NSSB, and the second phase of the project includes a new facility for LASO.

The NSSB Project continues the development of the theoretical-computational core in TA-3 that was started in FY99 with the Metropolis Center and NISC projects. The project includes construction of approximately 275,000 square feet of office space to house approximately 700 employees, including Central Records Management operations. A parking structure for 400 vehicles is included, as is a 600-seat auditorium. The SM-43 building (315,000 square feet) will be D&D'ed as part of the project.

The first phase of the NSSB Project received Critical Decision – 4 in May 2006. Phase II of the project (LASO Building Replacement") received CD-1/2/3 on December 20, 2006.

Chemistry, Metallurgy, and Research Replacement Project



CMRR Quick Facts and Status:

- Category I & Category II SNM Facilities
- Two structures: Radiological Laboratory Utility Office Building & Haz Category II/Security Category I facility
- TEC = $738M
- TPC = $838M
- Start Design: FY05
- RLUOB Start Construction: FY06
- Move-in: RLUOB FY09, Nuclear Facility FY13 (early finish)
- Status: Phase A final design/construction; Phases B and C preliminary design

The capabilities needed to execute the NNSA mission activities require facilities to handle actinide and other radioactive materials in a safe and secure manner. Of primary importance are the capabilities located within the CMR Building and the Plutonium Facility (located at TA-3 and -55, respectively). These facilities process, characterize, and store SNM. Most of the Laboratory's mission support functions require analytical chemistry, material characterization, and actinide research and development support capabilities. Additionally, both the CMR Building and Plutonium Facility currently house unique capacities that are not available elsewhere. Work is often moved between the CMR Building and the Plutonium Facility in order to use the full suite of capabilities that these two facilities provide.

The 50-year old CMR Building has many systems and structural components in need of upgrades, refurbishment, or replacement. Past studies identified a seismic fault trace located beneath the CMR Building, which greatly increases the level of structural upgrades needed at the CMR Building to meet current structural seismic code requirements for a Hazard Category II nuclear facility. Performing the needed repairs, upgrades, and systems retrofitting for long-term use of the CMR Building would be extremely difficult and cost prohibitive. Over the long-term, NNSA cannot continue to maintain the critical support capabilities in the CMR Building at an acceptable level of risk to the public and worker health and safety without severe operational restrictions. The current AB for the CMR Building is set to expire in 2010.

NNSA needs the physical means to accommodate the functional, mission-critical capabilities located in the current CMR Building beyond 2010 in a safe, secure, and environmentally sound manner. The CMRR Project will construct a new facility at TA-55 to house the existing CMR Building capabilities, including AC/MC and SNM storage. Currently planned are two buildings; the first is a combination radiological laboratory, office, and utility building (RLUOB), the second, a SNM Category I and II building. At a minimum, the buildings would be designed to operate for the next 50 years.

The project is split into three phases. Phase A consists of RLUOB, which will provide space outside the Perimeter Intrusion Detection , Assessment, and Delay System (PIDADS) for offices, light laboratories, and utility systems for both the nuclear facility as well as the RLUOB. Phase B is comprised of Special Facilities Equipment (SFE) that will provide the enclosures and equipment associated with both the RLUOB and Nuclear Facility. Phase C includes the design and construction of the Nuclear Facility (NF), the main facility located within the PIDADS.

The conceptual design phase was completed in FY05. CD–1 was received on June 7, 2005 and CD-2/3 for Phase A was received on October 21, 2005. Final Design and Construction activities are underway for Phase A. Preliminary design activities are ongoing for the Phase B and C.

Criticality Experimental Facility

The Criticality Experiments Facility (CEF) is a replacement facility for the national security missions that have been conducted at TA-18. The CEF is located within the Device Assembly Facility (DAF) at the NTS. The goal of the CEF Project is to provide a long-term base criticality experiments capability, improve the security and safety posture, and maximize the use of existing facilities.

CEF Quick Facts and Status:

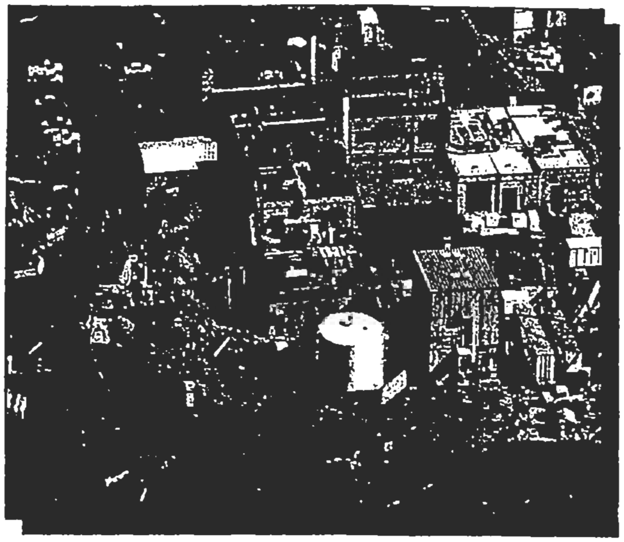
- Relocate some equipment, special nuclear material, and capabilities from TA-18 to NTS
- Modification of DAF to accommodate base criticality experiments capability
- TEC = $106M
- TPC = $145M
- Start Design: FY01
- Start Construction: FY04
- Construction Complete:FY10
- Status: CD-3B in 2QFY06, CD-3C in 3QFY06, CD-3D in 4QFY06

Planned CEF activities include: (1) R&D of technologies in support of Homeland Defense and counter-terrorism initiatives; (2) continued safe and efficient handling and processing of fissile materials; (3) development of technologies vital to implementing arms control and nonproliferation agreements; (4) development of emergency response technologies for response to terrorist attacks and other emergencies; and (5) training for criticality safety professionals, fissile materials handlers, emergency responders IAEA professionals, and other Federal and State organizations charged with Homeland Defense responsibilities.

The DAF will be modified to accommodate a base criticality experiments capability with existing DAF missions. Specifically: The DAF will be modified to accept four critical assemblies, two storage vaults, two control rooms, and several offices. The existing entry guard station will be modified to provide two automated entry lanes with biometrics. New personnel control fencing will be constructed within the PIDAS to allow escorted, uncleared workers access to the CEF construction sites. Classified workstations and telecommunications between the secure DAF and the Los Alamos National Laboratory in New Mexico will be provided. In addition, four critical assembly machines will be disassembled from TA-18, transported and reassembled at the DAF. The critical assembly controls and safety systems will be upgraded to meet nuclear safety requirements.

Construction activities are underway at the DAF with the final CD-3 scheduled for 4QFY07.

Radioactive Liquid Waste Treatment Facility (RLWTF) Upgrade



RLWTF Project Quick Facts and Status:

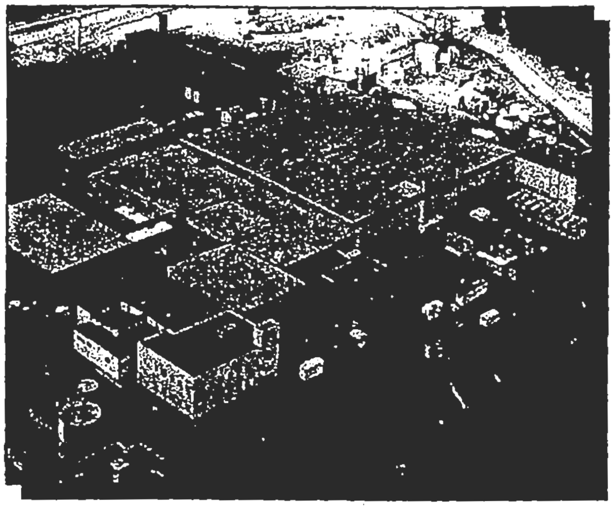
- Integrate new processes in coordination with existing facility and operations
- TEC = \$73M
- TPC = \$97M
- Start Design: FY05
- Start Construction: FY07
- Const. Complete: FY10
- D&D existing facilities: FY12
- Status: Preliminary and Final Design underway

This project will replace the RLWTF at TA-50 by enhancing reliability and process capability to meet projected regulatory requirements for discharge. The RLWTF is over 35 years old and many process and facility systems (e.g., electrical, mechanical, HVAC) are at the end of their design life and require upgrades and/or replacement.

A critical project element will focus on incorporating design features to result in a more efficient treatment processes. The project will allow for future flexibility to adapt to changes in regulatory requirements through the use of modular process treatment equipment and piping configurations. Additionally, effluent discharge standards are becoming more restrictive and the project received approval to add ZLD capability at CD-1.

CD-1 for construction of a new facility was recommended and approved on June 5, 2006 and phase A, the ZLD element received CD-2a approval on November 22, 2006. The project is currently in preliminary design for the treatment facility and final design for ZLD construction is anticipated to begin at the end of FY07 pending the outcome of the SWEIS ROD. Detailed design of the treatment facilities is expected to be completed in FY08.

TA-55 Infrastructure Reinvestment Project



TA-55 Infrastructure Reinvestment Quick Facts and Status:

- Focus on facility infrastructure systems
- Accomplish project without prolonged disruptions to programs and activities
- TEC = $124M (Phases I & II)
- TPC = $149M (Phases I & II)
- Start Design: FY05
- Start Construction: FY08
- Complete: FY17
- Status: Project has been split into two phases - multiple design activities ongoing on phase I.

The TA-55 Infrastructure Reinvestment Project will revitalize aging and obsolete facility and safety systems to ensure continuing support of NNSA's Stockpile Stewardship Mission, including the following critical activities conducted at TA-55:

- Manufacturing plutonium components
- Surveillance and disassembly of weapons components
- Actinide materials science and processing research and development
- Plutonium recovery from pit production and surveillance
- War reserve plutonium metal recovery and production
- Vault storage of nuclear materials
- Waste processing

TA-55 is the premiere nuclear and plutonium facility in the nation and was constructed in the mid-1970s. It consists of a high security Category I SNM laboratory and processing facility as well as various support structures and systems. It is the most modern and well-equipped nuclear facility at the Laboratory; however, it is aging and critical systems are beginning to require excessive maintenance. As a result, the facility is experiencing increased operating costs and reduced system availability. An investment over the near term to upgrade electrical, mechanical, safety, facility controls, and other selected systems will enable continued operation to satisfy mission objectives and programmatic milestones cost effectively for the next 30 to 40 years.

The goal of this project is to enable TA-55 facility systems to meet present and future nuclear component manufacturing, research/development, and related requirements for the stockpile while simultaneously meeting all safety and security requirements. This project will ensure that the right TA-55 facility infrastructure systems are in place to manufacture and certify the nuclear weapons stockpile safely and effectively and perform nuclear R&D.

The scope of this project will be coordinated through the INP process and through enhanced interface with LASO, NA-17, and NA-12. CD–1A was received in October 2006 and CD-2A in November 2006. Final Design is underway for Phase A subprojects with conceptual design ongoing for Phase B subprojects. Construction activities are anticipated in FY08 on the Phase A sub-projects.

TA-55 Radiography Facility

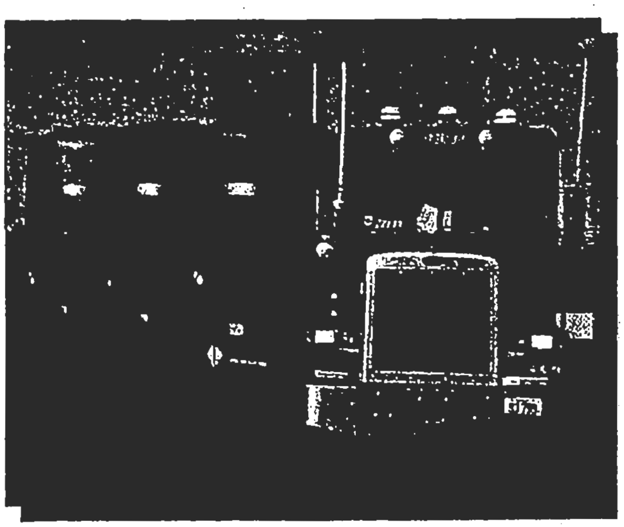
The proposed Radiography Facility for sealed nuclear components is planned to be located at TA-55, within the PIDAS enclosed area. The facility will house high-energy and medium energy x-ray systems suitable for examination of various sealed nuclear components. It will serve Pit Production Programs and Pit Surveillance Programs. The project will be designed and constructed to meet rigorous nuclear facility operations, safety, and security requirements.

TA-55 Radiography Quick Facts and Status:

- Relocate sealed component Radiography from TA-8 to TA-55
- TPC Range = $20M-$65M
- Start Design: FY06
- Complete: FY10
- Status: CD-0 approved, CD-1 forecast for FY07

The completed facility will be a long-term, flexible solution for TA-55 sealed nuclear component radiography. Formerly, radiography was conducted at TA-8 where extensive temporary safety and security measures were established each time an examination was made. These temporary measures were very expensive and time consuming and were not suitable for the long term efficiency, safety, and security of the plutonium and pit programs. Currently, the project is in the conceptual design phase.

TRU Waste Facility



TRU Waste Quick Facts and Status:

- Provide the required processing, temporary storage, and shipping capability for newly generated TRU waste
- TEC = $40M
- TPC Range= $45-80M
- Start Design: FY06
- Start Construction: FY09
- Complete: FY11

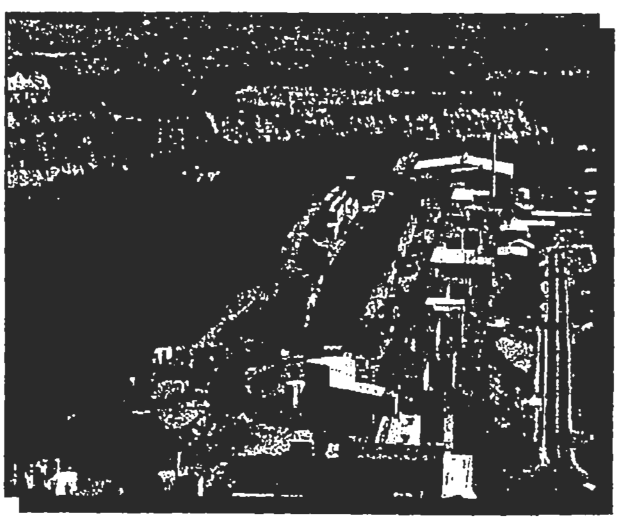
In order to continue to support the SSP and other nuclear programs, LANL must have a continuing capability to process TRU waste and to ship that waste to WIPP. The Order on Consent ("Consent Order") with the State of New Mexico signed in 2005 requires that LANL's existing TRU waste processing capability, located in Technical Area 54 (TA-54), be closed by 2012. Therefore, LANL must develop another means of processing and shipping TRU waste. This project will provide the required processing, temporary storage, and shipping capability for newly generated TRU waste, thereby ensuring LANL's continuing capability and reliability to support DP missions.

The proposed scope provides for design, construction, and installation of a facility to process and ship newly generated TRU waste to WIPP. It does not provide for the processing and shipment of legacy waste, which is being satisfied through another program.

This project is part of a comprehensive, long-term strategy to consolidate radioactive waste operations into a smaller, more compact area that can operate safely, securely, and effectively for the foreseeable future. The project is also part of LANL's NFC Program. The new facility will be located at either TA-52 or TA-63, at an approved site capable of satisfying all facility requirements. The facility will be capable of handing a minimum of 1000 drum equivalents.

The project is currently in the conceptual design phase (CD-0 approval was received in February 2006). The conceptual design phase will be followed by CD-1, scheduled for spring 2007.

LANSCE Refurbishment Project



LANSCE-R Quick Facts and Status:

- Revitalize 30 year old accelerator complex vital to SSP
- TPC Range = TBD
- Start Design: FY07
- Start Refurbishment: FY08
- Complete: FY15
- Status: CD-0 package signed on 12/27/06

LANSCE is a national user facility that provides extraordinary research capabilities in basic and applied science for national security, defense, and civilian applications. Central to the LANSCE facility is a versatile 800 MeV proton linear accelerator (Linac) that drives four major facilities with unique national research capabilities: the Proton Radiography (pRad) Facility that supports DP missions, the LANSCE facility that supports DP and Office of Science (OS) missions, the WNR Facility that supports DP missions, and the Isotope Production Facility (IPF) that supports Office of Nuclear Energy, Science, and Technology (NE) missions.

The highest-priority NNSA driver for LANSCE-R is the unique capability of proton radiography. The Proton Radiography Facility, which uses the pulsed H⁻ beam from the Linac, is unique in the world and provides time-sequenced radiographs of dynamic phenomena with billionths-of-a-second time resolution. Proton radiography is critical for ongoing certification and model development as described in detail in the classified addendum. It is anticipated that the data from 800 MeV pRad will continue to be of tremendous importance to Stockpile Stewardship for a least the next 15 to 20 years. Ensuring Linac beam operations for proton radiography beyond 2020 will benefit all LANSCE programs.

All three DOE offices (DP, NE, and OS) that support research at LANSCE have affirmed the importance of having LANSCE operational as a reliable facility for the next decade and beyond. Although all these offices use LANSCE, the Office of the Secretary of Energy has assigned NNSA DP with responsibility and accountability for reliable accelerator operations in support of the overall DOE mission. LANSCE continues to be the major Laboratory experimental-science facility and therefore is a critical feature of the Laboratory's science-based mission. There is no foreseeable substitute for this capability. Historically, LANSCE and its predecessor, LAMPF, have been essential in bringing exceptional talent to the entire Laboratory. Keeping LANSCE viable will continue this process.

LANSCE has been operational since 1972, is aging, and requires investment to continue operation. The LANSCE-R project is designed to sustain reliable facility operations past 2020 for defense research and applications with a focus on dependable beam delivery for proton radiography experiments. CD-0 for LANSCE-R was signed on 12/27/06 with an estimated Total Project Cost (TPC) ranging from $165 to $238M.

Chemistry Metallurgy Research (CMR) Building Demolition

CMR D&D Quick Facts and Status:

- Support complete demolition of the CMR building
- Part of the approval of CD–1 for the CMRR project
- TPC Range = TBD
- Start D&D: FY12
- Complete: TBD
- Status: CD-0 package signed

The 50-year old CMR Building has many systems and structural components in need of upgrades, refurbishment, or replacement. Past studies identified a seismic fault trace located beneath the CMR Building, which greatly increases the level of structural upgrades needed at the CMR Building to meet current structural seismic code requirements for a Hazard Category II nuclear facility. Performing the needed repairs, upgrades, and systems retrofitting for long-term use of the CMR Building would be extremely difficult and cost prohibitive. The current AB for the CMR Building is set to expire in 2010. This project will allow an older, non-compliant and expensive to maintain facility to be retired and demolished while also meeting the needs of the reconfigured weapons program.

As part of the approval CD–1 for the CMRR project, CD–0 was approved for the demolition of the existing CMR building. This project is intended to support complete demolition of the CMR building, including appropriate decontamination activities, physical demolition of the structure, disposal of all waste products generated, and site rehabilitation activities. The goal of this project would be to leave the CMR facility footprint in a Brownfield type state.

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Facilities and Infrastructure Recapitalization Program (FIRP) Line Items

Approved Line Item Construction Projects

FIRP applies new, increased, direct appropriations to address maintenance and infrastructure activities that will significantly improve the long-term physical and infrastructure conditions and mission availability. LI projects within FIRP are focused on utility systems. These projects are vital to mission accomplishment, yet they are not tied to a specific Campaign or weapons program. Because of their crosscutting nature, they have not previously achieved priority within strictly programmatic budget reviews. The Laboratory currently has two LI projects under FIRP.

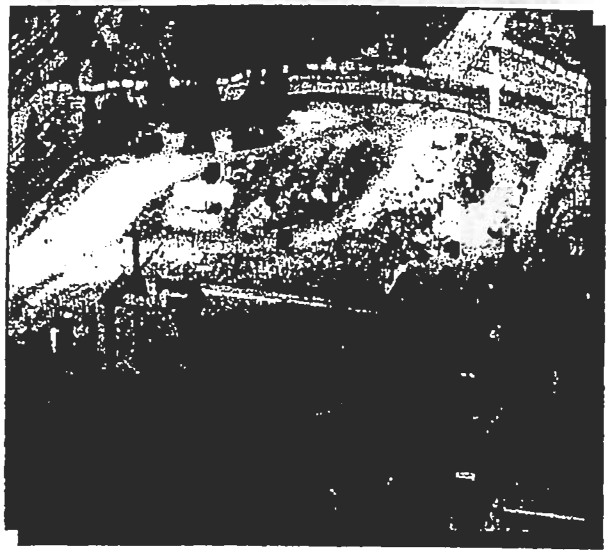
Power Grid Infrastructure Upgrades (PGIU) Project

PGIU Project Quick Facts and Status:

- TEC = $18.5M
- TPC = $20M
- Design & Const: FY05 (ongoing)
- Complete: FY07
- Status: CD-4a was received July, 2006; Phase B achieved substantial completion in January 2007; Additional scope is being proposed for additional DM at the TA-3 Substation to utilize project under-runs

The PGIU Project will provide improvements to the electrical infrastructure, which is currently prone to single point failures due to a lack of redundancy. This project has been part of the NNSA planning strategy for several years and is executed in two phases. Phase A constructed a new 115 kV transmission line approximately 10 miles long across DOE administered property. It originates at a new Southern Technical Area (STA) Substation and proceeds northwesterly through the central portion of the site to the West Technical Area (WTA) Substation. Phase B reduces DM items associated with the Eastern Technical Area (ETA) Substation. The ETA equipment has not received critical maintenance and repairs due to the inability to de-energize the ETA. With this project, the existing Norton and Reeves lines, as well as the new line, can be individually de-energized to perform critical maintenance, without impact to the Laboratory.

PF-41 Demolition Project



PF-41 Quick Facts and Status:

- Deferred Maintenance:
  2003 = $22,384
  Total = $705,942
- GSF: 35,849 sq ft
- D&D: begin in FY07: complete in FY 08
- TPC = $12.5M (Expense Funded)
- Status: received CD-0 in November, 2006: forecast CD-1 in February, 2007 and CD-2/3 in April, 2007

PF-41 Demolition Project will remove a substandard facility from within the TA-55 PIDAS thereby opening up valuable space for consideration for future projects. PF-41 is a facility comprising almost 35,000 sq ft and is located at TA-55. It was originally constructed in the early 1980's with the intended purpose to store several metric tons of containerized SNM, in various forms (e.g., oxides, shapes), to support short term and interim needs. It was intended to be a support facility for PF-4, the primary plutonium research and development facility at TA-55. The facility was never commissioned or used for its intended purpose for a variety of reasons.

A number of studies, conceptual designs, and other analysis have been conducted over the past 10-15 years evaluating PF-41 for various uses. These studies recommended upgrades of anywhere from $10M-$125M to adapt the facility in a compliant and operational manner to SNM storage, radiography, and other uses. The most important conclusion of each of those studies and analyses was that if the facility is to be used for a nuclear mission requiring the handling or storage of any form of SNM, significant modifications must be made to the building. In its current configuration, PF-41 is not capable or suitable for safe, compliant, or effective technical operations involving nuclear materials or classified technical research / manufacturing support activities.

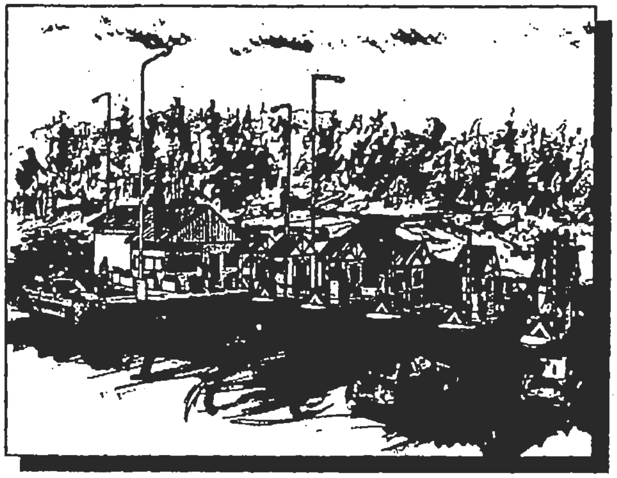
Due to its location in the core of the secure area at TA-55, the PF-41 facility is situated on an extremely strategic and valuable site. Its current use is as office space and records storage. Land/facility use is not in line with the strategic value of its location and studies have shown that refurbishment/remodel to a nuclear facility is cost prohibitive. Therefore this project to demolish this facility was proposed and approved.

Safeguards and Security (S&S) Line Items

Approved Line Item Construction Projects

These projects are sponsored by NA-70, the Office of Defense Nuclear Security.

Security Perimeter Project



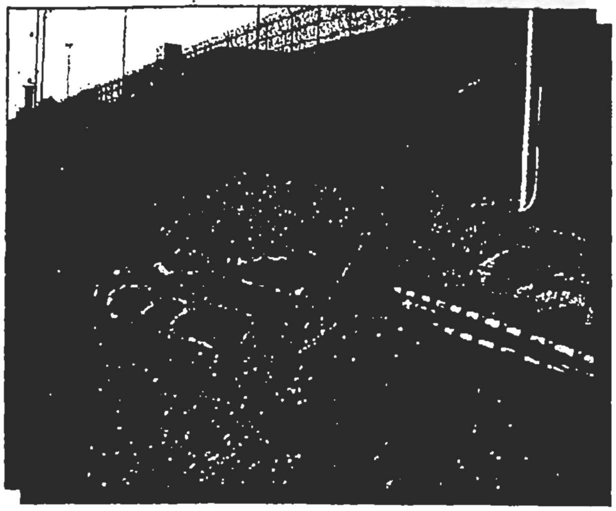
Security Perimeter Project Quick Facts and Status

- Selected road realignments and modifications
- TEC: [illegible]
- TPC: [illegible]
- Start [illegible]
- Start Construction: 4Q FY05
- Complete: 1Q FY07
- Status: CD-1 in 1Q FY04, CD-2/3 in 4Q FY05, CD-4 in 3Q FY07

As a result of the events of September 11th, the nature of terrorist threats has changed significantly in terms of the potential magnitude of an attack as well as terrorist motivations, targets, and methods. In recognition of this increased threat, the Laboratory and NNSA security and management have determined that there is a critical need to upgrade the physical protection around critical assets at the core of the site.

This project provides the Laboratory the ability to isolate the core area of the site from unscreened vehicle access in order to protect vital national security assets, government property, and human life from possible terrorist activity. This project provides the capability to enact a graded closure of the core area of the site depending on the NNSA SECON levels in effect at the time. During elevated threat conditions, all but emergency and designated government vehicles may be prevented from entering the core area of the site. Staffed access control stations with vehicle queuing approaches, necessary utilities, and security equipment are required to screen vehicles and provide the capability of closing off vehicle access if required.

Nuclear Materials Safeguards and Security Project (NMSSUP), Phase II



NMSSUP Phase II Quick Facts and Status:

- PIDAS upgrade and other exterior physical security modifications
- Exterior systems
- TEC = $214M
- TPC = $240M
- Start Design: 1QFY07
- Start Construction: FY08
- Complete: FY12
- Status: CD-1 approved May 2006; CD-2 scheduled in 1QFY08; CD-4 in [illegible] FY12 (Approve Start of Operation)

The overall objective of the NMSSUP is to upgrade and replace the existing physical security system to address the new protection strategy requirements and deteriorating physical security infrastructure. Planning for NMSSUP was initiated with a DOE security assessment in 1996. The assessment found that extensive upgrades were necessary to meet new threats. Phase I installed the data and communications backbone for the security system to the central and secondary alarm stations. Phase II will address the exterior security system at TA-55, the Laboratory's key nuclear facility that houses and processes Category I quantities of SNM. TA-55 is particularly important as it is the proposed site for consolidation of nuclear missions for the laboratory, including the CMRR Project.

Phase II includes the upgrade or replacement of the existing exterior intrusion detection, assessment, delay, access control, and security communication systems around TA-55. Entry control facilities for the protected area will also be replaced or upgraded. These systems will be integrated with the Argus security and access control system that was installed in Phase I.

When complete, Phase II will significantly improve the exterior security posture at TA-55 while making operations more cost effective. The maintenance backlog on aging systems will be reduced and/or eliminated through replacement with new systems. The NMSSUP includes five key subsystems as shown on Figure 1 and summarized below:

TAIZ - Technical Area Isolation Zone. The TAIZ will extend from the outer Perimeter Intrusion Detection, Assessment, and Delay System (PIDADS) fence to the TA-55 site boundary.

PIDADS – Perimeter Intrusion Detection, Assessment, and Delay System. The PIDADS will replace the existing PIDAS.

ATDS – Aerial Threat Deterrent System. The ATDS is to deter aerial approaches on the roof of PF-4.

ECF – Entry Control Facility. The ECF will be replacing the current Entry Control Facility (PF-9 & PF-22).

Utility Building (not shown) will serve as the new power feed for the upgrades.

NMSSUP is currently developing documents for CD-2 and CD-3 approvals scheduled for 1Q FY08. Construction start is scheduled for 2Q FY08, and overall project close out is scheduled for 3Q FY12.

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Attachment A-1
Facilities and Infrastructure Cost Projection Spreadsheet
Line Item Projects for NNSA - LANL Site
($000s)

Priority (1)	Project Name (2)	Project Number (3)	[illegible]	[illegible]	Mission Dependency	Deferred Maint. Reduction	GSF Added or Eliminated	Funding Type	Total	Prior Years Funding	FY 2006	FY 2007	FY 2008 FYNSP	FY 2009 FYNSP (13)	FY 2010 FYNSP (14)	FY 2011 FYNSP	FY 2012 FYNSP	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
A. Readiness in Technical Base and Facilities (RTBF) Line Items																						
F	National Security Sciences Building (22)	03-D-102		NMD	NA	22,280	6	OPC	36,475	3,400	2,900	175	4,000	15,000	11,000	-	-	-	-	-	-	-
								PE&D	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								LI	98,364	91,974	6,390	-	-	-	-	-	-	-	-	-	-	-
								Total (TPC)	134,839	95,374	9,290	175	4,000	15,000	11,000							
1	CMR Replacement Project (23)	04-D-125	LANL-04-D-125	MC	PMC	10,667	507	OPC	100,000	29,218	1,400	5,000	7,000	3,000	5,000	24,000	25,382	-	-	-	-	-
								PE&D	65,939	23,068	28,710	14,161	-	-	-	-	-	-	-	-	-	-
								LI	672,180	49,625	54,450	112,422	160,586	178,011	117,068	-	-	-	-	-	-	-
								Total (TPC)	838,099	101,911	84,560	131,583	167,586	181,011	122,068	24,000	25,382					
2	Criticality Experimental Facility	04-D-128		NA	NA	-	-	OPC	42,318	17,669	4,539	2,955	5,346	9,237	2,550	-	-	-	-	-	-	-
								PE&D	25,443	14,968	8,910	1,565	-	-	-	-	-	-	-	-	-	-
								LI	77,469	3,788	12,870	24,197	26,281	10,353	-	-	-	-	-	-	-	-
								Total (TPC)	145,228	36,425	26,319	28,717	31,627	19,590	2,550							
3	Radioactive Liquid Waste Treatment Facility Upgrade	07-D-220	LANL-07-D-220	MC	PMC	100	16	OPC	24,000	2,000	2,400	700	1,200	2,000	2,000	6,900	6,800	-	-	-	-	-
								PE&D	11,100	-	3,000	8,100	-	-	-	-	-	-	-	-	-	-
								LI	61,500	-	-	14,828	26,872	14,500	5,500	-	-	-	-	-	-	-
								Total (TPC)	96,600	2,000	5,400	23,628	27,872	16,500	7,500	6,900	6,800					
4	TA-55 Infrastructure Reinvestment (24)(26)	08-D-140.2		MC	PMC	TBD	-	OPC	24,800	1,000	3,000	1,500	1,300	1,100	1,500	1,500	1,700	1,700	3,000	3,500	2,000	2,000
								PE&D	7,000	-	2,000	2,000	2,000	1,000	-	-	-	-	-	-	-	-
								LI	117,040	-	-	-	6,000	12,000	12,000	12,000	12,240	12,000	12,000	12,000	12,000	14,800
								Total (TPC)	148,840	1,000	5,000	3,500	9,300	14,100	13,500	13,500	13,940	13,700	15,000	15,500	14,000	16,800
5	TA-55 Radiography (25)(26)	08-D-140.1	LANL-08-D-803	MC	PMC	TBD	5	OPC	3,500	-	750	500	250	1,000	1,000	-	-	-	-	-	-	-
								PE&D	6,836	-	1,859	1,977	3,000	-	-	-	-	-	-	-	-	-
								LI	28,000	-	-	-	-	20,000	8,000	-	-	-	-	-	-	-
								Total (TPC)	38,336		2,609	2,477	3,250	21,000	9,000							
6	TRU Waste Facility Project	07-D-140.2	LANL-09-D-XXX	MC	PMC	TBD	25	OPC	5,500	-	1,000	1,400	500	500	500	1,800	-	-	-	-	-	-
								PE&D	5,500	-	-	3,000	2,500	-	-	-	-	-	-	-	-	-
								LI	34,500	-	-	-	-	14,500	15,000	5,000	-	-	-	-	-	-
								Total (TPC)	45,500		1,000	4,400	3,000	15,000	15,500	6,800						
7	*LANSCE Refurbishment (LANSCE-R)(26)	TBD	LANL-07-001	MC	DSW	TBD	20	OPC	TBD	-	-	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	-	-	-
								PE&D	TBD	-	-	-	TBD	TBD	-	-	-	-	-	-	-	-
								LI	TBD	-	-	-	-	TBD	TBD	TBD	TBD	TBD	-	-	-	-
								Total (TPC)	TBD			TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD			
8	*Chemistry Metallurgy Research (CMR) Building Demolition	TBD	TBD	NMD	NA	TBD	(570)	OPC	TBD	-	-	-	-	-	-	TBD	TBD	TBD	TBD	TBD	TBD	TBD
								PE&D	TBD	-	-	-	-	-	-	-	-	TBD	TBD	TBD	-	-
								LI	TBD	-	-	-	-	-	-	-	-	-	-	TBD	TBD	TBD
								Total (TPC)	TBD							TBD	TBD	TBD	TBD	TBD	TBD	TBD
B. Facilities and Infrastructure Recapitalization Program (FIRP) Line Items																						
1	Power Grid Infrastructure Upgrade	05-D-602	LA-LI-05-01	NMD	NA	-	-	OPC	1,500	1,250	125	125	-	-	-	-	-	-	-	-	-	-
								PE&D	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								LI	18,336	9,921	8,416	-	-	-	-	-	-	-	-	-	-	-
								Total (TPC)	19,836	11,171	8,541	125										
2	*PF-41 Demolition (26)	TBD	TBD	NMD	NA	705	(36)	OPC	12,500	-	2,500	5,000	5,000	-	-	-	-	-	-	-	-	-
								PE&D	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								LI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								Total (TPC)	12,500		2,500	5,000	5,000									
C. Safeguards & Security (S&S) Line Items																						
1	Security Perimeter Project	LANL-05-017		NMD	NA	-	1	OPC	4,490	3,390	650	450	-	-	-	-	-	-	-	-	-	-
								PE&D	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								LI	19,842	19,842	-	-	-	-	-	-	-	-	-	-	-	-
								Total (TPC)	24,332	23,232	650	450										
2	NMSSUP Phase 2	05-D-170.1, 08-D-280	TBD	MC	PMC	TBD	22	OPC	27,200	10,700	5,500	2,000	1,000	1,000	3,000	4,000	-	-	-	-	-	-
								PE&D	44,590	10,000	34,590	-	-	-	-	-	-	-	-	-	-	-
								LI	168,210	-	-	-	48,000	48,000	49,000	25,210	-	-	-	-	-	-
								Total (TPC)	240,000	20,700	40,090	2,000	49,000	49,000	52,000	29,210						

Los Alamos

Priority (1)	Project Name (2)	Project Number(s)	Critical Mission Shortfalls	Mission Dependency (4)	Mission Dependency Program	Deferred Maint Reduction	GSF Added or Eliminated	Funding Type (9)	Location	Prior Years Funding	FY 2006	FY 2007	FY 2008 TYSP	FY 2009 TYSP	FY 2010 TYSP	FY 2011 TYSP	FY 2012 TYSP	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
D. Other Defense Programs Line Items [illegible]																						
	No "Other Defense Programs" Line Items							OPC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								PE&D	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								LI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								Total (TPC)														
E. Nuclear Nonproliferation (NN) Line Items																						
	No "Nuclear Nonproliferation" Line Items							OPC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								PE&D	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								LI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								Total (TPC)														
F. Non-NNSA Line Items																						
	No "Non-NNSA" Line Items							OPC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								PE&D	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								LI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								Total (TPC)														

Attachment A-2

Proposed Line Item Construction Projects

This spreadsheet proposes additional LI projects that are either above the FYNSP profile and/or are not reported in the current ICPP. The following Proposed LI Construction Project Information Sheets provide a justification for each project submission.

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NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet

Project Title/Site:

Weapons Manufacturing Support Facility

Federal and Contractor Program Manager(s) or Sponsor(s):

TBD, LASO; Glenn Mara, PADWP; funding sponsor DP

Federal and Contractor Project Manager(s):

TBD

Project Description:

This project (formerly titled "ESA Shops Replacement" and "ESA Fabrication Facility Replacement" in previous TYSP's) will consolidate metals fabrication, radiological and salt component machining and inspections capabilities, and advanced manufacturing technology development and related support personnel into a single 50,000 square foot facility. The new facility will replace the current weapons functions provided by two facilities, TA-3-39 and TA-3-102.

Current Proposed/Actual Project Schedule:

FY10 Start with Completion in FY14

Project Justification (Program Requirements):

While extremely busy during the Cold War, these facilities have much more capacity than is needed. Built in the mid 1950s, these oversized, inefficient, antiquated facilities do not provide the necessary support to the Laboratory and have become a financial burden. They lack auxiliary systems necessary to support anticipated program needs and their current locations create logistical problems. The functions to be reconfigured by the new facility include the following:

Alternatives Developed/Available to Meet Program Requirements:

None identified that will meet program requirements.

Proposed Funding Profile:

TPC $20.6 M. A DB acquisition approach will be utilized to reduce costs and accelerate the overall design and construction schedule.

	Funding	FY10	FY11	FY12	FY13	FY15	FY16
OPC	2,500	1,500	250	250	500		
PED	3,000		3,000				
LI	15,060			8,060	7,000		
TEC	18,060		3,000	8,060	7,000		
TPC	20,560	1,500	3,250	8,310	7,500		

Projected Annual Operating Costs:

TBD

Project Site/Facility Space Utilization:

This project would allow older, non-compliant and expensive-to-maintain facilities to be retired and demolished while also meeting the needs of a growing emergency response capability.

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet

Project Title/Site:

Energetic Materials Characterization Facility /Los Alamos National Laboratory

Federal and Contractor Program Manager(s) or Sponsor(s):

NNSA Program Manager – TBD / Contractor Program Manager - Charlie McMillan, ADWP, 505-667-8711 / Sponsor - DP

Federal and Contractor Project Manager(s):

TBD

Project Description:

The Energetic Materials Characterization Facility project will design and construct a state-of-the-art facility to conduct energetic material operations and provide capabilities critical to the surveillance, surety, and safety of energetic materials related to the nation's enduring nuclear stockpile and to homeland security needs. It will contain approximately 41,000 square feet on 2-3 levels of office, light and heavy laboratory and support/common areas. This new facility will reduce footprint at TA-9 with modern flexible space that can support the dual missions of nuclear weapons and homeland security. The facility will be occupied by Dynamic and Energetic Materials (DE) Division and will be located at TA-22. The facility will be inside the security perimeter and will include both open and secure communications as well as a VTR. The project will include blast chambers, required utility runs, parking, and short sections of access roadway.

Current Proposed/Actual Project Schedule:

CD-0 is planned for FY10

Project Justification (Program Requirements):

This project is necessary to maintain existing and future programs involving energetic materials for the design agency responsibility for both nuclear weapons and homeland security requirements. These efforts are currently supported in multiple buildings that are in excess of 50 years old and are obsolete and difficult to maintain. Currently some work must be delayed or repeated because temperature control in the existing facilities is nonexistent. Catastrophic steam-line failure has led to building abandonment and loss of programmatic equipment. Electrical service is inadequate to serve the increasingly electronic analytical requirements. Current laboratory space is inadequate to support the compartmentalized needs of homeland security as well as the nuclear stockpile requirements.

Consolidation will make management and maintenance easier and more cost efficient. The new facility will have a sustainable design that will yield lower ownership costs. The facility will be adaptable for future missions. The facility will provide maintainable fume hoods, building systems, and sufficient materials storage in addition to laboratory and office space. Vacated facilities, primarily at TA-9, will become available for D&D.

Process waste minimization is a goal of this project because off-site disposal has become increasingly difficult.

If this project is not completed, inefficient program support will continue and some programmatic activities will not be supported. The working conditions for Laboratory staff will continue to make recruiting and retention difficult.

Alternatives Developed/Available to Meet Program Requirements:

HE operations require special facilities and hence the operations can not easily be relocated to other existing areas at the Laboratory. These operations are daily activities making local capability essential. Materials can not be sent off site for testing because transportation requirements require the sensitivity testing and hence the characterization facility must be located at the Laboratory.

Proposed Funding Profile ($K):

	Funding	FY10	FY11	FY12	FY13	FY14	FY15
OPC	3,750	1,750	250	250	250	250	1,000
PED	6,000		4,000	2,000			
LI	43,000				20,000	18,000	5,000
TEC	49,000		4,000	2,000	20,000	18,000	5,000
TPC	52,750	1,750	4,250	2,250	20,250	18,250	6,000

Projected Annual Operating Costs:

Details are unknown at this time, however recent estimates of renovation costs, increased environmental protection, and lost productivity over a five-year period have resulted in a figure of $24M. That estimate does not include the costs associated with required capabilities to support homeland security and would not address certain requirements associated with laboratory /office separation.

Project Site/Facility Space Utilization:

This project results in a net square footage reduction of approximately 8,000 square feet.

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet

Project Title/Site:

Non-Nuclear Facility Consolidation /Los Alamos National Laboratory

Federal and Contractor Program Manager(s) or Sponsor(s):

NNSA Program Manager – TBD / LANL Program Manager – Glenn Mara, PADWP / Sponsor - DP

Federal and Contractor Project Manager(s):

TBD

Project Description:

As decisions are made with respect to Complex 2030 in the areas of consolidation of Tritium Capabilities, HE Fabrication and R&D Activities and Firing Sites, LANL is anticipating the need to consolidate out of and/or modernization of the non-nuclear capabilities that would remain at the site. At this time the scope of this project has not been determined and would be dependent on Complex 2030 decisions.

Current Proposed/Actual Project Schedule:

FY12 Start with Completion in FY17

Project Justification (Program Requirements):

Program Requirements will be defined as decisions are made on Complex 2030. At LANL many of the facilities that support non-nuclear portions of the program that this project would address will be nearing 50 years in age or older. Many are today, and will continue in the future, to be expensive to maintain in terms of operation, safety and compliance. To be able to support the weapons complex in the future, these facilities will need recapitalization and/or replacement to be economical to operate and to be safe and compliant.

Alternatives Developed/Available to Meet Program Requirements:

As decisions are made with respect to retained capabilities, alternatives will be explored

Proposed Funding Profile ($K):

TBD, projected Total Project Cost $131M

Projected Annual Operating Costs:

TBD

Project Site/Facility Space Utilization:

This project will allow older, non-compliant and expensive to maintain facilities to be retired and demolished while also meeting the needs of the reconfigured weapons program.

Proposed Funding Profile ($K):

	Funding	FY12	FY13	FY14	FY15	FY16	FY17
OPC	6,250	3,000	500	250	250	250	2,000
PED	15,000		10,000	5,000			
LI	110,000			10,000	40,000	40,000	20,000
TEC	125,000		10,000	15,000	40,000	40,000	20,000
TPC	131,250	3,000	15,000	15,250	40,250	40,250	22,000

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet

Project Title/Site:

National Security Engineering Facility / Los Alamos National Laboratory

Federal and Contractor Program Manager(s) or Sponsor(s):

NNSA Program Manager-TBD / LANL Program Managers - Scott Gibbs, Brett Knapp

Sponsor - DP

Federal and Contractor Project Manager(s):

LANL Program Manager/Sponsor TBD

Project Description:

The National Security Engineering (NSE) facility will consolidate, and relocate critical staff necessary for continued support of the Laboratory's national security missions. It will contain approximately 130,000 square feet, on 3-4 levels of office space and support/common areas. This will be a joint occupancy building including appropriate support engineering, administrative and programmatic engineering groups.

Current Proposed/Actual Project Schedule:

CD-0 is planned for FY13.

Project Justification (Program Requirements):

This project is necessary to replace existing obsolete and decaying modular and Cold War Era structures and to consolidate engineering activities at the Laboratory. Current activities are conducted in scattered, 30 to 50 year old facilities, which are obsolete, and increasingly expensive to operate. This project will make operations more efficient and reliable through provision of a modern facility, which will consolidate operations and functions from numerous facilities and structures spread throughout several Technical Areas. Operating costs will be reduced due to consolidation of space and use of modern, *Energy Star* equipment and controls. Working conditions for occupants will be improved by use of proper lighting, HVAC and ergonomic equipment and furniture.

Alternatives Developed/Available to Meet Program Requirements:

There are none identified that will meet program requirements.

Proposed Funding Profile ($K):

	Funding	FY13	FY14	FY15	FY16	FY17
OPC	3,000	1,500	250	250	250	750
PED	3,750		3,750			
LI	45,250			17,000	20,000	8,250
TEC	49,000		3,750	17,000	20,000	8,250
TPC	52,000	1,500	4,000	17,250	20,250	9,000

Projected Annual Operating Costs:

Details are unknown at this time, but overall operating costs are projected to be lower due to demolition of older facilities replaced by this project.

Project Site/Facility Space Utilization:

The existing structure will be removed in 2009 to accommodate the construction of the proposed NSE facility. In addition, a yet to be determined number of other facilities will be demolished when the NSE is complete.

NNSA Integrated Construction Program
Proposed Line Item Construction Project Information Sheet

Project Title/Site:

Radiological Sciences Institute: Phase I and 2, Institute for Low-level Radiological and Nuclear Science and Institute for Nuclear Nonproliferation Science and Technology for Weapons Physics and Threat Reduction/Los Alamos National Laboratory

Federal and Contractor Program Manager(s) or Sponsor(s):

NNSA Program Manager/Sponsor TBD

Douglas Beason, ADTR, Los Alamos National Laboratory, (505) 667-1437

Mary Neu, ADCLES, Los Alamos National Laboratory, (505) 606-2266

Federal and Contractor Project Manager(s):

LANL Program Manager/Sponsor TBD

Project description:

A new, consolidated, and integrated Radiological Sciences Institute (RSI) is planned for construction, and is included in the 2006 LANL SWEIS. The RSI will serve two purposes: (1) modernization of the Laboratory's radiochemistry, nuclear nonproliferation and safeguards, and nuclear and materials science capabilities and (2) assumption of capabilities that could potentially be lost from the Laboratory due to changes in other facilities (such as high activity radioactive materials handling capabilities that are not incorporated into the CMRR). The RSI will be constructed over 20 years, in a phased approach to address long term radiological and nuclear science R&D in support of core national security weapons and threat reduction missions.

Phase I of the RSI, the Institute for Low-level Radiological and Nuclear Science (IRNS) for Weapons Physics and Threat Reduction, will ensure a long term capability for the Laboratory to meet the radiochemistry and nuclear science requirements of weapons physics, threat reduction, and other national security needs of NNSA and other federal agencies, including work for others. Radiochemistry and nuclear science are recognized core capabilities for the Laboratory's Weapons Physics Program, and are also integral capabilities for multiple programs in the Threat Reduction core mission area. Facilities in the Phase 1 IRNS will be user facilities that are flexible, but directed at low-level radiological and nuclear sciences required by the nuclear weapons physics community and by DOE and various federal agency sponsors who require low-level radiological sciences capability. The IRNS will include facilities and capabilities essential for research and development involving nuclear materials and isotopes in nearly all forms, but at low-level radiological concentrations and configurations. The Institute will also house Radiation Protection capabilities in direct support of LANL mission areas and in providing health physics expertise to the broader DOE community. Another phase of the RSI, the Institute for Nuclear Nonproliferation Science and Technology (INNST), will focus on LANL mission areas of nuclear material detection and identification and safeguards and security technology development. Both the IRNS and INNST will accommodate a broad range of isotope science and technology activities in support of the laboratory's overarching National Security mission.

The IRNS will consist of multiple-use nuclear facilities (Security Category III/IV) incorporating both open and secured laboratories, used for research, development, testing, and the evaluation of technology directly applied to multiple programs that are at the overlap and interface of weapons physics and nuclear attribution science. The INNST will consist of multiple-use nuclear facilities (Security Category II and III/IV) incorporating both open and secured laboratories, used for research, development, testing, and the evaluation of technology directly applied to several programs, including international and domestic safeguards, remote unattended monitoring, Second Line of Defense, off-site source recovery, export control, international and domestic nuclear event evaluation and attribution, nuclear emergency response, and work for other government agencies, such as DHS, IAEA, and IC. (The RSI facilities, as described in the draft LANL SWEIS update, are consistent with these construction projects.)

Current Proposed/Actual Project Schedule:

(Fiscal Quarter)					
Preliminary Design start	Final Design Complete	Physical Construction Start	Physical Construction Complete	D&D Existing Facilities Start	D&D Existing Facilities Complete
1QFY09	4QFY10	1QFY11	2QFY13	TBD	TBD

Project Justification (Program Requirements):

The Laboratory radiochemistry, and nuclear and materials science, and nuclear nonproliferation and safeguards capabilities that support the weapons physics and threat reduction programs of the laboratory's National Security mission are currently located in facilities at TA-35, TA-48, and TA-3 (the CMR Building), as well as TA-53. Some of these capabilities have recently been relocated to these facilities following the termination of programmatic operations at TA-18. However, these facilities are also scheduled for closure by NNSA or are aging to a degree that they will not be functional for the long term. The RSI will ensure that the capabilities housed in these facilities are retained for NNSA and other Federal agencies.

There is natural synergy between the radiochemistry and nuclear science capability required by weapons physics and the threat reduction nuclear attribution activities at the Laboratory. With respect to other Laboratories these are unique particularly because they have grown out of the laboratory's primary mission as a nuclear weapons laboratory. The familiarity of the Laboratory staff with nuclear weapons materials, components, and systems, as well as the combination of cross-cutting science and technology expertise and facilities infrastructure at the Laboratory, have enabled development of threat reduction capabilities and technologies that might not otherwise have been developed by those unfamiliar with nuclear weapons technology. The overlap between these core mission areas will continue into the future and an integrated RSI will continue to exploit the synergies between these core mission areas.

Alternatives Developed/Available to Meet Program Requirements:

To be developed (TBD).

Proposed Funding Profile ($K)

Phase 1, IRNS:

	Funding	FY08	FY09	FY10	FY11	FY12	FY13
OPC	25,300	5,000	1,000	1,000	800	800	16,700
PED	25,000		10,000	15,000			
LI	215,100				86,040	96,040	33,020
TEC	240,100		10,000	15,000	86,040	96,040	33,020
TPC	265,400	5,000	11,000	16,000	86,840	96,840	49,720

Phase 2, INNST:

	Funding	FY11	FY12	FY13	FY14	FY15	FY16
OPC	20,300	5,000	1,000	1,000	800	800	11,700
PED	25,000		10,000	15,000			
LI	165,100				66,040	66,040	33,020
TEC	190,100		10,000	15,000	66,040	66,040	33,020
TPC	210,400	5,000	11,000	16,000	66,840	66,840	44,720

Projected Annual Operating Costs:

Under development

Project Site/Facility Space Utilization:

The Radiological Sciences Institute Project will allow for a decrease footprint of facilities under management by about 95,000 GSF (IRNS: 43,500, INNST: 51,000).

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Integrated Construction Program
Proposed Line Item Construction Project Information Sheet

Project Title/Site:

Fire Stations Replacement Project, LANL TA-3, TA-16, TA-49

Federal and Contractor Program Manager(s) or Sponsor(s):

NNSA Program Manager/Sponsor TBD

Beverly Ramsey, ER-DO, Los Alamos National Laboratory (505) 667-6211

Federal and Contractor Project Manager(s):

TBD

Project Description:

Replace Fire Station 1 at TA-3 with a new 12 bay station. Replace Fire Station 5 at TA-16 with a new 8 bay station. Construct a new 6 bay station near TA-49 to address fire protection response issues in remote areas of the Laboratory and to provide a base for wildland fire fighting capability. Construct a new firefighter training capability at TA-49.

Current Proposed/Actual Project Schedule:

FY09 Start with Completion in FY14

Project Justification (Program Requirements):

Fire Station 1 (TA-03-41), was classified as "failed" in the last summary condition report and had a backlog of DM amounting to over $3M as of June 2004. Fire Station 5 (TA-16-180) was classified as "fair" in the last summary condition report and has a DM backlog of $146,820. Neither building meets standards for fire fighter health and safety as described in the National Fire Protection Association (NFPA) 1500 "Standard on Fire Department Occupational Safety and Health Program.

To bring the site into compliance with the new 10CRF851 requirements in fire protection a significant expansion of the current firefighting capability at the site will be required to meet NFPA 1500 and 1710 requirements. The "Base Line Needs Assessment for Fire Department Services" (BNA) (LA-CP-04-008), dated June 7, 2004, prepared by Hughes Associates for the Emergency Operations Office-Fire as per DOE Order 420, recommends an expansion of about 100% of the current firefighting strength to meet the new NFPA and the new 10CFR851 requirements. The two current stations 1 and 5 are inadequate to handle the current level of firefighter staffing and firefighting equipment apparatus. There is also a gap in adequate coverage to protect some remote areas of the Lab to the NFPA 1710 response requirements. With the dramatic increase in staffing the current training facilities require replacement.

Alternatives Developed/Available to Meet Program Requirements:

None identified that will meet program requirements.

Proposed Funding Profile:

TPC $51 M with approximately $ 22M for Fire Station 1, $12M for Fire Station 5 and $17M for the TA49 facilities.

	Funding	FY09	FY10	FY11	FY12	FY13	FY14
OPC	3,200	1,000	300	300	300	300	1,000
PED	3,500		1,500	1,500	500		
LI	45,000				12,000	18,000	15,000
TEC	48,500		1,500	1,500	12,500	18,000	15,000
TPC	51,000	1,000	1,800	1,800	12,800	18,300	16,000

Projected Annual Operating Costs:

TBD

Project Site/Facility Space Utilization:

This project would allow older, non-compliant, and expensive-to-maintain facilities to be retired and demolished while also meeting the needs of a growing emergency response capability.

Integrated Construction Program
Proposed Line Item Construction Project Information Sheet

Project Title/Site:

Physical Science Research Complex / Los Alamos National Laboratory

Federal and Contractor Program Manager(s) or Sponsor(s):

NNSA Program Manager/Sponsor TBD

Susan Seestrom, ADEPS, Los Alamos National Laboratory , (505) 665-4454

Federal and Contractor Project Manager(s):

Pamela French, ADEPS, Los Alamos National Laboratory, (505) 667-8505

Project Description:

The Physical Science Research Complex will consist of four buildings that will support world class experimental work in the physical sciences. It will offer a flexible array of offices and light laboratories necessary to conduct the basic and applied research necessary to execute the science missions of Los Alamos. The Laboratory's experimental physical science capability spans several disciplines, divisions and directorates, but the primary focus will be on physics, instrumentation and materials for state-of-the-art experiments and research. The buildings will contain approximately 350,000 square feet, with up to four stories of office, light laboratory, analytical facilities and support/common areas. These will be joint occupancy buildings including the appropriate groups from technical divisions. It will be constructed at TA-3, within the central core.

Current Proposed/Actual Project Schedule:

CD-0 is planned for FY11.

Project Justification (Program Requirements):

This project is necessary to maintain, improve and consolidate portions of the strategic physical science capabilities at the Laboratory. It will create a robust multi-disciplinary, collaborative environment that motivates new interactions at discipline interfaces within the TA-3 core. Current activities are conducted in scattered, 30 to 50 year old facilities, which are obsolete and increasingly expensive to operate. This project will make operations more efficient and reliable through provision of a modern facility, and it will consolidate operations and functions from numerous facilities and structures spread throughout several Technical Areas. This project is not a radiological facility. Operating costs will be reduced due to consolidation of space and use of modern, *Energy Star* equipment and controls. Working conditions for occupants will be improved by use of proper lighting, heating, ventilation and air conditioning, and ergonomic equipment and furniture. Several existing structures and facilities, which will no longer be required as a result of the consolidation, will be decommissioned and demolished.

Alternatives Developed/Available to Meet Program Requirements:

None identified that will meet program requirements.

Proposed Funding Profile (Entire Complex) ($K):

	Funding	FY11	FY12	FY13	FY14	FY15
OPC	4,600	2,760	460	460	460	1460
PED	9,200	0	5,520	3,680	0	0
LI	94,300	0			46,000	48,300
TEC	103,500	0	5,520	3,680	46,000	48,300
TPC	108,100	2,760	5,980	4,140	46,460	48,760

Projected Annual Operating Costs:

Details are unknown at this time, but overall operating costs are project to be lower due to demolition of older facilities replaced by this project.

Project Site/Facility Space Utilization:

The Physical Science Complex is planned in a location that includes 40,000 square feet of existing structures at TA-3. A yet to be determined number of these facilities will be demolished when the complex is complete.

Integrated Construction Program
Proposed Line Item Construction Project Information Sheet

Project Title/Site:

Chemical Science and Engineering Laboratory (CSEL)/Los Alamos National Laboratory

Federal and Contractor Program Manager (s) or Sponsor(s):

NNSA Program Manager/Sponsor TBD

LANL Sponsor: Terry Wallace, PADSTE, 505-667-8597

Federal and Contractor Project Manager(s):

LANL Program Manager/Sponsor/TBD

Project Description:

The Chemical Science Engineering Laboratory (CSEL) facility will consolidate and relocate critical staff and operations for continued chemistry support to a variety of national security and civilian missions. The CSEL will promote more efficient collaboration between Laboratory Divisions, reducing construction costs, and prioritizing the allocation of Laboratory resources devoted to chemical science and technology applications. The CSEL will provide modern, high-quality space to meet or exceed current safety, security, regulatory, and engineering requirements, eliminating expensive and inefficient operations at obsolete, aged facilities. Currently Chemistry supports most every core mission and emerging mission area of the Laboratory. A modern chemical science facility is essential to the continued excellence of chemical science and technology support for the Los Alamos multi-program mission.

The CSEL project will involve replacement of 220,000 GSF of aging infrastructure with new construction of approximately 100,000 GSF of laboratory space, and approximately 50,000 GSF of office space and support/common areas, in multiple buildings to accommodate open and classified operations. These buildings will be joint occupancy for a variety of groups and divisions that support chemical operations, currently located in five different TA's within the Laboratory.

Current Proposed/Actual Project Schedule:

CD-0 is planned for FY10, with a five year construction schedule.

Project Justification (Program Requirements):

The chemistry and chemical engineering activities conducted in existing facilities include extensive production, research and development for national security and related civilian missions, often performed in partnership with other national laboratories, industry, and academia. These missions include:

- Analytical and measurement science in support of threat reduction, support for domestic and international chemical and biological attribution science, chemistry and chemical engineering support for multiple DOE offices where there is overlap between national security and civilian R&D interests

- Chemistry and chemical engineering support to biological research, detection and sensor technologies, nanotechnology, molecular science, catalysis and energy security, and basic energy science
- Analytical chemistry support for weapons manufacturing, such as non-radiological components and process development, case lifetime assessments, bioassay, and advanced hydro-test programs, and
- Material-property evaluations for stockpile stewardship, such as LEP joint test assemblies, significant finding investigations

New and developing projects that require chemistry and chemical engineering facilities include such missions as homeland security, advanced materials for fuel cycle initiatives, health security issues such as high throughput flu and biological technology development, aerosol science and technology for fate and transport (attribution) science, nano-science for fundamental science and national security applications, remote chemical and biological sensing for threat reduction, alternative energy systems, advanced fusion, and nuclear weapons-related research.

Alternatives Developed/Available to Meet Program Requirements:

None identified that will meet program requirements. A preliminary, pre-conceptual cost-benefit study was conducted that identified replacement as a much more cost-effective alternative to upgrading more than 50 year old buildings or relocation of programs to alternate laboratory sites. It is assumed that national priorities will continue to dictate the Laboratory's primary mission, which is national security, and that the DOE/NNSA, DoD, and DOE/Department of Science will continue to sponsor programs and direct the Laboratory to apply chemical science and technology to critical national security issues. LANL will not be able to continue its national security mission without local, integrated chemistry and chemical engineering facilities capable of production, research, and development.

Proposed Funding Profile ($K):

	Funding	FY10	FY11	FY12	FY13	FY14
OPC	14,000	5,000	2,000	2,000	2,000	3,000
PED	12,000		10,000	2,000		
LI	95,000			25,000	40,000	30,000
TEC	107,000		10,000	27,000	40,000	30,000
TPC	121,000	5,000	12,000	29,000	42,000	33,000

Projected Annual Operating Costs:

Details are unknown at this time, but this project is anticipated to significantly reduce operating and maintenance costs of existing aged chemical operation facilities across various technical areas.

Project Site/Facility Space Utilization:

This project would allow older, non-compliant and expensive-to-maintain facilities to be retired and demolished while also meeting the needs of a critical chemistry capability to various national security threat reduction, and civilian R&D missions

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

Priority (1)	Project Name (2)	Project Number (3)	Deferred Maintenance Identifier(s)	Mission Dependency	Mission Dependency Program	Deferred Maintenance Reduction	GSF Added or Eliminated	Funding Type	Total	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)
A. Readiness in Technical Base and Facilities (RTBF) Line Items																				
1	"Weapons Manufacturing Support Facility	TBD	LANL-11-D-140	MC	PMC	TBD	50	OPC	2,500	-	-	-	1,500	250	250	500	-	-	-	-
								PE&D	3,000	-	-	-	-	3,000	-	-	-	-	-	-
								LI	15,060	-	-	-	-	-	8,060	7,000	-	-	-	-
								Total (TPC)	20,560				1,500	3,250	8,310	7,500				
2	"Energetic Materials Characterization Facility	TBD	TBD	MD	SCI	TBD	TBD	OPC	3,750	-	-	-	1,750	250	250	250	250	1,000	-	-
								PE&D	6,000	-	-	-	-	4,000	2,000	-	-	-	-	-
								LI	43,000	-	-	-	-	-	-	20,000	18,000	5,000	-	-
								Total (TPC)	52,750				1,750	4,250	2,250	20,250	18,250	6,000		
3	"Non-Nuclear Facility Consolidation	TBD	TBD	TBD	TBD	TBD	TBD	OPC	6,250	-	-	-	-	-	3,000	500	250	250	250	2,000
								PE&D	15,000	-	-	-	-	-	-	10,000	5,000	-	-	-
								LI	110,000	-	-	-	-	-	-	-	10,000	40,000	40,000	20,000
								Total (TPC)	131,250						3,000	10,500	15,250	40,250	40,250	22,000
4	"National Security Engineering Facility	TBD	TBD	MD	ENG	TBD	-	OPC	3,000	-	-	-	-	-	-	1,500	250	250	250	750
								PE&D	3,750	-	-	-	-	-	-	-	3,750	-	-	-
								LI	45,250	-	-	-	-	-	-	-	-	17,000	20,000	8,250
								Total (TPC)	52,000							1,500	4,000	17,250	20,250	[illegible]
B. Facilities and Infrastructure Recapitalization Program (FIRP) Line Items																				
	No "Facilities and Infrastructure Recapitalization Program Line Items" proposed							OPC	-	-	-	-	-	-	-	-	-	-	-	-
								PE&D	-	-	-	-	-	-	-	-	-	-	-	-
								LI	-	-	-	-	-	-	-	-	-	-	-	-
C. Safeguards & Security (S&S) Line Items																				
	No "Safeguards & Security Line Items" proposed							OPC	-	-	-	-	-	-	-	-	-	-	-	-
								PE&D	-	-	-	-	-	-	-	-	-	-	-	-
								LI	-	-	-	-	-	-	-	-	-	-	-	-
D. Other Defense Programs Line Items (for example, Campaigns/Directed Stockpile Work (DSW))																				
	No "Other Defense Programs Line Items" proposed							OPC	-	-	-	-	-	-	-	-	-	-	-	-
								PE&D	-	-	-	-	-	-	-	-	-	-	-	-
								LI	-	-	-	-	-	-	-	-	-	-	-	-
E. Nuclear Nonproliferation (NN) Line Items																				
1	"Radiological Sciences Institute Phase 1 (IRNS funding)	N/A	N/A	MD	TBD	N/A	TBD	OPC	25,300	-	5,000	1,000	1,000	800	800	16,700	-	-	-	-
								PE&D	25,000	-	-	10,000	15,000	-	-	-	-	-	-	-
								LI	216,100	-	-	-	-	86,040	96,040	33,020	-	-	-	-
								Total (TPC)	[illegible]		5,000	11,000	16,000	86,840	96,840	49,720				
	"Radiological Sciences Institute Phase 2 (INNST funding)	N/A	N/A	MD	TBD	N/A	TBD	OPC	20,300	-	-	-	-	5,000	1,000	1,000	800	800	11,700	-
								PE&D	25,000	-	-	-	-	-	10,000	15,000	-	-	-	-
								LI	165,100	-	-	-	-	-	-	-	86,040	86,040	33,020	-
								(TPC)	210,400					5,000	11,000	16,000	86,840	86,840	44,720	

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

Priority (1)	Project Name (2)	Project Number (3)	Deferred Maintenance Identifier(s)	Mission Dependency (4)	Mission Dependency Program	Deferred Maintenance Reduction	GSF Added or Eliminated (6)	Funding Type (7)	Total (8)	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)
I. Non-NNSA Line Items																				
1	TA3, TA16 AND TA49 Fire Stations	TBD	TBD	NMO	NA	TBD	TBD	OPC	3,200	-	-	1,000	300	300	300	300	1,000	-	-	-
								PE&D	3,500	-	-	-	1,500	1,500	500	-	-	-	-	-
								LI	45,000	-	-	-	-	-	12,000	18,000	15,000	-	-	-
								Total (TPC)	51,700			1,000	1,800	1,800	12,800	18,300	16,000			
2	*Physical Science Research Complex	TBD	TBD	MD	DSW	TBD	310	OPC	4,600	-	-	-	-	2,760	460	460	460	460	-	-
								PE&D	9,200	-	-	-	-	-	5,520	3,680	-	-	-	-
								LI	94,300	-	-	-	-	-	-	-	48,000	46,300	-	-
								Total (TPC)	108,100					2,760	5,980	4,140	48,460	46,760		
3	*Chemical Science and Engineering Laboratory (CSEL)	TBD	TBD	MD	NA	TBD	150	OPC	14,000	-	-	-	5,000	2,000	2,000	2,000	3,000	-	-	-
								PE&D	12,000	-	-	-	-	10,000	2,000	-	-	-	-	-
								LI	95,000	-	-	-	-	-	25,000	40,000	30,000	-	-	-
								Total (TPC)	121,000				5,000	12,000	29,000	42,000	33,000			

Attachment A-3

RTBF/Operations of Facilities Projects

This spreadsheet includes facilities and infrastructure projects associated with Operations of Facilities within the RTBF category. RTBF/Operations of Facilities represents baseline funding necessary to ensure safe, secure, reliable facility operations on a daily basis.

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Attachment A-3
NNSA - LANL Facilities and Infrastructure Cost Projection Spreadsheet
RTBF/Operations of Facilities for LANL Site
($000s)

Priority (1)	Project Name (2)	Project Number (3)	Mission Dependency (4)	Mission Dep Program (4a)	Deferred Maint Reduction (5)	GSF Added or Eliminated (6)	Funding Type (7)	Total (8)	Prior Years' Funding (9)	FY 2006 (10)	FY 2007 (11)	FY 2008 FYNSP (12)	FY 2009 FYNSP (13)	FY 2010 FYNSP (14)	FY 2011 FYNSP (15)	FY 2012 FYNSP (16)	FY 2013 (17)	FY 2014 (18)	FY 2015 (19)	FY 2016 (20)	FY 2017 (21)
	Strategic Investment Projects																				
F	*PF-4 Switchgear Installation (TA-55) - FY06	LANL-04-218	MC	PMC	TBD	-	GPP	5,068	1,950	XXX	1,858	1,260	-	-	-	-	-	-	-	-	-
F	*LLW Pit - FY06 SI		MD	PMC	-	-	GPP	1,905	10	195	-	1,700	-	-	-	-	-	-	-	-	-
F	*TA-3 ESA Shops Be Decontamination Planning - FY06 FR		MD	DSW	TBD	-	E	2,420	200	120	2,100	-	-	-	-	-	-	-	-	-	-
1	TA-55 Vault Efficiency and Risk Reduction - FY07 SI	TBD	MC	PMC	-	-	E	1,806	-	-	1,606	-	-	-	-	-	-	-	-	-	-
2	*Outyear Strategic Investments (Funding for Strategic Investments is competed for each year.)	N/A	TBD	NA	TBD	TBD	E/GPP	100,210	-	-	-	8,040	9,270	9,550	9,830	10,130	10,430	10,750	11,070	11,400	11740
3	(28) Post FIRP Investments	Various	TBD	TBD	TBD	-	GPP	189,000	-	-	-	-	-	-	-	30,000	30,600	31,200	31,800	32,400	33000
	Footprint Reduction Projects																				
F	*CMR Hazard Reduction and Wing Closure - FY05 FR	TBD	MC	PMC	TBD	-	E	8,837	2,006	1,931	4,700	-	-	-	-	-	-	-	-	-	-
F	*TA-18-430 move to TA-18-260 - FY06 FR	TBD	MC	DSW	TBD	-	E	432	248	184	-	-	-	-	-	-	-	-	-	-	-
F	*TA-21 Closure (Iridium) - FY06 FR	TBD	NMD	NA	TBD	-	E	2,258	1,298	960	-	-	-	-	-	-	-	-	-	-	-
F	*Phermex Bldg. 186, 310, 349 to S&M - FY06 FR	TBD	NMD	NA	TBD	-	E	274	200	74	-	-	-	-	-	-	-	-	-	-	-
F	*Decontamination and Demolition Prep for PF-41 - FY06 FR	TBD	MD	PMC	TBD	-	E	383	217	166	-	-	-	-	-	-	-	-	-	-	-
F	*Transportainer Consolidation - FY06 FR	TBD	NMD	NA	TBD	-	E	112	100	12	-	-	-	-	-	-	-	-	-	-	-
F	*Burn Grounds - FY06 FR	TBD	NMD	NA	TBD	-	E	128	71	57	-	-	-	-	-	-	-	-	-	-	-
1	*Removal of MPF-394, 395, and 399	TBD	NMD	NA	TBD	-	E	104	-	-	104	-	-	-	-	-	-	-	-	-	-
2	*Removal of MPF-402 and 405	TBD	NMD	NA	TBD	-	E	65	-	-	65	-	-	-	-	-	-	-	-	-	-
3	*Relocation of Personnel Housed in PF-41	TBD	MD	NA	TBD	-	E	73	-	-	73	-	-	-	-	-	-	-	-	-	-
4	*Equipment Installation in TA-18-193	TBD	MC	NA	TBD	-	E	458	-	-	458	-	-	-	-	-	-	-	-	-	-
5	*De-inventory of Area L MLLW + MDA L Closure	TBD	NMD	NA	TBD	-	E	1,784	-	-	1,784	-	-	-	-	-	-	-	-	-	-
6	*D&D of TA-18-430 Complex and TA-37 Bunkers	TBD	NMD	NA	TBD	-	E	4,080	-	-	4,080	-	-	-	-	-	-	-	-	-	-
7	(27)*Outyear Footprint Reduction (Funding for Strategic Investments is competed for each year.)	N/A	MD/NMD	NA	TBD	TBD	E	109,908	1,320	916	4,500	9,000	9,270	9,550	9,830	10,130	10,430	10,750	11,070	11,400	11740

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Attachment A-4

Facilities and Infrastructure Recapitalization Projects (FIRP)

(Excludes utility LIs)

A-4a includes projects that target DM reduction and meet certain rating and scoring criteria. Since FIRP specifically targets DM reduction, proposed projects that do not substantially reduce the site's FY03 DM Baseline (as reported in its FY04 TYCSP) may not be accepted for funding. Projects were prioritized per the guidance using the FIRRS Matrix, with each project rated in each category of Health & Safety, Environmental & Waste Management, Safeguards & Security, and Mission & Investment. FIRP funding will end in FY13 per Congressional language.

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

FIRRS Priority (1)	Project Name (2)	FIRRS Score (2a)	Project Number (3)	Deferred Maint Identifier (3a)	Mission Dependency (4)	Mission Dependency Program (4a)	FY03 Baseline Deferred Maintenance Reduction	GSF Added or Eliminated	Funding Type	Total (6)	Prior Years' Funding	FY 2006 (10)	FY 2007 (11)	FY 2008 FYNSP (12)	FY 2009 FYNSP (13)	FY 2010 FYNSP	FY 2011 FYNSP (15)	FY 2012 FYNSP	FY 2013
F	Beryllium Tech Facility - Cartridge Filter House Install	50	LANL-R-03-02	LANL-R-03-02	MC	PMC	-	-	GPP	2,691	700	591	1,400	-	-	-	-	-	-
F	TA-50 Stem Wall Repair	60	LANL-R-04-01	LANL-R-04-01	MD	PMC	405	-	E	879	879	-	-	-	-	-	-	-	-
F	WETF Systems Refurbishment	60	LANL-R-04-02	LANL-R-04-02	MC	DSW	7,978	-	GPP	4,509	4,509	-	-	-	-	-	-	-	-
F	TA-50 Caustic Tank Replacement	60	LANL-R-04-07	LANL-R-04-07	MD	PMC	605	-	GPP	750	750	-	-	-	-	-	-	-	-
F	Roof Replacement TA-53-1, TA-8-21, TA-3-1"	55	LANL-R-04-11	LANL-R-04-11	NMD	NA	390	-	E/GPP	390	390	-	-	-	-	-	-	-	-
F	Deferred Maintenance TA-16-410/411	65	LANL-R-04-13	LANL-R-04-13	MC	DSW	-	-	GPP	4,050	4,050	-	-	-	-	-	-	-	-
F	TA-16-193 Reconfiguration	60	LANL-R-05-01	LANL-R-05-01	MD	DSW	3,923	-	GPP	1,642	2,643	(1,001)		-	-	-	-	-	-
F	DM Reduction on TA-16-304, 305, 306 and 307	60	TBD	LANL-R-05-01	MC	DSW			E	3,158	-		3,158	-	-	-	-	-	-
F	Reconfigure TA-39-98, Close 39-2, 39-103, 39-07	60	LANL-R-05-06	LANL-R-05-06	NMD	NA	1,384	-	GPP	1,541	1,541	-	-	-	-	-	-	-	-
F	Lujan Center Ventilation and Cooling Upgrade	60	LANL-R-05-08	LANL-R-05-06	MD	DSW	900	-	GPP	1,142	620	(49)	571	-	-	-	-	-	-
F	HVAC/Electrical Upgrade, MPF-4	60	LANL-R-05-08	LANL-R-05-08	NMD	NA	-	-	GPP	3,662	3,662	-	-	-	-	-	-	-	-
F	TA-50 Waste Treatment Plant Deficiencies - 1A (Room 60 Modifications)	65	LANL-R-05-11	LANL-DM-07G30-02A	MD	PMC	8,868	-	GPP/E	6,684	826	3,668	1,170	-	-	-	-	-	-
F	RAMP Roofing Support	60	LA-R-06-01	LANL-R-06-06	MC/MD/NMD	NA	1,500	-	GPP/E	900	-	900	-	-	-	-	-	-	-
F	TA-53-3 Hot Water System	55	LA-R-06-03	LANL-DM-06D30-02	MC	DSW	1,673	-	E	2,709	-	371	2,338	-	-	-	-	-	-
F	TA-53-3 Sector B Chilled Water System	55	LA-R-06-04	LANL-DM-06D30-04	MC	DSW	178	-	E	1,509	-	248	1,261	-	-	-	-	-	-
F	TA-53-3 Sector B 208-480V Electrical System Revitalization	55	LA-R-06-05	LANL-DM-06D50-02	MC	DSW	871	-	E	2,097	-	299	1,798	-	-	-	-	-	-
F	TA-03, -15, -16, -35 and -36 HVAC Systems Deficiencies (ME)	45	LA-R-06-07	LANL-DM-06D30-01	MC/MD/NMD	NA	1,460	-	GPP/E	1,540	-	1,540	-	-	-	-	-	-	-
F	TA-09, -22, -35, -39 and -53 Electrical Systems Deficiencies (ME)	55	LA-R-06-06	LANL-DM-06D50-01	MC/MD/NMD	NA	1,601	-	GPP/E	2,443	-	2,443	-	-	-	-	-	-	-
F	FY06 FIRP Funded D&D	N/A	LANL-D-06-01	LANL-D-06-01	NMD	NA		(98)	E	2,000	-	2,000	-	-	-	-	-	-	-
F	FY06 Planning for FY07 Recapitalization Projects	N/A	LANL-P-06-01	LANL-P-06-01	MC/MD/NMD	NA		-	GPP/E	1,728	-	1,728	-	-	-	-	-	-	-
1	FY07 RAMP Support	60	LANL-R-07-01	LANL-R-06-06	MC/MD/NMD	NA		-	E	1,100	-	-	1,100	-	-	-	-	-	-
2	TA-55 Roof Systems Deficiencies (ME	55	TBD	LANL-DM-06B30-02	MD	PMC	639	-	GPP/E	1,238	-	-	1,238	-	-	-	-	-	-
3	TA-08, -15, -16, -35, -39, -53 and -69 Roof Systems Deficiencies (ME)	55	TBD	LANL-DM-06B30-03	MD/NMD	NA	864	-	GPP/E	1,810	-	-	1,810	-	-	-	-	-	-
4	Roof Systems Deficiencies (ME	55	TBD	LANL-DM-06B30-03	MD/NMD	NA	1,294	-	GPP/E	2,151	-	-	2,151	-	-	-	-	-	-
5	TA11, 16, 35, 36, 37, 39, and 53 Electrical System Deficiencies	55	TBD	LANL-DM-09D50-02	MD	NA	994	-	E	995	-	-	995	-	-	-	-	-	-
6	TA-53-3 Sector C Chilled Water System	55	TBD	LANL-DM-06D30-04	MC	DSW	1,339	-	E	1,339	-	-	248	1,091	-	-	-	-	-
7	TA-53-3 Sector C 208-480V Electrical System Revitalization	55	TBD	LANL-DM-05D50-02	MC	DSW	1,877	-	E	1,877	-	-	299	1,578	-	-	-	-	-
8	Electrical Infrastructure Safety Upgrade (TA 15-183)	50	TBD	LANL-R-06-01	MD	DSW	196	-	GPP	600	-	-	600	-	-	-	-	-	-
9	TA-15, -16 and -65 Plumbing and Fire Protection Systems Deficiencies (ME)	50	TBD	LANL-DM-06D90-01	MD/NMD	DSW	484	-	GPP/E	842	-	-	842	-	-	-	-	-	-
10	TA-53-3 Sector E Chilled Water System	55	TBD	LANL-DM-06D30-04	MC	DSW	1,339	-	E	1,339	-		248	1,091	-	-	-	-	-
11	TA-53-3 Sector E 208-480V Electrical System Revitalization	55	TBD	LANL-DM-05D60-02	MC	DSW	1,877	-	E	1,877	-	-	299	1,578	-	-	-	-	-
12	Electrical Infrastructure Safety Upgrade (TA 53-27)"	50	TBD	LANL-R-06-10	NMD	NA	-	-	GPP	2,630	515	-	2,115	-	-	-	-	-	-
13	TA-16, -22, -35, -39 and -53 Construction Deficiencies (ME)	45	TBD	LANL-DM-06X90-01	MC/MD/NMD	NA	186	-	GPP/E	286	-	-	286	-	-	-	-	-	-
14	TA-16 Construction Deficiencies (ME	45	TBD	LANL-DM-06X90-02	MC	DSW	442		GPP/E	870	-	-	870	-	-	-	-	-	-
15	TA-03, -08, -09, -14, -15, -16, -22, -35, -38, 39, -40, -60, -63, -64 and -65 Exterior Construction Deficiencies (ME)	45	TBD	LANL-DM-08X90-04	MC/MD/NMD	NA	1,379		GPP/E	2,755	-	-	2,755	-	-	-	-	-	-
16	TA-08, -15, -16, -35, -36, -39, -40, -53, -54 and -65 Internal Construction Deficiencies (ME)	46	TBD	LANL-DM-09X90-06	MC/MD/NMD	NA	1,257		GPP/E	2,512	-	-	2,512	-	-	-	-	-	-
17	Electrical Infrastructure Safety Upgrade TA-21	50	TBD	LANL-R-XX-01	MD	SCI	1,900	-	GPP/E	3,404	-	-	3,404	-	-	-	-	-	-
18	TA-53-3 Sector G Chilled Water System	50	TBD	LANL-DM-05D30-04	MC	DSW	175	-	E	1,339	-	-	248	1,091	-	-	-	-	-
19	TA-53-3 Sector G 208-480V Electrical System Revitalization	55	TBD	LANL-DM-05D60-02	MC	DSW	87	-	E	1,877	-	-	299	1,578	-	-	-	-	-
20	TA-53-3 Sector D Chilled Water System	55	LA-R-06-04	LANL-DM-06D30-04	MC	DSW	175	-	E	1,339	-	-	248	-	1,091	-	-	-	-
21	TA-53-3 Sector D 208-480V Electrical System Revitalization	55	LA-R-06-05	LANL-DM-06D50-02	MC	DSW	871	-	E	1,877	-	-	299	-	1,578	-	-	-	-
22	TA-53-3 Sector F Chilled Water System	55	LA-R-06-04	LANL-DM-05D30-04	MC	DSW	178	-	E	1,339	-	-	248	-	1,091	-	-	-	-
23	TA-53-3 Sector F 208-480V Electrical System Revitalization	55	LA-R-06-06	LANL-DM-05D60-02	MC	DSW	871	-	E	1,877	-	-	299	-	1,578	-	-	-	-
24	TA-53-3 Sector H Chilled Water System	55	LA-R-06-04	LANL-DM-05D30-04	MC	DSW	178	-	E	1,339	-	-	248	-	1,091	-	-	-	-
25	TA-53-3 Sector H 208-480V Electrical System Revitalization	55	LA-R-06-05	LANL-DM-06D50-02	MC	DSW	871	-	E	1,877	-	-	299	-	1,578	-	-	-	-
26	TA-53-3 Sector A Chilled Water System	55	LA-R-06-04	LANL-DM-05D30-04	MC	DSW	175	-	E	1,339	-	-	248	-	-	1,091	-	-	-
27	TA-53-3 Sector S Chilled Water System	55	LA-R-06-04	LANL-DM-05D30-04	MC	DSW	175	-	E	1,339	-	-	248	-	-	1,091	-	-	-

Los Alamos

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

FIRRS Priority (1)	Project Name (2)	FIRRS Score (2a)	Project Number (3)	Deferred Maint Identifier (3a)	Mission Dependency (4)	Mission Dependency Program (4a)	Total Baseline Deferred Maintenance Reduction (5)	GSF Added or Eliminated (6)	Funding Type (7)	Total (8)	Prior Years' Funding (9)	FY 2006 (10)	FY 2007 (11)	FY 2008 FYNSP (12)	FY 2009 FYNSP (13)	FY 2010 FYNSP (14)	FY 2011 FYNSP (15)	FY 2012 FYNSP (16)	FY 2013 (17)
28	RLW Collection TA-48 to TA-50	68	TBD	LANL-R-06-14	NMD	PMC	TBD	-	E	4,300	-	-	4,300	-	-	-	-	-	-
29	FY07 Planning for FY08 Recapitalization Projects	N/A	TBD	LANL-P-07-01	MC/MD/NMD	NA	-	-	GPP/E	5,350	-	-	5,350	-	-	-	-	-	-
30	FY08 RAMP Support	60		LANL-R-06-05	MC/MD/NMD	NA	TBD	-	E	1,100	-	-	-	1,100	-	-	-	-	-
31	FY08 Electrical System DM Reductions (Mission Essential)	55	TBD	LANL-DM-07D50-01	MC	PMC/DSW	4,771	-	GPP/E	7,300	-	-	-	3,650	3,650	-	-	-	-
32	TA-08, -35, -64 and -65 Fire Protection Systems Deficiencies (ME)	55	TBD	LANL-DM-09D40-02	MD/NDM	NA	715	-	GPP/E	1,100	-	-	-	1,100	-	-	-	-	-
33	TA-15 and -21 Electrical Systems Deficiencies (ME)	55	TBD	LANL-DM-06D50-03	MC	PMC	9,214	-	GPP/E	15,400	-	-	-	4,000	4,000	4,000	3,400	-	-
34	TA-03, -08, -09, -11, -15 and -16 Plumbing and Fire Protection Systems Deficiencies (ME)	55	TBD	LANL-DM-08D80-01	MC/MD/NMD	NA	1,399	-	GPP/E	3,350	-	-	-	3,350	-	-	-	-	-
35	FY08 Cooling Systems DM Reductions (Mission Essential)	55	TBD	LANL-DM-09D30-04	MC/MD/NMD	NA	789	-	GPP/E	1,300	-	-	-	1,300	-	-	-	-	-
36	Roof System Deficiencies (ME	50	TBD	LANL-DM-08B30-01	MC/NMD	NA	5,738	-	GPP/E	7,600	-	-	-	1,000	3,800	2,800	-	-	-
37	FY08 Mechanical Systems DM Reductions (ME)	45	TBD	LANL-DM-07D90-01	MC	PMC	4,412	-	GPP/E	6,500	-	-	-	3,150	3,350	-	-	-	-
38	FY08 Architectural and Structural DM Reductions (ME)	45	TBD	LANL-DM-07X90-01	MC	PMC	1,708	#REF!	GPP/E	2,800	-	-	-	2,800	-	-	-	-	-
39	FY08 HVAC DM Reductions (Mission Essential)	45	TBD	LANL-DM-08D30-04	MC/MD	DSW/SCI	306	-	GPP/E	500	-	-	-	500	-	-	-	-	-
40	Construction Deficiencies (ME	45	TBD	LANL-DM-09C30-01	MC/MD/NMD	NA	6,951		GPP/E	11,600	-	-	3,000	3,000	3,000	2,800	-	-	-
41	FY08 Planning for FY09 Recapitalization Projects	N/A	TBD	N/A	MC/MD/NMD	NA	-	-	GPP/E	6,598	-	-	-	6,598	-	-	-	-	-
42	TA-03, -16, -36, -37, -40, -53, -64 and -65 Roof Systems Deficiencies (ME)	45	TBD	LANL-DM-09B30-04	MC/MD/NMD	NA	803	-	GPP/E	1,400	-	-	-	1,400	-	-	-	-	-
43	FY08 Construction and Specialty Systems Deficiencies (ME)	40	TBD	LANL-DM-08C30-03	MC	PMC	7,233	-	GPP/E	12,050	-	-	-	3,950	3,200	2,450	2,450	-	-
44	TA-53 and -55 HVAC Systems Deficiencies (ME) - A	45	TBD	LANL-DM-08D30-03A	MD/NMD	NA	583	-	GPP/E	1,180	-	-	-	1,180	-	-	-	-	-
45	Bldg 09-0045 Electrical System Deficiencies	55	TBD	LANL-DM-05D50-01	MD	SCI		-	GPP/E	1,800	-	-	-	1,800	-		-	-	-
46	Bldg 53-0004 Electrical Distribution System Deficiencies	55	TBD	LANL-DM-05D60-04	MC	PMC	-	-	GPP/E	1,600	-	-	-	1,600	-	-	-	-	-
47	TA-03, -08, -09, -11, -15 and -16 Plumbing and Fire Protection Systems Deficiencies (ME)	55	TBD	LANL-DM-09D90-01	MC/MD/NMD	NA	1,279	-	GPP/E	2,500	-	-	-	2,500	-	-	-	-	-
48	Radiography Facility Upgrades (TA-8-23	55	TBD	LANL-R-XX-04	MC	DSW	1,058	-	GPP/E	2,230	-	-	-	-	2,230	-	-	-	-
49	TA-16, -53 and -55 Electrical Systems Deficiencies	55	TBD	LANL-DM-08D50-03	NMD	NA	-	-	GPP/E	1,200	-	-	-	-	1,200	-	-	-	-
50	FY09 FIRP Funded D&D	N/A	TBD	N/A	NMD	NA	TBD	(92)	E	4,000	-	-	-	-	4,000	-	-	-	-
51	FY09 Planning for FY10 Recapitalization Projects	N/A	TBD	N/A	MC/MD/NMD	NA	-	-	GPP/E	8,536	-	-	-	-	8,536	-	-	-	-
52	FY09 RAMP Support	60	TBD	LANL-R-06-05	MC/MD/NMD	NA	TBD	-	E	1,200	-	-	-	-	1,200	-	-	-	-
53	TA-11 and -53 Construction and Specialty Systems Deficiencies (ME)	45	TBD	LANL-DM-08X90-02	MC/MD/NMD	PMC/DSW	-	-	GPP/E	350	-	-	-	-	350	-	-	-	-
54	Bldg 53-0030 HVAC Systems Deficiencies (ME)	45	TBD	LANL-DM-08D30-10	NMD	NA	611	-	GPP/E	1,200	-	-	-	-	1,200	-	-	-	-
55	Bldg 53-0030 Electrical Distribution System Deficiencies (ME)	60	TBD	LANL-DM-08D50-04	NMD	NA	642	-	GPP/E	1,200	-	-	-	-	1,200	-	-	-	-
56	Bldg 53-0003 HVAC System Deficiencies (ME)	45	TBD	LANL-DM-08D30-03	MC	DSW	658	-	GPP/E	1,300	-	-	-	-	1,300	-	-	-	-
57	CMR Mechanical Systems Deficiencies	55	TBD	LANL-DM-05CMR-01	MC	PMC	1,100			2,200	-	-	-	-	2,200	-	-	-	-
58	CMR Electrical System Deficiencies	55	TBD	LANL-DM-05CMR-02	MC	PMC	2,100			4,200	-	-	-	-	2,100	2,100	-	-	-
66	CMR Construction Deficiencies	45	TBD	LANL-DM09C-30-01	MC	PMC	500			1,000	-	-	-	-	1,000	-	-	-	-
60	Bldg 35-0042 HVAC and Cooling Systems Deficiencies (ME)	45	TBD	LANL-DM-08D30-05	MDI	PMC	855	-	GPP/E	1,000	-	-	-	-	-	1,000	-	-	-
61	TA-60 HVAC and Cooling Systems Deficiencies (ME)	50	TBD	LANL-DM-08D30-09	MD	PMC	635	-	GPP/E	1,200	-	-	-	-	-	1,200	-	-	-
62	TA-53 Fire Protection Systems Deficiencies (ME) - A	55	TBD	LANL-DM-08D40-01A	NMD	DSW	613	-	GPP/E	1,200	-	-	-	-	-	1,200	-	-	-
63	Bldg 53-0004 Fire Protection System Deficiencies (ME)	55	TBD	LANL-DM-08D40-02	MD	DSW	2,485	-	GPP/E	4,800	-	-	-	-	-	1,800	3,000	-	-
64	Bldg 53-0002 HVAC System Deficiencies	55	TBD	LANL-DM-05D30-08	NMD	DSW		-	GPP/E	3,800	-	-	-	-	-	1,600	2,200	-	-
65	TA-53 and -55 Mechanical Systems Deficiencies (ME) - B	45	TBD	LANL-DM-08D90-05B	MC/MD/NMD	NA	-	-	GPP/E	4,800	-	-	-	-	-	4,800	-	-	-
66	TA-55 Electrical Systems Deficiencies	55	TBD	LANL-DM-08D60-03	MC/MD	PMC	-	-	GPP/E	12,400	-	-	-	-	-	4,000	4,200	4,200	-
67	Bldg 53-0002 Electrical System Deficiencies	55	TBD	LANL-DM-05D50-03	NMD	DSW		-	GPP/E	2,800	-	-	-	-	-	2,800	-	-	-
68	Roof System Deficiencies (ME	55	TBD	LANL-DM-08B30-06	MC/MD	DSW/EHG	-	-	GPP/E	1,400	-	-	-	-	-	1,400	-	-	-
69	Bldg 16-0260 HVAC Systems Deficiencies (ME)	45	TBD	LANL-DM-06D30-01	MC	DSW	-	-	GPP/E	1,100	-	-	-	-	-	-	1,100	-	-
70	TA-16 Air Handling and Ductwork Systems Deficiencies (ME)	45	TBD	LANL-DM-08D30-04	MC	DSW	-	-	GPP/E	2,200	-	-	-	-	-	-	2,200	-	-
71	Shock and Detonation Physics Facility	50	TBD	LANL-R-04-04	MD	DSW	413			5,000	-	-	-	-	-	-	5,000	-	-

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

FIRRS Priority (1)	Project Name (2)	FIRRS Score (2a)	Project Number (3)	Deferred Maint Identifier (3a)	Mission Dependency (4)	Mission Dependency Program (5)	FY03 Baseline Deferred Maintenance Reduction	GSF Added or Eliminated (6)	Funding Type (7)	Total (8)	Prior Years' Funding (9)	FY 2006 (10)	FY 2007 (11)	FY 2008 FYNSP (12)	FY 2009 FYNSP (13)	FY 2010 FYNSP (14)	FY 2011 FYNSP (15)	FY 2012 FYNSP (16)	FY 2013 (17)
72	TA-53-7 HVAC System Deficiencies	46	TBD	LANL-DM-05D30-11	MC	DSW	2,103			4,200	-	-	-	-	-	2,100	2,100	-	-
73	Bldg 55-0004 Roof System Deficiencies (ME)	45	TBD	LANL-DM-05B30-01	MC	PMC	4,891	-	GPP/E	8,200	-	-	-	-	-	3,200	5,000	-	-
74	FY10 Planning for FY11 Recapitalization Projects	N/A	TBD	LANL-P10-01	MC/MD/NMD	NA	-	-	GPP/E	8,508	-	-	-	-	-	8,508	-	-	-
75	BLDG 03-0066 HVAC System Deficiencies	45	TBD	LANL-DNM-08D30-07	MC	PMC	-	-	GPP/E	9,600	-	-	-	-	-	4,800	4,800	-	-
76	TA-03 Electrical System deficiencies	50	TBD	LANL-DNM-07D50-06A	NMD	NA	3364	0	GPP/E	6,800	-	-	-	-	-	3,400	3,400	-	-
77	FY11 Planning for FY12 Recapitalization Projects	N/A	TBD	N/A	MC/MD/NMD	NA				8,245	-	-	-	-	-	-	8,245	-	-
78	FY11 RAMP Support	60	TBD	LANL-R-06-05	MC/MD/NMD	NA	TBD	-	E	2,200	-	-	-	-	-	-	2,200	-	-
79	Bldg 53-0003 Electrical Lighting Systems Deficiencies (ME)	55	TBD	LANL-DM-06D50-01	MC	DSW	-	-	GPP/E	1,300	-	-	-	-	-	-	1,300	-	-
80	Construction and Specialty Systems Deficiencies (ME)	45	TBD	LANL-DM-06X90-02	MC/MD/NMD	NA	-	-	GPP/E	800	-	-	-	-	-	-	-	800	-
81	Classified Parts Storage	55	TBD	LANL-R-XX-06	MD	DSW	812		GPP/E	1,600	-	-	-	-	-	-	1,600	-	-
82	Bldg 53-0001 Electrical System Deficiencies (ME)	55	TBD	LANL-DM-08D60-02	NMD	DSW	2,106	-	GPP/E	4,200	-	-	-	-	-	-	2,100	2,100	-
83	Life Extension Project (TA-9-21)	55	TBD	LANL-R-XX-05	MD	SCI	-	-	GPP/E	4,800	-	-	-	-	-	-	4,800	-	-
84	Bldg 16-0260 Electrical System Deficiencies (Mission Essential (ME))	56	TBD	LANL-DM-06D50-05	MC	DSW	1,737	-	GPP/E	3,500	-	-	-	-	-	-	-	3,600	-
85	TA-53 Fire Protection Systems Deficiencies (ME) - B	55	TBD	LANL-DM-08D40-03B	MD	DSW	699	-	GPP/E	1,400	-	-	-	-	-	-	-	1,400	-
86	Bldg 50-0037 Fire Protection System Deficiencies (ME)	55	TBD	LANL-DM-08D40-05	NMD	PMC	560	-	GPP/E	1,100	-	-	-	-	-	-	-	1,100	-
87	TA-9-38,40,42,46 Stm to Hot Water Htg. Conversion	40	TBD	LANL-R-06-11	MC/MD	SCI	72	-	GPP	2,741	341	-	-	-	-	-	-	2,400	-
88	TA-55 Heating and Cooling Systems Deficiencies (ME)	55	TBD	LANL-DM-09D30-05	NMD	PMC	2,363	-	GPP/E	4,600	-	-	-	-	-	-	-	4,600	-
89	Replace High Voltage Electrical Panels TA 48-1*	60	TBD	LANL-R-06-13	NMD	NA	2,293	-	GPP	5,054	454	-	-	-	-	-	-	4,600	-
90	TA-3-32 & TA-3-34 Revitalization (MST	50	TBD	LANL-R-06-08	NMD	NA	3,100	-	GPP	4,800	-	-	-	-	-	-	-	4,800	-
91	Electrical Infrastructure Safety Upgrade (TA 35-2)*	50	TBD	LANL-R-06-07	NMD	NA	-	-	GPP	7,329	729	-	-	-	-	-	-	3,300	3,300
92	Electrical Infrastructure Safety Upgrade (TA 46-1)	50	TBD	LANL-R-06-09	NMD	NA	-	-	GPP	3,384	414	-	-	-	-	-	-	2,970	-
93	TA-53 Fire Protection Systems Deficiencies (ME) - A	55	TBD	LANL-DM-09D40-01A	MC/MD/NMD	DSW	404	-	GPP/E	800	-	-	-	-	-	-	-	800	-
94	TA-15 and -21 Electrical Systems Deficiencies (ME)	55	TBD	LANL-DM-09D50-03	NMD	NA	396	-	GPP/E	800	-	-	-	-	-	-	-	-	800
95	Bldg 55-0008 Electrical Systems Deficiencies (ME)	55	TBD	LANL-DM-09D50-04	MD	PMC	1,019	-	GPP/E	2,480	-	-	-	-	-	-	-	-	2,480
96	Bldg 53-0003 Heat Ventilation Systems Deficiencies (ME)	55	TBD	LANL-DM-09D30-07	MC/MD/NMD	DSW	675	-	GPP/E	1,200	-	-	-	-	-	-	-	1,200	-
97	FY12 Planning for FY13 Recapitalization Projects	N/A	TBD	N/A	MC/MD/NMD	NA	-	-	GPP/E	7,567	-	-	-	-	-	-	-	7,567	-
98	FY12 RAMP Support	60	TBD	LANL-R-06-05	MC/MD/NMD	NA		-	GPP/E	2,400	-	-	-	-	-	-	-	2,400	-
99	Electrical System Deficiencies (Mission Essential)	55	TBD	LANL-DM-06D50-01	MC	PMC	-	-	GPP/E	4,700	-	-	-	-	-	-	-	4,700	-
100	Mechanical Systems Deficiencies (ME	56	TBD	LANL-DM-09D30-01	MC/MD/NMD	NA	-	-	GPP/E	1,500	-	-	-	-	-	-	-	1,500	-
101	TA-03 Electrical System deficiencies	50	TBD	LANL-DNM-07D50-06B	NMD	NA	2114	-	GPP/E	4,400	-	-	-	-	-	-	-	2,200	2,200
102	Site 7142010800 Natural Gas Deficiencies	45	TBD	LANL-DNM-09D20-03	NMD	NA	4,484	-	GPP/E	9,000	-	-	-	-	-	-	-	4,500	4,500
103	TA-50 HVAC Systems Deficiencies (Mission Essential)	55	TBD	LANL-DM-09D30-06	MD	PMC	-	-	GPP/E	4,800	-	-	-	-	-	-	-	-	4,800
104	Electrical Infrastructure Safety Upgrade (TA 33-114)	50	TBD	LANL-R-07-02	NMD	NA	186	-	GPP	2,000	-	-	-	-	-	-	-	-	2,000
105	Electrical Infrastructure Safety Upgrade (TA 35-46)	50	TBD	LANL-R-06-02	NMD	NA	49	-	GPP	3,000	-	-	-	-	-	-	-	-	3,000
106	Electrical Infrastructure Safety Upgrade (TA-39-2)	50	TBD	LANL-R-09-02	NMD	NA	-	-	GPP	1,000	-	-	-	-	-	-	-	-	1,000
107	TA-03 Roof Systems Deficiencies - E	50	TBD	LANL-DNM-05B30-01B	NMD	NA	968	-	GPP/E	2,100	-	-	-	-	-	-	-	-	2,100
108	TA-16 and -48 HVAC Systems Deficiencies	40	TBD	LANL-DNM-05D30-01	NMD	NA	733	-	GPP/E	1,700	-	-	-	-	-	-	-	-	1,700
109	TA-03, -16 and -35 Roof Systems Deficiencies	50	TBD	LANL-DNM-06B30-01	MC/NMD	NA	1,032	-	GPP/E	2,300	-	-	-	-	-	-	-	-	2,300
110	TA-03 Roof Systems Deficiencies - J	50	TBD	LANL-DNM-06B30-02A	NMD	NA	870	-	GPP/E	1,800	-	-	-	-	-	-	-	-	1,800
111	DX Consolidated Machine Shop	15	TBD	LA-R-XX-02	MD	SCI	1,562	6	GPP/E	3,300	-	-	-	-	-	-	-	-	3,300
112	LNETF (TA-16-302)	45	TBD	LA-R-XX-03	MD	DSW	728	6	GPP/E	1,700	-	-	-	-	-	-	-	-	1,700
113	TA-60 Waste Treatment Plant Deficiencies 1A (Mission Essential	60	TBD	LANL-DM-05G30-01A	MD	PMC	3,147	-	GPP/E	4,800	-	-	-	-	-	-	-	-	4,800
114	TA-16 and -55 Electrical Systems Deficiencies (Mission Essential)	50	TBD	LANL-DM-08D50-06	MD	PMC/DSW	-	-	GPP/E	4,800	-	-	-	-	-	-	-	-	4,800
115	Internal Construction Deficiencies (Mission Essential	45	TBD	LANL-DM-09X90-06	MC/MD/NMD	NA	-	-	GPP/E	4,800	-	-	-	-	-	-	-	-	4,800
116	FY13 RAMP Support	60	TBD	LANL-R-06-05	MC/MD/NMD	NA	-	-	GPP/E	2,500	-	-	-	-	-	-	-	-	2,500

FIRRS Priority (1)	Project Name (2)	FIRRS Score (2a)	Project Number (3)	Deferred Maint Identifier (3a)	Mission Dependency (4)	Mission Dependency Program (4a)	Baseline Deferred Maintenance Reduction	[illegible] or Eliminated	Funding Type	[illegible]	Funding	(10)	(11)	(12)	(13)	(14)	(15)	(16)	[illegible]
117	Construction and Sidewalk Drain Utility System Deficiencies	45	TBD	LANL-DNM-07X90-01	NMD	NA	714	-	GPP/E	1,400	-	-	-	-	-	-	-	-	1,400
118	761010880 Roads & Walks Deficiencies	40	TBD	LANL-DNM-08G20-01	NMD	NA	2,344	-	GPP/E	4,800	-	-	-	-	-	-	-	-	4,600
119	Site Utility Distribution Systems Deficiencies	40	TBD	LANL-DNM-08G30-01	NMD	NA	477	-	GPP/E	1,000	-	-	-	-	-	-	-	-	1,000
							[illegible]	[illegible]	TOTAL [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

2/23/2007

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

FIRRS Priority (1)	Project Name (2)	FIRRS Score (2a)	Project Number (3)	Deferred Maintenance Identifier(s) (3a)	Mission Dependency (4)	Mission Dependency Program (4a)	FY04 Identified Deferred Maintenance Reduction (5)	GSF Added or Eliminated (6)	Funding Type (7)	Total (8)	FY 2007 (11)	FY 2008 (12)	FY 2009 (13)	FY 2010 (14)	FY 2011 (15)	FY 2012 (16)	FY 2013 (17)
12	Electrical Infrastructure Safety Upgrade (TA-53-2)*	50	TBD	LANL-R-06-10	NMD	NA	1,974	-	GPP	2,115	2,115	-	-	-	-	-	-
28	RLW Collection TA-48 to TA-50	55	TBD	LANL-R-06-14	NMD	PMC	TBD	-	E	4,300	4,300		-	-	-	-	-
45	Bldg 09-0045 Electrical System Deficiencies	55	TBD	LANL-DM-05D50-01	MD	SCI	901	-	GPP/E	1,800	-	1,800	-		-	-	-
46	Bldg 55-0004 Electrical Distribution System Deficiencies	55	TBD	LANL-DM-05D50-04	MC	PMC	815	-	GPP/E	1,600	-	1,600	-	-	-	-	-
49	TA-16, -53 and -55 Electrical Systems Deficiencies	55	TBD	LANL-DM-06D50-03	NMD	NA	8,198	-	GPP/E	1,200	-	-	1,200	-	-	-	-
53	TA-11 and -53 Construction and Specialty Systems Deficiencies (ME)	45	TBD	LANL-DM-06X90-02	MC/MD/NMD	PMC/DSW	177	-	GPP/E	350	-	-	350	-		-	-
64	Bldg 53-0002 HVAC System Deficiencies	55	TBD	LANL-DM-05D30-09	NMD	DSW	1,893	-	GPP/E	3,800	-	-	-	1,600	2,200	-	-
65	TA-53 and -55 Mechanical Systems Deficiencies (ME) - B	45	TBD	LANL-DM-06D90-05B	MC/MD/NMD	NA	2,331	-	GPP/E	4,600	-	-	-	4,600	-	-	-
66	TA-55 Electrical Systems Deficiencies	55	TBD	LANL-DM-06D50-03	MC/MD	PMC	7,443	-	GPP/E	12,400	-	-	-	4,000	4,200	4,200	-
67	Bldg 53-0002 Electrical System Deficiencies	55	TBD	LANL-DM-05D50-03	NMD	DSW	1,382	-	GPP/E	2,600	-	-	-	2,600	-	-	-
68	Roof System Deficiencies (ME)	55	TBD	LANL-DM-06B30-06	MC/MD	DSW/ENG	695	-	GPP/E	1,400	-	-	-	1,400	-	-	-
69	Bldg 16-0260 HVAC Systems Deficiencies (ME)	45	TBD	LANL-DM-06D30-01	MC	DSW	567	-	GPP/E	1,100	-	-	-	-	1,100	-	-
70	TA-16 Air Handling and Ductwork Systems Deficiencies (ME)	45	TBD	LANL-DM-06D30-04	MC	DSW	1,116	-	GPP/E	2,200	-	-	-	-	2,200	-	-
75	BLDG 03-0066 HVAC System Deficiencies	45	TBD	LANL-DNM-08D030-07	MC	PMC	4925	0	GPP/E	9,600	-	-	-	4800	4800	-	-
79	Bldg 53-0003 Electrical Lighting Systems Deficiencies (ME)	55	TBD	LANL-DM-06D50-01	MC	DSW	560	-	GPP/E	1,300	-	-	-	-	1,300	-	-
80	Construction and Specialty Systems Deficiencies (ME)	45	TBD	LANL-DM-06X90-02	MC/MD/NMD	NA	393	-	GPP/E	800	-	-	-	-	-	800	-
83	Life Extension Project (TA-9-21)	55	TBD	LANL-R-XX-05	MD	SCI	4,002	-	GPP/E	4,800	-	-	-	-	4,800	-	-
91	Electrical Infrastructure Safety Upgrade (TA-35-2)*	50	TBD	LANL-R-06-07	NMD	NA	1,236	-	GPP	6,600	-	-	-	-	-	3,300	3,300
92	Electrical Infrastructure Safety Upgrade (TA-46-1)	50	TBD	LANL-R-06-09	NMD	NA	332	-	GPP	2,970	-	-	-	-	-	2,970	-
99	Electrical System Deficiencies (Mission Essential)	55	TBD	LANL-DM-08D50-01	MC	PMC	2,372	-	GPP/E	4,700	-	-	-	-	-	4,700	-
100	Mechanical Systems Deficiencies (ME)	55	TBD	LANL-DM-09D30-01	MC/MD/NMD	NA	741	-	GPP/E	1,500	-	-	-	-	-	1,500	-
103	TA-50 HVAC Systems Deficiencies (Mission Essential)	55	TBD	LANL-DM-09D30-06	MD	PMC	3,355	-	GPP/E	4,800	-	-	-	-	-	-	4,800
106	Electrical Infrastructure Safety Upgrade (TA-39-2)	50	TBD	LANL-R-09-02	NMD	NA	93	-	GPP	1,000	-	-	-	-	-	-	1,000
114	TA-16 and -55 Electrical Systems Deficiencies (Mission Essential)	50	TBD	LANL-DM-09D50-05	MD	PMC/DSW	3,543	0	GPP/E	4,800	-	-	-	-	-	-	4,800
115	Internal Construction Deficiencies (Mission Essential	45	TBD	LANL-DM-09X90-06	MC/MD/NMD	NA	3,419	0	GPP/E	4,800	-	-	-	-	-	-	4,800
									TOTAL (FIRP)	87,135	6,415	3,400	1,550	19,000	20,600	17,470	18,700

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Attachment A-5

Other Facilities and Infrastructure Cost Projection Spreadsheets

This spreadsheet includes facilities and infrastructure projects associated with other NNSA funded facilities and infrastructure non-LI projects not reported in Attachments A-3 or A-4, as well as those for non-NNSA programs and activities. It provides information on DM buydown projects funded from other sources. The IGPP planning in Attachment A-5 is based on the reality that the GPP limits have not been increased from the $5M maximum.

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Attachment A-5
Other Facilities and Infrastructure Cost Projection Spreadsheet
For NNSA - LANL Site
($000s)

Priority	Project Name	Project Number	Mission Dependency	Mission Dependency Program	Deferred Maintenance Reduction	GSF Added for Eliminated	Funding Type	Total	Prior Years' Funding	FY 2006	FY 2007	FY 2008 FYNSP	FY 2009 FYNSP	FY 2010 FYNSP	FY 2011 FYNSP	FY 2012 FYNSP	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
NNSA Facilities and Infrastructure Cost Projection Spreadsheet ([illegible])																					
	*Emergency Response Training Center							4,900			500	3,000	1,400								
	*Low Level Counting Assays at TA-48					TBD		4,000				2,000	2,900								
	*Quantum Institute					TBD		4,900				2,000	2,900								
	*Super VTR		NA	NA	0			TBD			TBD	TBD									
NNSA Facilities and Infrastructure Cost Projection Spreadsheet (LANL-[illegible])																					
	*Emergency Response Training Center	LANL-TBD	TBD	TBD	0		TBD	4,900			500	3,000	1,400								
	*Low Level Counting Assays at TA-48	LANL-TBD	TBD	TBD	0	TBD	TBD	4,900				2,000	2,900								
	*Quantum Institute	LANL-TBD	TBD	TBD	0	TBD	TBD	4,900				2,000	2,900								
	*Super VTR	LANL-TBD	NA	NA	0		TBD	TBD			TBD	TBD									
NNSA Facilities and Infrastructure Cost Projection Spreadsheet Institutional GPPs (IGPP) (2a)																					
F	Construct Parking Structure	LANL-03-243	NA	NA	0		GPP	4,900	4,900												
F	Badge Office Communication Lines	LANL-03-144	NA	NA	0		GPP	880	880												
F	Construct Surface Parking Lots	LANL-04-314	NA	NA	0		GPP	1,170	1,170												
F	Construct Mercury/Pajarito Parking Lot	LANL-05-420	NA	NA	0		GPP	530	78	452											
F	Relocate Radio Shop	LANL-05-421	NA	NA	0	7	GPP	2,600	630	1,970											
F	Relocate Roads & Grounds	LANL-05-422	NA	NA	0	7	GPP	2,800	879	1,921											
F	TA-3 Telecom Duct Bank Expansion	LANL-05-423	NA	NA	0		GPP	225	1	224											
F	*TA-48-1 Duct Washdown Pollution Prevention System	LANL-06-450	NA	NA	0		GPP	800	60	500	40										
F	TA-3 Utility Corridor	LANL-06-451	NA	NA	0		GPP	1,850		175	1,675										
F	Pajarito Corridor Road and Parking Project	LANL-06-452	NA	NA	0		GPP	4,900		480	4,420										
1	Upgrade Diamond Drive/Eniwetok Drive Intersection	LANL-07-428	NA	NA	0		GPP	3,000			200	2,800									
2	*Road Alignment and Intersection at TA-64	LANL-07-463	NA	NA	0		GPP	1,400			200	1,200									
3	*EES Fueling Station	LANL-TBD	NA	NA	0	-	GPP	TBD													
1	Construct Computing and Communications Operations Building	LANL-08-429	NA	NA	0	8	GPP	4,900													
2	*Otowi Building HVAC Systems Upgrades	LANL-08-454	NA	NA	0		GPP	4,900				1,500	3,400								
3	TA-16-171 Water Tank Refurbishment	LANL-08-436	NA	NA	0		GPP	4,000				750	4,150								
4	Construct Wellness Center Replacement	LANL-08-434	NA	NA	0	10	GPP	4,900				4,000									
5	TA-3/59 Sewer Upgrade	LANL-08-440	NA	NA	0		GPP	1,500				1,500	3,400								
6	Electrical Upgrade for Instidutional Computing	LANL-08-438	NA	NA	0		GPP	2,500				1,000	500								
1	Pajarito/Pecos Tunnel	LANL-09-455	NA	NA	0		GPP	2,000				2,000	500								
2	TA-60 EOC Support Office	LANL-09-435	NA	NA	0	10	GPP	4,900					1,750	250							
	Construct Institutional Office Building	LANL-TBD-456	NA	NA	0	25	GPP	4,900					1,000	3,900							
	Construct TA-49 Consolidated Emergency Training Center Bldg.	LANL-TBD-439	NA	NA	0	15	GPP	4,900													
	Road Safety Upgrades	LANL-TBD-444	NA	NA	0		GPP	TBD													
	Warehouse Relocation	LANL-TBD-427	NA	NA	0	20	GPP	TBD													
	Pajarito Road Parking Structure	LANL-TBD-457	NA	NA	0		GPP	TBD													
	Pajarito Corridor Electrical Substation	LANL-TBD-458	NA	NA	0		GPP	TBD													
	TBD	LANL-TBD-	NA	NA			GPP	TBD													
														10,000	15,000	15,000	15,000	15,000	15,000	######	15,000
Non-NNSA Facilities and Infrastructure Cost Projection Spreadsheet (Program: Institutional) (2a)																					
1	SM-43 D&D	LANL-06-DO-13	NA	NA		316,737	Exp.	32,475		300	175	4,000	15,000	13,000							
Non-NNSA Facilities and Infrastructure Cost Projection Spreadsheet (Program: EM for Process Contaminated Facilities)																					
1	TA-21 Closure Project (EM)	LANL-EM	Refer to Attachment E-1 for specific structures included in FIMS to be removed.				Exp.	33,576			18,100	550	5,826	5,300	4,000						
2	TA-21 Closure Project Request (EM)	LANL-EM					Exp.	67,000				27,100	22,400	17,500							
3	TA-54 Closure (EM)	LANL-EM					Exp.	48,938			391	4,665	8,452	8,749	2,646	4,765	6,235	11,138			
Facilities and Infrastructure Cost Projection Spreadsheet (Program: To be requested of NNSA/DOE for non-process contaminated facilities)																					
1	TA-54 Building Excessing/Safe Shutdown	LANL-TBD	Refer to Attachment E-1 for specific structures included in FIMS to be removed.				Exp.	3,541			-	409	632	767	833	476	624				
2	TA-54 RCRA Closures	LANL-TBD					Exp.	6,821			-	828	1,323	1,700	581	779	1,832				
3	D&D (TA-54) All TA-54 Non-Process Contaminated Facilities (Excluding 54 EM Funded Structures)	LANL-TBD					Exp.	28,885			-	8,966	2,986	3,497	2,224	3,286	7,706				
4	D&D of Non-Process Contaminated Facilities (TA-21)	LANL-TBD					Exp.	2,798			-	789	2,009	-	-	-	-				
5	TA-21 De-inventory & Storage	LANL-TBD					Exp.	3,210			2,617	593	-	-	-	-	-				
6	TA-54 De-inventory & Storage	LANL-TBD					Exp.	19,850				2,618	2,625	4,452	4,572	5,313	-				

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Attachment A-6

Security Infrastructure Projects

This spreadsheet crosswalks Security Infrastructure projects currently accepted for: 1) execution, to include funding for FY07, and 2) planning for FY08 and FY09, from Attachments A-1 through A-5 so that NNSA HQ has a corporate roll-up of ongoing Security Infrastructure projects. These spreadsheets also list the planned unfunded projects in a disciplined prioritization order to ensure that management attention and potential resource allocation are focused on the highest priorities. To provide rough order financial constraints, the unfunded submissions are for FY09 and FY10 only.

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

Priority (1)	Project Name (2)	Site Specific Project Number (3)	Mission Dependency (4)	Mission Dependency Program (4a)	Estimated Total Project Cost (8)	Line Item A-1,2	Planned Funding Source RTBF A-3	FIRP A-4	Other A-5	DBT Related? Y or N
	List FY 07 Projects									
1	NMSSUP II	LANL 05-D-070.1	MC	PMC	240,000	LI				Y
2	Security Perimeter Project	LANL-05-017	MC	DNS	24,000	LI				Y
3	*Alarm Point Increment Project		MC	DNS	3,500				GPP	N
4	*TA-55 Perimeter Enhancements		MC	PMC	589				GPP	Y
	List FY 08 Projects									
1	*NMSSUP II	LANL 05-D-070.1	MC	PMC	240,000	LI				Y
	List FY09 Projects									
	None									

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

Priority (1)	Prioritization Score (2a)	Project Name (2)	Site Specific Project Number (3)	Mission Dependency (4)	Mission Dependency Program (4a)	Total (8)	Proposed for either FY08 or FY09 funding	DBT Related? Y or N
1	63	*TA-72 Range Expansion (30)		MC	DNS	960	N/A	Y
2	62	*PTLA Indoor Range (30)		MC	DNS	5,467	N/A	Y
3	60	*PTLA Tactical Range (30)		MC	DNS	4,860	N/A	Y
4	54	*PTLA Advanced Tactical Training Facility (30)		MD	DNS	4,575	N/A	Y
5	20	S-Division Office Building		MD	DNS	4,860	FY08	N

NNSA Facilities and Infrastructure Cost Projection Spreadsheets
Attachment A Notes TYSP FY2008
LANL Site

(1)	Priority:	Each of the funding types (Line Item, RTBF/Operations of Facilities, and FIRP) is prioritized in sequential order (from 1 to xyz) for site facilities and infrastructure projects/activities.
		For funded projects – an "F" is shown in the priority column.
(2)	Official Project Name:	Changes from prior year plan are indicated with an asterisk "*" in front of the applicable Project Name
(3)	Project Number / Project Identification Number:	Assigned either by Headquarters for active projects or by the Laboratory for planned projects.
(3a)	Deferred Maintenance Identifier:	Unique project ID number required by implementation of Congressional Guidance for FIRP
(4)	Mission Dependency:	Defined as Mission Critical (MC); Mission Dependent, Not Critical (MD); or Not Mission Dependent (NMD)
(4a)	Mission Dependency Program:	If there is no clear predominant program activity then the Not Applicable (NA) designation is utilitized
(5)	Deferred Maintenance Reduction:	Deferred maintenance reduction from the FY03 Deferred Maintenance Baseline [k$] due directly or indirectly from completion of the project.
(6)	Gross Square Footage (gsf):	Total gross square footage constructed or eliminated as a result of the project or activity
(7)	Funding Type:	The type of funding associated with each activity / project, as applicable using the following abbreviations
		LI: Existing Capital Funded Line Item Project
		ALT: Alternative Financing
		OPC: Other Project Costs
		PE&D: Project Engineering & Design
		TPC : Total Project Cost
		E: Expense
		GPP: General Plant Project
		IGPP: Institutional General Plant Project
(8)	Total:	Total funding associated with each project. Each funding type and Total Project Cost (TPC) associated with each project is totaled. TPC is the sum of the LI and PE&D plus the OPC. Totals are entered for each fiscal year. Some project funding are to be determined at this time (TBD).
(9)	Prior Years Funding:	The actual prior years funding associated with the project (sum of the prior years funded through FY 2002 actual) for each funding type is listec
(10)	FY 2006:	The FY 2006 obligation authority / funding associated with the project
(11)	FY 2007:	This funding target is assumed from the basis of the FY 2007 President's Budget Request because the FY 2007 appropriations are not yet enacted
(12)-(16)	FY 2008 – FY 20112:	This data is consistent with the Appendix 1 LANL funding target of the FY 2008 TYSP guidance and the FY 2008-2012 President's Budget / FYNSP
(17)-(21)	FY 2013 – FY 2017:	Provides a requirements based case that is constrained by a 2.3% annual inflation-based assumption or, in the case of Line Items, the Integrated Construction Program Plan's out-year projections.
(22)	NSSB:	The gross square footage for this project includes the NNSB and LASO Building less the Administration Building disposition.
(23)	CMRR:	Out years OPC funds as presented in the ICPP included in FY2012. *In prior years the gross square footage has been reported as (150). This reduction assumed the demolition of the CMR building which is now included in the CMR Demolition project on A-1. Together these projects will reduce the footprint by approximately (150).
(24)	TA-55 Reinvestment Project:	The current funding profile matches that presented in NNSA's ICPP with the exception of PED funds. The PED funding presented here represents recent agreements between NNSA, NA-10 and LANL on PED funds
(25)	TA-55 Radiography:	Project funding proposed from RTBF and Pit Program.
(26)	Changes from Prior Year:	LANSCE-R: This project is an addition from prior year A-1. The LANSCE project funding is still to be determined (TBD) and not included in the totals.

Los Alamos

		CMR Demolition: This project is an addition from prior year A-1. The CMR Demolition project funding is to be determined (TBD) and not included in the totals.
		PF-41 Demolition: This is an addition from prior year A-1.
		Support Services Consolidation: This project has ended and has been eliminated from A-1.
		Los Alamos Center for Integrated Nano Technology (CINT) Gateway: This project has ended and has been eliminated from A-1.
		TA-55 Infrastructure Reinvestment and TA-55 Radiography have switched priority (4 & 5) since the FY07 TYSP.
To be Determined (TBD) totals to be included with the RTBF total and total site costs when available.		
None		
(27)	[1]**Outyear Footprint Reduction (Funding for Strategic Investments is competed for each year.)**	The initial implementation of SI/FR requires the Associate Directorates within LANL to compete for these funds on a yearly basis. As this program element matures, the process will require competition that looks a year ahead so that planning is done one year with execution to occur the following year. It is expected that as decisions on Complex 2030 are made and Directorates complete consolidation plans, better outyear definition will be provided.
(28)	**Post FIRP Investments**	LANL recognizes that at the conclusion of FIRP, additional investment in real property will be needed. Post FIRP investments are expected to be similar to the investments made by the recapitalization portion of FIRP.
(1)	**Priority**	Prioritizes each FIRP project in sequential order. Includes all current and future projects and those prior year projects not yet completed
(2)	**Project name**	For each project, provides the official name without acronyms. Changes from prior year's TYSP are indicated by an asterick(*) in front of the name
(2a)	**FIRRS Score**	For each FIRP Recapitalization project, the score from the FIRRS Matrix as presented in the FIRP PEP issued September 29, 2006 is entered
(3)	**Project Number**	Provides the project number that is assigned by Headquarters for active projects or by the site for planned project.
(3a)	**Deferred Maintenance Identifiers**	Provides the unique Project ID numbers tracked through the life of FIRP that provide an appropriate mechanism for identifying deficiencies that will be retired through the project. Is linked to the legacy DM Baseline identified in FY03 and FY04
(4)	**Mission Dependency**	(4) Mission Dependency: Identifies the predominant value of the project based on the Mission Dependency status of the facility or facilities that it affects Includes Mission Critical (MC), Mission Dependent Not Critical (MD) and Not Mission Dependent (NMD)
(4a)	**Mission Dependency Program**	Reflects the predominant Program Office that uses a facility or OSF asset and the specific Government Performance & Results Act program activity within that office that benefits from the completion of that project.
(5)	**Deferred Maintenance Reduction**	Identifies the total deferred maintenance reduction associated with the project. A-4a reflects the legacy Deferred Maintenance Baseline from FY03 reduced; while A-4b reflects that of FY04.
(6)	**Gross Square Footage**	Provides any net new GSF that will result from implementation of the project or net GSF that will be eliminated through completion of the project
(7)	**Funding Type**	Provides the funding type associated with each project (LI, ALT, OPC, PE&D, E, GPP, IGPP) that, for outyears, aligns with the annual Integrated Facilities & Infrastructure (IFI) Crosscut Budget.
(8)	**Total**	Provides cumulative costs for the project by funding type. In the case of projects other than line items, all funding is of a single type and is reported as one total.
(9)	**Prior Years Funding**	Provides the prior year funding for the project.
(10)	FY2006	Provides the FY2006 actuals associated with the project.
(11)	FY2007	Provides the FY2007 estimate consistant with the FY2007 Enacted Appropriation.
(12-16)	FYNSP	Provides data from FY2008 through FY2012 consistent with the Appendix 1 Site Funding Profiles and the President's Budget / FYNSP
(17)	FY2013	Provides an estimate of out year funding requirements through the end of the FIRP Program (Now 2013 only) consistent with the 2.3% annual inflation based assumption.
(29)		Initiation of institutional projects noted are contingent on funding availability as determined through the Laboratory's indirect budget prioritization process.
(30)	Attachment A-6(b)	Projects that are associated with the FY05 DBT will receive funding in 2010 through FS-20.

Attachment B

This section is a generation of FIMS Report #93 "AUI by FRPC Categories" which is in support of reporting asset utilization for the five building categories as defined by the FRPC (i.e., Office Laboratory, Warehouse, Housing, and Medical). The two Program Offices at the Laboratory that are reported are EM and NNSA.

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Attachment B - LANL Asset Utilization Index
U. S. Department of Energy
Facilities Information Management System
Asset Utilization Index by FRPC Categories
TYSP 2008-17

Program Office	Site Name	Measures	AUI	FRPC Guidelines	OECM Guidelines	Operating Gross Sqft*	Operating No of Bldgs*
EM	Los Alamos National Laboratory	Laboratory	0.00%	60 - 85%	90%	16,349	1
EM	Los Alamos National Laboratory	Warehouse	0.00%	50 - 85%	89%	1,728	1
					Los Alamos National Laboratory Site Totals*	18,077	2

Program Office	Site Name	Measures	AUI	FRPC Guidelines	OECM Guidelines	Operating Gross Sqft*	Operating No of Bldgs*
NNSA	Los Alamos National Laboratory	Office	81.41%	70 - 95%	95%	1,908,296	72
NNSA	Los Alamos National Laboratory	Laboratory	91.85%	60 - 85%	90%	3,403,446	185
NNSA	Los Alamos National Laboratory	Warehouse	97.73%	50 - 85%	89%	814,690	255
NNSA	Los Alamos National Laboratory	Medical	100.00%	70 - 95%	90%	20,600	1
					Los Alamos National Laboratory Site Totals*	6,147,032	513

*These numbers do not reflect the total gross square footage and number of buildings. They represent operating buildings only for the 5 FRPC categories.

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Attachment C

Attachment C not required for FY08-FY17 TYSP.

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Attachment D

Attachment D is not required for FY08-FY17 TYSP.

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Attachment E

This section describes the result of changes in planned FIRP, RTBF, EM and indirect budgets since the publication of the FY07 TYSP that impact planned and proposed projects to disposition excess facilities and control the site footprint. In particular, it discusses updates to the Attachment E-1 through E-6 tables that are the result of planned budget shortfalls in this FY. Projections for both disposition and new construction have been reduced.

Attachment E-1 - Excess Facilities Footprint Elimination Plan

This spreadsheet captures all facilities (NNSA, DOE, and non-DOE) that are currently excess to DOE or that will become excess during the 10 year planning horizon considered in the TYSP. Funding for facility disposition is currently provided by FIRP, RTBF, EM Programs, and other sources. The Laboratory prioritizes all excess facilities requiring disposition by funding program. Attachment E-1 is consistent with DOE accepted archived totals from FY02 through FY06 with a total of approximately 508K sq. ft. removed.

Principal Changes

Principal changes in Attachment E-1 reflect the reduction of FIRP funding in FY06-FY09 and the elimination of FIRP funding in FY10 and FY11. In addition, the D&D of SM43 (the Administration Building) has been moved to FY10 to reflect projected actual removal of the sq. ft. from the FIMS database.

Environmental Programs

Several facilities at TA-21 and TA-54 require deactivation, de-inventorying, RCRA closure, and D&D so that the Consent Order requirements can be satisfied. The DOE EM D&D Program has taken responsibility for funding D&D of process-contaminated facilities at TA-21 and TA-54 that inhibit completion of corrective actions under the Consent Order. De-inventorying and de-activating these facilities, as well as de-inventorying and de-activating and D&D of all non-process-contaminated facilities are outside the scope of the DOE EM D&D program. De-activation includes removal of all equipment from facilities and regulatory closure of RCRA-permitted areas within the facilities. The specific programs responsible for funding these activities have not been identified. Approximately $7M in funding is required in FY08. The funding profiles for these activities are summarized in Attachment A-5.

Several Laboratory structures that require D&D for compliance with the NMED consent order are not included in the FIMS database. These non-FIMS structures are not included in E-1 but are included in the A-5 funding profiles.

D&D and Future Land Transfer

In FY09, D&D of the existing LASO building (45,536 sq ft.) is included for consistency with Land Transfer requirements. The County of Los Alamos (the County) requested NNSA to consider the D&D of buildings 1001 and 1002 in TA-21 within the Land Conveyance and Transfer Tract A-11 in lieu of the commitment to D&D the LASO building and the associated Steam Plant within Tract A-13. Based upon estimates prepared by the Laboratory, LASO stated to the County that it believes it is in the best interest of the government to perform the D&D at Tract A-11 in lieu of Tract A-13, as the County requested. Further, LASO stated in response to the County that it planned to request funds to D&D Buildings within Tract A-13 in FY08/FY09. Currently LASO has no funds to assign to D&D on Tract A-11 in FY07. Consequently, Attachment E-1 notes the funding source as To Be Determined (TBD) for the D&D of the structures noted above in TA-43 in FY09.

Facilities Elimination and Disposition

The following tables provide an overview of Laboratory disposition successes from 2002 through 2006; planned D&D from 2007 through 2012; and the current and anticipated excess structures without funding sources and/or planned disposition years.

LANL Excess Facilities Elimination "Banked" Sq. Ft.

FY	FIRP	Other	Subtotal
2002	46,337	21,824	68,161
2003	48,704	87,712	136,416
2004	105,062	4,524	109,586
2005	114,754	1,142	115,896
2006	63,307	15,321	78,628
Subtotal	378,164	130,523	508,687

Planned D&D FY2007 - FY2012 (Sq. Ft.)

FY	FIRP	RTBF	EM	EM Request	Institution	TBD	Other	Subtotal
2007	6,300	86,307					2,014	94,621
2008	35,849		62,337	42,907			4,262	145,355
2009	96,528			10,879		45,536		152,943
2010			18,783	237,300	315,737		1,160	572,980
2011						50,433	848	51,281
2012		7,000						7,000
Subtotal	138,677	93,307	81,120	291,086	315,737	95,969	8,284	1,024,180

The FY09 TBD is for the LASO Building as required for Land Transfer.

Excess or Projected Excess Facilities		
CMR	571,458	RTBF Line Item; Disposition planned 3 to 5 years after CMRR competion.
TA-18	72,707	Structures currently in excessing process.
TA-21	18,812	Remaining structures not yet included in D&D plans.
Currenty Excessed	60,673	Structures in excess status but without dispositon plan.
Historcal Structures	112,172	Structures not to be removed (some require additional evaluation).
Subtotal	835,822	Subtotal does not include impact of LANL's Footprint Reduction Initiative.

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Attachment E-1
Facilities Disposition Plan
FY08 TYSP
NNSA - LANL

Funding Source (1)	Facility Identification Number (FIMS) (2)	Facility Name (3)	Mission Dependency Program (4)	Priority Score (5)	Priority Rank (6)	Gross Square Footage (gsf) (7)	FIMS Excess Indicator (8)	Excess Year (9)	Planned Disposition Year (10)	TEC to Disposition ($000s) (11)	FY2003 (baseline) Deferred Maint Reduction (for FIRP Demolition Only) ($000s) (12)	Yearly S&M Costs ($000s) (13)	Candidate for Transfer (14)	Contaminated (Yes or No) (15)	Notes (16)
FY02 Archived Total						68,181									
FY03 Archived Total						136,416									
FY04 Archived Total						109,588									
FY05 Archived Total						115,898									
2006 Facility Disposition															
FIRP	03-0031	CHEMICAL WAREHOUSE	NA	NA	NA	30,049	NA	NA	Complete - FIRP	N/A	1,245	N/A	N/A	N/A	Removed: 12/30/2005
FIRP	03-0208	ION BEAM EQUIPMENT BLDG	NA	NA	NA	1,440	NA	NA	Complete - FIRP	N/A	2,116	N/A	N/A	N/A	Removed: 12/15/2006
FIRP	03-0482	OFFICE BLDG	NA	NA	NA	3,325	NA	NA	Complete - FIRP	N/A	186	N/A	N/A	N/A	TRANSFERRED TO BIA: 5/13/2006
FIRP	03-0483	OFFICE BLDG	NA	NA	NA	3,333	NA	NA	Complete - FIRP	N/A	199	N/A	N/A	N/A	TRANSFERRED TO BIA: 5/13/2006
FIRP	03-1381	OFFICE TRAILER	NA	NA	NA	592	NA	NA	Complete - FIRP	N/A	30	N/A	N/A	N/A	TRANSFERRED TO BIA: 12/11/2005
FIRP	03-1552	OFFICE BLDG	NA	NA	NA	1,994	NA	NA	Complete - FIRP	N/A	47	N/A	N/A	N/A	TRANSFERRED TO BIA: 12/11/2005
FIRP	03-1586	OFFICE BLDG	NA	NA	NA	1,997	NA	NA	Complete - FIRP	N/A	69	N/A	N/A	N/A	TRANSFERRED TO BIA: 12/11/2005
FIRP	08-0024	STORAGE BLDG	NA	NA	NA	2,231	NA	NA	Complete - FIRP	N/A	110	N/A	N/A	N/A	Removed: 9/30/2006
FIRP	03-0025	UTILITY BLDG	NA	NA	NA	99	NA	NA	Complete - FIRP	N/A	5	N/A	N/A	N/A	Removed: 9/30/2006
FIRP	03-0028	GUARD STATION	NA	NA	NA	87	NA	NA	Complete - FIRP	N/A	3	N/A	N/A	N/A	Removed: 9/30/2006
FIRP	09-0029	UTILITY BLDG	NA	NA	NA	99	NA	NA	Complete - FIRP	N/A	3	N/A	N/A	N/A	Removed: 9/30/2006
FIRP	09-0035	PROCESS LAB	NA	NA	NA	1,911	NA	NA	Complete - FIRP	N/A	432	N/A	N/A	N/A	Removed: 4/25/2006
FIRP	09-0043	PROCESS BUILDING	NA	NA	NA	1,768	NA	NA	Complete - FIRP	N/A	371	N/A	N/A	N/A	Removed: 4/25/2006
FIRP	15-0046	EXERCISE FACILITY	NA	NA	NA	179	NA	NA	Complete - FIRP	N/A	72	N/A	N/A	N/A	Removed: 4/25/2006
FIRP	15-0305	TRANSPORTABLE	NA	NA	NA	3,552	NA	NA	Complete - FIRP	N/A	87	N/A	N/A	N/A	TRANSFERRED TO BIA: 9/08/06
FIRP	16-0209	LABORER SHOP	NA	NA	NA	187	NA	NA	Complete - FIRP	N/A	12	N/A	N/A	N/A	Removed: 12/15/2005
FIRP	21-0046	Z WAREHOUSE	NA	NA	NA	1,812	NA	NA	Complete - FIRP	N/A	87	N/A	N/A	N/A	Removed: 12/15/2005
FIRP	21-0359	OFFICE TRAILER	NA	NA	NA	540	NA	NA	Complete - FIRP	N/A	-	N/A	N/A	N/A	TRANSFERRED TO BIA: 8/4/2005
FIRP	21-0361	OFFICE TRAILER	NA	NA	NA	1,680	NA	NA	Complete - FIRP	N/A	-	N/A	N/A	N/A	TRANSFERRED TO BIA: 5/11/2006
FIRP	21-0365	OFFICE TRAILER	NA	NA	NA	1,660	NA	NA	Complete - FIRP	N/A	14	N/A	N/A	N/A	TRANSFERRED TO BIA: 5/11/2006
FIRP	21-0469	TRAILER	NA	NA	NA	480	NA	NA	Complete - FIRP	N/A	#N/A	N/A	N/A	N/A	TRANSFERRED TO BIA: 8/4/2005
FIRP	28-0001	MAGAZINE	NA	NA	NA	280	NA	NA	Complete - FIRP	N/A	9	N/A	N/A	N/A	Removed: 1/13/2006
FIRP	28-0002	MAGAZINE	NA	NA	NA	280	NA	NA	Complete - FIRP	N/A	9	N/A	N/A	N/A	Removed: 1/13/2006
FIRP	28-0003	MAGAZINE	NA	NA	NA	280	NA	NA	Complete - FIRP	N/A	9	N/A	N/A	N/A	Removed: 1/13/2006
FIRP	28-0004	MAGAZINE	NA	NA	NA	280	NA	NA	Complete - FIRP	N/A	6	N/A	N/A	N/A	Removed: 1/13/2006
FIRP	28-0005	MAGAZINE	NA	NA	NA	280	NA	NA	Complete - FIRP	N/A	9	N/A	N/A	N/A	Removed: 1/13/2006
FIRP	40-0004	FIRING POINT	NA	NA	NA	572	NA	NA	Complete - FIRP	N/A	10	N/A	N/A	N/A	Removed: 4/25/2006
FIRP	40-0019	OFFICE AND LAB	NA	NA	NA	189	NA	NA	Complete - FIRP	N/A	57	N/A	N/A	N/A	Removed: 4/25/2006
FIRP	40-0043	STORAGE BUILDING	NA	NA	NA	216	NA	NA	Complete - FIRP	N/A	31	N/A	N/A	N/A	Removed: 4/25/2006
FIRP	41-0044	STORAGE BLDG	NA	NA	NA	297	NA	NA	Complete - FIRP	N/A	0	N/A	N/A	N/A	Removed: 9/1/2006
FIRP	41-0054	STORAGE BLDG	NA	NA	NA	256	NA	NA	Complete - FIRP	N/A	0	N/A	N/A	N/A	Removed: 9/1/2006
FIRP	49-0023	BOTTLE HOUSE	NA	NA	NA	256	NA	NA	Complete - FIRP	N/A	90	N/A	N/A	N/A	Removed: 12/15/2005
FIRP	49-0121	CABLE BLDG	NA	NA	NA	377	NA	NA	Complete - FIRP	N/A	-	N/A	N/A	N/A	Removed: 12/15/2005
FIRP	51-0549	TRAILER	NA	NA	NA	709	NA	NA	Complete - FIRP	N/A	#N/A	N/A	N/A	N/A	AUCTIONED: 9/30/2005
2006 Complete - FIRP Total						83,307									
OTHER	16-0248	TRAILER	NA	NA	NA	208	NA	NA	Complete - Other	N/A	9	N/A	N/A	N/A	AUCTIONED: 10-13-05
OTHER	21-0490	TRAILER	NA	NA	NA	321	NA	NA	Complete - Other	N/A	#N/A	N/A	N/A	N/A	Transferred to another Fed. Agency. 10/18/05
S&S Line Item	03-0070	MAINTENANCE SHOP	NA	NA	NA	6,028	NA	NA	Complete - Other	N/A	117	N/A	N/A	N/A	Removed by the Security Perimeter Project: 2/24/06
S&S Line Item	03-0225	GENERAL STORAGE	NA	NA	NA	1,166	NA	NA	Complete - Other	N/A	12	N/A	N/A	N/A	Removed by the Security Perimeter Project: 2/24/06
S&S Line Item	03-0478	STORAGE SHED	NA	NA	NA	192	NA	NA	Complete - Other	N/A	20	N/A	N/A	N/A	Removed by the Security Perimeter Project: 2/24/06
S&S Line Item	03-0479	STORAGE SHED	NA	NA	NA	256	NA	NA	Complete - Other	N/A	15	N/A	N/A	N/A	Removed by the Security Perimeter Project: 2/24/06
S&S Line Item	03-1501	TRAILER	NA	NA	NA	400	NA	NA	Complete - Other	N/A	25	N/A	N/A	N/A	Removed by the Security Perimeter Project: 2/24/06
S&S Line Item	03-1989	STORAGE SHED	NA	NA	NA	87	NA	NA	Complete - Other	N/A	12	N/A	N/A	N/A	Removed by the Security Perimeter Project: 2/24/06
S&S Line Item	51-0023	MODEL SHOP	NA	NA	NA	6,661	NA	NA	Complete - Other	N/A	126	N/A	N/A	N/A	Removed by the Security Perimeter Project: 4/20/06
2006 Complete - Other Total						15,321									
2006 Total						78,628									

Attachment E-1
Facilities Disposition Plan
FY08 TYSP
NNSA - LANL

Funding Source (1)	Facility Identification Number (FIMS) (2)	Facility Name (3)	Mission Dependency Program (4)	Priority Score (5)	Priority Rank (6)	Gross Square Footage (gsf) (7)	FIMS Excess Indicator (8)	Excess Year (9)	Planned Disposition Year (10)	TEC to Disposition ($K) (11)	FY2003 (baseline) Deferred Maint Reduction (for FIRP Demolition Only) ($K) (12)	Yearly S&M Costs ($K) (13)	Candidate for Transfer (14)	Contaminated (Yes or No) (15)	Notes (16)
2007 Facility Disposition															
FIRP	15-0140	STORAGE BUILDING	NA	In Progress	In Progress	1,210		2007	2007	Funded	66		No	N/A	Historical Significance: Not eligible
FIRP	35-0268	TRANSPORTABLE	NA	In Progress	In Progress	1,703		2007	2007	Funded	58		No	N/A	
FIRP	35-0269	TRANSPORTABLE	NA	In Progress	In Progress	1,699		2007	2007	Funded	105		No	N/A	
FIRP	35-0270	TRANSPORTABLE	NA	In Progress	In Progress	1,688		2007	2007	Funded	56		No	N/A	
2007 FIRP Total						6,300									
RTBF	21-1001	RECORDS CENTER	NA	Not applicable: this group of structures is included as one package and is on land slated for Land Transfer in FY2007		15,423		2007	2007	2,341	1,106	42	No	N/A	Structures listed will be part of an RTBF supported LAND TRANSFER to Los Alamos County as part of the Department's Land Transfer Agreement. Structures will be vacated as a result of NSSB Construction and records movement to that new facility. These structures are anticipated to be removed (archived) from the database upon completion of Land Transfer. 21-1001 and 1002 Historical Significance: Eligible, documentation in progress.
RTBF	21-1002	WAREHOUSE	NA			15,881		2007	2007		913	43	No	N/A	
RTBF	21-1003	BACKFLOW PREVENTER	NA			113		2007	2007			0	No	N/A	
RTBF	21-1004	MORGAN SHED	NA			-		2007	2007		#N/A	-	No	N/A	192 sq. ft. Morgan Shed - part of Land Transfer
RTBF	21-1005	MORGAN SHED	NA			-		2007	2007		#N/A	-	No	N/A	192 sq. ft. Morgan Shed - part of Land Transfer
RTBF	21-1006	MORGAN SHED	NA			-		2007	2007		#N/A	-	No	N/A	192 sq. ft. Morgan Shed - part of Land Transfer
RTBF	21-1007	MORGAN SHED	NA			-		2007	2007		#N/A	-	No	N/A	192 sq. ft. Morgan Shed - part of Land Transfer
RTBF	21-1008	MORGAN SHED	NA			-		2007	2007		#N/A	-	No	N/A	192 sq. ft. Morgan Shed - part of Land Transfer
RTBF	21-1009	MORGAN SHED	NA			-		2007	2007		#N/A	-	No	N/A	192 sq. ft. Morgan Shed - part of Land Transfer
RTBF	21-1010	TRANSPORTAINER	NA			-		2007	2007		#N/A	-	No	N/A	320 sq. ft. transportainer - part of Land Transfer
RTBF	15-0040	OFFICE AND LAB	NA	In Progress	In Progress	13,487		2007	2007	Funded	3,140	36	No	N/A	Historical Significance: Eligible, documentation in progress.
RTBF	15-0476	TRAILER	SCI	In Progress	In Progress	675		2007	2007	Funded	3	2	No	N/A	
RTBF	16-0430	HE PRESSING BUILDING	DSW	In Progress	In Progress	19,168		2007	2007	Funded	284	52	No	N/A	D&D contingent on RTFB funding decisions Historical Significance: Eligible, documentation pending
RTBF	16-0435	REST HOUSE	DSW	In Progress	In Progress	4,439		2007	2007	Funded	287	12	No	N/A	D&D contingent on RTFB funding decisions Historical Significance: Not eligible
RTBF	16-0437	REST HOUSE	DSW	In Progress	In Progress	4,323		2007	2007	Funded	287	12	No	N/A	D&D contingent on RTFB funding decisions Historical Significance: Not eligible
RTBF	37-0001	MAGAZINE	NA	In Progress	In Progress	188		2007	2007	Funded	7	1	No	N/A	Needs National Register of Historic Places evaluation
RTBF	37-0002	MAGAZINE	NA	In Progress	In Progress	192		2007	2007	Funded	15	1	No	N/A	Needs National Register of Historic Places evaluation
RTBF	37-0003	MAGAZINE	NA	In Progress	In Progress	416		2007	2007	Funded	8	1	No	N/A	Needs National Register of Historic Places evaluation
RTBF	37-0015	MAGAZINE	DSW	In Progress	In Progress	800		2007	2007	Funded	26	2	No	N/A	Needs National Register of Historic Places evaluation
RTBF	37-0016	MAGAZINE	NA	In Progress	In Progress	800		2007	2007	Funded	28	2	No	N/A	Needs National Register of Historic Places evaluation
RTBF	37-0017	MAGAZINE	NA	In Progress	In Progress	800		2007	2007	Funded	28	2	No	N/A	Needs National Register of Historic Places evaluation
RTBF	37-0016	MAGAZINE	DSW	In Progress	In Progress	800		2007	2007	Funded	28	2	No	N/A	Needs National Register of Historic Places evaluation
RTBF	37-0027	STORAGE BUILDING	DSW	In Progress	In Progress	800		2007	2007	Funded	28	2	No	N/A	
RTBF	53-0394	TRANSPORTBABLE	NA	In Progress	In Progress	1,692		2007	2007	Funded	29	5	No	N/A	
RTBF	53-0395	TRANSPORTBABLE	NA	In Progress	In Progress	1,711		2007	2007	Funded	29	5	No	N/A	
RTBF	53-0399	TRANSPORTBABLE	NA	In Progress	In Progress	1,692		2007	2007	Funded	29	5	No	N/A	
RTBF	53-0402	TRANSPORTBABLE	NA	In Progress	In Progress	1,455		2007	2007	Funded	26	4	No	N/A	
RTBF	53-0405	TRANSPORTBABLE	NA	In Progress	In Progress	1,452		2007	2007	Funded	8	4	No	N/A	
2007 RTBF Total						88,307									
OTHER	55-0139	TRAILER	NA	In Progress	In Progress	672		2007	2007	Funded	12	2	No	N/A	
OTHER	55-0144	TRAILER	NA	In Progress	In Progress	670		2007	2007	Funded	12	2	No	N/A	
OTHER	55-0145	TRAILER	PMC	In Progress	In Progress	672		2007	2007	Funded	12	2	No	N/A	
2007 Other Total						2,014									
2007 Total						94,621									

Attachment E-1
Facilities Disposition Plan
FY08 TYSP
NNSA - LANL

Funding Source (1)	Facility Identification Number (FIMS) (2)	Facility Name (3)	Mission Dependency Program (4)	Priority Score (5)	Priority Rank (6)	Gross Square Footage (gsf) (7)	FIMS Excess Indicator (8)	Excess Year (9)	Planned Disposition Year (10)	TEC to Disposition ($000s) (11)	FY2003 (baseline) Deferred Maint Reduction (for FIRP Demolition Only) ($000s) (12)	Yearly S&M Costs ($000s) (13)	Candidate for Transfer (14)	Contaminated (Yes or No) (15)	Notes (16)
2008 Facility Disposition															
FIRP	55-0041	NUCLEAR MATERIALS STORAGE FACILITY	PMC	In Progress	In Progress	35,849		2007	2008	12,500	22		No		
2008 FIRP						35,849									
EM	21-0002	LABORATORY BLDG	NA	NA. EM funded D&D for these process contaminated structures.		14,447	Yes	1994	2008	Included in the EM Funding for the TA-21 Closure Project	306	24	Yes	Yes	Historical Significance. Eligible, documentation in progress
EM	21-0005	LABORATORY BLDG.	NA			27,039	Yes	1998	2008		548	24	Yes	Yes	
EM	21-0210	ENV-ECO	NA			20,851	-	2007	2008		509	36	Yes		
2008 EM Total						62,337									
EM ROST	21-0003	LABORATORY BLDG	NA	NA: EM funding requested for this set of process contaminated structures		4,733	Yes	1994	2008	Included in the EM Funding for the TA-21 Closure Project see Attachment A-5	32		Yes	Yes	Historical Significance. Eligible, documentation in progress.
EM ROST	21-0004	LABORATORY BLDG	NA			1,551	Yes	1964	2008		39		Yes	Yes	
EM ROST	21-0116	WAREHOUSE	NA			2,067	Yes	1998	2008		55	10	Yes	Yes	
EM ROST	21-0149	CORRIDOR STRUCTURE	NA			3,762	Yes	1998	2008		-		Yes	Yes	
EM ROST	21-0150	MOLECULAR CHEMISTRY	NA			14,842	Yes	1998	2008		885		Yes	Yes	
EM ROST	21-0312	CORRIDOR STRUCTURE	NA			2,072	Yes	1998	2008		-		Yes	Yes	
EM ROST	21-0313	CORRIDOR STRUCTURE	NA			4,264	Yes	1998	2008		-		Yes	Yes	
EM ROST	21-0314	CORRIDOR STRUCTURE	NA			4,843	Yes	1998	2008		-		Yes	Yes	
EM ROST	21-0315	CORRIDOR STRUCTURE	NA			4,773	Yes	1998	2008		-		Yes	Yes	
2008 EM ROST Total						42,907									
S&S	55-0264	PLUTONIUM ACCESS CENTER	PMC	NA - NMSSUP II funded		4,262		2008	2008	Funded	23		No		NMSSUP II Line Item Project
2008 S&S Total						4,262									
2008 Total						145,355									
2009 Facility Disposition															
FIRP	54-0048	TENSION SUPPORT DOME (Pad 5)	PMC	68	1	13,951		2008	2009	4,500	131	38	Yes		
FIRP	54-0049	TENSION SUPPORT DOME (Pad 3)	PMC	86	1	25,587		2008	2009		#N/A		Yes		
FIRP	54-0062	CANOPY COVERS BLDG. 35, 36, 58	NA	NA	-	-		2008	2009		#N/A	-	Yes		Structure with 3652 sq. ft. not in FIMS
FIRP	54-0215	TENSION SUPPORT DOME	PMC	68	1	15,181		2007	2009		#N/A	41	Yes		
FIRP	54-0224	TENSION SUPPORT DOME (Pad 5)	PMC	88	1	5,829		2008	2009		#N/A	16	Yes		
FIRP	54-0226	TENSION SUPPORT DOME (Pad 1)	PMC	88	1	21,718		2007	2009		2	59	Yes		
FIRP	54-0283	TENSION SUPPORT DOME (Pad 6)	NA	66	1	14,262		2009	2009		#N/A	39	Yes		
2009 FIRP						96,528									
EM ROST	21-0257	RAD LIQUID WASTE	DSW	NA. EM funding requested for this set of process contaminated structures		4,229		2009	2009	Included in the EM Funding Request for the TA-21 Closure Project see Attachment A-5	518	11	Yes		
EM ROST	21-0229	PUMP HOUSE	NA			214		2009	2009		-	1	Yes	Yes	
EM ROST	21-0230	AERATION/ SEDIMENTATION	NA			1,258		2009	2000		#N/A	3	Yes		
EM ROST	21-0286	WAREHOUSE	NA			3,578	Yes	1995	2009		-	10	Yes		Historical Significance. Eligible, documentation complete
EM ROST	21-0342	EAST WATER TOWER	NA			1,600		2009	2009		#N/A	4	Yes		Historical Significance: Not eligible
2009 EM ROST Total						10,879									
TBD	43-0039	DOE-LASO BUILDING	NA	NA - Structures to be addressed as part of Land		39,788		2009	2009	TBD	1,016	107	No		Contingent on construction of new LASO Building; required prior to land transfer;
	43-0041	STORAGE BUILDING	NA			5,748		2009	2009		1,462	16	No		
2009 TBD Total						45,536									
2009 Total						152,943									
2010 Facility Disposition															
EM	21-0155	TRITIUM SYSTEMS TEST ASSEMBLY	NA	NA: EM funded D&D for these process contaminated TA-21 structures.		16,349	Yes	2003	2010	Included in the EM Funding for this set of structures at TA-21	- 3,254	44	Yes	Yes	Transferred from the Office of Science to EM in 2003 Historical Significance: Eligible, documentation in progress.
EM	21-0213	SUPPLY WAREHOUSE	NA			1,728	Yes	2003	2010		5	5	Yes	Yes	
EM	21-0220	COOLING TOWER	NA			450	Yes	2003	2010		#N/A	1	Yes	Yes	Transferred from the Office of Science to EM in 2003 Historical Significance: Not eligible
EM	21-0388	50' STEEL STACK	NA			256		2010	2010		#N/A	1	Yes	Yes	
EM	21-0420	COOLING TOWER	NA			N/A		2010	2010		#N/A	-	Yes	Yes	
2010 EM Total						18,783									

Los Alamos

Attachment E-1
Facilities Disposition Plan
FY08 TYSP
NNSA - LANL

Funding Source (1)	Facility Identification Number (FIMS) (2)	Facility Name (3)	Mission Dependency Program (4)	Priority Score (5)	Priority Rank (6)	Gross Square Footage (gsf) (7)	FIMS Excess Indicator (8)	Excess Year (9)	Planned Disposition Year (10)	TEC to Disposition ($000s) (11)	FY... Deferred Maint Reduction (for FIRP Demolition Only) ($000s) (12)	Yearly S&M Costs ($000s) (13)	Candidate for Transfer (14)	Contaminated (Yes or No) (15)	Notes (16)
EM ROST	21-0042	Z PUMP HOUSE C108692	NA	NA: EM funding requested for this set of process contaminated structures at TA-21.		65	Yes	2003	2010	Included in the EM Funding Request for the TA-21 Closure Project see Attachment A-5	.	0	Yes	Yes	Historical Significance: Not eligible
EM ROST	21-0168	EQUIPMENT BUILDING	DSW			856		2010	2010		172	2	Yes	Yes	Historical Significance: Eligible, documentation in progress.
EM ROST	21-0167	EQUIPMENT BUILDING	DSW			873		2010	2010		166	2	Yes	Yes	Historical Significance: Eligible, documentation in progress.
EM ROST	21-0152	LABORATORY BLDG	DSW			13,750		2009	2010		1,198	37	Yes	Yes	Historical Significance: Eligible, documentation in progress.
EM ROST	21-0209	TSFF	DSW			13,155		2009	2010		2,418	36	Yes	Yes	Historical Significance: Eligible, documentation in progress.
EM ROST	21-0227	SUMP-LIFT	NA			452		2010	2010		45	1	Yes	Yes	Historical Significance: Not eligible
EM ROST	21-0376	MECHANICAL EQUIPMENT	DSW			544		2010	2010		#N/A	1	Yes	Yes	
EM ROST	54-0002	OPERATIONS BLDG	PMC	NA: EM funding requested for this set of process contaminated structures at TA-54.		1,617		2010	2010	Included in the EM Funding Request for the TA-54 Closure Project see Attachment A-5	2	4	Yes		
EM ROST	54-0008	CONTAMINATED DRUM	PMC			651		2009	2010		3	2	Yes		
EM ROST	54-0011	WASTE MGMT CONTROL FACILITY	PMC			1,136		2009	2010		13	2	Yes		
EM ROST	54-0020	EQUIPMENT SHELTER BLDG	PMC			680		2009	2010		4	2	Yes		
EM ROST	54-0033	TRU-WASTE DRUM PREP	PMC			7,854		2008	2010		8	21	Yes		Needs National Register of Historic Places evaluation
EM ROST	54-0153	TENSION SUPPORT DOME (Pad 6)	PMC			18,610		2008	2010		#N/A	50	Yes		
EM ROST	54-0156	MODIFIED MORGAN SHED	PMC			192		2009	2010		.	1	Yes		
EM ROST	54-0226	TENSION SUPPORT DOME (Pad 1)	PMC			21,718		2007	2010		2	59	Yes		
EM ROST	54-0229	TENSION SUPPORT DOME (Pad 9)	PMC			20,498		2010	2010		.	55	Yes		
EM ROST	54-0230	TENSION SUPPORT DOME (Pad 9)	PMC			19,895		2010	2010		#N/A	53	Yes		
EM ROST	54-0231	TENSION SUPPORT DOME (Pad 9)	PMC			21,363		2010	2010		.	58	Yes		
EM ROST	54-0232	TENSION SUPPORT DOME	PMC			19,679		2010	2010		.	53	Yes		
EM ROST	54-0242	TRAILER	PMC			510		2010	2010		.	1	Yes		
EM ROST	54-0281	TENSION SUPPORT DOME	PMC			4,160		2010	2010		#N/A	11	Yes		
EM ROST	54-0282	TENSION SUPPORT DOME	NA			7,350		2009	2010		#N/A	20	Yes		
EM ROST	54-0263	TENSION SUPPORT DOME (Pad 6)	NA			14,262		2009	2010		#N/A	39	Yes		
EM ROST	54-0269	UTILITY BLDG	PMC			240		2009	2010		6	1	Yes		
EM ROST	54-0296	MODULAR BLDG	NA			360		2009	2010		3	1	Yes		
EM ROST	54-0304	HVAC EQUIPMENT BLDG	PMC			120		2009	2010		#N/A	0	Yes		
EM ROST	54-0306	TRAILER	PMC			355		2009	2010		2	1	Yes		
EM ROST	54-0315	CONTROL BLDG	PMC			734		2009	2010		5	2	Yes		
EM ROST	54-0324	TRAILER	PMC			456		2009	2010		17	1	Yes		
EM ROST	54-0325	TRAILER	PMC			996		2009	2010		27	3	Yes		
EM ROST	54-0367	MODULAR BLDG	NA			702		2009	2010		.	2	Yes		
EM ROST	54-0375	TENSION SUPPORT DOME	NA			30,221		2010	2010		#N/A	82	Yes		
EM ROST	54-0412	DECON VOLUME REDUCTION SY (Pad 1)	PMC			13,284		2010	2010		#N/A	36	Yes		
EM ROST	54-0483	MODIFIED	PMC			160		2009	2010		#N/A	0	Yes		
2010 EM ROST Total						237,300									
S&S	55-0009	GUARD STATION #402	PMC	NA - NMSSUP II funded		1,160		2010	2010	Funded	10	NA	No	No	Funded by NMSSUP II
2010 S&S Total						1,160									
INST.	03-0043	ADMINISTRATION BUILDING	NA	NA - Institutional component of the NSSB Project		315,737		2010	2010	30,000	22,280	652	No	No	Institutionally Funded Historical Significance: Eligible, documentation in progress.
2010 INSTL Total						315,737									
2010 Total						572,980									

Attachment E-1
Facilities Disposition Plan
FY08 TYSP
NNSA - LANL

Funding Source (1)	Facility Identification Number (FIMS) (2)	Facility Name (3)	Mission Dependency Program (4)	Priority Score (5)	Priority Rank (6)	Gross Square Footage (gsf) (7)	FIMS Excess Indicator (8)	Excess Year (9)	Planned Disposition Year (10)	TEC to Disposition ($000s) (11)	FY2011 Baseline Deferred Maint Reduction (for FIRP Demolition Only) ($000s) (12)	Yearly S&M Costs ($000s) (13)	Candidate for Transfer (14)	Contaminated (Yes or No) (15)	Notes (16)
2011 Facility Disposition															
S&S	55-0043	ASSESSMENT BLDG	NA	NA - NMSSUP II funded		163		2011	2011	Funded		NA	No		Funded by NMSSUP II
S&S	55-0047	GENERATOR BLDG	NA			685		2011	2011				No		Funded by NMSSUP II
2010 S&S Total						848									
TBD	54-0022	TRANSPORTABLE	NA	88	1	1,680		2011	No later than 2011		59	5	Yes		
TBD	54-0034	TRANSPORTABLE	NA	88	1	1,705		2011	No later than 2011		33	5	Yes		
TBD	54-0037	TRAILER	NA	88	1	547		2011	No later than 2011		16	1	Yes		
TBD	54-0036	TRU-WASTE NDA/NDE	PMC	84	2	7,576		2011	No later than 2011		87	20	Yes		Needs National Register of Historic Places evaluation
TBD	54-0039	PCB WASTE STORAGE FACILITY	PMC	84	2	2,173		2011	No later than 2011		#N/A	6	Yes		
TBD	54-0051	TRAILER	NA	88	1	722		2011	No later than 2011		-	2	Yes		
TBD	54-0055	MODIFIED MORGAN SHED	EM	88	1	288		2011	No later than 2011		475	1	Yes		
TBD	54-0060	TRAILER	NA	88	1	672		2011	No later than 2011		4	2	Yes		
TBD	54-0064	TRANSPORTABLE	NA	84	2	1,680		2011	No later than 2011		19	5	Yes		
TBD	54-0063	PASSAGEWAY	NA	84	2	90		2011	No later than 2011		2	3	Yes		
TBD	54-0084	PASSAGEWAY	NA	84	2	82		2011	No later than 2011		1	0	Yes		
TBD	54-0117	TRAILER	NA	88	1	720		2011	No later than 2011		-	2	Yes		
TBD	54-0185	TRAILER	NA	88	1	617		2011	No later than 2011		-	2	Yes		
TBD	54-0210	TRAILER	NA	88	1	660		2011	No later than 2011		15	2	Yes		
TBD	54-0211	TRAILER	NA	66	1	624		2011	No later than 2011		-	2	Yes		
TBD	54-0221	TRAILER	NA	88	1	592		2011	No later than 2011		-	2	Yes		
TBD	54-0240	ROVER TRAILER	PMC	88	1	296		2011	No later than 2011		-	1	Yes		
TBD	54-0244	DOUBLEWIDE TRAILER	NA	88	1	1,422		2011	No later than 2011		6	4	Yes		
TBD	54-0245	DOUBLEWIDE TRAILER	NA	88	1	1,434		2011	No later than 2011		14	4	Yes		
TBD	54-0246	DOUBLEWIDE TRAILER	NA	66	1	1,420		2011	No later than 2011		20	4	Yes		
TBD	54-0247	DOUBLEWIDE TRAILER	NA	88	1	1,439		2011	No later than 2011		-	4	Yes		
TBD	54-0268	TRAILER	NA	88	1	673		2011	No later than 2011		3	2	Yes		
TBD	54-0290	TRAILER	NA	88	1	626		2011	No later than 2011		31	2	Yes		
TBD	54-0327	BACKFLOW PREVENTOR BUILDING	NA	84	2	397		2011	No later than 2011	Non-process contaminated portion of the TA-54 Closure Project with funding to be requested of NNSA/DOE: see Attachment A-5	-	1	Yes		
TBD	54-0413	TRAILER	NA	88	1	240		2011	No later than 2011		37	1	Yes		
TBD	54-0424	TRAILER	EM	88	1	125		2011	No later than 2011		#N/A	0	Yes		
TBD	54-0434	MODULAR OFFICE BLDG	NA	88	1	1,436		2011	No later than 2011		14	4	Yes		
TBD	54-0436	MODIFIED TRANSPORTAINER	PMC	88	1	320		2011	No later than 2011		#N/A	1	Yes		
TBD	54-0439	MODIFIED TRANSPORTAINER	PMC	88	1	240		2011	No later than 2011		-	1	Yes		
TBD	54-0455	TRAILER	EM	88	1	504		2011	No later than 2011		#N/A	1	Yes		
TBD	54-0464	MODIFIED TRANSPORTAINER	PMC	88	1	640		2011	No later than 2011		#N/A	2	Yes		
TBD	54-0473	STORAGE BLDG	PMC	84	2	1,835		2011	No later than 2011		#N/A	5	Yes		
TBD	54-0486	MODIFIED TRANSPORTAINER	PMC	88	1	384		2011	No later than 2011		#N/A	1	Yes		
TBD	54-0532	TRANSPORTABLE	EM	88	1	1,410		2011	No later than 2011		#N/A	4	Yes		
TBD	54-0533	TRANSPORTABLE	EM	88	1	3,550		2011	No later than 2011		#N/A	10	Yes		
TBD	54-1001	RADIATION EXPOSURE BLDG	NA	84	2	2,311		2011	No later than 2011		15	6	Yes		Needs National Register of Historic Places evaluation
TBD	54-1002	LIFT BLDG	NA	84	2	68		2011	No later than 2011		5	0	Yes		
TBD	54-1003	CONTROL BLDG	NA	84	2	197		2011	No later than 2011		24	1	Yes		Needs National Register of Historic Places evaluation
TBD	54-1004	STORAGE BLDG	NA	84	2	1,920		2011	No later than 2011		#N/A	5	Yes		
TBD	54-1005	TRAILER	NA	88	1	674		2011	No later than 2011		19	2	Yes		
TBD	54-1009	CHEMISTRY LAB	EM	84	2	2,324		2011	No later than 2011		55	6	Yes		
TBD	54-1014	TRAILER	EM	84	2	1,436		2011	No later than 2011		94	4	Yes		
TBD	54-1050	TRANSPORTABLE	NA	88	1	2,036		2011	No later than 2011		4	5	Yes		
TBD	54-1051	MODIFIED MODULAR SHED	NA	88	1	360		2011	No later than 2011		#N/A	1	Yes		
TBD	54-1052	MODIFIED MODULAR SHED	NA	88	1	360		2011	No later than 2011		#N/A	1	Yes		
2011 TA-54 TBD						50,433									
2011 Total						61,281									

Attachment E-1
Facilities Disposition Plan
FY08 TYSP
NNSA - LANL

Funding Source (1)	Facility Identification Number (FIMS) (2)	Facility Name (3)	Mission Dependency Program (4)	Priority Score (5)	Priority Rank (6)	Gross Square Footage (gsf) (7)	FIMS Excess Indicator (8)	Excess Year (9)	Planned Disposition Year (10)	TEC to Disposition ($000s) (11)	FY2003 (baseline) Deferred Maint Reduction (for FIRP Demolition Only) ($000s) (12)	Yearly S&M Costs ($000s) (13)	Candidate for Transfer (14)	Contaminated (Yes or No) (15)	Notes (16)
2012 Facility Disposition															
RTBF	50-001	LIQUID DISPOSAL PLANT	PMC	NA - Funded by RLWTF Line Item Project		7,000		2012	2012	TBD	#N/A	NA	No		Portion of building; Funded by the RLWTF Line Item Project. Needs National Register of Historic Places Evaluation.
2012 RTBF Total						7,000									
2012 Total						7,000									
* Grand total only includes FY2007 through FY2012 subtotals.															
The Following groupings address CMR TA-18, remaining TA-21 structures, and currently excessed structures without a projected D&D year or funding sponsor.															
CMR and related facilities															
RTBF	03-0029	CMR LABORATORY	PMC	NA - The Priority Score and Priority Rank are not included for CMR because the set of buildings are viewed as an integral group to be removed as one project.		566,849		TBD	CMR Complex D&D to be completed approximately 3 to 5 years after completion of the CMRR Project.	TBD	82,216	NA at this time			CMR Complex D&D to be completed approximately 3 to 5 years after completion of the CMRR Project. TA-3-29 Historical Significance: Eligible, documentation pending
RTBF	03-0503	GUARD STATION	PMC			349		TBD		TBD	20				
RTBF	03-0564	EQUIPMENT SHELTER	PMC			80		TBD		TBD	-				
RTBF	03-0586	MECHANICAL BLDG	PMC			336		TBD		TBD	26				
RTBF	03-1198	SWITCHGEAR (CMR)	NA			-		TBD		TBD	#N/A				
RTBF	03-0154	HOT WASTE PUMP HOUSE	PMC			400		TBD		TBD	-				
RTBF	03-1810	GUARD STATION	PMC			288		TBD		TBD	22				
RTBF	03-1614	GUARD STATION	PMC			64		TBD		TBD	6				
RTBF	03-1615	GUARD STATION	PMC			64		TBD		TBD	8				
RTBF	03-2206	STORAGE BUILDING	PMC			3,028		TBD		TBD	-				
						571,458			CMR (TBD) Total						
TA-18 Facilities															
TBD	18-0005	GENERAL STORAGE	NA	84	1	123	Yes	1995	TBD	TBD	#N/A	0	TBD	TBD	Historical Significance: Eligible, documentation pending
TBD	18-0028	WAREHOUSE	NA	84	1	4,782		TBD	TBD	TBD	26	13	TBD	TBD	Needs National Register of Historic Places evaluation.
TBD	18-0030	MAIN BLDG	NA	84	1	23,137		TBD	TBD	TBD	1,640	62	TBD	TBD	
TBD	18-0031	UTILITY BLDG	NA	84	1	2,093		TBD	TBD	TBD	542	6	TBD	TBD	
TBD	18-0032	CRITICAL ASSEMBLY BLDG	NA	84	4	3,286		TBD	TBD	TBD	607	9	TBD	TBD	
TBD	18-0037	GUARD STATION	NA	84	1	189		TBD	TBD	TBD	69	1	TBD	TBD	
TBD	18-0116	CRITICAL ASSEMBLY BLDG	NA	52	7	5,790		TBD	TBD	TBD	943	16	TBD	TBD	
TBD	18-0119	STORAGE BLDG	NA	84	1	1,242		TBD	TBD	TBD	51	3	TBD	TBD	
TBD	18-0122	STORAGE BLDG	NA	84	1	1,372		TBD	TBD	TBD	35	4	TBD	TBD	
TBD	18-0127	PULSED ACCELERATOR BLD	NA	56	6	9,537		TBD	TBD	TBD	344	26	TBD	TBD	
TBD	18-0128	ASSEMBLY COVER BLDG	NA	84	1	120		TBD	TBD	TBD	1	0	TBD	TBD	
TBD	18-0129	REACTOR SUB-ASSY BLDG	NA	76	3	6,570		TBD	TBD	TBD	336	18	TBD	TBD	
TBD	18-0138	WAREHOUSE	NA	84	1	1,344		TBD	TBD	TBD	35	4	TBD	TBD	
TBD	18-0141	ULTRA-SONIC CLEANING BLD	NA	84	1	963		TBD	TBD	TBD	89	3	TBD	TBD	
TBD	18-0147	OFFICE BLDG	NA	84	1	1,298		TBD	TBD	TBD	60	4	TBD	TBD	
TBD	18-0168	SHEBA CRITICAL BLDG	NA	56	6	400		TBD	TBD	TBD	14	1	TBD	TBD	Needs National Register of Historic Places evaluation.
TBD	18-0184	TRAILER	NA	80		248		TBD	TBD	TBD	-	1	TBD	TBD	
TBD	18-0186	OTHER SERVICE BUILDINGS	NA	84	1	38	Yes	1995	TBD	TBD	3	0	TBD	TBD	Needs National Register of Historic Places evaluation.
TBD	18-0187	GUARD TOWER	NA	84	1	38		TBD	TBD	TBD	3	0	TBD	TBD	
TBD	18-0188	GUARD TOWER	NA	84	1	36	Yes	1995	TBD	TBD	3	0	TBD	TBD	
TBD	18-0189	SECUR ENHANC ASSESSM	NA	78	3	912		TBD	TBD	TBD	38	2	TBD	TBD	
TBD	18-0190	GUARD STATION	NA	84	1	523		TBD	TBD	TBD	71	1	TBD	TBD	
TBD	18-0227	ACCELERATOR DEV LAB	NA	52	7	2,838		TBD	TBD	TBD	40	8	TBD	TBD	Needs National Register of Historic Places evaluation.
TBD	18-0256	BUTLER BLDG	NA	52	7	920		TBD	TBD	TBD	-	2	TBD	TBD	
TBD	18-0257	TRAILER	NA	60	5	1,440		TBD	TBD	TBD	19	4	TBD	TBD	
TBD	18-0258	TRAILER	NA	80	2	1,440		TBD	TBD	TBD	87	4	TBD	TBD	
TBD	18-0270	GUARD STATION	NA	76	3	42		TBD	TBD	TBD	1	0	TBD	TBD	
TBD	18-0288	TRAILER	NA	60	5	840		TBD	TBD	TBD	20	2	TBD	TBD	
TBD	18-0297	STORAGE BLDG	NA	52	7	874		TBD	TBD	TBD	-	2	TBD	TBD	
TBD	18-0313	TRAILER	NA	58	6	156		TBD	TBD	TBD	#N/A	0	TBD	TBD	
TBD	18-0314	TRAILER	NA	56	6	70		TBD	TBD	TBD	#N/A	0	TBD	TBD	
TBD	18-0315	TRAILER	NA	56	6	70		TBD	TBD	TBD	#N/A	0	TBD	TBD	
						72,707			TA18 (TBD) Total						

Attachment E-1
Facilities Disposition Plan
FY08 TYSP
NNSA - LANL

Funding Source (1)	Facility Identification Number (FIMS) (2)	Facility Name (3)	Mission Dependency Program (4)	Priority Score (5)	Priority Rank (6)	Gross Square Footage (gsf) (7)	FIMS Excess Indicator (8)	Excess Year (9)	Planned Disposition Year (10)	TEC to Disposition ($000s) (11)	FY2007 (baseline) Deferred Maint Reduction (for FIRP Demolition Only) ($000s) (12)	Yearly S&M Costs ($000s) (13)	Candidate for Transfer (14)	Contaminated (Yes or No) (15)	Notes (16)
								TA-21 Facilities							
TBD	21-0014	ECO Archive	NA	Included as a group for the non-process contaminated facility portion of the TA-21 Closure Project with funding to be requested of NNSA/DOE: see Attachment A-5		2,956		TBD	TBD	TBD	221		Yes	Yes	Historical Significance: Not eligible.
TBD	21-0031	ELECTRONIC/CABLE FAB	NA			9,164		TBD	TBD	TBD	483		Yes	Yes	Historical Significance: Eligible, documentation in progress.
TBD	21-0080	PRV STATION (WATER)	NA			35	Yes	1998	TBD	TBD	-	4	Yes	Yes	
TBD	21-0212	CALCIUM BLDG	NA			455		TBD	TBD	TBD	56		Yes	Yes	Historical Significance: Eligible, documentation in progress.
TBD	21-0355	STORAGE TRAILER	NA			500	Yes	1999	TBD	TBD	-	15	Yes	Yes	
TBD	21-0357	STEAM PLANT	NA			5,682		TBD	TBD	TBD	183		Yes	Yes	
						18,812			TA21 (TBD) Total						
							Currently excessed without a projected D&D year or funding sponsor								
TBD	02-0016	ION BEAM FACILITY	NA	84	1	56,259	Yes	1999	2022	TBD	1,043	152	Yes	Yes	D&D Planning Complete Historical Significance: Eligible, documentation pending
TBD	11-0002	CONTROL BUILDING	DSW	84	1	831	Yes	2002	2022	TBD	10	2			Historical Significance: Eligible, documentation pending
TBD	14-0005	STORAGE BUILDING	NA	84	1	375	Yes	1994	2022	TBD	#N/A	1			
TBD	14-0038	STORAGE SHACK	NA	88	1	48	Yes	1994	2022	TBD	1	0			
TBD	15-0009	FIRING BUNKER	NA	84	1	297	Yes	1992	2022	TBD	50	1	Yes	Yes	Historical Significance: Eligible, documentation pending
TBD	15-0027	CONTROL BLDG	NA	84	1	560	Yes	1992	2022	TBD	#N/A	2	Yes	Yes	Historical Significance: Eligible, documentation pending
TBD	15-0044	CONTROL BUILDING	NA	84	1	508	Yes	2000	2022	TBD	#N/A	1	Yes	Yes	Historical Significance: Not eligible
TBD	22-0025	PROCESS BLDG	NA	84	1	227	Yes	1997	2022	TBD	36	1	No	No	Historical Significance: Eligible, documentation pending
TBD	33-0026	STORAGE BLDG	OFO	84	1	173	Yes	1992	2022	TBD	#N/A	0	No	No	Historical Significance: Eligible, documentation complete
TBD	33-0129	TEST CELL	OFO	84	1	202	Yes	1993	2022	TBD	11	1	No	No	Needs National Register of Historic Places evaluation.
TBD	39-0007	FIRING CHAMBER #2	NA	84	1	490	Yes	1994	2022	TBD	3	1	No	No	Historical Significance: Not eligible
TBD	39-0008	FIRING CHAMBER #3	NA	84	1	562	Yes	1994	2022	TBD	4	2	No	No	Historical Significance: Not eligible
TBD	55-0048	GUARD TOWER STA #407	NA	84	1	36	Yes	1994	2022	TBD	-	0	No	No	Needs National Register of Historic Places evaluation.
TBD	55-0125	GUARD TOWER STA #406	NA	84	1	38	Yes	1984	2022	TBD	-	0	No	No	
TBD	55-0162	GUARD TOWER STA #420	NA	84	1	49	Yes	1994	2022	TBD	-	0	No	No	
						60,673		Currently Excessed Structures in Other TAs (Funding TBD) Total							
							The following structures are historical and are not planned for demolition.								
N/A	08-0001	GUN SITE LABORATORY &	NA	NA	NA	3,330	Yes	1992	Historical Structure	NA	135	6	NO		
N/A	08-0002	GUN SITE SHOP & STORAGE BUILDING	NA	NA	NA	408	Yes	1992	Historical Structure	NA	33	6	NO		Historical - NOT TO BE DEMOLISHED; DOE Manhattan Project Signature Facility, Potential Manhattan Project National Historic Landmark.
N/A	08-0003	GUN SITE LABORATORY BUILDING	NA	NA	NA	602	Yes	1992	Historical Structure	NA	18	6	NO		
N/A	16-0058	MAGAZINE	NA	NA	NA	299	Yes	1992	Historical Structure	NA	#N/A	8	NO		
N/A	16-0516	V-SITE HIGH BAY BUILDING	DSW	NA	NA	660		2110	Historical Structure	NA	171	8	NO	Yes	Historical - NOT TO BE DEMOLISHED
N/A	16-0517	V-SITE EQUIPMENT BUILDING	DSW	NA	NA	318	Yes	1999	Historical Structure	NA	27	8	NO	Yes	Historical - NOT TO BE DEMOLISHED DOE Manhattan Project Signature Facility, Potential Manhattan Project National Historic Landmark.
N/A	16-1451	BACK GATE GUARD STATION	NA	NA	NA	187	Yes	1999	Historical Strucure	NA	53	3	NO		Historical - NOT TO BE DEMOLISHED Potential DOE Cold War Signature Facility
N/A	18-0001	SLOTIN ACCIDENT BUILDING	NA	NA	NA	1,051		2110	Historical Structure	NA	558		NO	TBD	Historical - NOT TO BE DEMOLISHED; Potential Manhattan Project National Historic Landmark; historical documentation pending.
N/A	18-0002	BATTLESHIP BUILDING/ CONTROL BUNKER	NA	NA	NA	123	Yes	1995	Historical Structure	NA	#N/A		NO	TBD	Historical - NOT TO BE DEMOLISHED; historical documentation pending.
N/A	18-0023	CASA #1	NA	NA	NA	2,881		2110	Historical Structure	NA	499		NO	TBD	Historical - NOT TO BE DEMOLISHED; needs NRPH evaluation.
N/A	18-0026	HILLSIDE VAULT	NA	NA	NA	287		2110	Historical Strucure	NA	45		NO	TBD	Historical - NOT TO BE DEMOLISHED; needs NRPH evaluation.
N/A	18-0029	POND CABIN	NA	NA	NA	384		2110	Historical Structure	NA	4		NO		Historical - NOT TO BE DEMOLISHED; On the New Mexico State Register of Historic Places
N/A	22-0001	FAT MAN ASSEMBLY BUILDING	NA	NA	NA	7,695	Yes	1992	Historical Structure	NA	1,372	20	NO	No	Historical - NOT TO BE DEMOLISHED; Potential Manhattan Project National Historic Landmark

Attachment E-1
Facilities Disposition Plan
FY08 TYSP
NNSA - LANL

Funding Source (1)	Facility Identification Number (FIMS) (2)	Facility Name (3)	Mission Dependency Program (4)	Priority Score (5)	Priority Rank (6)	Gross Square Footage (gsf) (7)	FIMS Excess Indicator (8)	Excess Year (9)	Planned Disposition Year (10)	TEC to Disposition ($000) (11)	FY 2008 (Based on) Deferred Maint Reduction due FIRP Demolition Only ($000) (12)	Yearly S&M Costs ($000) (13)	Candidate for Transfer (14)	Contaminated (Yes or No) (15)	Notes (16)
N/A	41-0002	GUARD STATION	NA	NA	NA	781		2110	Historical Structure	NA	23		NO		Historical - NOT TO BE DEMOLISHED;
N/A	41-0003	BLOWER HOUSE	NA	NA	NA	24		2110	Historical Structure	NA	0		NO		
N/A	41-0008	COVERED PASSAGEWAY	NA	NA	NA	938		2110	Historical Structure	NA	#N/A		NO		Historical - NOT TO BE DEMOLISHED Potential DOE Cold War Signature Facility
N/A	60-0019	RACK TOWER	NA	NA	NA	17,318	Yes	1998	Historical Structure	NA	564	20	NO		
N/A	08-0037	CONCRETE BOWL	NA	NA	NA			2110	Historical Structure	NA	#N/A		NO		REINFORCED CONCRETE BOWL 200' DIAMETER
N/A	12-0004	HEXAGONAL FIRING PIT	NA	NA	NA			2110	Historical Structure	NA	#N/A		NO		HEXAGONAL SHAPED PIT, 8' SIDES BY 12' DEEP AND LINED INSIDE AND TOP WITH 3/4" STEEL PLATE. Historical - NOT TO BE DEMOLISHED;
N/A	16-0410	ASSEMBLY BUILDING	DSW	NA	NA	10,187		2110	Historical Structure	NA	811		NO		Historical - NOT TO BE DEMOLISHED. Potential DOE Cold War Signature Facility
N/A	16-0411	ASSEMBLY BUILDING	DSW	NA	NA	2,342		2110	Historical Structure	NA	105		NO		
N/A	16-0413	REST HOUSE	DSW	NA	NA	1,247		2110	Historical Structure	NA	61		NO		
N/A	16-0414	STORAGE BUILDING FOR TA-16-410 & 411 ASSEMBLY BUILDINGS	DSW	NA	NA	8,488		2110	Historical Structure	NA	84		NO		
N/A	16-0415	REST HOUSE	DSW	NA	NA	4,559		2110	Historical Structure	NA	48		NO		Historical - NOT TO BE DEMOLISHED Needs NRHP Evaluation.
N/A	33-0027	GUARD STATION	OFO	NA	NA	186		2110	Historical Structure	NA	20		NO		
N/A	33-0028	WATER TOWER	NA	NA	NA	-		2110	Historical Structure	NA	#N/A		NO		Historical - NOT TO BE DEMOLISHED 50,000 GAL CAPACITY. FROM TOP OF FOOTINGS: 61' TO BOTTOM BOWL. 89' TO TOP OF BOWL CYL SECTION, 68' 6 3/4" TO TOP OF CYLINDER SECTION, 38' 8 1/2" DIAMETER.
N/A	41-0001	UNDERGROUND VAULT	NWR	NA	NA	7,267		2110	Historical Structure	NA	#N/A		NO		Historical - NOT TO BE DEMOLISHED, Potential DOE Cold War Signature Facility
N/A	41-0004	ICE HOUSE	NA	NA	NA	21,805		2110	Historical Structure	NA	647		NO		Historical - NOT TO BE DEMOLISHED
N/A	60-0017	ASSEMBLY BUILDING	NA	NA	NA	18,213		2110	Historical Structure	NA	401		NO		Historical - NOT TO BE DEMOLISHED, Potential DOE Cold War Signature Facility
N/A	73-0015	FRONT GATE GUARD TOWER	NA	NA	NA	592		2110	Historical Structure	NA	13		NO		Historical -NOT TO BE DEMOLISHED, Potential DOE Cold War Signature Facility
Historical Structures Total						112,172									

Attachment E-2 - New Construction Footprint Added

The DOE implementing policy requires new construction projects that add space be offset with an equivalent amount of space that has been removed from the site. Attachment E-2 captures the GSF of FYNSP approved construction along with the year of beneficial occupancy through the 10 year planning horizon.

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Attachment E-2
New Construction Footprint Added
FY08 TYSP
NNSA - LANL

Funding Source (1)	Project Number (2)	Facility Name (3)	Mission Dependency Program (4)	Funding Type (LI, GPP, IGPP) (5)	Project Area (GSF) (6)	Year of Beneficial Occupancy (7)	Notes (8)
RTBF	LANL-03-068	Pajarito Road Access Control Stations	NA	GPP	772	FY04	
FIRP	LANL-R-03-09	FWO Office Building	NA	GPP	19,242	FY04	
Other		Office Building (TA-55-0313)	NA	GPP	23,860	FY04	
RTBF	LANL-04-205	Office Building (TA-3-1437)	NA	GPP	3,500	FY04	
FY04 New Construction Total GSF					47,374		
RTBF	LANL-04-205	Office Building (TA-3-1437)	NA	GPP	397	FY04	space not previously noted
CGRP		Records Center (TA-63-121)	NA	GPP	8,220	FY05	
FY05 New Construction Total GSF					8,617		
FIRP	LANL-R-03-07	Hydrotest Design Facility (TA-22-120)	DSW	GPP	14,327	FY06	
S&S	LANL-04-168	TA-64 PTLA Building (TA-64-67& 68)	NA	GPP	7,046	FY06	
EM		Centralized Characterization Project (TA-54-532 & 533)	EM	GPP	4,960	FY06	
OS	LANL-02-010	Center for Integrated Nanotechnology -CINT (TA-3-1420)	SC	LI	34,945	FY06	
RTBF	LANL-03-D-102	National Security Sciences Building (TA-3-1400)	NA	LI	296,522	FY06	
IGPP	LANL-05-321	Relocate Radio Shop (TA-60-0245)	NA	IGPP	7,400	FY06	
IGPP	LANL-05-422	Relocate Roads & Grounds (TA-60-250)	NA	IGPP	6,669	FY06	
FIRP	LANL-05-D-602	Control House (TA-71-0002)	NA	LI	953	FY06	
FY06 New Construction Total GSF					372,822		
FIRP	LANL-R-03-02	Beryllium Tech Facility - Cartridge Filter House Install	PMC	GPP	3,100	FY07	
S&S	LANL-05-017	Security Perimeter Project (Multiple structures)	NA	LI	3,384	FY07	
FY07 New Construction Total GSF					6,484		
RTBF	LANL-03-D-102	Los Alamos Site Office	NA	LI	24,818	FY08	Part of NSSB
S&S	LANL-08-D-701	West Side Entry Control Center (TA-55)	NA	LI	1,500	FY08	NMSSUP II
CGRP	LANL-01-D703	TA-50 Pump House Influenent Storatge Facility (TA-50-250)	PMC	LI	20,100	FY08	Waste Mitigation/ Risk Management Project
FY08 New Construction Total GSF					46,418		
IGPP	LANL-08-429	Computing and Communications Operations Buildinc	NA	IGPP	8,000	FY09	
IGPP	LANL-08-434	Construct Wellness Center Replacement	NA	IGPP	10,000	FY09	
S&S	LANL-08-D-701	Utility Building (TA-55)	PMC	LI	2,000	FY09	NMSSUP II
RTBF	LANL-04-D-125	CMR Replacement Project (RLUOB)	PMC	LI	220,000	FY09	
FY09 New Construction Total GSF					240,000		
IGPP	LANL-9-435	TA-69 EOC Office	NA	IGPP	10,000	FY10	
S&S	LANL-08-D-701	East Side Entry Control Center (TA-55)	PMC	LI	18,000	FY10	NMSSUP II
S&S	LANL-08-D-701	Underground Access Tunnel (TA-55)	PMC	LI	2,100	FY10	NMSSUP II
FY10 New Construction Total GSF					[illegible]1,100		
FIRP	LANL-R-06-13	Replace High Voltage Electrical Panels TA-48-1	NA	GPP	100	FY11	
RTBF	LANL-08-D-803	TA-55 Radiography Facility	PMC	LI	5,000	FY11	
RTBF	LANL-07-D-220	Radioactive Liquid Waste Treatment Facility Upgrade	PMC	LI	16,000	FY11	
FY11 New Construction Total GSF					21,100		
RTBF	LANL-09-D-XXX	TA-55 TRU Waste Treatment Facility	PMC	LI	25,000	FY12	

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Attachment E-2
New Construction Footprint Added
FY08 TYSP
NNSA - LANL

Funding Source (1)	Project Number (2)	Facility Name (3)	Mission Dependency Program (4)	Funding Type (LI, GPP, IGPP) (5)	Project Area (GSF) (6)	Year of Beneficial Occupancy (7)	Notes (8)
RTBF	LANL-03-068	Pajarito Road Access Control Stations	NA	GPP	772	FY04	
FIRP	LANL-R-03-09	FWO Office Building	NA	GPP	19,242	FY04	
Other		Office Building (TA-55-0313)	NA	GPP	23,860	FY04	
RTBF	LANL-04-205	Office Building (TA-3-1437)	NA	GPP	3,500	FY04	
FY04 New Construction Total GSF					**47,374**		
RTBF	LANL-04-205	Office Building (TA-3-1437)	NA	GPP	397	FY04	space not previously noted
CGRP		Records Center (TA-63-121)	NA	GPP	8,220	FY05	
FY05 New Construction Total GSF					**8,617**		
FIRP	LANL-R-03-07	Hydrotest Design Facility (TA-22-120)	DSW	GPP	14,327	FY06	
S&S	LANL-04-168	TA-64 PTLA Building (TA-64-67& 68)	NA	GPP	7,046	FY06	
EM		Centralized Characterization Project (TA-54-532 & 533)	EM	GPP	4,960	FY06	
OS	LANL-02-010	Center for Integrated Nanotechnology -CINT (TA-3-1420)	SC	LI	34,945	FY06	
RTBF	LANL-03-D-102	National Security Sciences Building (TA-3-1400)	NA	LI	296,522	FY06	
IGPP	LANL-05-321	Relocate Radio Shop (TA-60-0245)	NA	IGPP	7,400	FY06	
IGPP	LANL-05-422	Relocate Roads & Grounds (TA-60-250)	NA	IGPP	6,669	FY06	
FIRP	LANL-05-D-602	Control House (TA-71-0002)	NA	LI	953	FY06	
FY06 New Construction Total GSF					**372,822**		
FIRP	LANL-R-03-02	Beryllium Tech Facility - Cartridge Filter House Install	PMC	GPP	3,100	FY07	
S&S	LANL-05-017	Security Perimeter Project (Multiple structures)	NA	LI	3,384	FY07	
FY07 New Construction Total GSF					**6,484**		
RTBF	LANL-03-D-102	Los Alamos Site Office	NA	LI	24,818	FY08	Part of NSSB
S&S	LANL-08-D-701	West Side Entry Control Center (TA-55)	NA	LI	1,500	FY08	NMSSUP II
CGRP	LANL-01-D703	TA-50 Pump House Influenent Storatge Facility (TA-50-250)	PMC	LI	20,100	FY08	Waste Mitigation/ Risk Management Project
FY08 New Construction Total GSF					**46,418**		
IGPP	LANL-08-429	Computing and Communications Operations Building	NA	IGPP	8,000	FY09	
IGPP	LANL-08-434	Construct Wellness Center Replacement	NA	IGPP	10,000	FY09	
S&S	LANL-08-D-701	Utility Building (TA-55)	PMC	LI	2,000	FY09	NMSSUP II
RTBF	LANL-04-D-125	CMR Replacement Project (RLUOB)	PMC	LI	220,000	FY09	
FY09 New Construction Total GSF					**240,000**		
IGPP	LANL-9-435	TA-69 EOC Office	NA	IGPP	10,000	FY10	
S&S	LANL-08-D-701	East Side Entry Control Center (TA-55)	PMC	LI	16,000	FY10	NMSSUP II
S&S	LANL-08-D-701	Underground Access Tunnel (TA-55)	PMC	LI	2,100	FY10	NMSSUP II
FY10 New Construction Total GSF					**28,100**		
FIRP	LANL-R-06-13	Replace High Voltage Electrical Panels TA-48-1	NA	GPP	100	FY11	
RTBF	LANL-08-D-803	TA-55 Radiography Facility	PMC	LI	5,000	FY11	
RTBF	LANL-07-D-220	Radioactive Liquid Waste Treatment Facility Upgrade	PMC	LI	16,000	FY11	
FY11 New Construction Total GSF					**21,100**		
RTBF	LANL-09-D-XXX	TA-55 TRU Waste Treatment Facility	PMC	LI	25,000	FY12	

Attachment E-2
New Construction Footprint Added
FY08 TYSP
NNSA - LANL

Funding Source (1)	Project Number	Facility Name (2)	Mission Dependency Program (3)	Funding Type (LI, GPP, IGPP) (5)	Project Area (GSF) (4)	Year of Beneficial Occupancy	Notes (6)
FY12 New Construction Total GSF							
RTBF	LANL-04-D-125	CMR Replacement Project (Nuclear Facility)	PMC	LI	287,000	FY14	
LANL-07-001	LANL-07-001	LANSCE Refurbishment	DSW	LI	20,000	FY14	
FY14 New Construction Total GSF					307,000		
FY15 New Construction Total GSF					0		

Attachment E-3 - Grandfathered Footprint Added

This spreadsheet identifies projects that meet the provision of approval for start of construction provided prior to FY03. By definition, this Attachment is unaffected by budget changes in programs.

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Attachment E-3
GRANDFATHERED Footprint Added
FY08 TYSP
NNSA - LANL

Funding Source (1)	Project Number (2)	Facility Name (3)	Mission Dependency Program (4)	Funding Type (LI, GPP, IGPP) (5)	Project Area (GSF) (6)	Year of Beneficial Occupancy	Notes (8)
Other	LANL-02-065	BSL (03-1076)	NA	GPP	3,233	2003	Contract awarded 9/26/02
RTBF		Water Treatment Facility (03-1398)	NA	GPP	4,703	2003	Contract awarded 7/2/02
FIRP	LANL-02-078	D Division Office Building (03-1405)	NA	GPP	25,635	2003	Contract awarded 6/2/02
FIRP	LANL-02-077	S-3 Office building (03-1409)	NA	GPP	21,266	2003	Construction started in July 2002
FIRP	LANL-02-075	Occupational Medical Facility (03-1411)	NA	GPP	20,600	2003	Contract awarded June 2002
Other	LANL-00-008	Nonproliferation and International Security Center (03-2322)	NVP	LI	178,638	2003	Construction started in March 2001
DP		DARHT Vessel Preparation Facility (15-0534)	DSW	LI	7,964	2003	Part of DARHT; CD3 granted in 1998
DP		Storage Building (15-0603)	SCI	LI	615	2003	Part of DARHT; CD3 granted in 1998
DP		Storage Building (15-0604)	SCI	LI	613	2003	
CGRP		Shop Building (15-0563)	SCI	GPP	3,655	2003	Contract awarded 12/3/01
CGRP		Calibration Building (15-0564)	SCI	GPP	3,200	2003	Contract awarded 12/3/01
CGRP	LANL-01-030	Office Building (16-0933)	DSW	LI	22,787	2003	Portion of Line Item; Construction complete in Nov 2002
CGRP		Prep Building (36-0078)	SCI	GPP	1,527	2003	HE Preparation; CGRP

Funding Source (1)	Project Number (2)	Facility Name (3)	Mission Dependency Program (4)	Funding Type (LI, GPP, IGPP) (5)	Project Area (GSF) (6)	Year of Beneficial Occupancy	Notes (8)
Other	LANL-99-006	Isotope Production Facility (53-0984)	NA	LI	5,632	2003	Construction started in Feb. 2000
CGRP		Storage Building (64-0064)	NA	GPP	6,168	2003	Contract awarded Nov. 16, 2001
CGRP	LANL-01-029	Emergency Operation Center (69-0033)	NA	LI	40,906	2003	Construction started in January 2002
CGRP		Storage Building (69-0051)	NA	LI	912	2003	Part of EOC Line Item
FY03 Subtotal					348,054		
FIRP	LANL-02-076	MST Office Building (03-1415)	NA	GPP	20,646	2004	Contract signed Sept 2002
RTBF	LANL-02-093	Weapons Plant Support Facility (16-0969)	DSW	GPP	22,156	2004	Contract awarded 9/27/02
FY04 Subtotal					42,802		

Attachment E-4 - Footprint Tracking Summaries

This attachment tracks the extent to which the Laboratory can comply with DOE directives to offset new construction projects footprint by the transfer, sale, or demolition of excess buildings and facilities of equal size. Attachment E-4a applies to NNSA facilities only while Attachment E-4b applies to all facilities sitewide. The River Graph Chart with E-4a shows the growth and drop of total site GSF over time. The River Graph Chart with E-4b shows the growth and drop of total NNSA-LANL site GSF over time.

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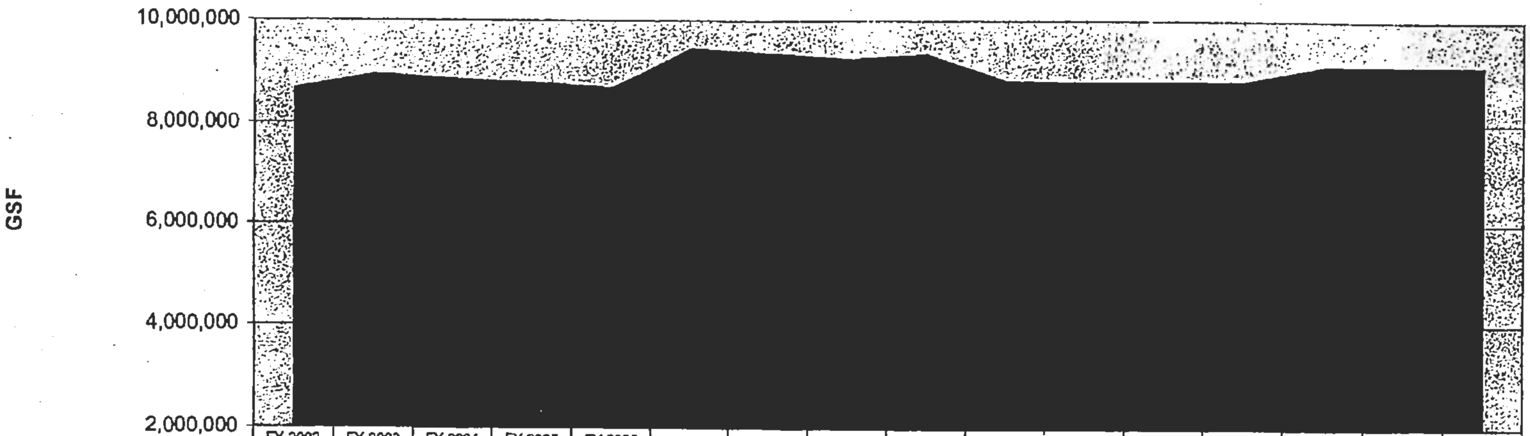
Attachment E-4(a)
FOOTPRINT TRACKING SUMMARY SPREADSHEET (SAMPLE DATA)
FY08 TYSP
NNSA - LANL Site Footprint Tracking Summary - NNSA

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) (8a)	NNSA Site Total Footprint (gsf) (9)	NNSA Leased Space (10)
[illegible]	8,675,489	-68,161	0	8,607,328	-68,161	0	0	0	8,607,328	
[illegible]	8,607,328	-136,416	0	8,470,912	-204,577	0	348,054	348,054	8,818,966	
[illegible]	8,470,912	-109,586	47,374	8,408,700	-266,789	0	42,802	390,856	8,799,556	
[illegible]	8,408,700	-115,896	8,617	8,301,421	-374,068	0	0	390,856	8,692,277	
[illegible]	8,301,421	-78,628	337,877	8,560,670	-114,819	0	0	390,856	8,951,526	
[illegible]	8,560,670	-94,621	6,484	8,472,533	-202,956	0	0	390,856	8,863,389	504,826
[illegible]	8,472,533	-145,355	46,418	8,373,598	-301,893	0	0	390,856	8,764,452	504,826
[illegible]	8,373,596	-152,943	240,000	8,460,653	-214,836	0	0	390,856	8,851,509	504,826
[illegible]	8,460,653	-538,035	28,100	7,950,718	-724,771	0	0	390,856	8,341,574	504,826
[illegible]	7,950,718	-51,791	21,100	7,920,027	-755,462	0	0	390,856	8,310,883	504,826
[illegible]	7,920,027	-7,000	25,000	7,938,027	-737,462	0	0	390,856	8,328,883	504,826
[illegible]	7,938,027	0	0	7,938,027	-737,462	0	0	390,856	8,328,883	504,826
[illegible]	7,938,027	0	307,000	8,245,027	-430,462	0	0	390,856	8,635,883	504,826
[illegible]	8,245,027	0	0	8,245,027	-430,462	0	0	390,856	8,635,883	504,826
[illegible]	8,245,027	0	0	8,245,027	-430,462	0	0	390,856	8,635,883	504,826
[illegible]	8,245,027	0	0	8,245,027	-430,462	0	0	390,856	8,635,883	504,826

Differences from the Sitewide Footprint Summary Spreadsheet:
1. Addition of the Center for Integrated Nanotechnology (34,945 sq. ft.) in 2006, funded by Office of Science
2. Elimination of the TSTA facility (18,783 sq. ft.) transferred by Office of Science with D&D, funded by EM in 2010.

ATTACHMENT E-4(a)
FY08 TYSP
NNSA - LANL Site Space Tracking Summary - NNSA



	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	FY 2014	FY 2015	FY 2016	FY 2017
NNSA Leased Space (10)						504,826	504,826	504,826	504,826	504,826	504,826	504,828	504,828	504,828	504,826	504,826
Cumulative "Grandfathered" Footprint Added (gsf) (8a)	0	348,054	390,858	390,856	390,856	390,856	390,856	390,856	390,856	390,858	390,856	390,858	390,858	390,858	390,856	390,856
Beginning Site Footprint (gsf) (2)	8,675,489	8,607,328	8,470,912	8,408,700	8,301,421	8,580,670	8,472,533	8,373,596	8,460,653	7,950,718	7,920,027	7,938,027	7,938,027	8,245,027	8,245,027	6,245,027

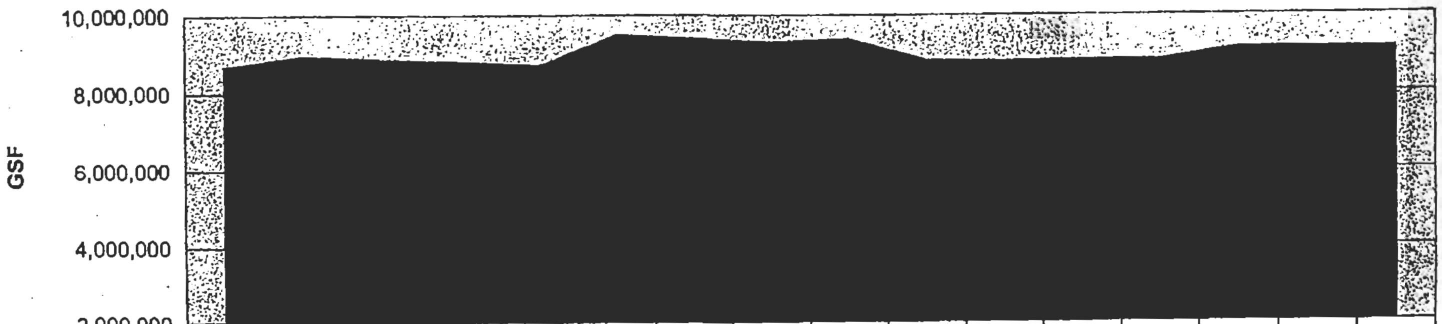
Attachment E-4 (b)
FOOTPRINT SUMMARY SPREADSHEET (SAMPLE DATA)
FY08 TYSP
NNSA - LANL Footprint Tracking Summary - SITE WIDE (Multi-Program)

Fiscal Year (1)	Beginning Site Footprint (gsf) (2)	Excess Facilities Footprint Elimination (gsf) (3)	New Construction Footprint Added (gsf) (4)	Site Footprint Reduction by FY (5)	Footprint "Banked" (gsf) (6)	Waiver/Transfer (gsf) (7)	"Grandfathered" Footprint Added (gsf) (8)	Cumulative Grandfathered Footprint Added (gsf) (8a)	Site Total Footprint (Multi-Program) (gsf) (9)	Leased Space (10)
[illegible]	8,675,489	-68,161	0	8,607,328	-68,161	0	0	0	8,607,328	
[illegible]	8,607,328	-136,416	0	8,470,912	-204,577	0	348,054	348,054	8,818,966	
[illegible]	8,470,912	-109,586	47,374	8,408,700	-266,789	0	42,802	390,856	8,799,556	
[illegible]	8,408,700	-115,896	8,617	8,301,421	-374,068	0	0	390,856	8,692,277	
[illegible]	8,301,421	-78,628	372,822	8,595,615	-79,874	0	0	390,856	8,986,471	
[illegible]	8,595,615	-94,621	6,484	8,507,478	-168,011	0	0	390,856	8,898,334	504,826
[illegible]	8,507,478	-145,355	46,418	8,408,541	-266,948	0	0	390,856	8,799,397	504,826
[illegible]	8,408,541	-152,943	240,000	8,495,598	-179,891	0	0	390,856	8,886,454	504,826
[illegible]	8,495,598	-572,980	28,100	7,950,718	-724,771	0	0	390,856	8,341,574	504,826
[illegible]	7,950,718	-51,281	21,100	7,920,537	-754,952	0	0	390,856	8,311,393	504,826
[illegible]	7,920,537	-7,000	25,000	7,938,537	-736,952	0	0	390,856	8,329,393	504,826
[illegible]	7,938,537	0	0	7,938,537	-736,952	0	0	390,856	8,329,393	504,826
[illegible]	7,938,537	0	307,000	8,245,537	-429,952	0	0	390,856	8,636,393	504,826
[illegible]	8,245,537	0	0	8,245,537	-429,952	0	0	390,856	8,636,393	504,826
[illegible]	8,245,537	0	0	8,245,537	-429,952	0	0	390,856	8,636,393	504,826
[illegible]	8,245,537	0	0	8,245,537	-429,952	0	0	390,856	8,636,393	504,826

Differences from the NNSA Footprint Summary Spreadsheet:
1. Addition of the Center for Integrated Nanotechnolgy (34,945 sq. ft.) in 2006, funded by Office of Science
2. Elimination of the TSTA facility (18,783 sq. ft.) transferred by Office of Science with D&D, funded by EM in 2010.

Los Alamos

ATTACHMENT E-4(b)
FY08 TYSP
NNSA - LANL Site Wide Footprint Tracking Summary - SITE WIDE (Multi-Program)



	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	FY 2014	FY 2015	FY 2016	FY 2017
Leased Space (10)						504,826	504,826	504,826	504,826	504,826	504,826	504,826	504,826	504,826	504,826	504,826
Cumulative Grandfathered Footprint Added (gsf) (8a)	0	348,054	390,856	390,856	390,856	390,856	390,856	390,856	390,856	390,856	390,856	390,856	390,856	390,856	390,856	390,856
Beginning Site Footprint (gsf) (2)	8,675,489	8,607,328	8,470,912	8,408,700	8,301,421	8,595,615	8,507,478	8,408,541	8,495,598	7,950,718	7,920,537	7,938,537	7,938,537	8,245,537	8,245,537	8,245,537

Attachment E-5 - Waiver/Transfer Log, Space Added or Eliminated

There are no waivers or transfers of space currently in effect for the Laboratory.

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Attachment E-5
FY08 TYSP
NNSA - LANL
Waiver/Transfer Log (Space Added or Eliminated)

Site or Program Donor (1)	Site or Program Receiver (2)	Waiver Banked (gsf) (3)	Transfer Banked (gsf) (4)	Request Submitted (Yes/No) (5)	Request Approved (Yes/No) (6)	Comments (7)
						No waivers or transfers to date involving the Los Alamos National Laboratory

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Attachment E-6 - Leased Space Profile

This attachment tracks the current profile of leased space for the Laboratory as a means of tracking growth or shrinkage in the amount of and application of leased space.

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Attachment F

Attachments F-1 and F-2 - Deferred Maintenance Baseline and Projected Deferred Maintenance Reduction Spreadsheet

The data reported in Attachment F-1 will be used to report the NNSA maintenance requirements baseline and assess actual and planned progress towards reducing DM. Attachment F-1 addresses the FY03 DM baseline as identified in the FY04 TYCSP and reflects reductions against this baseline. New growth in DM (i.e. DM not identified in the FY03 baseline as presented in the FY04 TYCSP or new DM that occurs because of funding shortfalls) is reported in Attachment F-2. A NNSA corporate roll-up of data reported in this spreadsheet will be used to trend and analyze progress towards the achievement of NNSA's Deferred Maintenance Reduction goals.

Attachments F-3 to F-5 - NNSA Deferred Maintenance Projections Charts

Attachments F-3 through F-7 illustrate progress in meeting each of the quantifiable NNSA Corporate Goals. These data will help demonstrate actualized achievement of the NNSA corporate goal for FY05 (stabilize DM) and planned progress toward the NNSA corporate goal for FY09 (reduce DM to within industry standards). FY03 is the baseline from which progress and results will be assessed.

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Attachment E-6
FY 2007 Leased Space Profile
FY08 TYSP
NNSA - LANL

# (1)	FIMS # (2)	Property Name (3)	Mission Dependency Program (4)	Mission Dependency (5)	# Occupants (6)	Gross Square Feet (7)	*Rental Rate per Rentable s.f. (8)	*Annual Cost (9)	Lease Type (10)	Lease Term - yrs. (11)	Exp. Month / Year (12)	Renewal Options (13)
1	00-0199	Canyon School	NA	NMD	82	34,651	12	398,112	Unserviced	5	31-Dec-06	Y
2	00-0480	Pajarito School	NA	NMD	172	37,026	13	463,566	Unserviced	5	31-Jan-09	N
3	00-0548	Shannon Bldg 1	NA	NMD	24	9,277	12	75,075	Unserviced	5	30-Jun-09	N
4	00-0549	Shannon Bldg 2	NA	NMD	NA	2,813	10	27,920	Unserviced	5	30-Jun-09	N
5	00-0726	Diversity Office	NA	NMD	47	7,785	17	48,841	Unserviced	5	31-Aug-09	N
6	00-0758	Museum Fabrication Shop	NA	NMD	NA	2,374	11	26,097	Full	5	31-Jan-07	N
7	00-0759	Office Bldg	NA	NMD	10	3,804	17	64,397	Unserviced	5	31-Oct-05	Y
8	00-0760	General Law Office	NA	NMD	56	21,366	16	287,982	Unserviced	5	19-Dec-06	Y
9	00-0762	Office Bldg	NA	NMD	17	4,998	15	72,706	Unserviced	5	31-May-08	N
10	00-0763	Housing Office	NA	NMD	2	621	16	9,023	Full	5	14-Nov-06	N
11	00-0764	557 Oppenheimer	NA	NMD	51	8,338	20	180,983	Full	5	28-Feb-06	Y
12	00-0767	Central Park Square	NA	NMD	23	7,067	21	142,914	Full	4	14-Nov-05	Y
13	00-0767-A	Central Park Square	NA	NMD	113	11,124	21	237,823	Full	4	14-Oct-05	Y
14	00-0769	Office Building	NA	NMD	77	12,196	19	255,436	Full	7	31-Mar-09	Y
15	00-0770	Office Building	NA	NMD	12	1,883	22	42,384	Unserviced	5	31-Oct-07	Y
16	00-0771	Office and Training Center	NA	NMD	NA	4,878	20	87,770	Full	5	31-Mar-08	Y
17	00-0772	Office Building	NA	NMD	0	1,193	15	18,240	Full	5	29-Feb-08	Y
18	00-0774	1175 Iris Street Apartments	NA	NMD	NA	14,350	17	245,700	Full	3	16-Mar-06	Y
19	00-0775	1305 Iris Street Apartments	NA	NMD	NA	9,840	17	168,480	Full	3	16-Mar-06	Y
20	00-0776	3590 Gold Street Apartments	NA	NMD	NA	1,300	12	16,200	Full	2	31-Dec-05	Y
21	00-0777	3620 Gold Street Apartments	NA	NMD	NA	1,300	12	16,200	Full	2	31-Dec-05	Y
22	00-0778	3806 Gold Street Apartments	NA	NMD	NA	3,900	12	48,600	Full	2	31-Dec-05	Y
23	00-0779	3810 Gold Street Apartments	NA	NMD	NA	1,300	12	16,200	Full	2	31-Dec-05	Y
24	00-0780	3785 Gold Street Apartments	NA	NMD	NA	1,300	13	16,440	Full	2	31-Dec-05	Y
25	00-0781	3789 Gold Street Apartments	NA	NMD	NA	650	13	8,220	Full	2	31-Dec-05	Y
26	00-0782	3793 Gold Street Apartments	NA	NMD	NA	650	13	8,220	Full	2	31-Dec-05	Y
27	00-0783	3807 Gold Street Apartments	NA	NMD	NA	650	13	8,220	Full	2	31-Dec-05	Y
28	00-0786	Office Building	NA	NMD	39	9,707	17	165,818	Unserviced	5	31-Jul-09	Y
29	00-0787	Office Building	NA	NMD	163	43,733	23	1,026,494	Full	6	28-Feb-10	Y
30	00-0850	Transportable	NA	NMD	0	768	5	3,150	Full	5	31-May-07	N
31	00-1197	Mesa School	NA	NMD	24	11,102	13	138,735	Unserviced	5	31-Jan-08	N
32	00-1237	Pueblo School	NA	NMD	303	50,132	13	639,684	Unserviced	5	31-Jan-08	N
33	00-1246	A & M Bldg	NA	NMD	71	15,160	15	230,432	Unserviced	5	30-Jun-09	N
34	00-1308	Training Cntr	NA	NMD	44	23,135	19	439,940	Full	5	31-May-07	N
35	00-1309	Bradbury Science Museum	NA	NMD	16	13,989	23	305,301	Full	5	30-Apr-08	N
36	00-1313	New Mexico Environmental Bldg	NA	NMD	3	2,241	13	27,048	Full	5	31-Oct-08	N
37	00-1317	Office Bldg	NA	NMD	51	6,500	16	100,863	Unserviced	5	29-Feb-08	N
38	00-1320	Transportable	NA	NMD	0	896	5	3,150	Full	5	31-May-07	N
39	00-1325	TSC Dev Office	NA	NMD	84	22,226	19	438,615	Full	5	30-Sep-09	Y
40	00-1328	White Rock Office Park	NA	NMD	7	1,662	16	25,599	Unserviced	5	30-Apr-06	Y
41	00-1329	White Rock Office Park	NA	NMD	9	1,334	16	25,599	Unserviced	5	30-Apr-06	Y
42	00-1330	TRK - 195 East Rd, Suite 103	NA	NMD	115	19,111	20	376,680	Full	5	31-Jan-06	Y
43	00-1331	White Rock Shopping Cntr Suite P	NA	NMD	31	6,625	17	128,800	Full	5	31-Mar-06	Y
44	00-1355	Exhibit Warehouse	NA	NMD	NA	4,269	6	24,044	Full	5	31-Dec-06	N
45	00-1356	Exhibit Warehouse	NA	NMD	NA	1,976	6	11,150	Full	5	31-Dec-06	Y

Attachment E-6
FY 2007 Leased Space Profile
FY08 TYSP
NNSA - LANL

# (1)	FIMS # (2)	Property Name (3)	Mission Dependency Program (4)	Mission Dependency (5)	# Occupants (6)	Gross Square Feet (7)	*Rental Rate per Rentable s.f. (8)	*Annual Cost (9)	Lease Type (10)	Lease Term - yrs. (11)	Exp. Month / Year (12)	Renewal Options (13)
46	00-1357	Bradbury Office Bdlg	NA	NMD	2	1,290	22	28,050	Full	5	30-Jun-08	Y
47	03-4200	LA Research Park	NA	NMD	95	25,919	53	719,598	Full	5	31-Mar-06	Y
48	CARLS1	E-Division Carlsbad Office	EM	NMD	0	7,880	12	94,560	Full	5	31-Jul-05	Y
49	CARLS2	Carlsbad Warehouse	EM	NMD	NA	3,900	6	24,889	Full	5	31-Mar-06	N
50	DOESF	Old Pecos Trail	NA	NMD	3	1,375	20	24,768	Full	4	31-May-05	Y
51	ESPAN1	Office Building	NA	NMD	2	672	12	8,064	Unserviced	4	30-Jun-05	N
52	ESPAN2	MAP Program	NA	NMD	10	4,830	6	28,200	Unserviced	10	31-Aug-09	Y
53	46-0577	Trasportanble	NA	NMD	78	3,550	6	22,914	Unserviced	5	31-Dec-10	N
54	46-0578	Transportable	NA	NMD	28	4,260	10	42,062	Unserviced	5	31-Dec-10	N
55	48-0234	Transportable	NA	NMD	7	4,260	11	45,362	Unserviced	5	31-Dec-10	N
56	48-0235	Transportable	NA	NMD	10	2,130	25	52,732	Unserviced	5	31-Dec-10	N
57	21-9000	Trailer	NA	NMD	6	1,420	9	12,697	Unserviced	2	31-Oct-09	N
58	21-9001	Trailer	NA	NMD	6	1,420	9	12,697	Unserviced	2	31-Oct-09	N
59	21-9002	Trailer	NA	NMD	NA	720	8	5,477	Unserviced	2	31-Oct-09	N

*As is indicated by DEAR 970.5204-3 DEC 2000, paragraph [b][3], lease information such as "dollars per square feet" is regarded as information owned by LANS LLC as "procurement information," and is therefore marked as such. In addition, the information is also proprietary and is also marked as "commercial/proprietary information". Since leases are competed, LANS does not want the "dollars per square feet" information to be generally available to the public. LANS asserts that the "dollars per square feet" information is owned by LANS and also qualifies for the "commercial/proprietary" exemption should such information be requested from the Department of Energy or the NNSA in accordance with the requirements of the Freedom of Information Act Requests. The information contained in the Attachment E-6 of the TYSP, under Columns (8), Rental Rate per rentable square foot, and (9), Annual Cost, is therefore marked "LANS procurement and commercial/proprietary information."

Attachment F-1
FIRP FY 2003 Deferred Maintenance Baseline and Projected Deferred Maintenance Reduction from Baseline
NNSA - LANL Site
($000s)

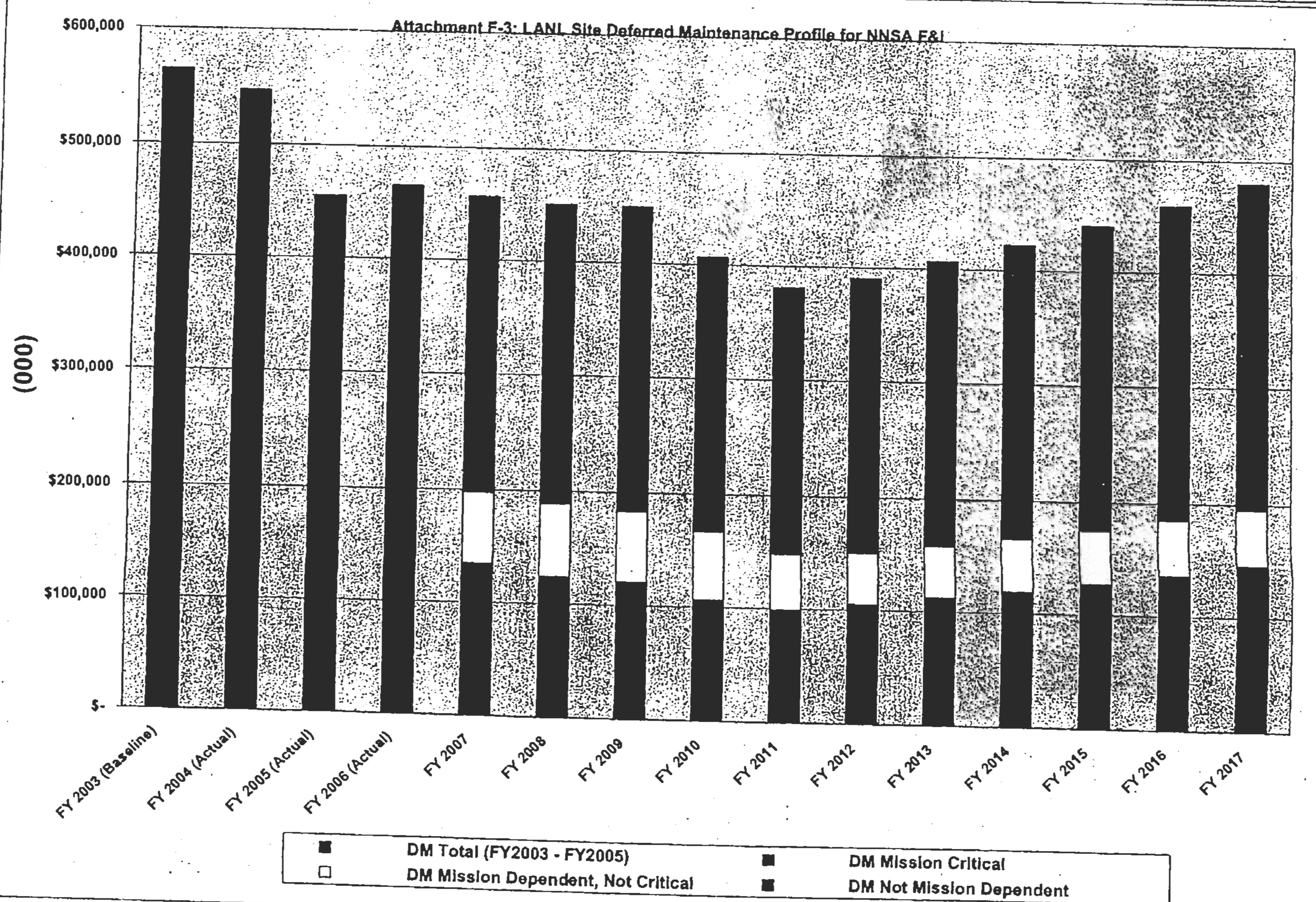
[illegible]	FY 2003	FY 2004	FY 2005	FY 2006	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1. FIRP DEFERRED MAINTENANCE (DM) BASELINE (Excludes Programmatic Real Property or Equipment)	584,243	429,439	359,144	334,895	321,527	302,638	288,645	248,972	224,933	224,314	224,314	224,314	224,314	224,314	224,314
2. DEFERRED MAINTENANCE BASELINE (DM) REDUCTION TOTAL	24,770	134,803	115,916	24,291	13,368	18,888	13,893	39,673	24,039	619	-	-	-	-	-
A. Reduction in DM Baseline (total due to FIRP ONLY) for all F&I	24,770	27,424	63,355	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						
i. Reduction in DM for Mission-Critical F&I (due to FIRP ONLY)				8,278	5,447	18,201	8,651	15,535	10,542	-	-				
ii. Reduction in DM for Mission Dependent, Not Critical F&I (due to FIRP ONLY)				2,424	2,924	92	2,352	329	2,899	-	-				
iii. Reduction in DM for Not Mission Dependent F&I (due to FIRP ONLY)				12,917	2,535	1,034	-	-	10,521	-	-				
3. REPLACEMENT PLANT VALUE (RPV) FOR NNSA FACILITIES & INFRASTRUCTURE	5,623,221														

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

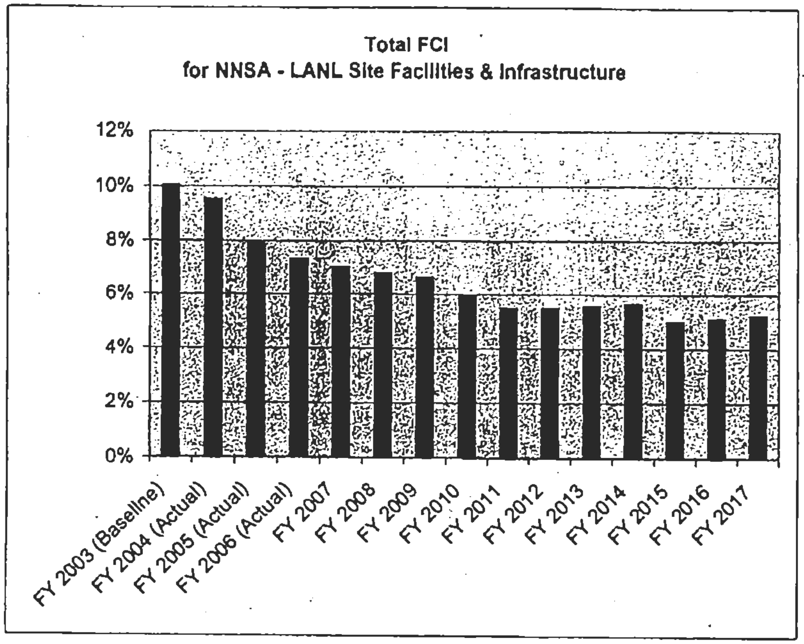
1. NNSA ANNUAL REQUIRED MAINTENANCE	107,124	109,313	111,620	102,814	108,284	107,213	110,147	110,771	113,438	115,726	118,387	121,703	140,577	143,810	147,115
1A. NNSA ANNUAL REQUIRED REPLACEMENT-IN-KIND	-	11,443	22,803	18,507	3,430	38,180	9,706	-	-	-	-	-	-	-	-
2. NNSA ANNUAL PLANNED MAINTENANCE TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
a. Direct	41,804	48,718	49,078	48,752	41,908	41,908	41,908	41,908	41,908	41,908	41,908	41,908	54,488	54,488	54,488
b. Indirect	48,418	58,807	58,373	46,472	46,238	46,238	46,238	46,238	46,238	46,238	46,238	46,238	46,238	46,238	46,238
2A. NNSA ANNUAL PLANNED REPLACEMENT-IN-KIND	-	1,382	13,470	7,328	4,696	8,453	5,864	12,520	22,470	2,836	-	-	-	-	-
3. NNSA DEFERRED MAINTENANCE (DM) TOTAL (Excludes Programmatic Real Property or Equipment) = Inflation Prior Year DM Total + DM New - Prior Year DM Reduction	564,243	548,979	456,113	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
i. Backlog Inflation Rate (%)		2.3%	2.6%	5.5%	2.2%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
a. DM Inflation		12,978	14,221	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ii. DM NEW		36,278	8,487	12,328	3,984	4,433	4,877	5,206	5,680	6,168	6,668	7,178	8,400	9,008	9,631
A. DM, Mission-Critical F&I ONLY				136,731	133,930	134,238	120,933	106,603	99,085	106,391	112,079	119,164	177,359	136,070	148,317
B. DM, Mission-Dependent, Not Critical F&I ONLY				71,575	83,770	84,343	82,237	80,251	48,897	44,575	45,601	46,648	47,722	48,820	49,943
C. DM, Not Mission-Dependent F&I ONLY				257,487	254,864	262,461	267,374	239,136	232,662	240,155	248,062	256,439	265,304	274,632	284,461
4. DEFERRED MAINTENANCE (DM) REDUCTION TOTAL for NNSA Facilities and Infrastructure (F&I)	24,770	28,110	114,574	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
i. Reduction Total attributed to FIRP ONLY	24,770	28,110	40,891	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
A. Reduction in DM for Mission-Critical F&I				7,036	8,727	16,901	9,511	20,640	13,785	-	-	-	-	-	-
1. Reduction attributed to FIRP ONLY				10,402	8,208	783	2,960	1,667	12,732	-	-				
B. Reduction in DM for Mission-Dependent, Not Critical F&I				10,439	9,380	684	3,566	3,418	12,739	5,446	-	-	-	-	-
1. Reduction attributed to FIRP ONLY				6,897	2,851	1,148	116	1,946	13,782	-	-				
C. Reduction in DM for Not Mission-Dependent F&I				9,282	6,253	3,751	2,683	38,026	13,880	-	-	-	-	-	-
1. Reduction attributed to FIRP ONLY				-	-	-	-	-	-	-	-				
5. REPLACEMENT PLANT VALUE (RPV) for NNSA Facilities and Infrastructure (F&I) = Inflation of PY RPV + Increase or Decrease due to other causes	5,623,221	5,742,511	5,778,207	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A. RPV for NNSA Mission-Critical F&I ONLY				3,061,671	3,114,842	3,180,575	3,263,868	3,339,030	3,418,827	3,494,391	3,574,762	3,856,982	4,918,335	5,031,457	5,147,181
B. RPV for NNSA Mission-Dependent, Not Critical F&I				442,278	441,359	440,047	473,256	344,720	360,710	357,781	365,989	398,115	407,272	416,639	426,222
C. RPV for NNSA Not Mission-Dependent F&I				2,883,138	2,964,627	3,005,309	3,089,574	3,098,480	3,168,833	3,241,716	3,316,278	3,392,550	3,470,579	3,550,402	3,632,061
D. RPV Increase from prior year attributed to inflation				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
E. RPV increase / decrease attributed to causes other than inflation (provide separate supporting narrative behind F-2 exhibit)				41,328	(2,451)	(28,738)	18,229	(181,113)	7,149	(11,345)	-	23,708	1,177,243	-	-
FCI Mission Dependent, Not Critical				18.2%	14.4%	14.8%	13.2%	17.5%	13.6%	12.6%	12.5%	11.7%	11.7%	11.7%	11.7%

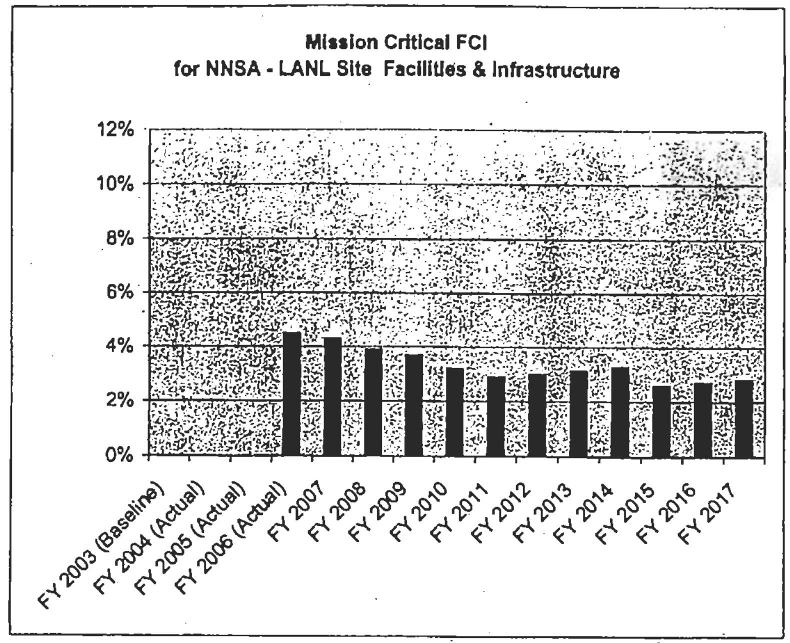
ATTACHMENT F-3
INPUT SHEET FOR CHART
($000)
NNSA - LANL SITE

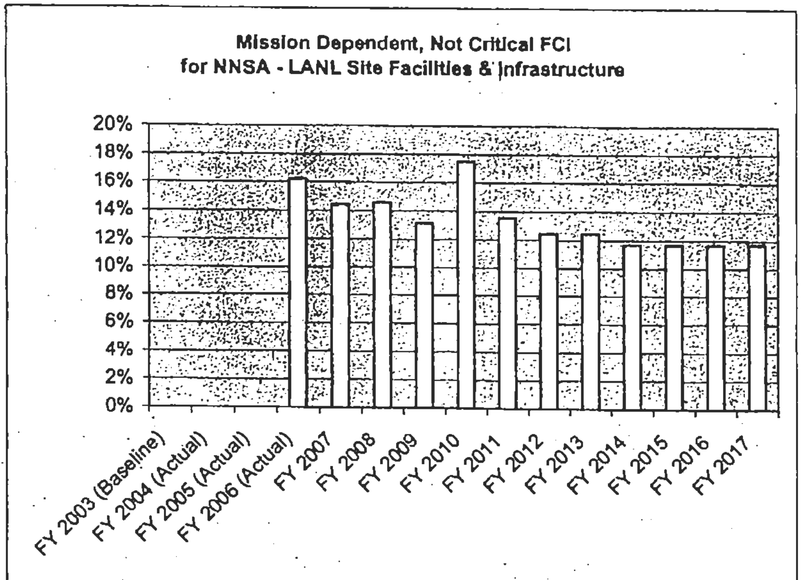
Category of Maintenance	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
DM Total (FY2003 - FY2005)	564,243	546,979	455,113	465,773											
DM Mission Critical					133,930	124,239	120,933	106,603	99,085	105,391	112,079	119,184	127,359	136,070	145,317
DM Mission Dependent, Not Critical					83,770	84,343	62,237	60,251	48,897	44,575	45,601	46,649	47,722	48,820	49,943
DM Not Mission Dependent					258,954	262,481	267,374	239,136	232,662	240,155	248,082	256,459	265,304	274,632	284,461

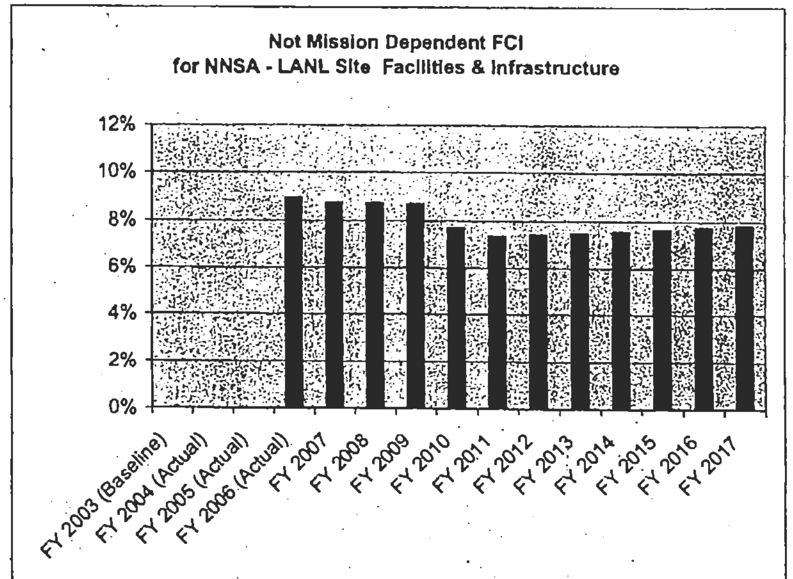


ATTACHMENT F-4: LANL Site Facility Condition Index (FCI)









Attachment F-5
Replacement-In-Kind Projects Over $500K
NNSA - LANL Site

Optimum Year for Funding	Project Name	Facility ID (FIMS)	Mission Dependency	Description of Deficient Subsystems for Replacement in Kind	Funding Source	Planned Fiscal Year for Funding	Identified in FY 2003 Baseline (Y or N)	Within Current FYNSP Constraints (Y or N)	Projected Cost ($K)
2004	LANL-DNM-05D30-01	16-0204	NMD	Mech;HVAC System All Inclusive	FIRP	2011	Y	Y	$777
2004		50-0002	MD	Site;Utity Dist;Plumb;Waste Treat Plant	TBD		Y	Y	$3,335
2004		03-0030	MD	Roof;Single-Ply Membrane	TBD		Y	Y	$3,340
2004		03-0035	NMD	Ext;Windows+Glazed Walls;Windows	TBD		Y	Y	$1,177
2004		03-0066	MC	Elec;Serv+Distrib;Low Voltage Distrib	TBD		Y	Y	$2,527
2004		03-0066	MC	Elec;Serv+Distrib;Low Voltage Distrib	TBD		Y	Y	$1,782
2004		03-0066	MC	Elec;Serv+Distrib;Low Voltage Distrib	TBD		Y	Y	$665
2004	LANL-R-XX-04	08-0023	MC	Roof;Single-Ply Membrane	FIRP	2010	Y	Y	$687
2004		43-0041	NMD	Fndatns;Walls	TBD	2009	Y	Y	$720
2004		43-0434	NMD	Site;Roads+Walks	TBD		Y	Y	$5,696
2004	LANL-R-06-13	46-0001	NMD	Electrical System	FIRP	2011	Y	Y	$4,694
2004		50-0002	MD	Site;Utity Dist;Plumb;Waste Treat Plant	TBD		Y	Y	$17,277
2004		53-0002	NMD	Mech;Cooling;Cooling Towers	TBD		N	N	$509
2004	01	53-0003	MC	Roof;Single-Ply Membrane	FIRP	2008	Y	Y	$3,607
2004	03	53-0003	MC	Mech;Cooling;Packaged HVAC	FIRP	2010	Y	Y	$688
2004		53-0003	MC	Elec;Serv+Distrib;Low Voltage Distrib	TBD		Y	Y	$2,118
2004	LANL-R-05-06	53-0007	MC	Mech;HVAC System All Inclusive	FIRP	2007	Y	Y	$1,270
2004		53-0028	MD	Roof;Specialties	TBD		Y	Y	$2,824
2004	LANL-DM-05D50-04	53-0030	MC	Elec;Serv+Distrib;Low Voltage Distrib	FIRP	2010	Y	Y	$680
2004	LANL-DM-05D50-04	55-0004	MC	Elec;Serv+Distrib;Low Voltage Distrib	FIRP	2010	Y	Y	$681
2004	LANL-DM-05B30-01	55-0004	MC	Roof;Single-Ply Membrane	FIRP	2011	Y	Y	$5,183
								Total FY 2004	$60,345
2005	LANL-R-06-08	03-0034	NMD	Electrical System	FIRP	2011	Y	Y	$607
2005	LANL-R-06-08	03-0034	NMD	Mech;HVAC System All Inclusive	FIRP	2011	Y	Y	$533
2005	FY07 RAMP Support	03-0038	NMD	Roof;Single-Ply Membrane	FIRP	2007	Y	Y	$3,597
2005		03-0132	NMD	Roof;Single-Ply Membrane	TBD		Y	Y	$3,787
2005		03-0218	NMD	Electrical System	TBD		N	N	$787
2005		16-0260	MC	Mech;Heat+Vent;Air Handlers+Fans	TBD		N	N	$600
2005		16-0460	NMD	Mech;HVAC System All Inclusive	TBD		N	N	$636
2005		48-0001	NMD	Mech;HVAC System All Inclusive	TBD		N	N	$4,061
2005		48-0001	NMD	Mech;Plumbing;Drain,Waste,Vent	TBD		Y	Y	$1,296
2005		52-0001	NMD	Mech;HVAC System All Inclusive	TBD		Y	Y	$753
2005	LANL-DM-05D50-02	53-0001	NMD	Electrical System	FIRP	2007	Y	Y	$2,234
2005	LANL-DM-05D30-09	53-0002	NMD	Mech;HVAC System All Inclusive	FIRP	2010	N	N	$1,767
2005	LANL-DM-05D30-02	53-0003	MC	Mech;Heat+Vent;Heating Hot Water Distr	FIRP	2007	Y	Y	$2,079
2005	LANL-DM-05D50-01	53-0003	MC	Elec;Lighting;Luminaires	FIRP	2010	N	N	$594
2005		55-0004	MC	Conveying;Specialty;Pneumatic Tube	TBD		Y	Y	$2,969
2005	LANL-DM-05D50-01	55-0004	MC	Electrical System	FIRP	2011	Y	Y	$1,080
2005		55-0004	MC	Mech;Fire Prot;Wet Pipe Sprinkler	TBD		Y	Y	$1,858
2005		59-0001	NMD	Mech;HVAC System All Inclusive	TBD		Y	Y	$1,237
								Total FY 2005	[illegible]

Los Alamos

Optimum Year for Funding	Project Name	Facility ID (FIMS)	Mission Dependency	Description and Details of Sub-systems for Replacement	Funding Source	Planned Fiscal Year for Funding	Identified in FY 2008 Baseline (Y or N)	Within Current FYNSP Constraints (Y or N)	Projected Cost ($K)
2006		03-0132	NMD	Electrical System	TBD		N	N	$6,358
2006		22-0091	MC	Roof;Single-Ply Membrane	TBD		N	N	$795
2006	TA50-1 D&D	50-0001	MD	Electrical System	RTBF	2012	N	N	$2,564
2006	LANL-DM-08D30-06	50-0001	MD	Mech;HVAC System All Inclusive	FIRP	2011	N	N	$3,481
2006		53-0001	NMD	Mech;HVAC System All Inclusive	TBD		N	N	$3,427
2006	LANL-DM-06D90-058	55-0004	MC	Mech;Plumbing;Drain,Waste,Vent	FIRP	2010	N	N	$704
2006		7111010371	NMD	Site;Utity Dist;Elec;Substation	TBD		N	N	$1,158
								Total FY 2006	$18,487
2007		35-0002	NMD	Mech;HVAC System All Inclusive	TBD		N	N	$1,827
2007		55-0004	MC	Mech;Fire Prot;Wet Pipe Sprinkler	TBD		N	N	$1,529
								Total FY 2007	$3,356
2008		03-0030	NMD	Mech;Heat+Vent;Terminal Units	TBD		Y	Y	$603
2008		03-0035	NMD	Mech;HVAC System All Inclusive	TBD		Y	Y	$740
2008		03-0066	MC	Electrical System	TBD		Y	Y	$2,972
2008		03-0123	NMD	Electrical System	TBD		Y	Y	$795
2008		46-0024	NMD	Electrical System	TBD		Y	Y	$625
2008	LANL-DM-07D50-01	53-0003	MC	Electrical System	FIRP	2008	Y	Y	$4,217
2008		55-0004	MC	Electrical System	TBD		Y	Y	$7,887
2008	LANL-DM-06D50-03	55-0004	MC	Electrical System	FIRP	2009	Y	Y	$7,887
2008	LANL-DM-09D30-05	55-0006	MD	Mech;Cooling;Centrif Chillers	FIRP	2011	Y	Y	$2,494
2008		7142010600	NMD	Mech;Plumbing;Natural Gas	TBD		Y	Y	$8,216
								Total FY 2008	$36,436
2009		03-0066	MC	Mech;HVAC System All Inclusive	TBD		N	N	$5,140
2009		03-0142	NMD	Mech;HVAC System All Inclusive	TBD		N	N	$1,923
2009	LANL-R-XX-06	16-0302	MD	Electrical System	FIRP	2010	N	N	$719
2009	LANL-R-06-07	35-0002	NMD	Electrical System	FIRP	2011	N	N	$1,293
								Total FY 2009	$9,075
2010									
								Total FY 2010	[illegible]
2011									
								Total FY 2011	[illegible]
2012									
								Total FY 2012	[illegible]
2013									
								Total FY 2013	[illegible]
2014									
								Total FY 2014	[illegible]
2015									
								Total FY 2015	[illegible]
2016									
								Total FY 2016	[illegible]
2017									
								Total FY 2017	[illegible]

Attachment G

Attachment G. contains FIMS Report #92 "Mission Dependency Report" and the set of NNSA Mission Critical Facilities Change Requests that have been submitted or are planned to be submitted in FY07, consistent with NA-10 change control process.

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Attachment G
U. S. Department of Energy
Facilities Information Management System
Mission Dependency Report (FIMS Report 92)
NNSA - LANL Site

Prop Id	Prop Name	Mission Dependency	Bldg RPV	Year Built	Deferred Maint	Summary Condition	Mission Dependent Program	Gross Sqft	Percent Utilization	Site Name	Site Program Office
03-2327	Strategic Computer Complex	Mission Critical	108,737,258	2002	72,641	Excellent	ASC	368,900	100%	Los Alamos National Laboratory	NNSA
							ASC Total	368,900			
08-0023	Betatron Bldg	Mission Critical	826,062	1951	950,546	Fail	DSW	4,745	100%	Los Alamos National Laboratory	NNSA
09-0046	Process Lab	Mission Critical	780,428	1953	69,031	Adequate	DSW	1,771	100%	Los Alamos National Laboratory	NNSA
11-0030	Vibration Test Bldg	Mission Critical	390,976	1959	87,591	Fair	DSW	2,001	100%	Los Alamos National Laboratory	NNSA
15-0242	Make Up Bldg	Mission Critical	83,954	1968	3,141	Good	DSW	455	100%	Los Alamos National Laboratory	NNSA
15-0312	DARHT Facility	Mission Critical	24,620,302	1999	-	Excellent	DSW	62,862	76%	Los Alamos National Laboratory	NNSA
15-0313	Radiographic Support Lab	Mission Critical	4,612,167	1990	-	Excellent	DSW	24,668	100%	Los Alamos National Laboratory	NNSA
15-0534	DARHT Vessel Preparation Facility	Mission Critical	1,556,090	2003	-	Excellent	DSW	7,964	100%	Los Alamos National Laboratory	NNSA
16-0202	Shops Bldg	Mission Critical	12,636,359	1953	487,900	Good	DSW	26,448	100%	Los Alamos National Laboratory	NNSA
16-0205	Tritium Processing Facility	Mission Critical	30,736,522	1984	134,533	Excellent	DSW	9,186	100%	Los Alamos National Laboratory	NNSA
16-0207	Weapons Component Test Facility	Mission Critical	4,127,355	1954	156	Excellent	DSW	22,075	100%	Los Alamos National Laboratory	NNSA
16-0260	Process Bldg	Mission Critical	15,895,870	1951	2,012,577	Fair	DSW	36,072	100%	Los Alamos National Laboratory	NNSA
16-0304	Plastics Bldg	Mission Critical	8,598,805	1954	1,041,768	Fair	DSW	19,513	100%	Los Alamos National Laboratory	NNSA
16-0306	Plastics Bldg	Mission Critical	8,654,330	1954	1,349,665	Fair	DSW	19,639	100%	Los Alamos National Laboratory	NNSA
16-0410	Assembly Bldg	Mission Critical	6,491,155	1952	1,922,986	Poor	DSW	10,187	100%	Los Alamos National Laboratory	NNSA
22-0091	Detonator Facility	Mission Critical	3,964,751	1983	889,467	Fair	DSW	22,774	100%	Los Alamos National Laboratory	NNSA
22-0093	High Explosive Wing	Mission Critical	3,355,707	1983	293,297	Adequate	DSW	7,615	100%	Los Alamos National Laboratory	NNSA
22-0115	HPDF-High Power Detonator Facility	Mission Critical	7,181,597	2004	-	Excellent	DSW	9,970	100%	Los Alamos National Laboratory	NNSA
40-0005	Firing Point	Mission Critical	303,907	1951	671,835	Fail	DSW	1,533	100%	Los Alamos National Laboratory	NNSA
53-0003	LANSCE Accelerator Bldg	Mission Critical	63,145,254	1971	17,687,898	Poor	DSW	337,730	98%	Los Alamos National Laboratory	NNSA
53-0007	LANSCE/WNR Building	Mission Critical	6,256,565	1976	1,761,737	Poor	DSW	33,463	100%	Los Alamos National Laboratory	NNSA
53-0008	Proton Stg. Ring Facility	Mission Critical	2,007,421	1984	394,750	Fair	DSW	12,828	100%	Los Alamos National Laboratory	NNSA
53-0030	Neutron Scattering Exper	Mission Critical	3,194,848	1988	2,561,885	Fall	DSW	20,416	100%	Los Alamos National Laboratory	NNSA
53-0369	WNR Target Cell #4	Mission Critical	316,727	1988	-	Excellent	DSW	1,694	100%	Los Alamos National Laboratory	NNSA
							DSW Total	695,609			

Los Alamos

Prop Id	Prop Name	Mission Dependency	Bldg RPV	Year Built	Deferred Maint.	Summary Condition	Mission Dependent Program	Gross Sqft	Percent Utilization	Site Name	Site Program Office
35-0189	Lab Optics Evaluation	Mission Critical	2,439,580	1977	38,388	Excellent	ICF	13,048	100%	Los Alamos National Laboratory	NNSA
							ICF Total	13,048			
03-0029	CMR Laboratory	Mission Critical	1,898,686,986	1953	50,803,103	Good	PMC	566,849	86%	Los Alamos National Laboratory	NNSA
03-0066	Sigma Bldg	Mission Critical	33,843,485	1959	17,791,653	Poor	PMC	194,401	100%	Los Alamos National Laboratory	NNSA
03-0141	Beryllium Technology Facility	Mission Critical	5,617,746	1960	128,997	Good	PMC	32,269	100%	Los Alamos National Laboratory	NNSA
03-1698	Materials Science Lab	Mission Critical	13,333,739	1993	117,821	Excellent	PMC	71,315	100%	Los Alamos National Laboratory	NNSA
55-0004	Plutonium Bldg	Mission Critical	780,267,987	1974	34,657,722	Good	PMC	233,193	100%	Los Alamos National Laboratory	NNSA
							PMC Total	1,098,027			
09-0033	Lab Bldg	Mission Critical	165,212	1953	221,945	Fail	SCI	949	100%	Los Alamos National Laboratory	NNSA
09-0038	Process Lab	Mission Critical	313,700	1953	2,557	Excellent	SCI	1,594	100%	Los Alamos National Laboratory	NNSA
09-0048	Process Lab	Mission Critical	428,251	1953	574,975	Fail	SCI	3,557	100%	Los Alamos National Laboratory	NNSA
							SCI Total	6,100			

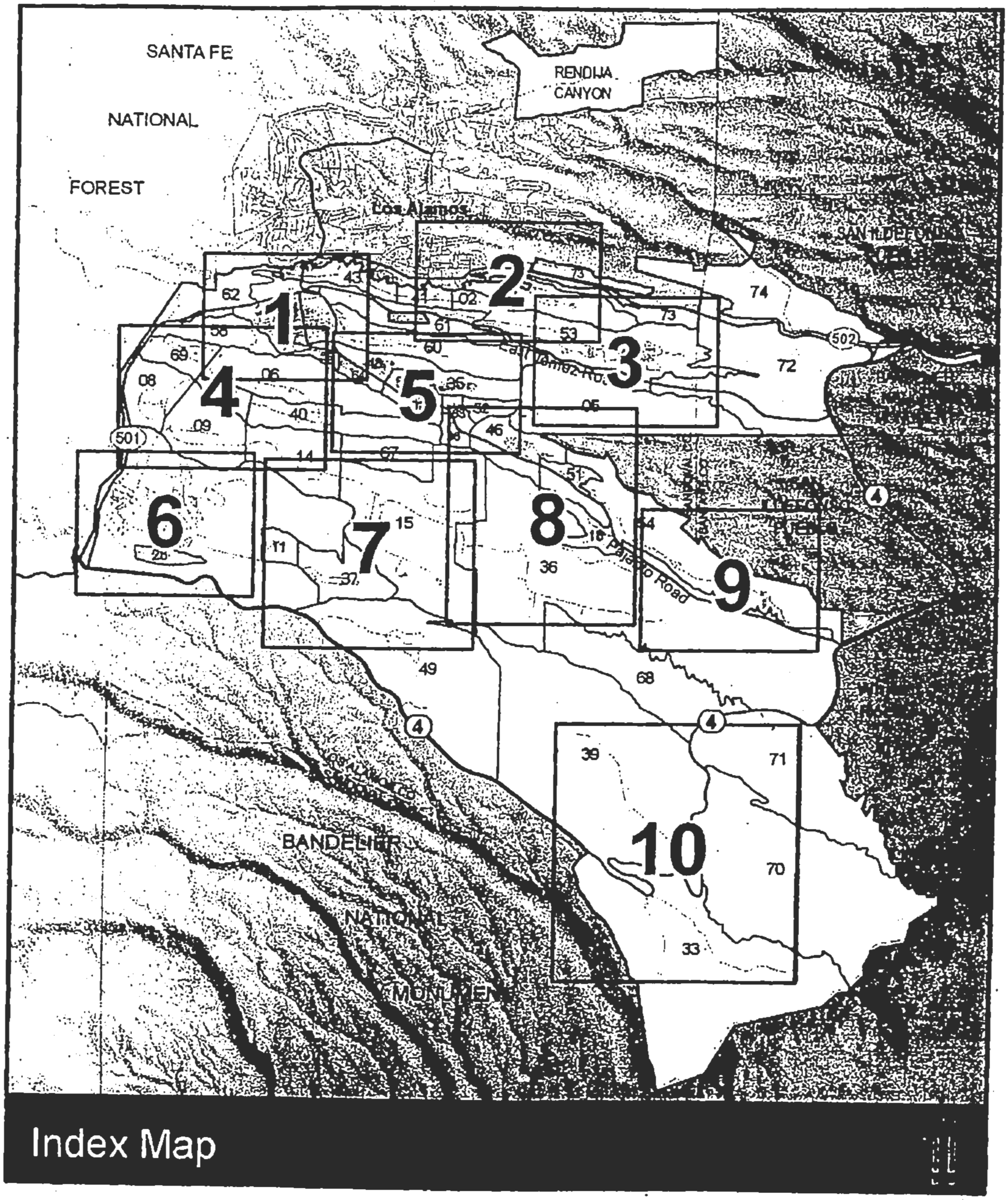
Attachment G
Mission Critical
FY07 Planned Change Requests
NNSA - LANL Site

Property Name	Facility Identification Number	Current Use	Misson Dependency Program Office	Requested Action	Justification
TECH SHOP	03-0039	WEAPONS COMPONENTS MANUFACTURING	PMC	Addition	These machine shops provide the only capability at LANL to machine most of the non-nuclear components for the nuclear weapons research and development program such as components for stockpile production, including joint test assemblies and pit manufacturing, and weapons certification and design. These facilities meet the mission critical critieria because they are necessary to perform the primary missions assigned to LANL. There are no other facilities within the complex to perform the machining work done at these two facilities, and the PMC would be severely impacted if they were not available.
TECH SHOPS ADDITION	03-0102	NUCLEAR WEAPONS MACHINE SHOP	PMC	Addition	These machine shops provide the only capability at LANL to machine most of the non-nuclear components for the nuclear weapons research and development program such as components for stockpile production, including joint test assemblies and pit manufacturing, and weapons certification and design. These facilities meet the mission critical critieria because they are necessary to perform the primary missions assigned to LANL. There are no other facilities within the complex to perform the machining work done at these two facilities, and the PMC would be severely impacted if they were not available.

Property Name	Facility Identification Number	Current Use	Misson Dependency Program Office	Requested Action	Justification
RAD LIQUID TREATMENT	50-0001	NUCLEAR WASTE PROCESSING AND/OR HANDLING BLDG	PMC	Addition	These facilities handle the collection of radioactive liquid waste generated at laboratories and shops across the site, but the majority of waste comes from TA-55. These facilities meet mission critical critieria because they are necessary to perform the primary missions assigned to LANL, and operations at TA-55 would be either severely disrupted or even halted without their availability.
INDUSTRIAL WASTE STATION TA-50-2	50-0002	NUCLEAR CONTAMINATED STORAGE	PMC	Addition	These facilities handle the collection of radioactive liquid waste generated at laboratories and shops across the site, but the majority of waste comes from TA-55. These facilities meet mission critical critieria because they are necessary to perform the primary missions assigned to LANL, and operations at TA-55 would be either severely disrupted or even halted without their availablity.

Attachment H

Sitewide Maps



Legend

- Technical Area Boundary
- Paved Road
- Department of Energy

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Current and Future Facility Status Maps

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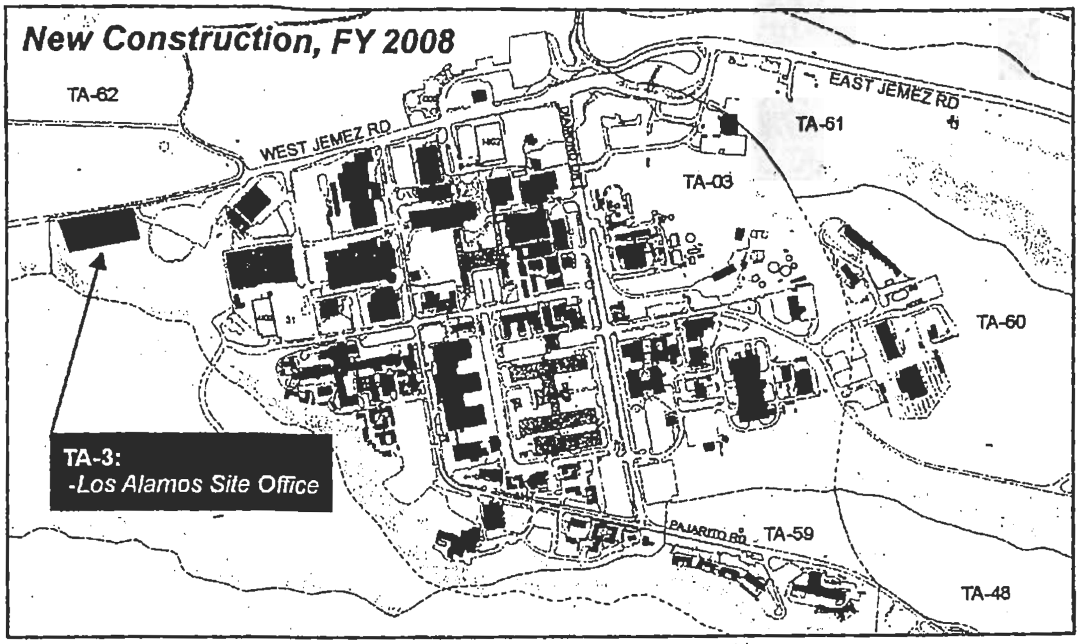
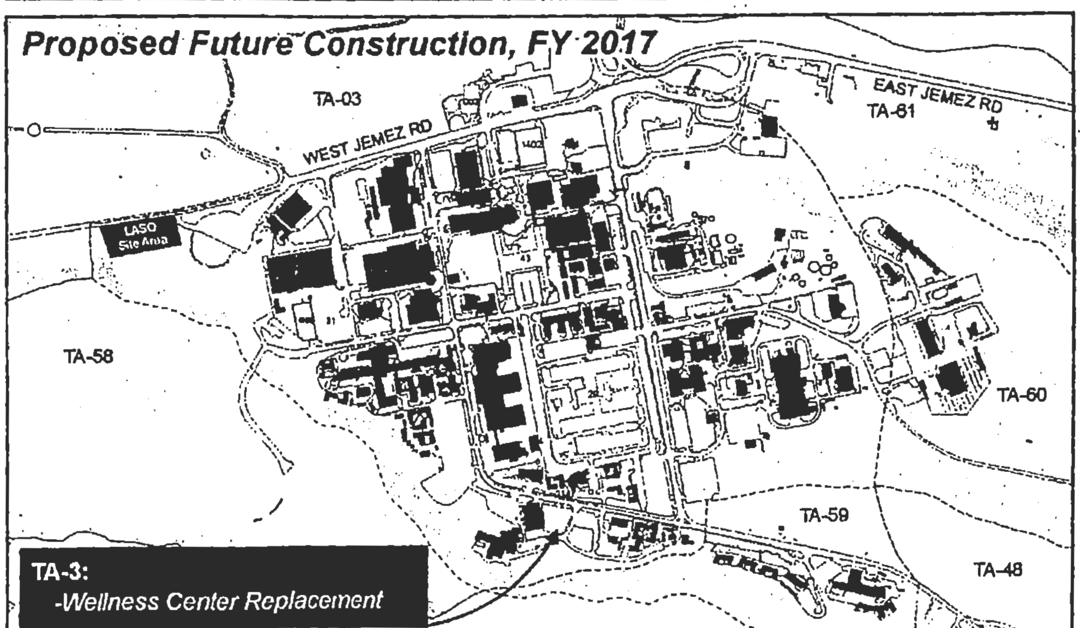
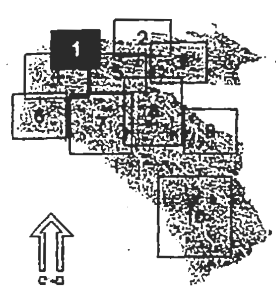


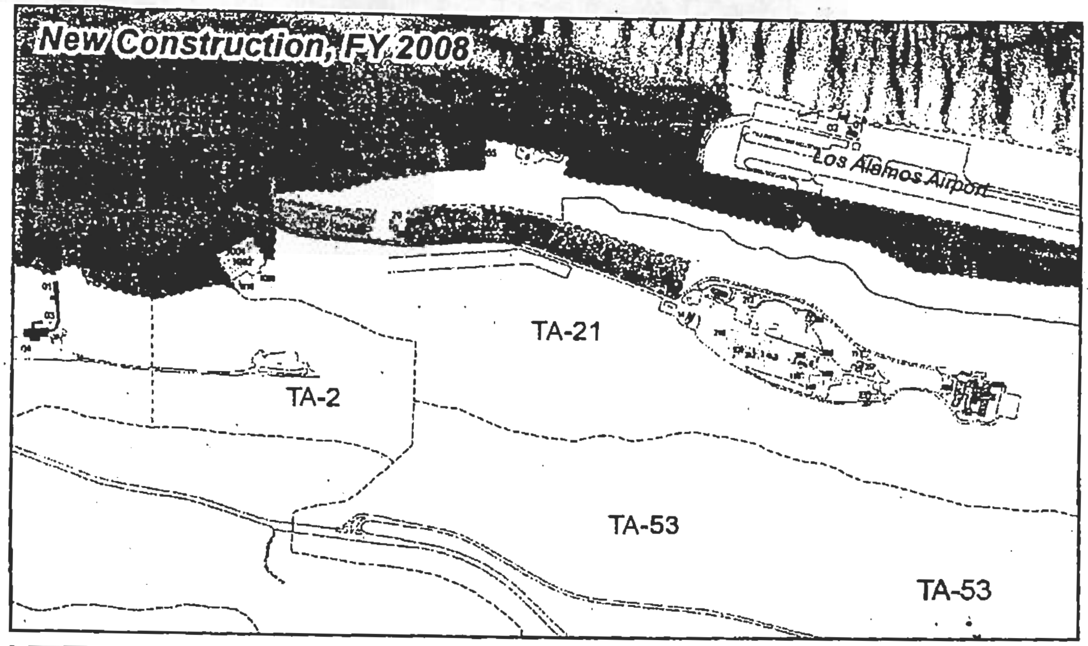


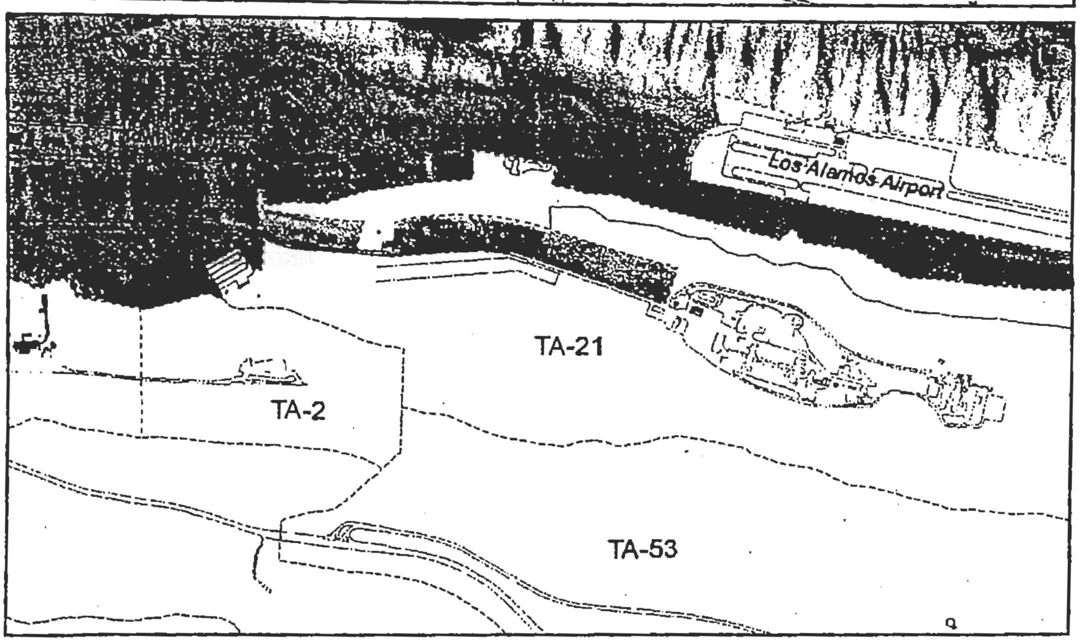
MAP 1 - Facility Status, FY 2008 - FY 2017
New and Proposed Construction (Footprint Added)

- New Construction (Footprint Added)
- Active Facility
- Inactive Facility
- Future Excess Facility
- Excessed Facility
- Historic Structure
- Outgranted/Outleased Facility



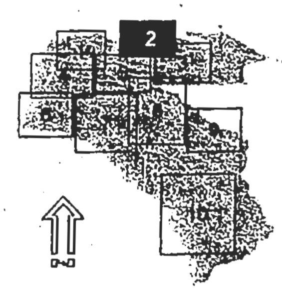
NOTES:
-Historic Structures are not to be demolished in accordance with Attachment E-1.
-New Construction (Footprint Added) is in accordance with Attachment E-2.





MAP 2 - Facility Status, FY 2008 - FY 2017
New and Proposed Construction (Footprint Added)

- New Construction (Footprint Added)
- Active Facility
- Inactive Facility
- Future Excess Facility
- Excessed Facility
- Historic Structure
- Outgranted/Outleased Facility



NOTES:
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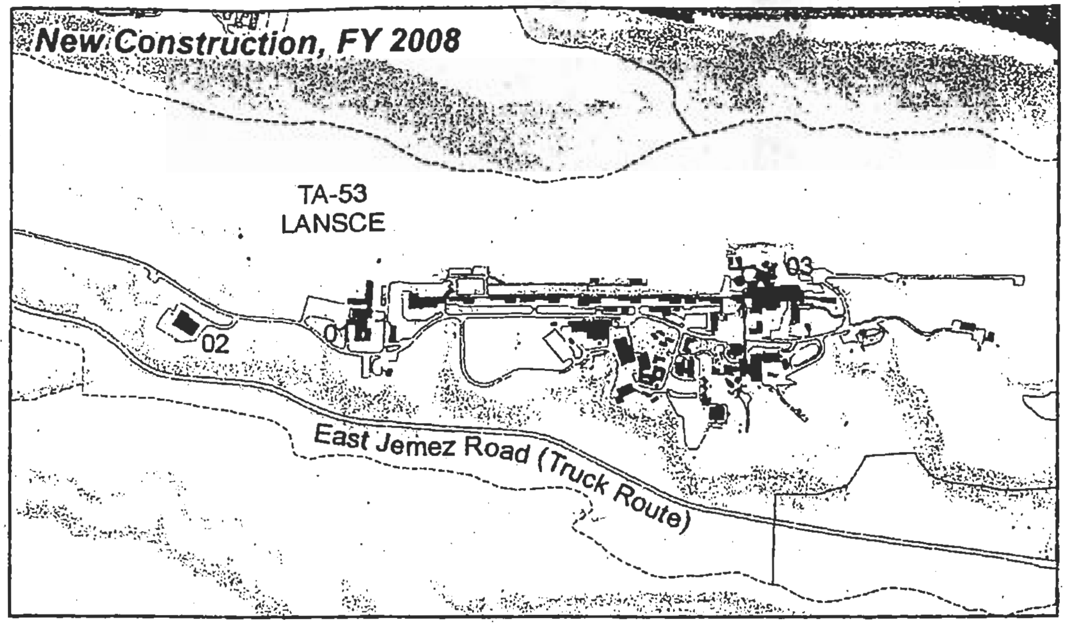
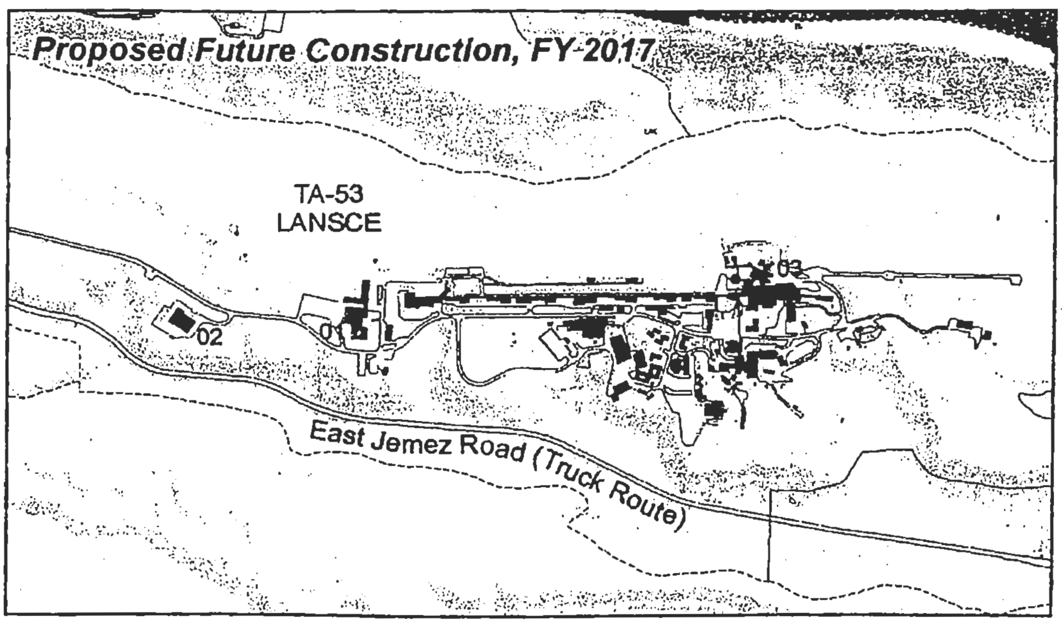
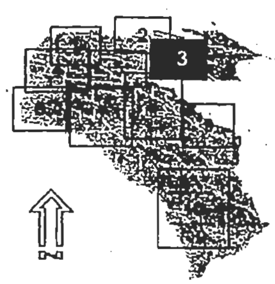




MAP 3 - Facility Status, FY 2008 - FY 2017
New and Proposed Construction (Footprint Added)

- New Construction (Footprint Added)
- Active Facility
- Inactive Facility
- Future Excess Facility
- Excessed Facility
- Historic Structure
- Outgranted/Outleased Facility



NOTES:
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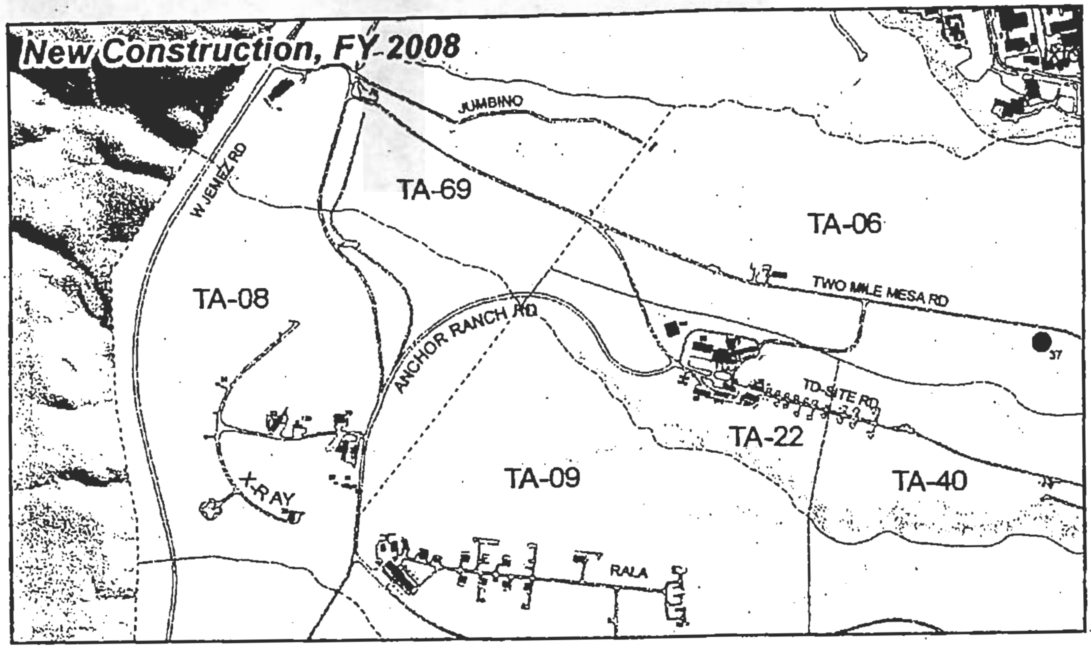
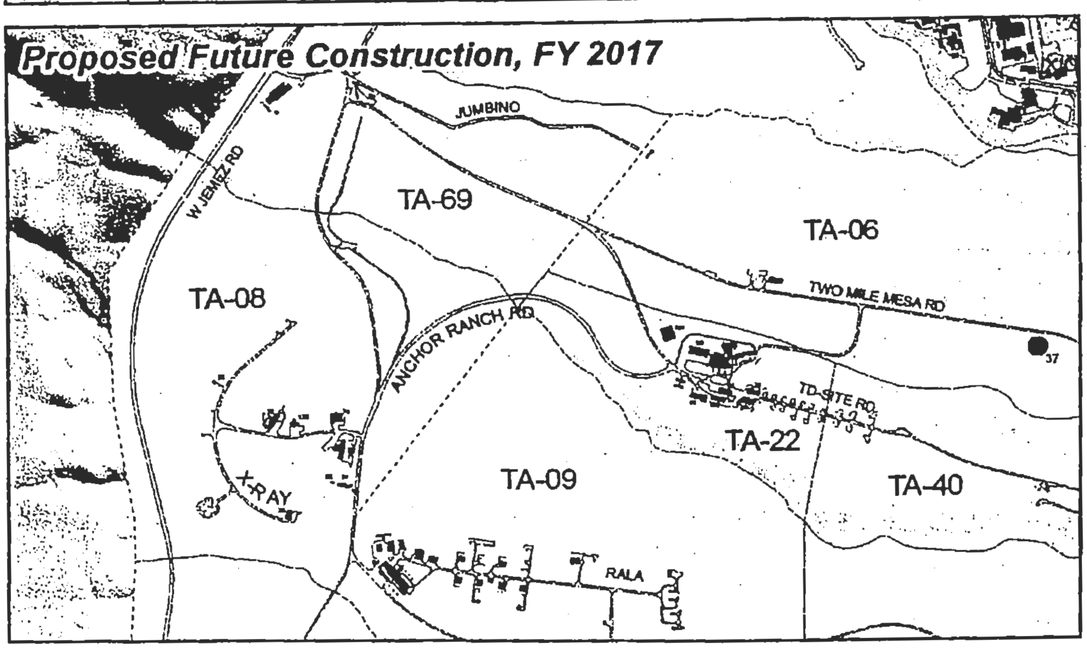
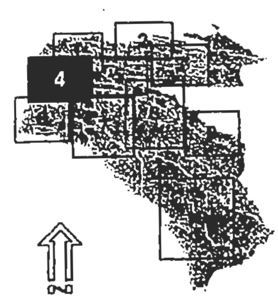
-New Construction (Footprint Added) is in accordance with Attachment E-2.





MAP 4 - Facility Status, FY 2008 - FY 2017
New and Proposed Construction (Footprint Added)

- New Construction (Footprint Added)
- Active Facility
- Inactive Facility
- Future Excess Facility
- Excessed Facility
- Historic Structure
- Outgranted/Outleased Facility



NOTES:
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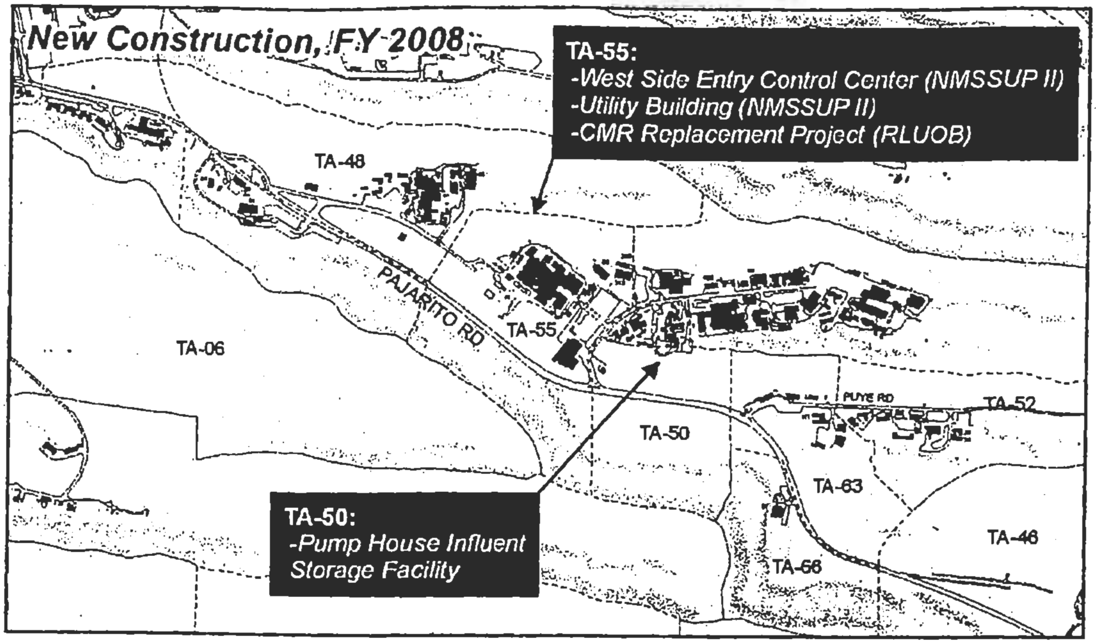
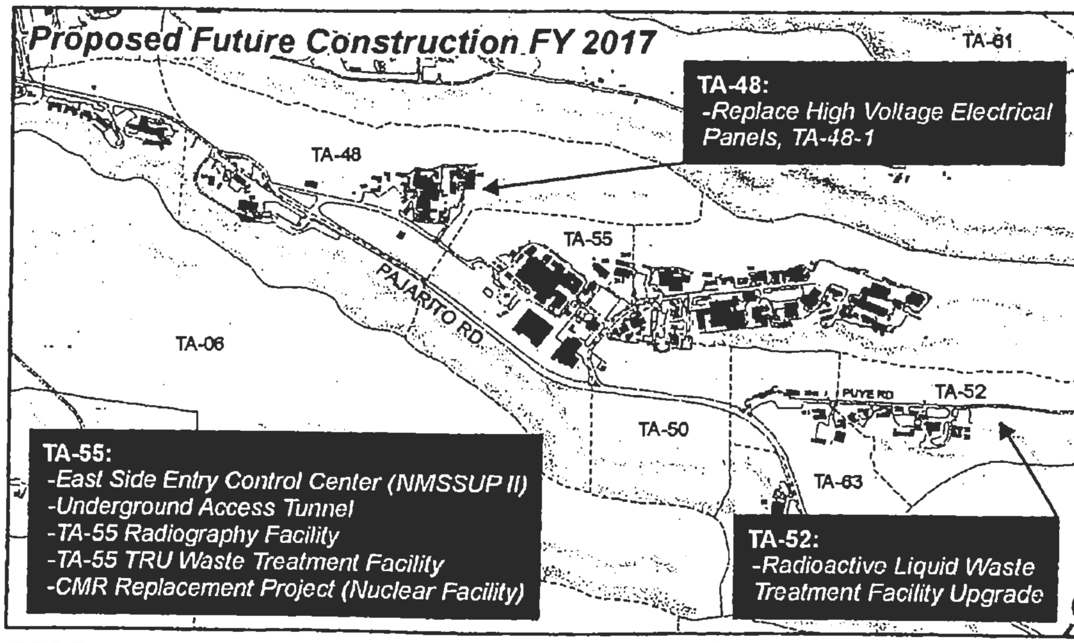
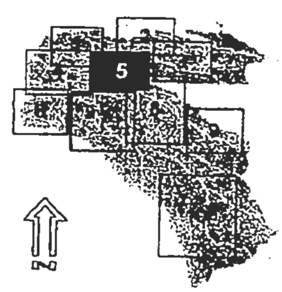
-New Construction (Footprint Added) is in accordance with Attachment E-2.



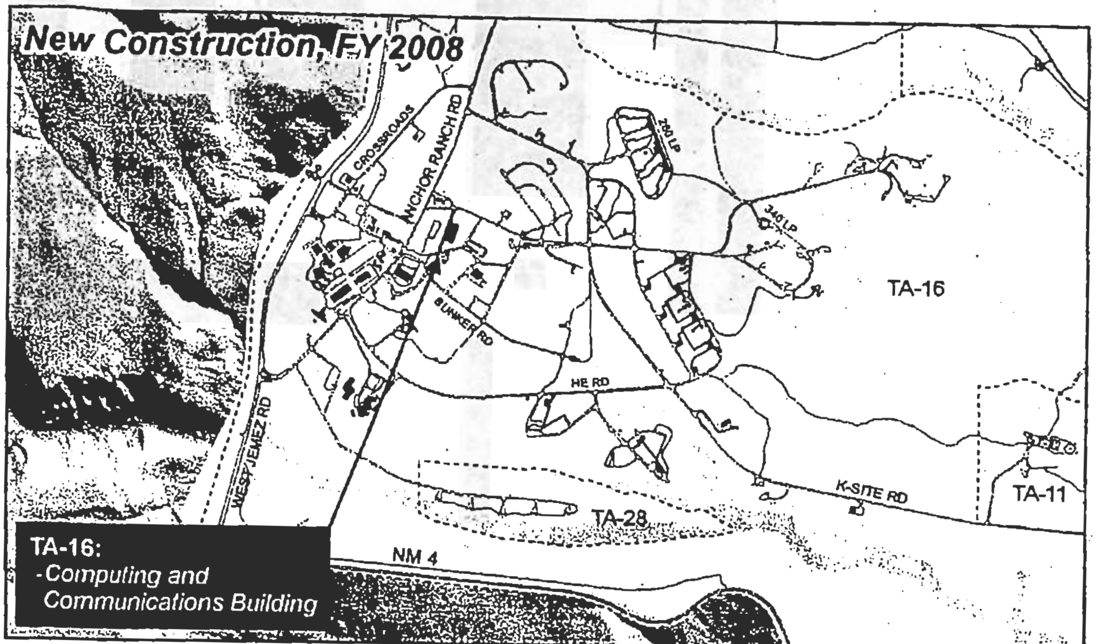


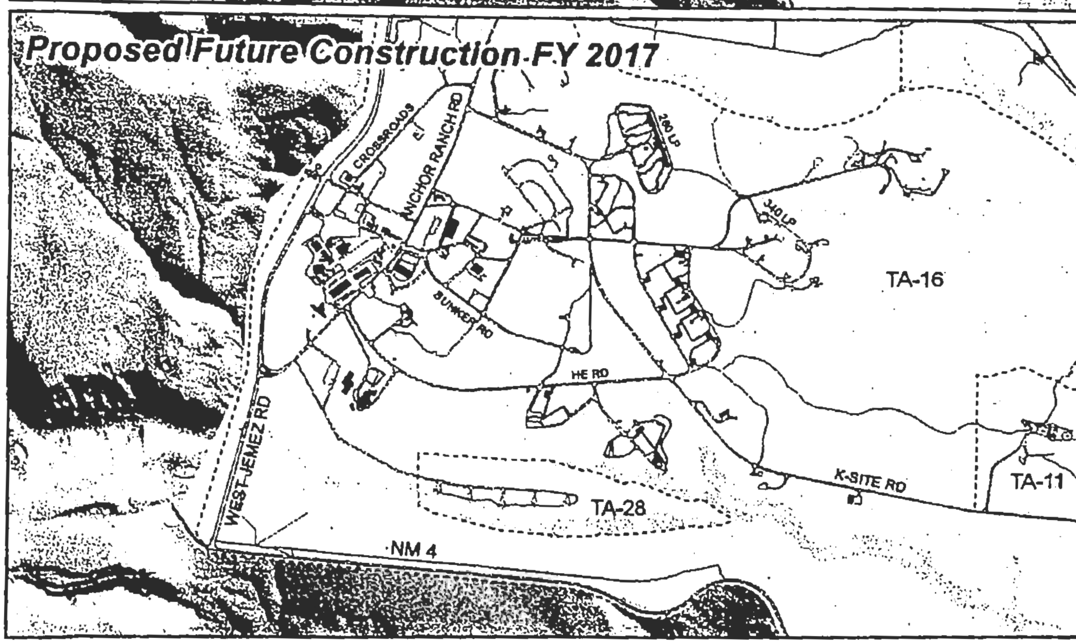
MAP 5 - Facility Status, FY 2008 - FY 2017
New and Proposed Construction (Footprint Added)

- New Construction (Footprint Added)
- Active Facility
- Inactive Facility
- Future Excess Facility
- Excessed Facility
- Historic Structure
- Outgranted/Outleased Facility



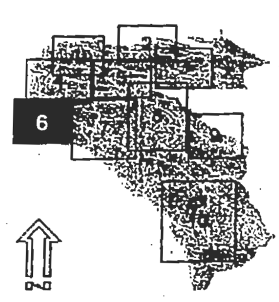
NOTES:
-Historic Structures are not to be demolished in accordance with Attachment E-1.
-New Construction (Footprint Added) is in accordance with Attachment E-2.



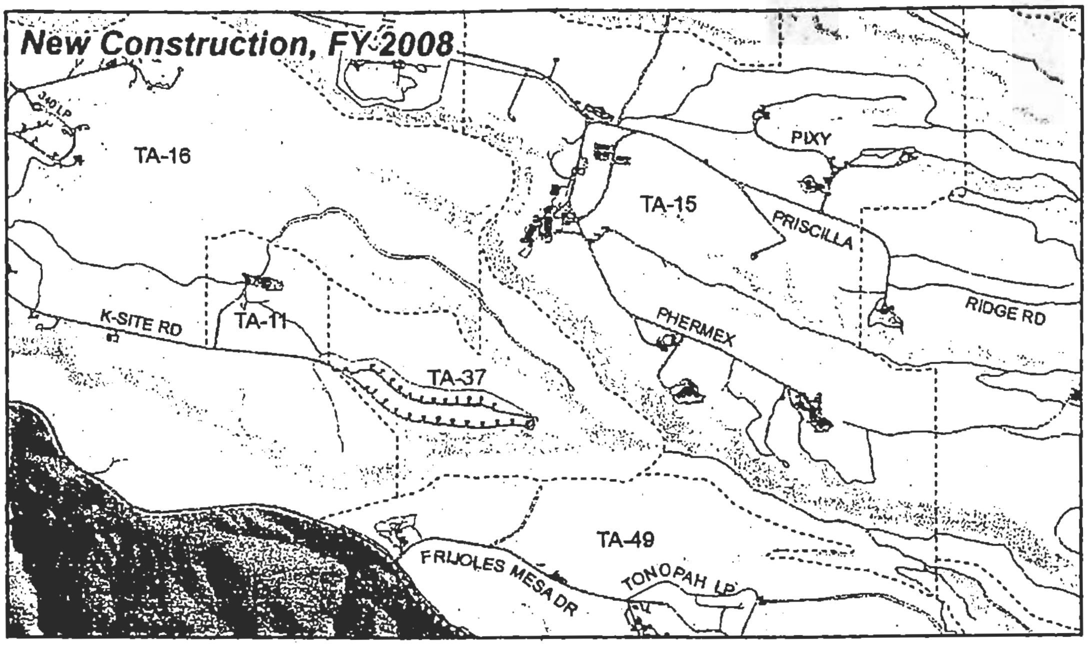


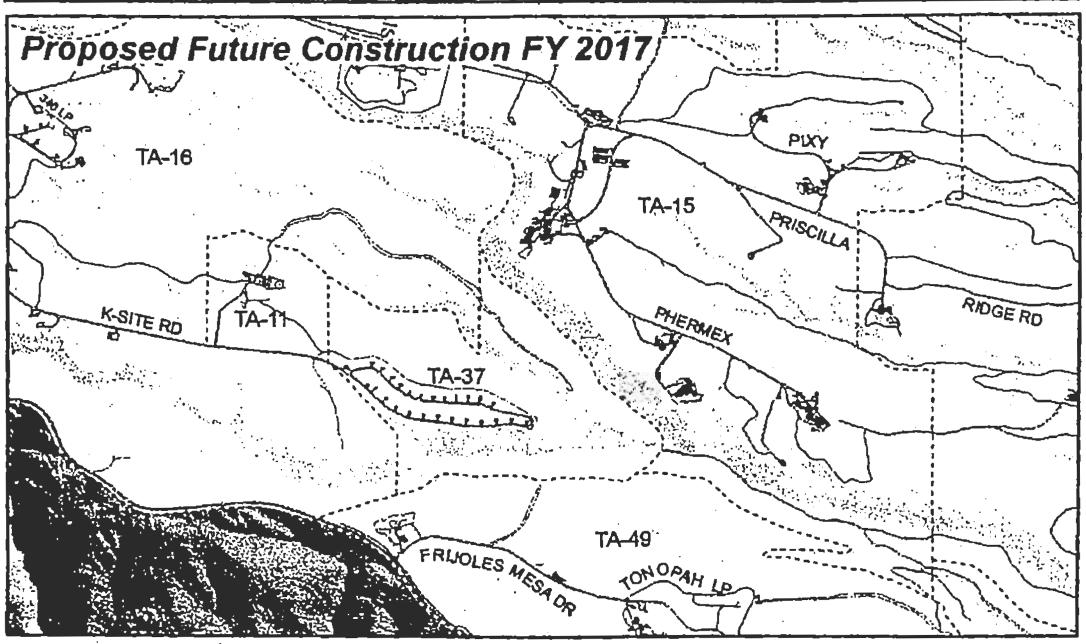
MAP 6 - Facility Status, FY 2008 - FY 2017
New and Proposed Construction (Footprint Added)

- New Construction (Footprint Added)
- Active Facility
- Inactive Facility
- Future Excess Facility
- Excessed Facility
- Historic Structure
- Outgranted/Outleased Facility



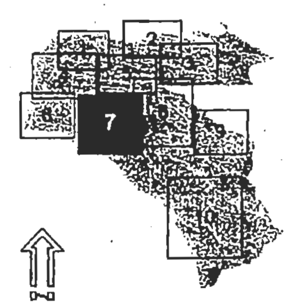
NOTES:
-Historic Structures are not to be demolished in accordance with Attachment E-1.
-New Construction (Footprint Added) is in accordance with Attachment E-2.



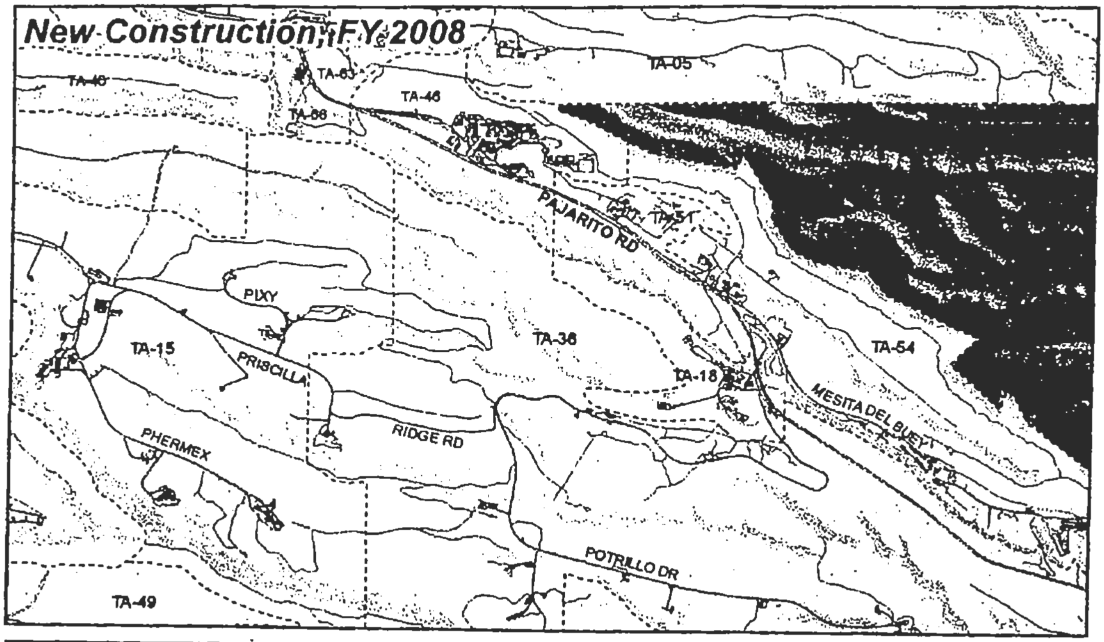


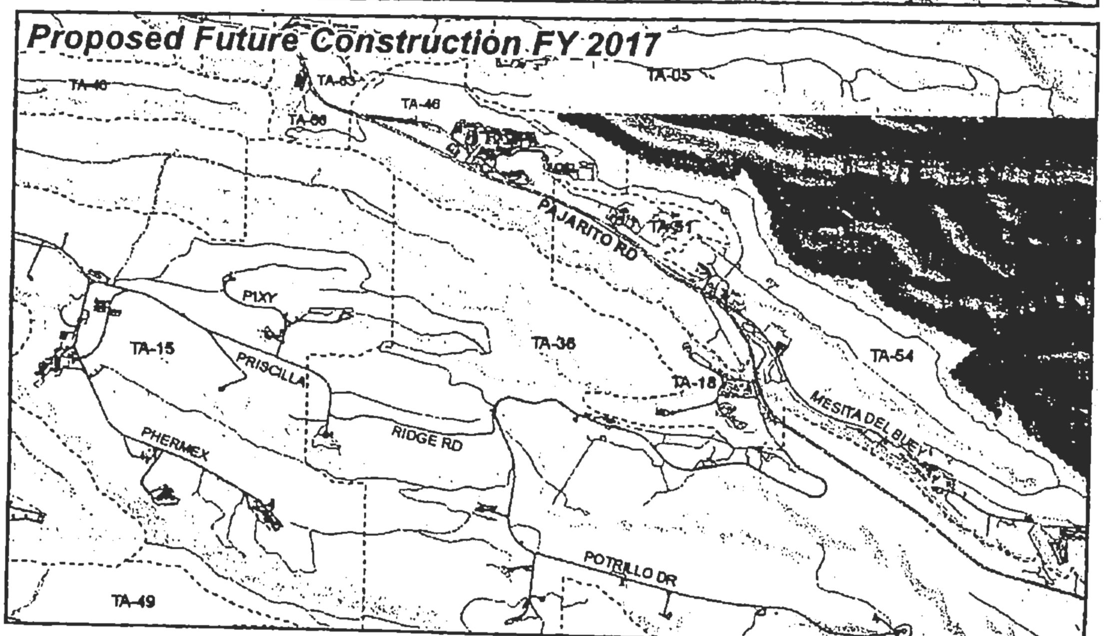
MAP 7 - Facility Status, FY 2008 - FY 2017
New and Proposed Construction (Footprint Added)

- New Construction (Footprint Added)
- Active Facility
- Inactive Facility
- Future Excess Facility
- Excessed Facility
- Historic Structure
- Outgranted/Outleased Facility



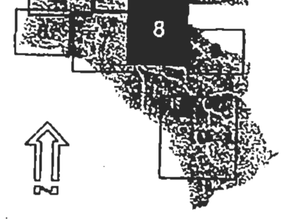
NOTES:
-Historic Structures are not to be demolished in accordance with Attachment E-1.
-New Construction (Footprint Added) is in accordance with Attachment E-2.



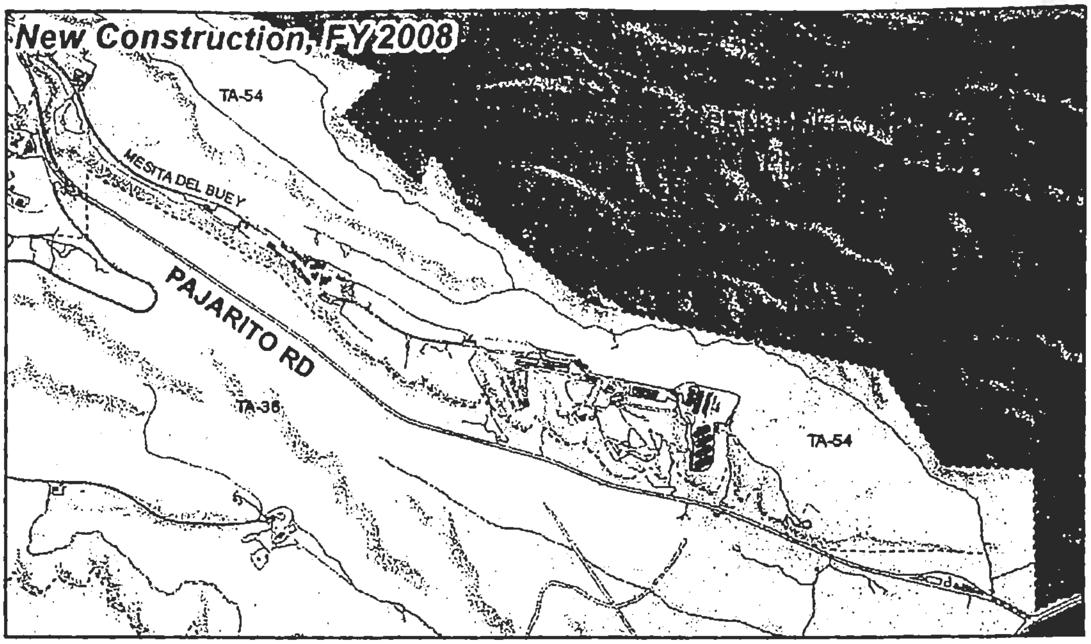


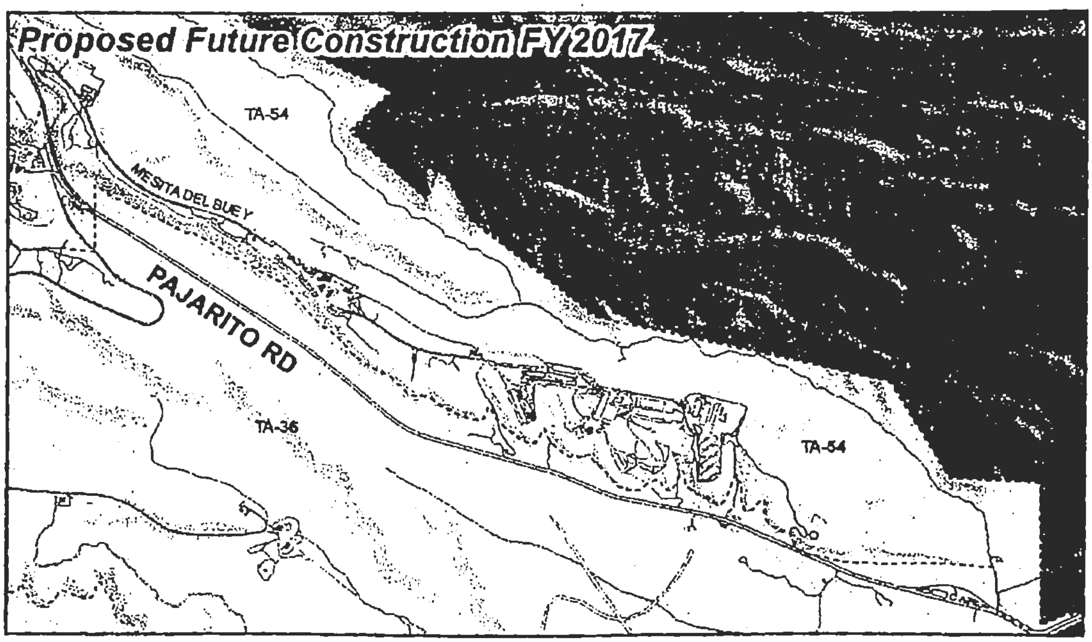
MAP 8 - Facility Status, FY 2008 - FY 2017
New and Proposed Construction (Footprint Added)

- New Construction (Footprint Added)
- Active Facility
- Inactive Facility
- Future Excess Facility
- Excessed Facility
- Historic Structure
- Outgranted/Outleased Facility



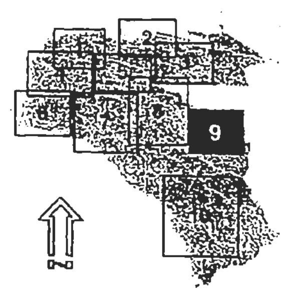
NOTES:
-Historic Structures are not to be demolished in accordance with Attachment E-1.
-New Construction (Footprint Added) is in accordance with Attachment E-2.



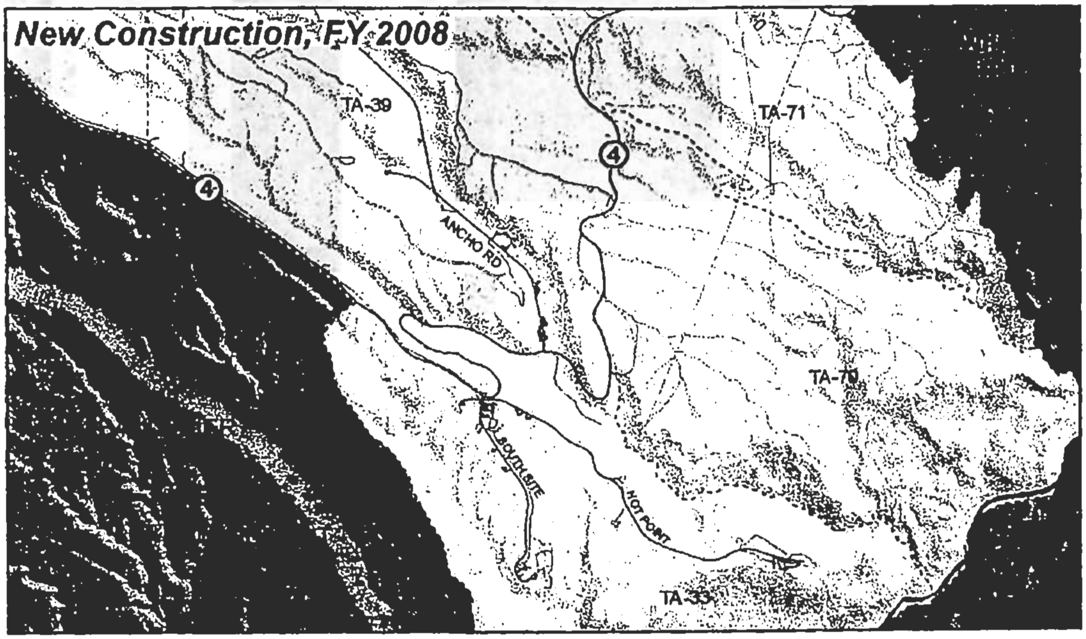


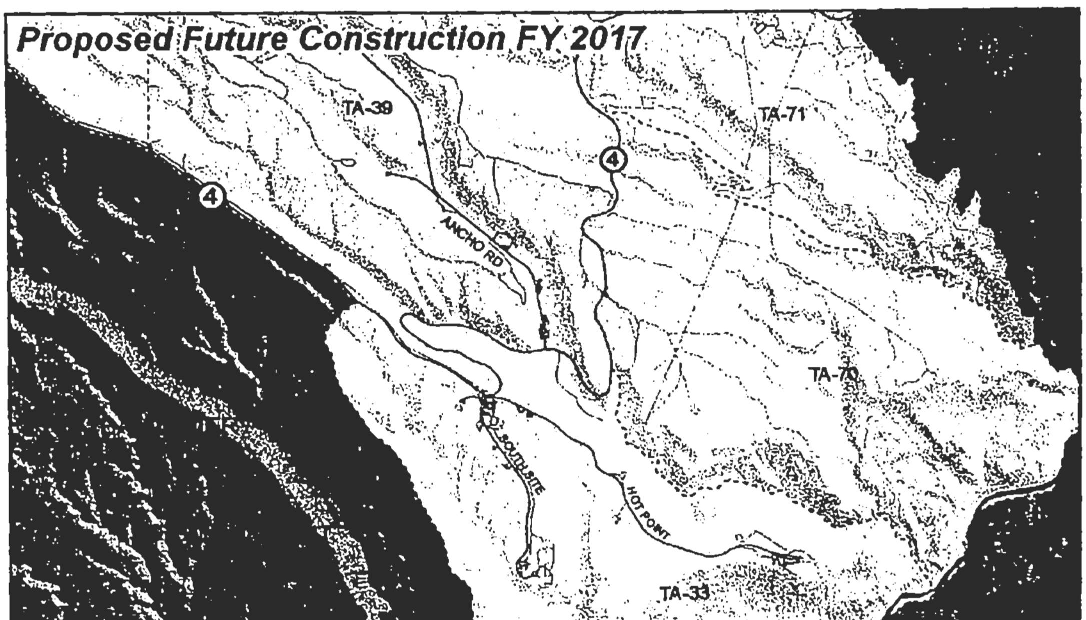
MAP 9 - Facility Status, FY 2008 - FY 2017
New and Proposed Construction (Footprint Added)

- New Construction (Footprint Added)
- Active Facility
- Inactive Facility
- Future Excess Facility
- Excessed Facility
- Historic Structure
- Outgranted/Outleased Facility



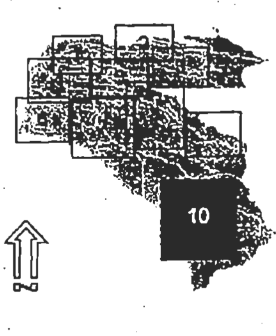
NOTES:
-Historic Structures are not to be demolished in accordance with Attachment E-1.
-New Construction (Footprint Added) is in accordance with Attachment E-2.





MAP 10 - Facility Status, FY 2008 - FY 2017
New and Proposed Construction (Footprint Added)

- New Construction (Footprint Added)
- Active Facility
- Inactive Facility
- Future Excess Facility
- Excessed Facility
- Historic Structure
- Outgranted/Outleased Facility



NOTES:
-Historic Structures are not to be demolished in accordance with Attachment E-1.
-New Construction (Footprint Added) is in accordance with Attachment E-2.

Utility Maps

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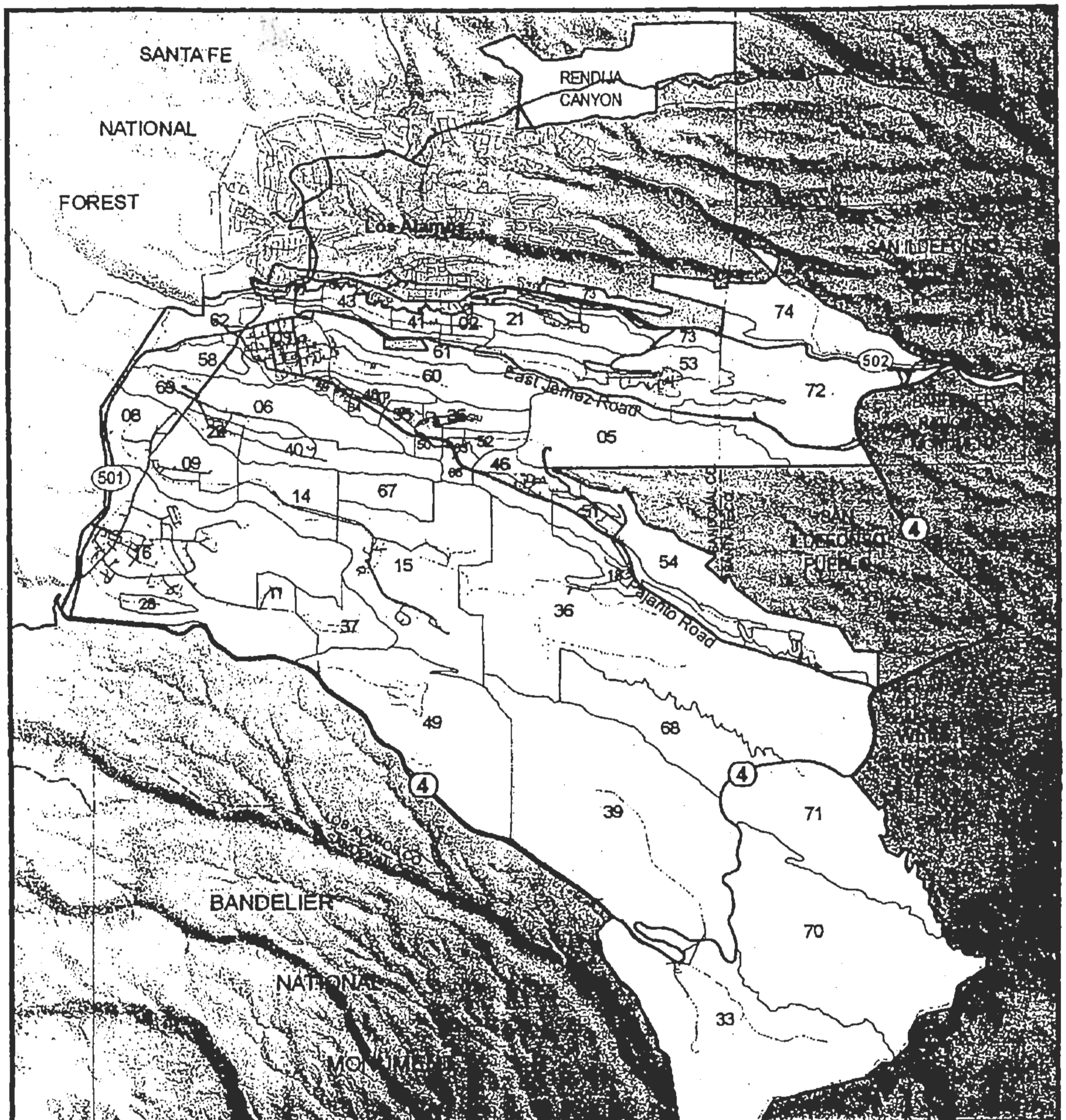
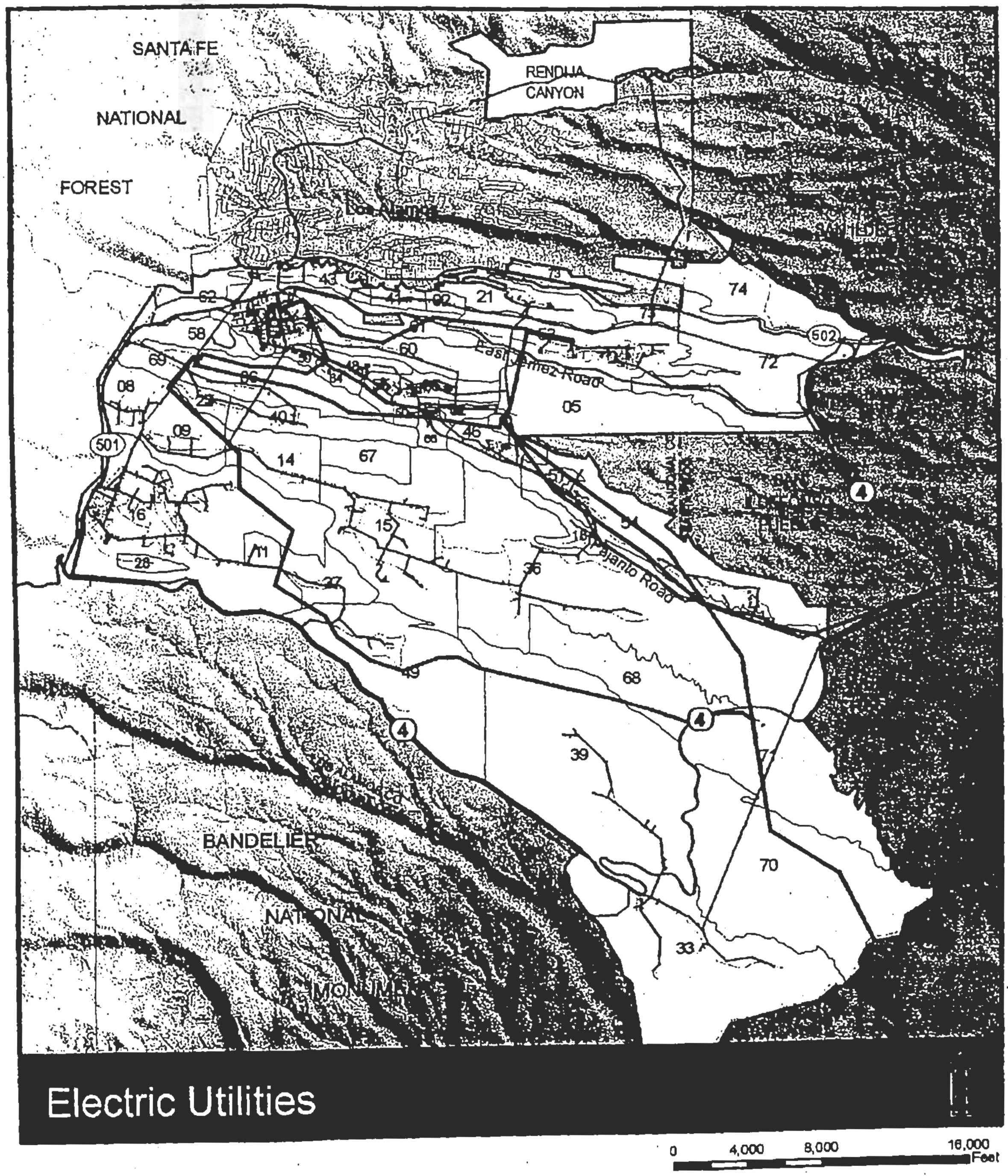


Water Utilities

Legend

Water Distribution

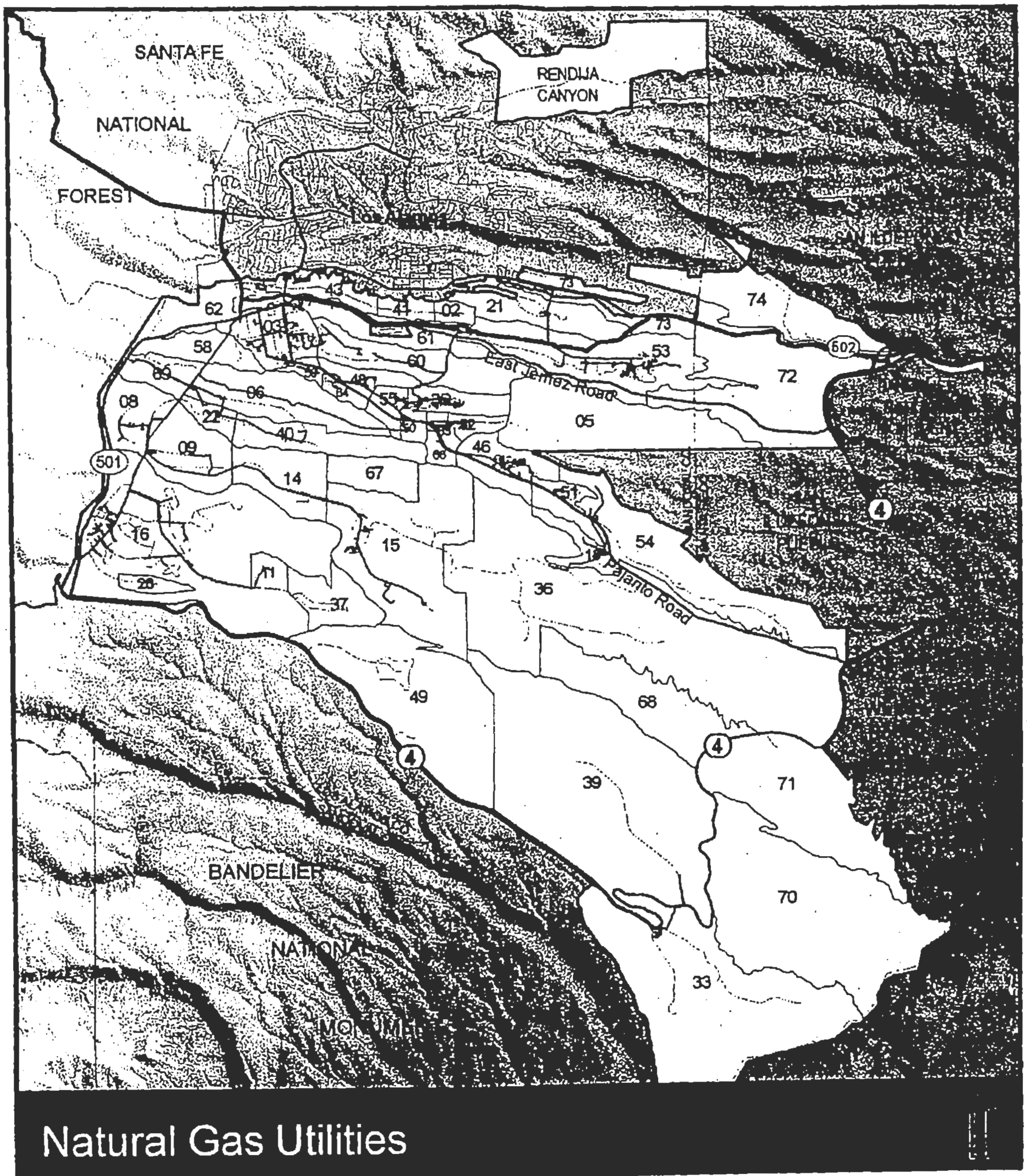
Water Transmission



Legend

Electric Distribution

Electric Transmission

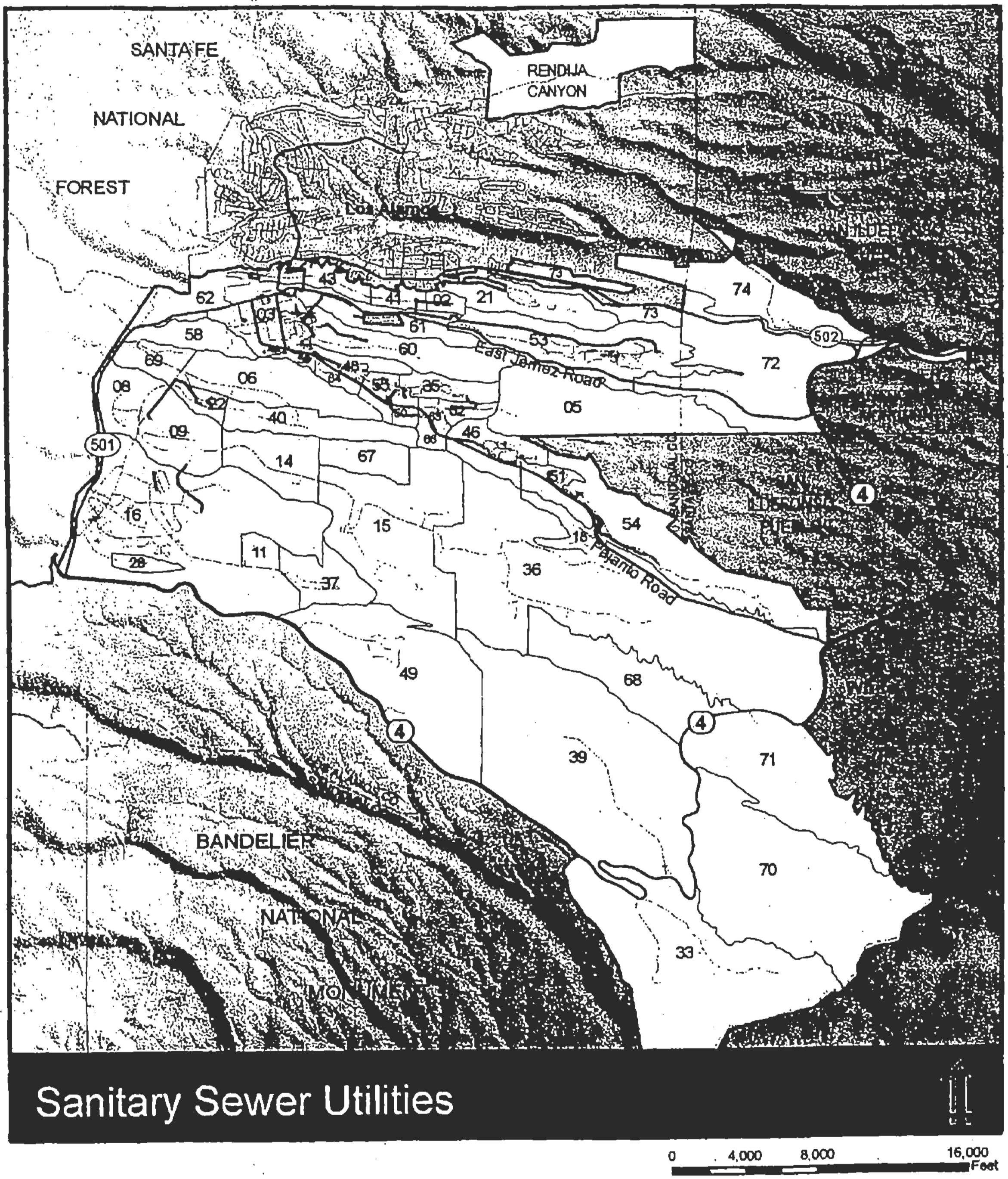


0 4,000 8,000 16,000 Feet

Legend

Gas Distribution

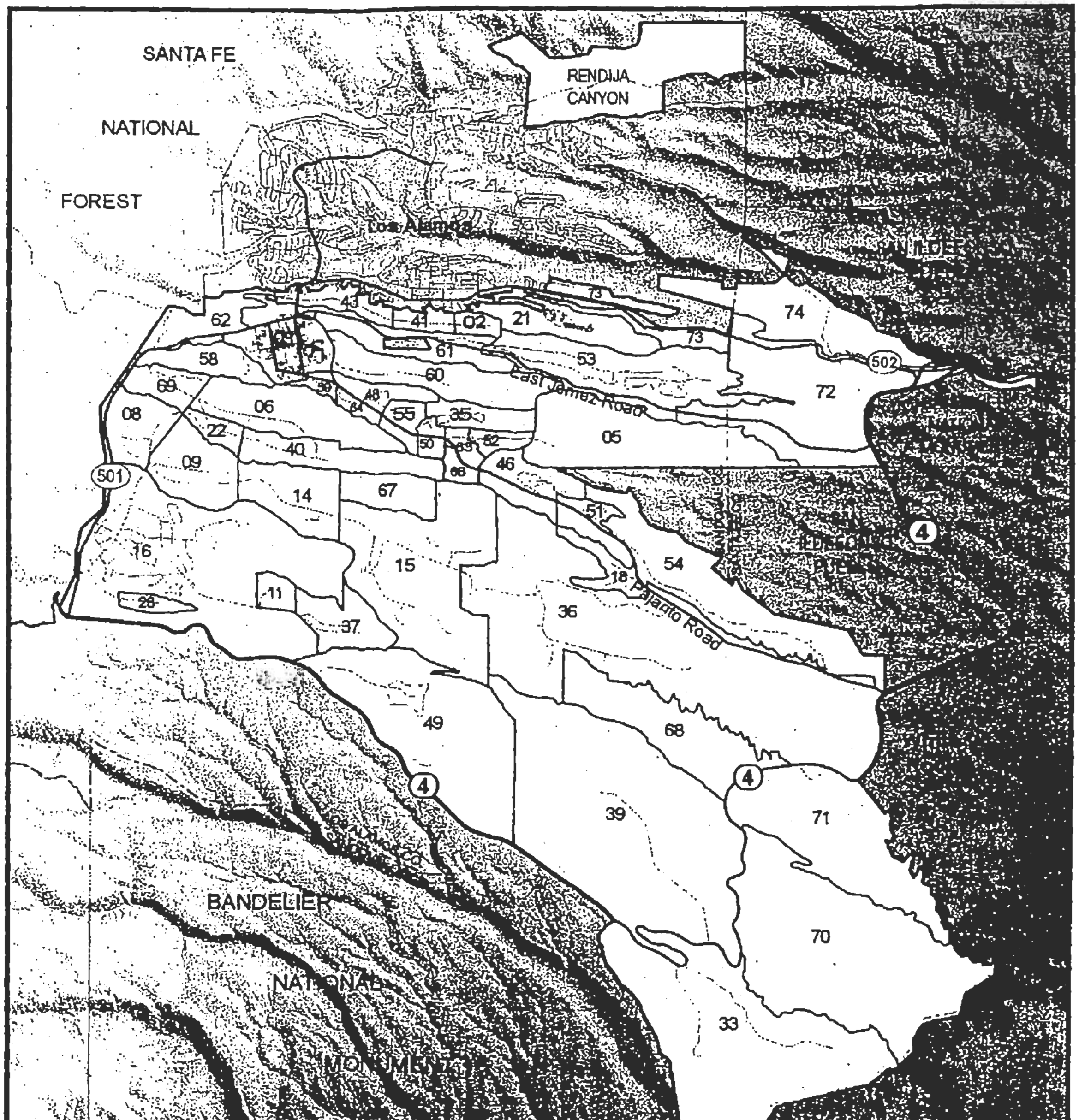
Gas Transmission



Legend

Force Main

Gravity



Steam Utilities

0 4,000 8,000 16,000 Feet

Legend

Steam Distribution Line

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