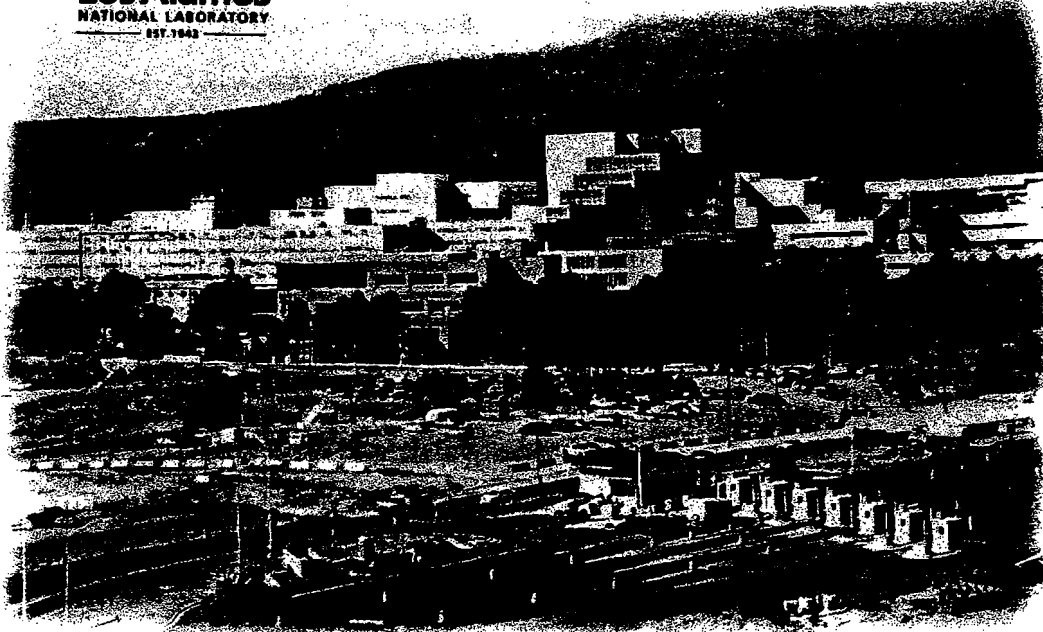


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3-26-09



Ten-Year Site Plan FY 2008 - FY 2017



May be exempt from public release under the Freedom of Information Act (5 U.S.C. 552),

Exemption number and category: Exemption 2, Circumvention of Statute;

Exemption 5, Privileged Information

Department of Energy review required before public release.

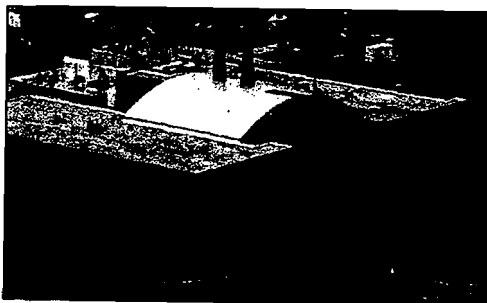
Name/Org: Site Planning and Project Initiation Group (SPPI)

Date: January 9, 2007

Guidance (if applicable): n/a

LA-CP-07-0039

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

31.9%
0.3%
0.6%
16.9%
50.3%



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.

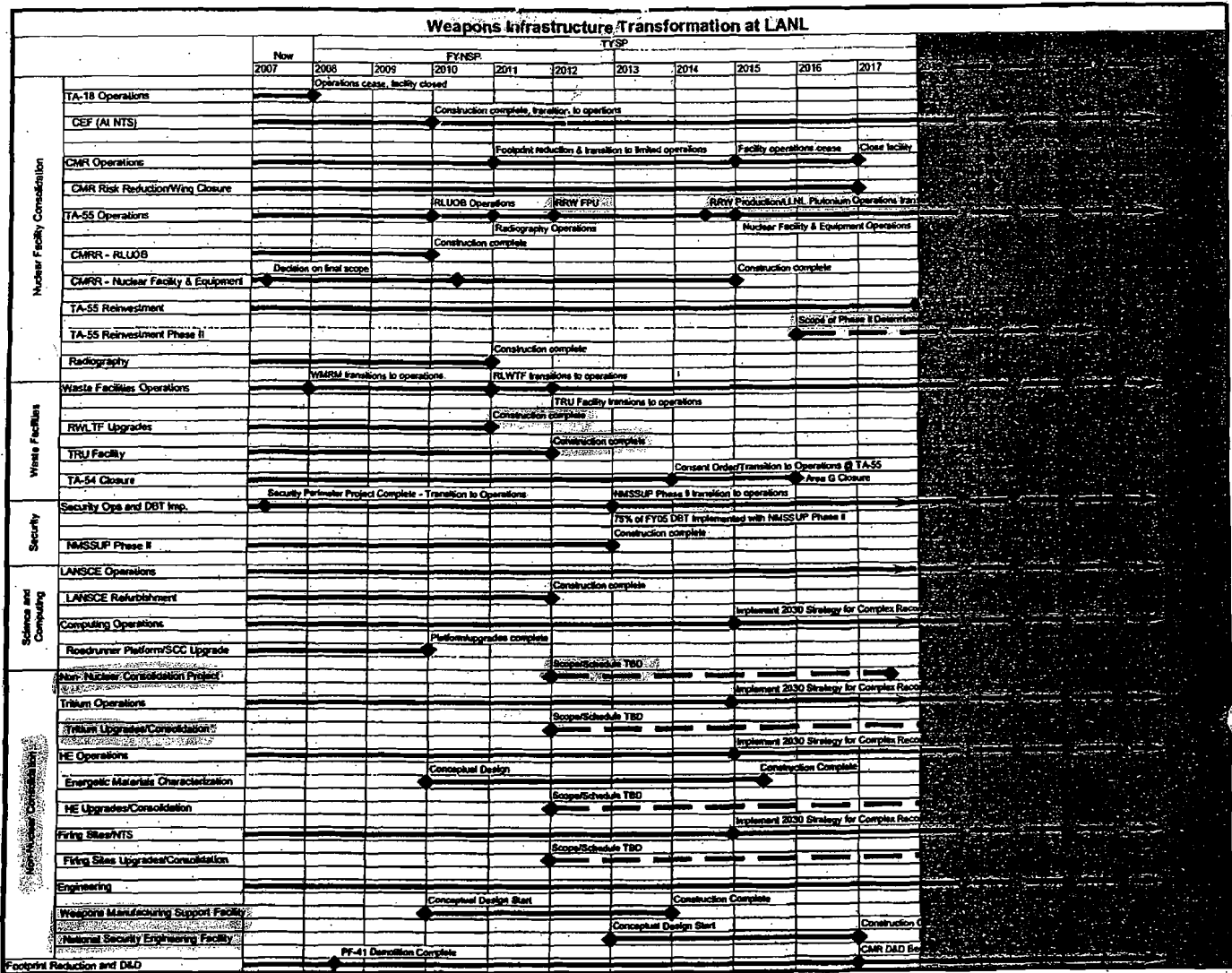


Figure 3-1: The Laboratory's path forward in response to NNSA's Complex 2030 Plan

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

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.

]*

Replacement Plant Value =
≥ \$2.2B
\$55 M/yr maintenance

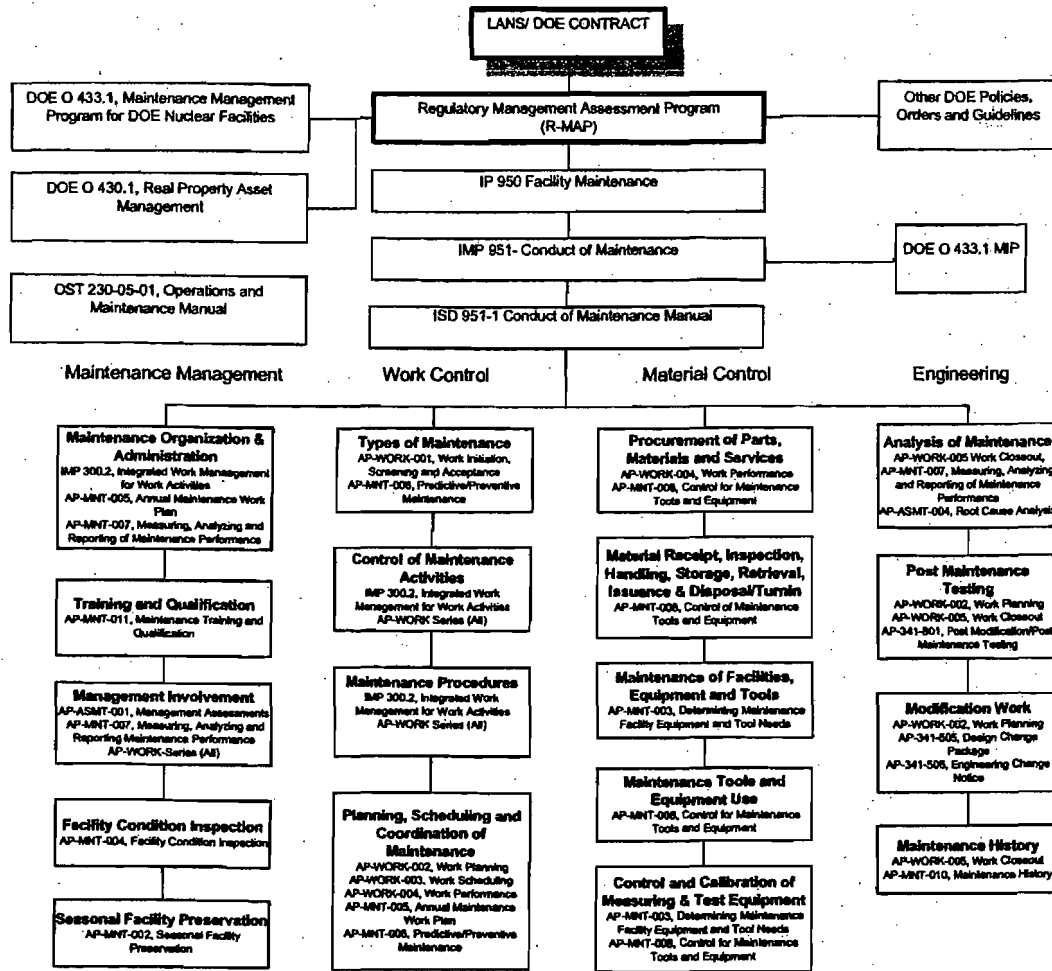


Figure 4-10: Laboratory Maintenance Management Program

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

see previous

88 LANL
 - 6 CMR
 + 55 CMRR
 137

$$\frac{137}{88} = 1.56 \text{ } 56\% \text{ increase}$$

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

**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 I 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 10CFR851 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.

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:

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.

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