

Los Alamos
NATIONAL LABORATORY
EST. 1943



Ten-Year Comprehensive Site Plan FY05 - FY14

February 11, 2005

LA-CP-04-0678

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Department of Energy review required before public release.

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Date: October 1, 2004

Guidance (if applicable): N/A

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4.7.5 Los Alamos Science Complex

Since 2000, the University of California Office of the President (UCOP) and the Laboratory have been developing alternative financing methods in addition to traditional construction mechanisms such as congressional line-item or GPP funding as a means to address aging infrastructure. While real progress has been made in recent years to improve facilities and infrastructure, serious concerns and challenges remain for non-directly funded NNSA programs that conduct scientific research in support of the DP mission. Many of the non-directly funded facilities are reaching the end of their useful life and require major upgrades to meet future mission needs.

Non-direct, non-mission essential NNSA facilities, while important as a whole, will always be considered a lower priority when competing for construction dollars as long as important mission critical direct priorities remain unfunded due to ongoing budget constraints and the fluctuation of the government's funding cycle.

During FY03/04, working with NA-10 and UCOP, the Laboratory developed the mission need and acquisition strategy plan to alternatively finance construction of the Los Alamos Science Complex (Science Complex). Located at TA-58 Two Mile Mesa North, the Science complex will relocate and co-locate approximately 1,300 scientific staff from within various Laboratory TAs. Approximately 402,000 GSF of new multi-disciplinary, modern, competitive, high-quality space will be constructed.

The objective of the Science Complex is to provide non-directly funded, non-mission essential, NNSA scientific facilities in a state-of-the-art multi-purpose and multi-disciplinary environment that will enable DP mission supported and related basic and applied scientific research and technology to be conducted in a unique and powerful collaborative setting designed to be environmentally sound and highly cost effective.

Alternative financing will utilize a "third party" to develop and construct the Science Complex for the Laboratory and DOE/NNSA to lease. Oak Ridge National Laboratory successfully used this approach to build approximately 375,000 GSF of new facility space in FY03/04. Using this approach, construction was completed much faster and costs were kept much lower because the government's year-to-year uncertainty in the availability of funds was eliminated while conforming to the Office of Management and Budget budgetary rules.

On April 1, 2004, NA-10 authorized the Laboratory to proceed with development of the Science Complex. Further analysis, development, and design are currently underway.

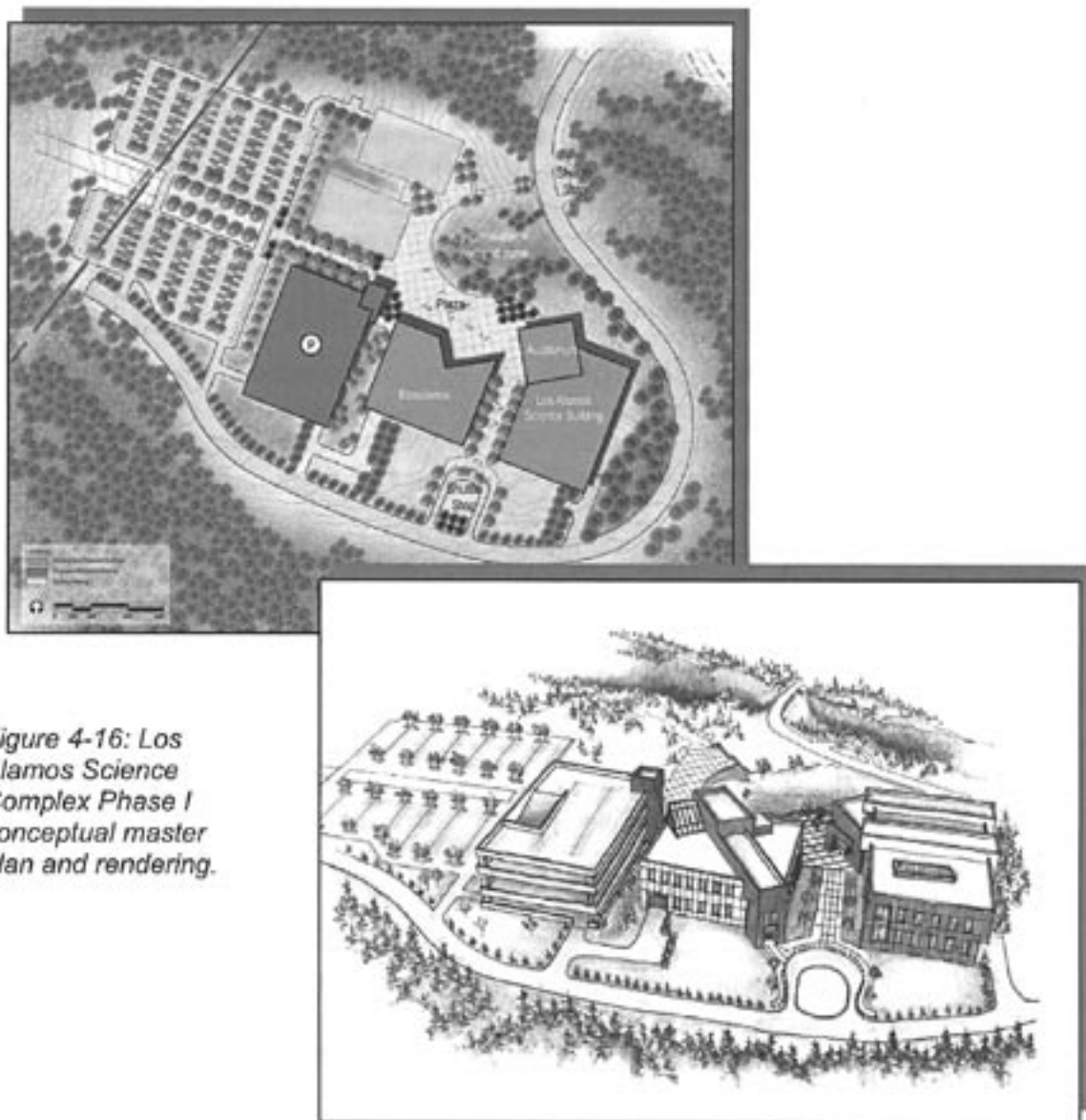


Figure 4-16: Los Alamos Science Complex Phase I conceptual master plan and rendering.



Los Alamos
NATIONAL LABORATORY
EST. 1942

Ten-Year
Comprehensive
SITE PLAN
FY06 – FY15

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Department of Energy review required before public release.

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Date: September 20, 2005

Guidance (if applicable): n/a

Distribution Limitation Statement: Further dissemination authorized to U. S. Government agencies and their contractors;
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LA-CP-05-0992

4.7.5 Los Alamos Science Complex

The Laboratory's infrastructure is rapidly aging and there are many multi-purpose, non-directly funded facilities reaching the end of their useful life and which will require major upgrades to meet future mission needs. Since these facilities are indirectly funded, during times of budget constraints they are considered lower priority as long as mission-critical stockpile stewardship facilities, funded by DP, remain unfunded.

The University of California's Office of the President (UCOP) has been working closely with DOE/NNSA Headquarters to develop alternative financing (e.g., third-party) methods in addition to traditional construction mechanisms such as congressional line-item or GPP funding as a means to address the indirectly funded infrastructure.

Beginning in FY03/04, UCOP began developing the mission need and acquisition strategy plan to finance the Los Alamos Science Complex (Science Complex). Two buildings, one classified and one unclassified, totaling 402,000 GSF, will house approximate 1,400 scientific staff members from across the Laboratory. This new multi-disciplinary, state-of-the-art infrastructure will be LEED Silver certified and highly cost effective.

In February 2004, the Los Alamos Site Office, on behalf of the NNSA, executed a Memorandum of Understanding with the United States Postal Service (USPS) and authorized the USPS, as a third-party, to assist in the development of the two

buildings and parking to meet the needs of the DOE/NNSA. U.S. Code of Federal Regulations Title 39 defines the USPS' authorization to furnish property and services to Executive agencies (e.g. DOE) within the meaning of Section 105 of Title 5.

Mission Need for the Science Complex was approved by the Office of Program Analysis and Evaluation in January 2004 and the Deputy Administrator for Defense Programs, NA-10, granted UCOP approval to proceed to prepare a detailed alternative financing proposal package and operating lease in April 2004.

Development of the Science Complex is underway and groundbreaking will occur approximately second quarter FY07.

Strategic Research (SR) Directorate

The Strategic Research (SR) Directorate creates and develops science and technology in support of the Laboratory. The SR mission is to advance knowledge across a broad range of scientific disciplines. In collaboration with Nuclear Weapons and Threat Reduction directorates, SR promotes basic and applied research directed toward solving complex scientific and technological problems in support of the Laboratory's national security and threat reduction missions. SR leads the Laboratory's broad national security mission in energy security, environmental security, and critical infrastructure. As a broker of scientific knowledge and understanding, SR supports the mission of the Laboratory 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.

SR has approximately 1,800 employees; including more than 1,200 scientists, engineers, post-doctoral fellow and graduate students. It originates most of the Laboratory's collaborations with universities, industrial firms, other government laboratories and international research centers. The Directorate has the largest share of Laboratory Fellows, long-term visiting scientists, post-doctoral researchers and graduate students.

SR operates a number of science and engineering facilities including the Laboratory's National High Magnetic Field Laboratory, the High-Temperature Superconductivity Technology Center and the Stable Isotope Resource. Access to the facilities is available to qualified members of the national and international science and engineering community.

SR has four technical divisions: the Chemistry Division, the Earth and Environmental Science Division, the Materials Science and Technology Division and the Theoretical Division. The Directorate has five program offices; The Office of Energy and Environment Initiatives, the Nuclear Technology Applications office, the Office of Science Program Office, the Science and Technology Base Office and the Technology Transfer office.

In support of the SR mission, the Directorate will make cost effective investments in the infrastructure, workforce, facilities, and technologies that will enable effective program management of activities. Goals and objectives for SR facilities are derived through coordination with the Strategic Research Directorate Laboratory Plan -2002-2005 and through the Facility Strategic Plans that have been completed by each SR Division.

SR Facility Goals and Objectives include:

- Deliver and maintain safe and secure facilities,
- Provide attractive and comfortable office and laboratory space for staff,
- Enhance the productivity and interaction of the staff, and
- Replace failing facilities with modern cost efficient ones focusing attention on the environment, safety, security, and consolidation of capabilities.
- Continue to champion the 3rd party development of the Los Alamos Science Complex at TA-58 North, as a way to accelerate upgrades of facilities in addition to traditional Line-Item or GPP funding sources.

SR Division Facility Goals and Objectives:

- Chemistry Division:
 - Remain in the CMRR Project.
 - Focus on TA-53-964 (IPF), TA-48-28, 45, 107, and TA-35, 85 as priority for facility upgrades, renovation for long-term investment.
 - Construct a new dedicated secure facility for Dissolving and Radiochemistry at TA-48.
 - Develop and construct a consolidated radiological complex (office & lab) at TA-48 to replace ~200,000 GSF of aging facilities at TA-46, 48, and 59.
 - Consolidate remaining non-radiological capabilities in the Los Alamos Science Complex, TA-58 North.
- Earth and Environmental Science Division:
 - Relocate entire division to the Los Alamos Science Complex at TA-58 North.
- Materials Science and Technology Division:
 - Develop a consolidated Materials Science Complex at TA-3, including renovation, upgrades, and new construction.
 - Create a new Center for Materials Synthesis and Fabrication.
 - Develop the infill of the MSL TA-3-1698) to provide office and possible light laboratory space and meet current office space needs.
 - Complete CINT, planned for FY06.
 - Re-locate NHMFL from TA-35, and
 - Renovate and refurbish the Superconductivity Tech Center and Cryogenics Building "B" at TA-3-32 and 34.
 - Weapons Materials Engineering Complex:
 - Consolidation of SNM Materials R&D at TA-3, or within the proposed Radiological Sciences Institute at TA-48.
 - Upgrade/renovate, as required, other TA-3 and 35 facilities.
- Theoretical Division:
 - Relocate entire division to the Los Alamos Science Complex at TA-58 North.