



Department of Energy
National Nuclear Security Administration
Washington, DC 20585



May 15, 2006

The Honorable A.J. Eggenberger
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, N.W., Suite 700
Washington, D.C. 20004-2901

Dear Mr. Chairman:

In your May 31, 2005, letter you requested a report describing the strategy that would lead to timely resolution of all fire protection deficiencies noted by your staff and achieve site-wide improvements in the Los Alamos National Laboratory (LANL) fire protection program for defense nuclear facilities. You suggested that the strategy should involve a multi-year project plan similar to those developed by LANL under the Operations Efficiency Project for other major institutional issues. You also requested that the report include a discussion of lessons learned at other DOE sites that have experienced similar challenges in fire protection, an estimate of engineering resources required, and a projection of when all fire protection upgrades would be completed.

On January 12, 2006, NNSA submitted an interim response to the Board's request. The interim response contained LANL's proposed overall integrated plan for fire protection, along with an evaluation by the Los Alamos Site Office (LASO) that expressed concerns regarding the anticipated benefits, plan direction, and requirement expectations. As part of contract transition activities, LASO requested an updated plan from LANL and committed to developing a complementary Site Office fire protection oversight strategy.

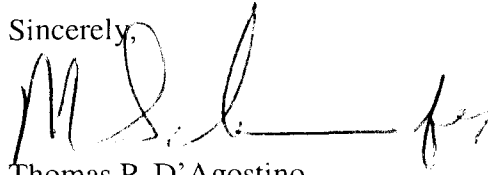
The Administrator has requested that I forward to you the updated LANL fire protection strategy and LASO's evaluation of the strategy. In its evaluation, LASO expressed concerns related to inadequate staffing, quality of fire protection analyses, and the pending fire department services agreement, along with other implementation issues. On a positive note, LASO commended LANL for its preparation for improvement in wildland fire management.

In March 2006, the Administrator directed the LASO Manager to implement a new, two-year pilot model for providing oversight, following approval of the Los Alamos National Security, LLC (LANS) Contractor Assurance System. The new oversight model will apply to business systems, non-nuclear safety, project management, and all other areas, except security and the performance of nuclear operations. In light of this new direction, LASO's fire protection oversight strategy will be incorporated into the pilot oversight model for those activities that do not impact nuclear operations. LASO will continue to provide full fire protection oversight for nuclear operations at LANL.



If you have any questions, please contact me, or have your staff contact Mike Thompson of my office at 301-903-5648 or Gerald Schlapper, Senior Safety Advisor at LASO at 505-665-7111.

Sincerely,

A handwritten signature in black ink, appearing to read 'T. P. D'Agostino', with a long horizontal flourish extending to the right.

Thomas P. D'Agostino
Deputy Administrator
for Defense Programs

Enclosure

cc: L. Brooks, NA-1
E. Wilmot, LASO
G. Schlapper, LASO
W. Futrell, LASO
M. Whitaker, DR-1
D. Cobb, LANL
W. S. Gibbs, LANL
C. Leasure, LANL

memorandum

National Nuclear Security Administration
Los Alamos Site Office
Los Alamos, New Mexico 87544

DATE: APR 25 2006
REPLY TO: S&H:WF-001
ATTN OF:
SUBJECT: Update on Los Alamos National Laboratory (LANL) Plan for Fire Protection at LANL in Response to the May 31, 2005, Defense Nuclear Facility Safety Board Letter (DNFSB 2005)

TO: Thomas P. D'Agostino, Administrator for Defense Programs, NA-10, HQ/FORS

Attached is LANL's update for the integrated plan for fire protection at LANL in response to the May 31, 2005, DNFSB letter.

While Los Alamos Site Office (LASO) continues to concur with LANL's proposed overall integrated plan for fire protection, this office continues to have concerns with specific parts of the proposed plan and actions taken to date to fully implement the plan.

Specific areas identified in the Board's letter of May 31, to which this office remains concerned, include the following:

Fire Protection Program Staffing: Although 10 months have passed since the issuance of the DNFSB letter in question, only one junior fire protection engineer has been added to the LANL Emergency Operations (EO) Fire Protection Group (FIRE) staff. As noted in previous correspondence, adequate numbers of qualified fire protection engineers are necessary to the success of any fire protection program. This is especially true at an aging nuclear site as complex and diversified as LANL. A contractor self-assurance program will not be successful unless adequate numbers of qualified fire protection professionals are available to perform rigorous oversight at nuclear and non-nuclear hazardous facilities.

Fire Protection System Inspection, Testing and Maintenance: While progress is being made in this area, an unacceptable backlog of maintenance activities remains. In early 2006, it was discovered that the visual inspection of automatic sprinkler system components had not been performed as required by NFPA 25 in key nuclear facilities. The implementation of the visual inspection requirement resulted in the discovery of compromised sprinklers in a number of nuclear facilities. The discovery and subsequent replacement of the sprinklers in question resulted in the suspension of programmatic activities within the facility.

Fire Hazard Analyses (FHAs): While LANL continues to make progress in resolving the backlog of facility FHAs, concern remains with the quality of FHAs. For example, the corroded/painted sprinkler issue identified in TA-55, PF-4, should have been identified during the facility FHA but was not. This oversight resulted in an unplanned shutdown of the facility and costs to the government.

Exemption Requests: LASO remains concerned that LANL's use of the exemption request process is excessive, relies too heavily on cost-benefit techniques without factoring into account the threats to fire fighter safety that buildings lacking adequate fire protection may represent. This approach also fails to recognize the adverse public response that would in all probability result from an uncontrolled fire in a nuclear or radiation facility lacking an acceptable level of fixed fire protection.

Funding for Fire Protection Upgrades at Existing Facilities: It is not apparent from the LANL response that a program has been put into place to resolve identified fire protection deficiencies on an ongoing basis. It is important that LANL have a program not only to document and track newly identified fire protection deficiencies, but the program must also ensure that fire protection deficiencies are resolved in a timely manner.

LANSCE Fire Pump Replacement Actions: While a Corrective Action Plan has been developed for replacement of the fire pump, LANL EO FIRE was unable to support design efforts due to competing priorities.

Emergency Baseline Needs Assessment (BNA): The BNA refers to the tri-annual review of fire department operations in accordance with DOE Order 420.1A. LASO does not agree with key points of the LANL response to this topic. There is current data and a basis to determine an initial level of fire department staffing. The current staffing level is grossly insufficient based upon an analysis of the requirements of NFPA 1710. Certainly there is a need for two new fire stations and possibly a third if activities continue to grow along Route 4. However, this is not a sound basis for delaying the process of adding additional fire fighters. NFPA 1710 provides leeway in meeting response time requirements (90% of the time criteria). Further LASO believes, based upon the size of LANL, delayed response times to small facilities in remote locations is justified. In addition, long-term approaches should include providing automatic sprinkler protection in most facilities, thus reducing the need for and demand placed upon manual fire fighting forces in the event of a fire.

Responsibility for procuring fire department services has been transferred from LANL to LASO. This action was taken following LANL's inability to reach an agreement with the county following eight years of negotiations. The status of this effort is discussed later in this letter.

Post-Partial Site-wide Fire Alarm System Replacement Project (Post-FARP): LASO concurs that progress continues to be made in this area, including expedited efforts to remove TA-55-3/4 and CMR from the BRASS system. LASO does remain concerned that there may be a delay in bringing the fire portion of the Consolidated Dispatch Center to full operations status due to delays associated with integration issues between two of the projects sub-contractors.

Wildland Fire Management: LANL is to be commended for its preparation for the upcoming wildland fire season, which in combination with the ongoing drought is anticipated to be high to extreme. LASO remains concerned that LANL is not funding an ongoing program for wildland fuels mitigation in areas where wildland fires may threaten facilities.

Agreement for Fire Department Services: This project remains on target with implementation of the agreement planned for late summer. Under the agreement staffing requirements will be increased over 3 years to comply with the requirements of NFPA 1710, and other initiatives designed to enhance the delivery of fire department services to the Laboratory will be implemented. As the staffing level increases, steps will also be taken to ensure that in the event of an off-LANL fire, sufficient resources are maintained to ensure a first alarm response to LANL without the need to recall off-duty personnel. Other enhancements include replacing uniformed administrative personnel with non-uniformed administrative personnel, establishing a fire apparatus replacement program, and exploring the establishment of a hazardous materials response unit.

LASO Initiatives for the future: LASO has begun to engage LANS upper management by bringing to their attention its concerns with the current status of the fire protection program at the Laboratory. This includes conveying LASO's expectations that LANS will initiate changes and actions, which will bring about substantial improvements to the fire protection program and its implementation.

Should you have questions regarding this response please contact Gerry Schlapper, Senior Safety Advisor, at (505) 665-7111, or Walter Futrell, Fire Protection Program Manager, at (505) 665-6574.



Edwin L. Wilmot
Manager

Attachment

cc w/attachment:

X. Ascanio, NA-124, HQ/GTN
S. Pierpoint, NA-125.2, HQ/GTN
M. Schoenbauer, NA-12, HQ/FORS
M. Whitaker, DR-1, HQ/FORS
C. Keilers, DNFSB, LASO
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C. Steele, S&H, LASO
K. Keilholtz, OFO, LASO
D. Cobb, Dir, LASO, MS-100
D. Winchell, PS-2, LANL, MS-C347



*Associate Director for
Security & Facility Operations*
Los Alamos National Laboratory
P.O. Box 1663, MS A110
Los Alamos, NM 87545

Date: March 31, 2006
Refer To: ADSFO:06-013

Mr. Gerald Schlapper
National Nuclear Security Administration,
Los Alamos Site Office (NNSA/LASO)
35th Street, MS A316
Los Alamos, NM 87544

Re: LANL Update/Status Report Regarding Fire Protection Program

Dear Mr. Schlapper:

NNSA-LASO directed LANL to provide an update/status report on nine of eleven specific Fire Protection Program issues and actions by March 31, 2006. The attachments provide status of our issues and actions. Specifically, Attachment 1 is a detailed narrative and Attachment 2 is a Gantt chart showing the status of each activity in the plan.

The attachments are related to a series of documents previously exchanged between LANL, NNSA-LASO, and the DNFSB. The documents previously exchanged are as follows:

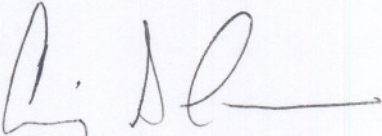
1. LANL Memorandum No. DIR-05-352 to NNSA-LASO, Fire Protection at Los Alamos National Laboratory, dated October 3, 2005.
2. NNSA-LASO Memorandum No. S&H:6WF-001, LANL Integrated Plan for Fire Protection at LANL in Response to the May 31, 2005, Defense Nuclear Facility Safety Board letter (DNFSB 2005), dated November 8, 2005
3. NNSA Memorandum from Linton F. Brooks, Administrator, to A.J. Eggenberger, Chairman DNFSB, dated January 12, 2006.
4. NNSA-LASO Memorandum No. S&H: GS-001 from Gerald Schlapper to Don Cobb, dated March 9, 2006.

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We are executing against our plan to improve our overall Fire Protection Program at LANL. If you have any questions, please do not hesitate to contact me at 606-0000.

Regards,



Craig S. Leasure
Principal Deputy Associate Director
for Security and Facility Operations

CSL:dmp

Attachments:

- Attachment 1 – Detailed Narrative
- Attachment 2 – Gantt Chart

Cys with attachments:

- Jim Streit, FIRE, MS K493
- Beverly Ramsey, EOO, MS C938
- W. Scott Gibbs, ADSFO, MS A110
- Don D. Cobb, DIR, MS A100
- ADSFO File

Attachment 1

Status of Progress on DNFSB Fire Protection Program Corrective Actions

This report provides an update/status of the DNFSB Fire Protection Program Corrective Actions.

1. Staffing

Objective: Secure a complement of qualified fire protection engineering expertise to support effective implementation of the Laboratory's fire protection program. The plan calls for hiring four qualified fire protection engineers (FPEs) during FY06.

Status: Los Alamos hired one FPE in the first half of FY06. LANL is using task-order subcontractors to perform fire hazard analyses to fill in the staffing limitations until the remaining personnel are hired.

Discussion: LANL continues to actively pursue talented and experienced fire protection professionals. To this end, LANL is currently advertising (LANL Job #210528) for qualified Fire Protection Engineering staff, with an offer of an attractive referral incentive. The LANL Fire Protection Group (FIRE) is interviewing qualified applicants when résumés and application information are received. In January 2006, FIRE selected two qualified FPE candidates. One candidate accepted a similar position at Sandia National Laboratory (SNL); the second candidate is currently considering the LANL job offer. The LANL Fire Protection Group is accelerating its efforts to hire the remaining personnel by the end of the year.

2. Fire Protection Systems, Structures and Components (SSC) Inspection, Testing and Maintenance (ITM)

Objective: Improve institutional performance of fire protection SSC ITM through implementation of the following:

- Procedures for required maintenance elements of DOE Orders 420.1A and 433.1, and national consensus standards.
- DOE O 433.1, *Maintenance Management Program for DOE Nuclear Facilities*, by June 30, 2006, in accordance with the site Maintenance Implementation Plan (MIP) to ensure a mature maintenance program is implemented for fire protection and other systems important to safety.
- Performance of ITM program gap analyses to ascertain and then perform the backlog of delinquent ITM for nuclear facilities by December 22, 2006.
- Performance of ITM program gap analyses to ascertain and then perform the backlog of delinquent ITM for high- and moderate-hazard non-nuclear facilities by September 28, 2007.
- Performance of ITM program gap analyses to ascertain and then perform the backlog of delinquent ITM for low-hazard non-nuclear facilities by June 30, 2008.

Status: LANL has made positive progress in this area of the LANL fire protection program, including the following accomplishments:

- Initial documentation and performance gap analyses for nuclear facility fire protection SSC ITM have been completed on schedule.

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- The DOE O 433.1 MIP was submitted to LASO for approval in June 2005. and an update is currently in development. Because of RTBF budget reductions, this MIP update is reexamining the June 30, 2006, commitment for nuclear facility implementation of DOE O 433.1.
- The Laboratory has initiated a project to assess all required ITM and outstanding backlog of fire protection SSCs in nuclear and non-nuclear facilities during FY06. Implementation funding for working the ITM backlog will be addressed in the FY07 budget.

Discussion: LANL continues to focus on the institutional maintenance program for fire protection SSCs. To more effectively capture sufficient detail or requirements to automatically drive an NFPA compliant ITM program, LANL's effort in this area will concentrate on transferring new construction projects to the responsible management organization, ensuring implementation of required maintenance programs, and improving our computerized maintenance management system and a master equipment list (MEL) process. With increases in FIRE staff resources to daily monitor and oversee the ITM program, LANL will improve in the investigations of ITM program concerns and issues and real-time trending or discovery of opportunities for improvement.

3. Fire Hazard Analyses (FHAs)

Objective: Development and performance of a resource-based schedule for the preparation and maintenance of FHAs for LANL facilities, including necessary updates to documents in support of authorization basis re-submittals to LASO, and development and submittal of DOE O 420.1A compliance documentation to NNSA where equivalencies or exemptions are warranted.

Status: The following work has been done in this area:

- The following updated FHAs were completed:
 - TA-16-205/450 WETF
 - TA-3-1076 BSL-3
- The following scheduled FHAs for existing and new LANL facilities have been completed:
 - TA-3-39/102 Shops Facilities
 - TA-16-1674 and TA-50-184 Qwest facilities
 - TA-22-90/91/93/115 DX Lab Facilities
 - TA-35-27 Safeguards Facility
 - TA-35-85 Laboratory
 - TA-35-213 Target Fabrication facility
 - TA-3-1420 CINT facility (new facility)

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- A subset of the scheduled FHAs for existing LANL facilities, listed below, are within two months of completion; the subcontractor has been allowed to extend scheduled deliverable dates so LANL comments can be incorporated completely. LANL is managing the schedule variance with a focus on document quality.
 - TA-3-22 Steam Plant facilities
 - TA-9-21 DX Laboratory
 - TA-43-1 Health Research Laboratory (HRL)
 - TA-53-1 Lab and Office facility
 - TA-3-132 Central Computing Facility (CCF)
- An FHA update for the TA3-29 CMR is currently underway in support of a pending BIO update submittal to LASO.
- There are several DOE O 420.1A compliance documents (equivalencies or exemption requests) awaiting LASO review and action.

Discussion: ESA-TSE's follow-on comments on the WETF mission commitments will warrant an interim update to the WETF FHA in April 2006. An update to the TA-3-29 CMR FHA is now underway (due for completion in May 2006) to support a BIO resubmittal and address several lingering fire protection issues that were raised previously. While not typically within the facility-based scope of an FHA based on DOE O 420.1A and agreements made between LASO and LANL in FY01, LANL Packaging and Transportation (P&T) recently subcontracted for a Fire Assessment (an FHA-like document) for their mobile activities in response to a LASO readiness assessment review. This document was completed in March 2006.

Directly related to DOE O 420.1A ¶ 4.2.1.11 compliance documentation, LANL submitted several equivalencies (EQs) and exemptions (EXs), summarized in Table 1, below. The last four submitted exemptions utilize, in part, cost-benefit techniques accepted at the Savannah River Site as the basis for the requests. LANL has several other existing facilities with estimated loss potentials in excess of \$1,000,000 that lack automatic fire suppression systems. LANL intends to submit exemption requests for these facilities as well, but would like to receive some feedback from NNSA on these recent submittals before developing the next compliance document submittals.

Attachment 1

Table 1: LANL DOE O 420.1A Open Compliance Documentation Status

DOE O 420.1A Compliance Document	LANL Submittal Date	Initial LASO Response Date	LANL Response Date	Resolution Date
EQ-2004-001 Request for Equivalency Approval to DOE O 420.1A for LANL Building TA-16-205, Room 124 Fire Wall Upgrades (Fire Damper Omission)	12/7/2004			
EX-2004-002 Request for Permanent Exemption Approval to DOE O 420.1A for LANL Building TA-53-3, Sprinklers in Lower Level of Linear Accelerator	12/7/2004	4/26/2005.	5/12/2005	
EX-2004-003 Request for Permanent Exemption Approval to DOE O 420.1A for LANL Building TA-53-3, Linear Accelerator Sector Fire Walls	12/7/2004	4/26/2005.	5/12/2005	
EX-2005-003 Request for Permanent Exemption Approval to DOE O 420.1A for LANL Building TA-18-23: (1) Lack of Automatic Fire Suppression System for Property Loss Potential in Excess of \$1,000,000; and (2) Means of Egress Arrangement not in Compliance with NFPA 101, Life Safety Code, Requirements	8/4/2005			
EX-2005-004 Request for Permanent Exemption Approval to DOE O 420.1A for LANL Building TA-18-32, Lack of Automatic Fire Suppression System for Property Loss Potential in Excess of \$1,000,000	8/4/2005			
EX-2005-005 Request for Permanent Exemption Approval to DOE O 420.1A for LANL Building TA-18-116: (1) Lack of Automatic Fire Suppression System for Property Loss Potential in Excess of \$1,000,000; and, (2) Means of Egress Arrangement not in Compliance with NFPA 101, Life Safety Code, Requirements	8/4/2005			
EX-2006-001 Request for Permanent Exemption Approval to DOE O 420.1A for LANL Building TA-16-180; Lack of Automatic Fire Suppression System for Property Loss Potential in Excess of \$1,000,000	2/2/2006			

4. Emergency Baseline Needs Assessment (BNA)

NFPA codes and standards, DOE O 420.1A, and the Order's implementation guidance allows alternate equivalent approaches and new technology to be considered as a way to establish compliance with the code and standard's prescriptive requirements—subject to review/concurrence by DOE/NNSA. LANL does not view NFPA 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*, as a voluntary requirement. (NFPA codes and standards are a DOE/UC contract commitment, excluding NFPA 5000.) LANL sought professional advice for several of the more contentious issues and recommendations contained in the BNA, which included approaches to establishing the appropriate on-shift staffing for emergency services for LANL hazards and facilities (including consideration of installed fire protection features where appropriate), apparatus type, fleet management, and procedures.

The Laboratory currently does not fully meet NFPA 1710 requirements; sufficient data does not exist to determine an exact level of compliance. NFPA 1710 specifically mandates numbers of

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personnel, by position, required at a fire incident. It also mandates time limits for a response to a fire event. Simply increasing staffing levels using the current set of Fire Stations will not produce compliance with NFPA 1710 for the Laboratory. Full compliance will likely require additional fire stations and reconfiguring or replacing the current active stations. Fire Stations are line item capital acquisitions and a project to initiate replacement of the existing Fire Stations and the additional capability needed for NFPA 1710 compliance have been included in the Laboratory's March Ten Year Site Plan update submittal to NNSA.

5. Post-Partial Site-wide Fire Alarm System Replacement Project (Post-FARP)

Objective: Complete the project scope of the FARP and develop the follow-on scope of work necessary to upgrade nuclear facility fire alarm systems reaching the end of their reliable operational lifetime.

Status: The current status of this effort is as follows:

- Installation of the UDACT on the fire alarm system at TA-55-3/4 is pending LASO authorization basis change approval; currently scheduled for completion by June 2006.
- Replacement of one small fire alarm panel with integral dialer and installation of a UDACT on the primary fire alarm system at TA-3-29 CMR is pending authorization basis review by the facility; currently scheduled for completion by June 2006.
- Fire alarm replacement within TA-55-4 currently relies on implementing the approved TA-55 Infrastructure Reinvestment Line Item Project.
- Other nuclear facility fire alarm system upgrades remain as described in Reference (1) in cover letter and will be aligned with future, remaining facility missions.

Discussion: As of March 24, 2006, only the TA-55-3/4 and TA-3-29 fire alarm systems are reporting via the BRASS to the TA-64-01 Central Alarm Station (CAS). The large replacement TA-53-4 LANSCE system was commissioned during the week of March 20, 2006, to coincide with the end of an accelerator maintenance outage at the facility. The LANSCE system engineer for accelerator radiation and personnel safety systems raised concerns late during the week of March 13, 2006, about the effects of a high-radiation environment during long-term beam delivery on the TA-53-4 replacement fire alarm system's electric components. LANL decided to continue installation and commissioning of the new fire alarm system and demolishing the older AutoCall-based system during the week of March 20, 2006. When beam delivery begins in April 2006, LANL will then closely monitor the performance of the new system. If adverse performance of the new fire alarm system is observed, LANL will pursue alternative approaches to providing required fire alarm system coverage in those areas of the LANSCE facility affected by the high-radiation environment.

LANL is working on the authorization basis (AB) issues associated with TA-55-3/4 (AutoCall CD-TXA fire alarm control panel and components) and TA-3-29 (AutoCall CD-NA-2 fire alarm control panel and components). LANL anticipates that both of these will be transitioned off of the BRASS on or about June 30, 2006. To maintain commitments described in TA-3-29 CMR authorization basis documentation, the current "proof-of-concept" Digitize system monitoring the primary facility fire alarm system (FCI fire alarm control panels and components) will be

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relocated from the TA-64-01 CAS to the new Consolidated Dispatch Center (CDC) within TA-69-33 Emergency Operations Center (EOC) in concert with transition of fire dispatch operations to the CDC later this year.

Two other town-site systems, the TA-0-1309 Bradbury Museum and TA-73-4 Fire Station #6, also remain on BRASS. These will be removed from BRASS in the near term subject to securing a remote monitoring contract for the Bradbury Museum within the next 60 days.

The long-term plan to address antiquated and aging facility fire alarm systems post-FARP is consistent with the October 2005 plan submittal. Final plans are subject to the long-term program plans for several facilities (e.g., the transfer to D&D of TA-21-209 and implementation of the October 2004 NNSA TA-18 Closure Plan).

Of more immediate concern is the need to complete the installation of the Lab-wide fire alarm receiving system at the TA-69-33 EOC CDC (being provided by FARP) and the integration of this system with the Intergraph computer-aided dispatch (CAD), which will ultimately be used to dispatch police, 911 and fire/emergency medical services. LANL has assigned a project manager to oversee the final integration and successful start-up of the dispatch center equipment, which is expected to be an intensive effort during FY06.

6. Wildland Fire Management

Objective: Maintain a steady-state readiness for effective wildland fire management.

Status: CY06 wildland fire season preparation is well underway for what is anticipated to be a difficult fire year. When and if sustained, adverse conditions occur, LANL will issue fire restrictions in concert with regional land manager restrictions.

Discussion: This year has all the precursor conditions (lack of precipitation and snowfall, early warm temperatures and wind) for a potentially catastrophic wildland fire season for most of the Southwest, including Northern New Mexico. LANL remains engaged with regional land management organizations and will concurrently issue restrictions and operational limitations in the Laboratory's wildland areas when sustained, very high, extreme, and red flag conditions arrive.

To prepare for the pending season, LANL has completed or is the process of performing the following:

- Cleared fire roads of dead and down trees so they are now open.
- Surfaced fire roads to correct erosion.
- Hardening of fire roads at water crossings.
- Removed hazard trees in the areas of fire roads and fire breaks.
- Reconditioned and restored existing fire breaks.
- Mitigation planning for log deck and slash removal/treatment (~7000 yd³), including development of a work plan and contract submittal.
- Purchasing of equipment and materials to stock the LANL fire cache for the upcoming season (e.g., Class A foam).

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- Early maintenance, preplanning, and staging of equipment at the LANL fire cache.
- Early completion of annual wildland fire fighter re-certifications for LAFD.
- Updating of the fuels/land cover maps within the Farsight Model at the TA-69-33 EOC.

Limited FY05 tree thinning activities were undertaken following close-out of the Cerro Grande Recovery Project (CGRP). LANL facilities management personnel performed additional thinning activities, such as routine vegetation control, clearing debris and removing dead standing trees. Recent work has been completed in and around the ESA burning ground (TA-16) and the DX firing sites (TA-15, TA-36 and TA-39). Institutional funding for forest thinning and forest fuels management competes with other institutional needs, so these were not funded to desired levels in FY05. While there remain small pockets of heavy forested fuels that can cause severe wildland fire challenges, the Cerro Grande Fire and post-fire forest-fuels treatment programs have changed the overall fire model for LANL from a full-crowning fire scenario to a fast-moving ground fire scenario. Although ground fires are generally easier to control and suppress, they normally travel faster and farther before they can be controlled and contained.

7. Lessons Learned from Other Sites

Lessons learned from other sites are dispersed through some of the preceding narrative. LANL has fielded multiple inquiries related to the painted/corroded sprinkler head issue at PF-4 and has shared information on request. In addition to informal discussions with fire protection colleagues at other sites, LANL continues to receive feedback and suggestions on improvements from other recent assessment activities, such as the SSO program review of fire protection SSC vital safety systems (VSS). Furthermore, informal meetings with the LANS-designated management team have opened up discussions with Idaho National Laboratory fire protection and emergency management subject matter experts on improvement opportunities that will be pursued under LANS. In concert with other commitments, emergent issues, and available resources, LANL strives to incorporate lessons learned from other sites and assessment recommendations and conclusions.

8. Fire Protection Staffing/Comparison with Other DOE Sites

Underlying the successful improvement of the fire protection program is a prerequisite need to staff the LANL Fire Protection Group with qualified and talented fire protection professionals. As noted in the LANL corrective action plan, LANL is significantly understaffed in this area when compared with both Lawrence Livermore National Laboratory (LLNL) and the Savannah River Site (SRS). LASO's commentary re-affirms this conclusion of understaffing with a comparison of the Y-12 fire protection program.

9. Funding for Fire Protection Upgrades at Existing Facilities

LANL is working through the following specific concerns:

- Post-FARP planning of fire alarm system replacements and upgrades for equipment reaching obsolescence at TA-55 PF-4 has relied on the approved TA-55 Infrastructure Reinvestment Line Item Project #LANL-06-015 starting in FY06. Funding for this project

Attachment 1

is being discussed with NA-10, to plan the project, which will affect when the upgrade will be performed.

- Resolution for means of egress issues at TA-16-200 through application of NFPA 101A, *Alternative Approaches to Life Safety*, evaluation techniques and implementation of strategic fire alarm system, sprinkler system, vertical opening and HVAC control upgrades to provide an equivalent level of safety.
- Installation of a new fire alarm system at TA-16-460 to meet the requirements of NFPA 101, *Life Safety Code*®, for building occupant notification.
- Retirement and replacement of the remaining Halon 1211 portable fire extinguisher inventory in-service beyond the 12-year cylinder hydrostatic test interval of NFPA 10 under KSL Project Management Plan (PMP) #0093-06 by November 2006. FY06 funding will allow replacement of the inventory. FY07 funding to complete this effort will be necessary to ensure recovery and shipment of the reclaimed agent to DoD.
- Retirement of existing Halon 1301 fixed fire extinguishing systems, and replacement with a suitable clean agent system where still required, in concert with previous DOE guidance memoranda and Executive Order #13148, *Greening the Government through Leadership in Environmental Management* (4/22/2000).
- Timely extension of fire alarm and fire sprinkler systems into an increasing number of modular office, clean room or screen room structures within existing structures.

Status of the TA-53 LANSCE Fire Pump Replacement Actions:

- On March 6, 2006, LANL approved the final report, *ADWP Corrective Action of the Water Main Break and Diesel Fire Pump Fire at the Los Alamos Neutron Science Center (dated June 2004)*. The LASO Fire Protection Engineer was an observer of the plan development and a signatory on the report. Table I of the report includes nine corrective action objectives and 14 specific corrective actions. The next corrective action to be accomplished—development of design specifications for fire suppression systems based on flow and pressure requirements and hydrant flow tests—was due for completion by March 15, 2006. Because LANL FPE resources were re-assigned to the LANS facility walkdown efforts until approximately April 15, 2006, completion of this corrective action will slip to about April 30, 2006. Other concurrent corrective actions should not be too adversely affected by this delay.

Activity ID	Activity Name	Original Duration	Start	BL Start	Finish	BL Finish	Gantt Chart (2005-2008)			
DNFSB Fire Protection Plan Response		1081.0d	04-Nov-04 A	04-Nov-04	07-Apr-09	19-Dec-08				
Staffing		377.0d	01-Apr-05 A	01-Apr-05	05-Oct-06	05-Oct-06				
A1000	Prepare job ads for FPE TSM and TSM Mgmt GL positions for posting	15.0d	11-Apr-05 A	11-Apr-05	02-May-05 A	29-Apr-05				
A1010	Post job ad #'s 210528 and 210529 for FPE TSM and TSM Mgmt GL positions	0.0d	28-Apr-05 A	28-Apr-05	28-Apr-05 A	28-Apr-05				
A1020	EO FIRE performs the candidate review and interview process.	334.0d	01-Jun-05 A	01-Jun-05	29-Sep-06	29-Sep-06				
A1030	New entry-level FPE TSM joins EO-FIRE staff	75.0d	29-Apr-05 A	29-Apr-05	15-Aug-05 A	15-Aug-05				
A1040	Add new FPE TSM and new SSM fire protection specialist for ITM review, oversight, etc.	146.0d	29-Apr-05 A	29-Apr-05	03-Apr-06	29-Nov-05				
A1045	Add new SSM fire protection specialist for ITM review oversight	50.0d	15-Sep-05 A	15-Sep-05	14-Apr-06	29-Nov-05				
A1050	Add new FPE TSM	207.0d	29-Apr-05 A	29-Apr-05	03-May-06	01-Mar-06				
A1060	Add new FPE TSM	272.0d	29-Apr-05 A	29-Apr-05	01-Jun-06	01-Jun-06				
A1070	Add new FPE TSM	337.0d	29-Apr-05 A	29-Apr-05	01-Sep-06	01-Sep-06				
A1080	Quarterly review/evaluate staffing	5.0d	30-Dec-05 A	30-Dec-05	17-Jan-06 A	06-Jan-06				
A1081	Quarterly review/evaluate staffing	5.0d	31-Mar-06*	31-Mar-06	06-Apr-06	06-Apr-06				
A1082	Quarterly review/evaluate staffing	5.0d	30-Jun-06*	30-Jun-06	07-Jul-06	07-Jul-06				
A1083	Quarterly review/evaluate staffing	5.0d	29-Sep-06*	29-Sep-06	05-Oct-06	05-Oct-06				
A1850	Update/Revise and submit to Policy Office LPR402-00-00 App. 9 replacement IP in concert with new LANL M&O	85.0d	15-Feb-06 A	01-Dec-05	01-Jun-06	01-Jun-06				
A1860	Update/Revise and submit to Policy Office LIR402-910-01 replacement IMP in concert with new LANL M&O	75.0d	15-Feb-06 A	01-Dec-05	01-Jun-06	01-Jun-06				
A1870	Update/Revise/Expand & submit to Policy Office replacement "Fire Protection Program Manual" in concert with new LANL M&O	126.0d	04-Apr-06*	01-Mar-06	29-Sep-06	29-Sep-06				
A1880	Convert/Revise & submit to Policy Office replacement AP-FIRE-001 "Fire Protection Engineering Evaluations" in concert w	66.0d	03-Apr-06*	01-Mar-06	05-Jul-06	01-Jun-06				
A1890	Convert/Revise & submit to Policy Office replacement AP-FIRE-002 "Fire Protection Equivalencies" in concert w/ LANL M&O	66.0d	03-Apr-06*	01-Mar-06	05-Jul-06	01-Jun-06				
A1900	Convert/Revise & submit to Policy Office replacement AP-FIRE-003 "Fire Protection Exemptions" in concert w/ LANL M&O	66.0d	03-Apr-06*	01-Mar-06	05-Jul-06	01-Jun-06				
A1910	Convert/Revise & submit to Policy Office replacement AP-FIRE-XXX "Knox Box Management/Control" in concert w/ LANL M&O	66.0d	03-Apr-06*	01-Feb-06	05-Jul-06	01-Jun-06				

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Activity ID	Activity Name	Original Duration	Start	BL Start	Finish	BL Finish	2005												2006												2007												2008											
A1920	Convert/Revise & submit to Policy Office replacement AP-FIRE-XXX "Non-Emergency Use of Fire Hydants" w/ LANL M&O	292.0d	01-Apr-05 A	01-Apr-05	01-Jun-06	01-Jun-06																																																
A1930	Convert/Revise & submit to Policy Office replacement AP-FIRE-XXX "FHA Preparation Guide!" in concert w/ LANL M&O	85.0d	01-Jun-06*	01-Jun-06	29-Sep-06	29-Sep-06																																																
Inspection, Testing and Maintenance (ITM) Program for FP SSCs		672.0d	03-Oct-05 A	03-Oct-05	30-Jun-08	30-Jun-08																																																
A1085	Complete FP SSC ITM Program documentation gap analysis for nuclear facilities (see FM-MSE-06-003)	74.0d	11-Oct-05 A	11-Oct-05	30-Jan-06 A	31-Jan-06																																																
A1086	Complete FP SSC ITM performance gap analysis for nuclear facilities to determine ITM delinquencies (see FM-MSE-06-005)	78.0d	01-Nov-05 A	01-Nov-05	28-Feb-06 A	28-Feb-06																																																
A1090	Update FP SSC ITM program for nuc. facilities to NFPA stds. & DOE-approved EQs in resp. to gaps (see KSL PMP 0082-06)	206.0d	01-Mar-06 A	01-Mar-06	22-Dec-06	22-Dec-06																																																
A1100	Review nuclear facility ITM program, perform delinquent ITM. (see KSL PMP 0082-06)	206.0d	01-Mar-06 A	01-Mar-06	22-Dec-06	22-Dec-06																																																
A1110	Implement DOE O 433.1 Maintenance Implementation Plan (MIP) within nuc. facilities for fire protection SSCs.	185.0d	03-Oct-05 A	03-Oct-05	30-Jun-06	30-Jun-06																																																
A1120	Update/Upgrade the FP SSC ITM program for high- and moderate-hazard non-nuclear facilities (see KSL PMP 0082-06)	248.0d	02-Oct-06*	02-Oct-06	28-Sep-07	28-Sep-07																																																
A1130	Review high- and moderate-hazard non-nuclear facility ITM program, perform delinquent ITM (see KSL PMP 0082-06)	248.0d	02-Oct-06*	02-Oct-06	28-Sep-07	28-Sep-07																																																
A1140	Update/Upgrade the FP SSC ITM program for low hazard facilities (see KSL PMP 0082-06)	434.0d	02-Oct-06*	02-Oct-06	30-Jun-08	30-Jun-08																																																
A1150	Review low hazard facility ITM program, perform delinquent ITM (see KSL PMP 0082-06)	434.0d	02-Oct-06*	02-Oct-06	30-Jun-08	30-Jun-08																																																
Fire Hazards Analyses (FHAs)		713.0d	04-Nov-04 A	04-Nov-04	28-Sep-07	28-Sep-07																																																
A1160	Issue revised/updated FHA for TA-16-205/450 WETF to support April 2005 DSA update submittal to LASO-SABT.	92.0d	06-Jun-05 A	06-Jun-05	05-Dec-05 A	14-Oct-05																																																
A1170	Issue revised/updated FHA for TA-3-29 CMR to update 1996-era document.	82.0d	01-Dec-05 A	06-Jun-05	31-May-06	31-Mar-06																																																
A1180	Issue revised/updated FHA for TA-50-01/250 RLWTF to update 2003-era document.	148.0d	01-Apr-05 A	01-Apr-05	30-Aug-05 A	31-Oct-05																																																
A1190	Issue revised/updated FHA for TA-50-69 WCRRF.	52.0d	04-Nov-04 A	04-Nov-04	28-Jan-05 A	28-Jan-05																																																
A1200	Issue revised/updated FHA for TA-54-38 RANT to update 2004-era document and address DSA and SABT issues/comments.	79.0d	01-Dec-04 A	01-Dec-04	31-Mar-05 A	31-Mar-05																																																
A1210	Issue initial FHA for TA-55-355 SST Pad to support ISB submittal package to LASO for TA-18 Early Move Project.	54.0d	01-Mar-05 A	01-Mar-05	13-May-05 A	13-May-05																																																
A1220	Issue initial FHA for TA-55-185 Interim Storage Activity to support approved ISB (Cancelled due to mission change)	85.0d	01-Apr-05 A	01-Apr-05	01-Aug-05 A	01-Aug-05																																																
A1230	Issue revised FHA for TA-3-141 BTF to update incomplete 2000-era fire accident analyses docs. incorporating LASO commts	148.0d	01-Apr-05 A	01-Apr-05	18-Nov-05 A	31-Oct-05																																																
A1240	Issue initial FHA for TA-39-62.	63.0d	01-Feb-05 A	01-Feb-05	29-Apr-05 A	29-Apr-05																																																

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Activity ID	Activity Name	Original Duration	Start	BL Start	Finish	BL Finish	2005												2006												2007												2008											
A1250	Issue initial FHA for TA-3-22 Steam Plant facilities following DIR-04-114 memorandum with funding influx.	160.0d	04-Apr-05 A	04-Apr-05	27-Mar-06 A	18-Nov-05	[Gantt bar: Apr 04 - Mar 27, 2006]																																															
A1260	Issue initial FHA for TA-3-39 and -102 MSM Shop facilities following DIR-04-114 memorandum with funding influx.	160.0d	04-Apr-05 A	04-Apr-05	23-Nov-05 A	18-Nov-05	[Gantt bar: Apr 04 - Nov 23, 2005]																																															
A1270	Issue initial FHA for TA-9-21 DX Laboratory facilities following DIR-04-114 memorandum with funding influx.	160.0d	04-Apr-05 A	04-Apr-05	23-Nov-05 A	18-Nov-05	[Gantt bar: Apr 04 - Nov 23, 2005]																																															
A1280	Issue initial FHA for TA-16-1374 & TA-50-184 Qwest Switch facilities following DIR-04-114 memorandum	160.0d	04-Apr-05 A	04-Apr-05	22-Nov-05 A	18-Nov-05	[Gantt bar: Apr 04 - Nov 22, 2005]																																															
A1290	Issue initial FHA for TA-22-90, -91, -93 and -115 DX Laboratory facilities following DIR-04-114	160.0d	04-Apr-05 A	04-Apr-05	19-Jan-06 A	18-Nov-05	[Gantt bar: Apr 04 - Jan 19, 2006]																																															
A1300	Issue initial FHA for TA-35-27 Safeguards facility following DIR-04-114 memorandum with funding influx.	160.0d	04-Apr-05 A	04-Apr-05	23-Nov-05 A	18-Nov-05	[Gantt bar: Apr 04 - Nov 23, 2005]																																															
A1310	Issue initial FHA for TA-35-85 Laboratory facility following DIR-04-114 memorandum with funding influx.	160.0d	04-Apr-05 A	04-Apr-05	27-Mar-06 A	18-Nov-05	[Gantt bar: Apr 04 - Mar 27, 2006]																																															
A1320	Issue initial FHA for TA-35-213 Target Fabrication facility following DIR-04-114 memorandum with funding influx.	160.0d	04-Apr-05 A	04-Apr-05	27-Mar-06 A	18-Nov-05	[Gantt bar: Apr 04 - Mar 27, 2006]																																															
A1330	Issue initial FHA for TA-43-1 HRL facilities following DIR-04-114 memorandum with funding influx.	160.0d	04-Apr-05 A	04-Apr-05	27-Mar-06 A	18-Nov-05	[Gantt bar: Apr 04 - Mar 27, 2006]																																															
A1340	Issue initial FHA for TA-53-1 LANSCE Laboratory and Office facility following DIR-04-114 memorandum with funding influx.	160.0d	04-Apr-05 A	04-Apr-05	27-Mar-06 A	18-Nov-05	[Gantt bar: Apr 04 - Mar 27, 2006]																																															
A1350	Issue initial FHA for TA-3-132 Central Computing Facility.	162.0d	06-Jun-05 A	06-Jun-05	28-Apr-06	31-Jan-06	[Gantt bar: Jun 06 - Apr 28, 2006]																																															
A1360	Issue initial preliminary FHA for TA-3-1420 CINT facility.	59.0d	03-Oct-05 A	03-Oct-05	07-Feb-06 A	30-Dec-05	[Gantt bar: Oct 03 - Feb 07, 2006]																																															
A1370	Issue revised/updated FHA for TA-8-23 to reflect downgrade from HC2 nuclear to low hazard radiological facility.	62.0d	01-Jun-06*	01-Feb-06	28-Aug-06	29-Sep-06	[Gantt bar: Jun 01 - Aug 28, 2006]																																															
A1380	Issue revised/updated FHA for TA-18 LACEF	55.0d	14-Apr-06*	01-Feb-06	30-Jun-06	30-Jun-06	[Gantt bar: Apr 14 - Jun 30, 2006]																																															
A1390	Issue revised/updated FHA for TA-55-355 SST Pad to reflect as-built conditions, close-out of ORR issues, EX status, etc.	62.0d	03-Jan-06 A	03-Jan-06	31-May-06	31-Mar-06	[Gantt bar: Jan 03 - May 31, 2006]																																															
A1400	Issue revised/updated FHA for TA-15-312 DARHT	106.0d	01-Jun-06*	01-Feb-06	31-Oct-06	30-Jun-06	[Gantt bar: Jun 01 - Oct 31, 2006]																																															
A1410	Issue revised/updated FHA for TA-3-1076 BSL-3 (subject to EIS and ORR schedule)	126.0d	05-Dec-05 A	03-Jan-06	15-Feb-06 A	30-Jun-06	[Gantt bar: Dec 05 - Feb 15, 2006]																																															
A1570	Issue initial FHA for TA-16-202 ESA Laboratory Bldg	62.0d	01-Dec-05 A	03-Jan-06	28-Apr-06	31-Mar-06	[Gantt bar: Dec 01 - Apr 28, 2006]																																															
A1580	Issue revised/updated FHA for TA-48-01 RC-1 Laboratory FHA update (2000 era document)	64.0d	04-Apr-06*	03-Apr-06	03-Jul-06	30-Jun-06	[Gantt bar: Apr 04 - Jul 03, 2006]																																															
A1590	Issue initial FHA for TA-3-1698 MSL Bldg	63.0d	03-Jul-06*	03-Jul-06	29-Sep-06	29-Sep-06	[Gantt bar: Jul 03 - Sep 29, 2006]																																															
A1600	Issue initial FHA for TA-3-440 SAS Bldg	63.0d	03-Jul-06*	03-Jul-06	29-Sep-06	29-Sep-06	[Gantt bar: Jul 03 - Sep 29, 2006]																																															
A1610	Issue initial FHA for TA-64-01 CAS Bldg	63.0d	03-Jul-06*	03-Jul-06	29-Sep-06	29-Sep-06	[Gantt bar: Jul 03 - Sep 29, 2006]																																															

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Activity ID	Activity Name	Original Duration	Start	BL Start	Finish	BL Finish	2005												2006												2007												2008																																																																
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A1620	Issue intial FHA for TA-46-31 Laboratory Bldg	59.0d	02-Oct-06*	02-Oct-06	29-Dec-06	29-Dec-06																																																																																																					
A1630	Issue intial FHA for TA-46-200 Laboratory Bldg	59.0d	02-Oct-06*	02-Oct-06	29-Dec-06	29-Dec-06																																																																																																					
A1640	Issue intial FHA for TA-46-250 Laboratory Bldg	59.0d	02-Oct-06*	02-Oct-06	29-Dec-06	29-Dec-06																																																																																																					
A1650	Issue intial FHA for TA-46-16 Laboratory Bldg	62.0d	02-Jan-07*	02-Jan-07	30-Mar-07	30-Mar-07																																																																																																					
A1660	Issue intial FHA for TA-46-24 Laboratory Bldg	62.0d	02-Jan-07*	02-Jan-07	30-Mar-07	30-Mar-07																																																																																																					
A1670	Issue intial FHA for TA-46-25 Laboratory Bldg	62.0d	02-Jan-07*	02-Jan-07	30-Mar-07	30-Mar-07																																																																																																					
A1680	Issue intial FHA for TA-53-14 Accelerator Lab Bldg	64.0d	02-Apr-07*	02-Apr-07	29-Jun-07	29-Jun-07																																																																																																					
A1690	Issue intial FHA for TA-16-410/411/414 Assembly Bldgs	64.0d	02-Apr-07*	02-Apr-07	29-Jun-07	29-Jun-07																																																																																																					
A1700	Issue intial FHA for TA-16-460 Bio Laboratory Bldg	127.0d	02-Apr-07*	02-Apr-07	28-Sep-07	28-Sep-07																																																																																																					
A1710	Issue intial FHA for TA-48-45 Clean Laboratory Bldg	63.0d	02-Jul-07*	02-Jul-07	28-Sep-07	28-Sep-07																																																																																																					
A1720	LANL submits to LASO TA-18-23 CASA 1 Exemption Request for NFPA 101 & lack of fire suppression \$-loss non-compliances	45.0d	01-Jun-05 A	01-Jun-05	03-Aug-05 A	03-Aug-05																																																																																																					
A1730	LANL submits to LASO TA-18-32 CASA 2 Exemption Request for lack of fire suppression for \$-loss non-compliance.	45.0d	01-Jun-05 A	01-Jun-05	03-Aug-05 A	03-Aug-05																																																																																																					
A1740	LANL submits to LASO TA-18-116 CASA 3 Exemption Request for NFPA 101 & lack of fire suppression \$-loss non-compliances	45.0d	01-Jun-05 A	01-Jun-05	03-Aug-05 A	03-Aug-05																																																																																																					
A1750	LANL submits to LASO TA-3-130 Calibration Lab Exemption Request for lack of fire suppression \$-loss non-compliance.	62.0d	01-May-06*	03-Jan-06	27-Jul-06	31-Mar-06																																																																																																					
A1760	LANL submits to LASO TA-3-218 Physics Support Bldg Exemption Request for lack of fire suppression \$-loss non-compliance.	62.0d	01-May-06*	01-Feb-06	27-Jul-06	28-Apr-06																																																																																																					
A1770	LANL submits to LASO TA-3-253 Electron Prototype Lab Exemption Request fo lack of fire suppression \$-loss non-compliance	62.0d	01-May-06*	01-Feb-06	27-Jul-06	28-Apr-06																																																																																																					
A1780	LANL submits to LASO TA-8-23 Radiography Bldg Exemption Request for lack of fire suppression \$-loss non-compliance.	62.0d	01-May-06*	01-Nov-05	27-Jul-06	30-Dec-05																																																																																																					
A1790	LANL submits to LASO TA-9-48 Machining Bldg Exemption Request for lack of fire suppression \$-loss non-compliance.	64.0d	03-Apr-06*	03-Apr-06	30-Jun-06	30-Jun-06																																																																																																					
A1800	LANL submits to LASO TA-16-180 Fire Station #5 Exemption Request for lack of fire suppression \$-loss non-compliance.	39.0d	01-Nov-05 A	03-Oct-05	02-Feb-06 A	30-Dec-05																																																																																																					
A1810	LANL submits to LASO TA-16-281/282/301 Rest Houses Exemption Request for lack of fire suppression \$-loss non-compliance.	64.0d	01-May-06*	01-May-06	31-Jul-06	31-Jul-06																																																																																																					
A1820	LANL submits to LASO TA-46-16 Laboratory Bldg Exemption Request for lack of fire suppression \$-loss non-compliance.	64.0d	01-May-07*	01-May-07	31-Jul-07	31-Jul-07																																																																																																					
Emergency Services Baseline Needs Assessment (BNA) Implementation		304.0d	01-Apr-05 A	01-Apr-05	22-Jun-06	31-Jan-06																																																																																																					

Activity ID	Activity Name	Original Duration	Start	BL Start	Finish	BL Finish	2005												2006												2007												2008											
A1420	Secure services of a fire department operations and emergency management SME to assist with implementation strategies	123.0d	01-Apr-05 A	01-Apr-05	23-Sep-05 A	23-Sep-05	[Gantt bars for 2005]																																															
A1430	EO to develop and submit a proposed implementation plan for outstanding BNA recommendations and issues to LASO. Deferred	115.0d	14-Jul-05 A	14-Jul-05	30-Jan-06 A	30-Dec-05	[Gantt bars for 2005]																																															
A1435	Obtain LASO approval	16.0d	01-Jun-06*	03-Jan-06	22-Jun-06	31-Jan-06													[Gantt bars for 2006]																																			
Los Alamos Fire Department Emergency Services Contract		287.0d	02-Jun-05 A	02-Jun-05	31-Jul-06	01-Jun-06	[Gantt bars for 2005]												[Gantt bars for 2006]																																			
A1440	LANL ceases any further contract activities.	1.0d	02-Jun-05 A	02-Jun-05	02-Jun-05 A	02-Jun-05	[Gantt bars for 2005]																																															
A1830	DOE conducts contract negotiations	67.0d	15-Sep-05 A	15-Sep-05	01-Jun-06	22-Dec-05	[Gantt bars for 2005]												[Gantt bars for 2006]																																			
A1840	LANL evaluates & develops implementation plan to execute LAFD contract terms.	84.0d	03-Apr-06*	03-Jan-06	31-Jul-06	01-Jun-06													[Gantt bars for 2006]																																			
Post Partial Site-Wide Fire Alarm Replacement Project		922.0d	01-Jul-05 A	01-Jul-05	07-Apr-09	19-Dec-08	[Gantt bars for 2005]												[Gantt bars for 2006]												[Gantt bars for 2007]												[Gantt bars for 2008]											
A1450	FARP project retains TA-55-3/4 within scope per LASO direction, requires rev of Emer Resp & Ops Ctr proc., AB changes	53.0d	01-Aug-05 A	01-Aug-05	30-Jun-06	14-Oct-05	[Gantt bars for 2005]												[Gantt bars for 2006]																																			
A1460	FARP project retains TA-3-29 CMR within scope per LASO direction, requires rev of op. & ITM procedures, AB changes	53.0d	01-Aug-05 A	01-Aug-05	30-Jun-06	14-Oct-05	[Gantt bars for 2005]												[Gantt bars for 2006]																																			
A1470	In conjunction with FIRP, determine extent of annual fire alarm rep. project scopes for implementation under FIRP	189.0d	03-Jul-06*	03-Jan-06	06-Apr-07	29-Sep-06													[Gantt bars for 2006]												[Gantt bars for 2007]												[Gantt bars for 2008]											
A1480	Replace the TA-55-3/4 AutoCall FACP and field devices under the FY2005 TYCSP TA-55 infrastructure Reinvestment Line Item	687.0d	03-Jul-06*	03-Jan-06	07-Apr-09	30-Sep-08													[Gantt bars for 2006]												[Gantt bars for 2007]												[Gantt bars for 2008]											
A1481	TA-54-38 RANT replace the AutoCall-based fire alarm system.	303.0d	09-Apr-07	02-Oct-06	23-Jun-08	20-Dec-07													[Gantt bars for 2006]												[Gantt bars for 2007]												[Gantt bars for 2008]											
A1482	TA-16-205/450 WETF replace the AutoCall-based fire alarm system.	303.0d	09-Apr-07	02-Oct-06	23-Jun-08	20-Dec-07													[Gantt bars for 2006]												[Gantt bars for 2007]												[Gantt bars for 2008]											
A1483	TA-18 LACEF replace the AutoCall-based fire alarm system (tied to TA-18 closure plan).	304.0d	01-Oct-07*	01-Oct-07	19-Dec-08	19-Dec-08													[Gantt bars for 2006]												[Gantt bars for 2007]												[Gantt bars for 2008]											
A1490	Develop a post-FARP follow-on Line Item Project proposal for remaining fire alarm scope.	185.0d	01-Jul-05 A	01-Jul-05	05-Jun-06	31-Mar-06	[Gantt bars for 2005]												[Gantt bars for 2006]																																			
Wildland Fire Management		741.0d	26-Sep-05 A	26-Sep-05	30-Sep-08	30-Sep-08	[Gantt bars for 2005]												[Gantt bars for 2006]												[Gantt bars for 2007]												[Gantt bars for 2008]											
A1500	LANL development and approval of its DOE O 450.1-required wildland fire management plan.	25.0d	26-Sep-05 A	26-Sep-05	31-Mar-06	31-Oct-05	[Gantt bars for 2005]												[Gantt bars for 2006]																																			
A1505	LANL completes independent review of Wildland Fire Management Plan	43.0d	01-Mar-06 A	01-Nov-05	31-Mar-06	30-Nov-05													[Gantt bars for 2006]																																			
A1510	LANL to develop FY06 annual work scopes in support of the approved plan to continue forest fuels mitigation	79.0d	03-Oct-05 A	03-Oct-05	13-Jan-06 A	02-Dec-05	[Gantt bars for 2005]												[Gantt bars for 2006]																																			
A1520	LANL to execute FY06 annual work scopes in support of the approved plan to continue forest fuels mitigation	189.0d	18-Jan-06 A	03-Jan-06	29-Sep-06	29-Sep-06													[Gantt bars for 2006]												[Gantt bars for 2007]												[Gantt bars for 2008]											
A1530	LANL to develop FY07 annual work scopes in support of the approved plan to continue forest fuels mitigation	42.0d	02-Oct-06	02-Oct-06	04-Dec-06	04-Dec-06													[Gantt bars for 2006]												[Gantt bars for 2007]												[Gantt bars for 2008]											

Primary Baseline
 Remaining Work
 ◆ Milest...
 Actual Work
 Critical Remaining Work
 ▶ Sum...

Activity ID	Activity Name	Original Duration	Start	BL Start	Finish	BL Finish	2005												2006												2007												2008											
							2005				2006				2007				2008				2005				2006				2007				2008																			
A1540	LANL to execute FY07 annual work scopes in support of the approved plan to continue forest fuels mitigation	189.0d	02-Jan-07*	02-Jan-07	28-Sep-07	28-Sep-07	[Gantt chart bars for A1540: 02-Jan-07 to 28-Sep-07]																																															
A1550	LANL to develop FY08 annual work scopes in support of the approved plan to continue forest fuels mitigation	42.0d	01-Oct-07	01-Oct-07	03-Dec-07	03-Dec-07	[Gantt chart bars for A1550: 01-Oct-07 to 03-Dec-07]																																															
A1560	LANL to execute FY08 annual work scopes in support of the approved plan to continue forest fuels mitigation	190.0d	02-Jan-08*	02-Jan-08	30-Sep-08	30-Sep-08	[Gantt chart bars for A1560: 02-Jan-08 to 30-Sep-08]																																															
A1940	LANL ENV Completes annual update to Wildland Fire Management Plan, including tree mortality gap	85.0d	01-Jun-06*	01-Jun-06	29-Sep-06	29-Sep-06	[Gantt chart bars for A1940: 01-Jun-06 to 29-Sep-06]																																															
A1950	LANL ENV updates forest fuel loading database	107.0d	01-May-06*	01-May-06	29-Sep-06	29-Sep-06	[Gantt chart bars for A1950: 01-May-06 to 29-Sep-06]																																															
A1960	LANL ENV exercises Fuels & Fire Hazard Assessment Model in the LANL emergency exercise program	189.0d	03-Jan-06 A	03-Jan-06	29-Sep-06	29-Sep-06	[Gantt chart bars for A1960: 03-Jan-06 to 29-Sep-06]																																															
A1970	LANL completes annual update to Wildland Fire Management Plan	84.0d	01-Jun-07*	01-Jun-07	28-Sep-07	28-Sep-07	[Gantt chart bars for A1970: 01-Jun-07 to 28-Sep-07]																																															

Primary Baseline
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