



**Department of Energy**  
**National Nuclear Security Administration**  
Washington, DC 20585

April 30, 2004

The Honorable John T. Conway  
Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, NW.  
Suite 700  
Washington, D.C. 20004

Dear Mr. Chairman:

In your January 27, 2004, letter on Conduct of Engineering and Implementation of Department of Energy (DOE) Order 420.1A, *Facility Safety*, at Los Alamos National Laboratory (LANL), you requested the National Nuclear Security Administration's plans and a report for full implementation of this order.

LANL has several initiatives underway to enhance the conduct of engineering and implementation of DOE Order 420.1A for **facility work**. These initiatives are listed in the enclosure. However, a significant effort is still required to develop a program and an implementation plan for **non-facility work**. Therefore, the Office of Defense Programs finds it necessary to request a 90-day extension to prepare an adequate implementation plan.

The request for extension has previously been discussed with your staff. Should you have any questions, please do not hesitate to contact me or have a member of your staff contact Sujita Pierpoint at (301) 903-9601 or Gerald Schlapper at (505) 665-7111.

Sincerely,

A handwritten signature in black ink, appearing to read "Everet H. Beckner".

Everet H. Beckner  
Deputy Administrator  
for Defense Programs

Enclosure

cc w/enclosure:

**M. Whitaker, DR-1/**



Printed with soy ink on recycled paper


04 APR -5 PH 4: 31

Associate Director for Operations  
P.O. Box 1663, Mail Stop A104  
Los Alamos, New Mexico 87545  
(505) 667-0079/FAX: (505) 665-1812

Date: April 5, 2004  
Refer to: AD-Ops:04-029

Mr. Edwin Wilmot, Manager  
Los Alamos Site Office  
MS A316  
Los Alamos, NM 87545

Subject: Request for Extension for the LANL Response to the January 27, 2004 Letter from DNFSB to NNSA on Conduct of Engineering and Implementation of DOE Order 420.1A, *Facility Safety* at Los Alamos National Laboratory

  
Dear Mr. ~~Wilmot~~:

DNFSB requested a report from NNSA in the subject letter to address the following:

1. Outlines the milestones and completion dates for incorporating DOE Order 420.1A and its guidance into LANL requirements and guidance documents. This plan should encompass the application of those requirements and associated guidance to a new safety class and safety significant structures, systems, and components within existing facilities whether the structures, systems, and components are associated with facility or non-facility work.
2. Outlines how to determine when the application of engineering practices such as a conceptual design phase and independent design reviews would improve the safety of non-facility projects, and what changes are needed in LANL requirements, guidance and training to affect this application.
3. Outlines requirements, guidance, and training needed at LANL to ensure that appropriate reviews of design adequacy are conducted for existing structures, systems, and components that are newly designated as safety class or safety significant.

After careful review and consideration of our current status relative to implementation of DOE O 420.1A and the institutional actions necessary to address the DNFSB request, we find it necessary to request a 90 day extension for the submittal to the subject letter.

Currently, LANL has the following initiatives underway to enhance the conduct of engineering and implementation of DOE Order 420.1A for **facility work**.

1. Facility and Waste Operations (FWO) Division is the Design Authority for facility work at LANL. To establish a single point of contact for Design Authority, FWO has formed a Program Office for Engineering Oversight headed

by a Chief Engineer reporting directly to the Facility and Waste Operations Division Leader. The Engineering Standards Manager who was part of FWO's Design Engineering and Construction Services (FWO-DECS) group has been transferred into this new office. This realignment provides more visibility to the engineering standards within the division and LANL.

2. Several new chapters (i.e. nuclear, hazardous process, radiation protection) are incorporated into the LANL Engineering Manual to include technical requirements of DOE Order 420.1A and its guidance. In addition to technical requirements, the nuclear chapter provides the overall process of integrating safety analysis into design.
3. Several existing chapters (i.e. structural, electrical, instrumentation and control) are revised to incorporate technical requirements of DOE Order 420.1A and its guidance.
4. Requirement to perform a formal back-fit analysis of existing SSCs whose function have been upgraded to perform safety function(s) is included in Chapter 1, Section Z1010, Administration (Programmatic and Facility) of the LANL Engineering Manual. Overall methodology and documentation needed with the back-fit analysis is also described in this section.
5. LIR 220-03-01, Engineering Standards have been revised to explicitly state that once the standards receive consensus approval of programmatic groups and are issued, they do apply to non-facility work.
6. Engineering Program Manual is being developed under the Integrated Facility Management Program (IFMP) and is scheduled to be completed in FY04. The Engineering Program Manual would describe a single, site-wide engineering program for facility work.
7. IFMP has developed and piloted three change control procedures and currently these procedures are being revised to incorporate lessons learned and are expected to be ready for use for facility work in June 2004.
8. Several procedures required to implement DOE Order 420.1A, System Engineering Program have been developed and are being implemented for facility work.
9. IFMP engineering program is focusing, in FY04, on developing remaining procedures needed to implement DOE Order 420.1A, System Engineering Program.

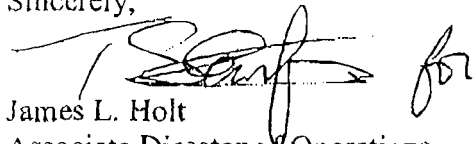
LANL is progressing towards establishing a single site-wide engineering program for facility and non-facility work. This program shall implement DOE Order 420.1A across the site consistently. LANL is taking the following steps to achieve these goals:

1. Establish a DOE Order 420.1A Implementation Team with membership from groups that perform facility and non-facility work. This team shall be sponsored by myself and the team leader shall report progress of the Order implementation to me monthly.

2. This team shall develop an institutional implementation plan for DOE Order 420.1A. The implementation of the Order shall be managed using project management principles and practices.
3. The team shall ensure that the requirement for performing the independent design reviews during different project phases for facility and non-facility work are included in the engineering design procedures. The team shall also ensure that technical review procedures for facility and non-facility work are developed/revised and implemented.
4. The requirement for performing design adequacy reviews for existing structures, systems, and components that are of the newly designated safety class or safety significant is already included in Chapter 1, Section Z1010, Administration (Programmatic and Facility) of the LANL Engineering Manual. The team shall ensure that the design adequacy process is clearly delineated in the engineering procedures, personnel performing this function are trained, and the process is implemented for facility and non-facility work.

Considering the magnitude and importance of this task to NNSA and LANL, the Laboratory requests an extension for the submittal of the requested information to LASO for submittal to the DNFSB concerning the implementation DOE Order 420.1A, *Facility Safety* from April 1, 2004 to June 30, 2004.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Holt for". The signature is written in a cursive, somewhat stylized font.

James L. Holt  
Associate Director of Operations

Cy: IM-5, MS A150  
ADOps file  
Jim Angelo, PS-DO, C347  
Pat Volza, PS-2, DNFSB Coordinator, C347  
Gurinder Grewal, FWO-DO, M791