



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

March 29, 2010

The Honorable John E. Mansfield  
Vice Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, N.W., Suite 700  
Washington, D.C. 20004

Dear Mr. Vice Chairman:

On December 2, 2009, the Defense Nuclear Facilities Safety Board (DNFSB) issued a letter with a 90-day reporting requirement for a report on the actions taken or planned by the Los Alamos Site Office (LASO) and Los Alamos National Security, LLC (LANS) to address work planning and controls deficiencies. My letter dated February 23, 2010, promised a response by April 2, 2010.

This letter transmits reports from LASO and LANS that provide the completed and planned actions to the identified deficiencies. Additionally, Defense Programs (NA-10) has partnered with the Energy Facilities Contractors Group (EFCOG) to begin a long-term initiative to improve work planning and work control within the National Security Enterprise. As part of this effort we are considering developing tools and improving guidance on work planning and work control within the Department. Your staff is already involved in the EFCOG groups and is welcome to participate in the initiative.

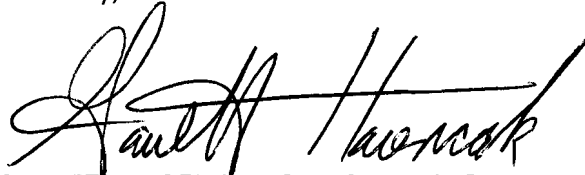
LANS developed actions to address the issues identified in your letter and also used the opportunity to re-evaluate and in some cases continue the changes and improvements that have been made in work planning and work control over the past three years. The revised plan has broad support from the laboratory's senior leadership and the goal is to develop and implement, effective, sustainable improvements in activity level work control.

LASO oversight actions will continue to implement a risk-based oversight program in accordance with DOE O 226.1A, *Implementation of Department of Energy Oversight Policy*. Facility Representatives and subject matter experts will perform work planning and control oversight as committed in the attached LASO response and annual LASO assessment plan. LASO, with support from other NNSA organizations, will conduct an independent work planning and control assessment in FY 2011 to assess the effectiveness and implementation of LANS improvement activities across the laboratory.



If you have any questions concerning this letter, please contact me or have your staff contact Mr. William (Ike) White at (202) 586-8214.

Sincerely,

A handwritten signature in black ink, appearing to read "Garrett Harencaak". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

GARRETT HARENCAK, Brig Gen, USAF  
Principal Assistant Deputy Administrator  
for Military Application  
Office of Defense Programs

Enclosure

cc w/enclosure:

- T. D'Agostino, NA-1
- M. Whitaker, HS-1.1
- D. Winchell, LASO
- M. Anastasio, LANS

# memorandum

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

DATE: **MAR 16 2010**  
REPLY TO:  
ATTN OF: SO:21CC-240186  
SUBJECT: Activity-Level Work Planning Improvement Actions

TO: Brigadier General Garrett Harencak, Principal Assistant Deputy Administrator for Military Application, NA-10, HQ/FORS

#### References:

- 1.) Letter from John E. Mansfield, PH.D, Vice Chairman, DNFSB, to The Honorable Thomas P. D'Agostino, Administrator, NNSA, *Letter refers to the DNFSB Staff Issue Report Memorandum in Reference (2)*, dated December 2, 2009
- 2.) Memorandum from R. Verhaagen, DNFSB, to T. J. Dwyer, Technical Director, and Board members, Subject: "*Activity-Level Work Planning at Los Alamos National Laboratory*", dated September 17, 2009

Attached is a summary of Defense Nuclear Facilities Safety Board (DNFSB) issues and corresponding Los Alamos Site Office (LASO) responses in support of the U.S. Department of Energy (DOE) National Nuclear Security Administration (NNSA) response to the DNFSB letter, Reference (1), concerning activity-level work planning. Attachment 2, which is supported by LASO, contains the response from Los Alamos National Security, LLC (LANS).

Los Alamos Site Office implements its oversight responsibilities via DOE Order 226.1A using a risk based approach, and oversight has been and will continue to be accomplished by our Facility Representatives and Subject Matter Experts who are actively engaged in a wide variety of transactional and system oversight activities. On January 20, 2010, LASO issued a letter to LANS expressing concerns about worker safety associated with integrated work control in programmatic and research operations. It is evident that Laboratory senior management is committed to improving activity level work control and the management team has been actively engaged in their action plan to improve work planning and control.

The Laboratory will be implementing their continuous improvement activities through mid Fiscal Year 2011. After that, LASO, in concert with NNSA, plans to conduct a focused work planning and control assessment to assess the status of the Laboratory improvement activities and implementation of work planning and control at the activity level. This assessment will utilize the NNSA criteria and review approach documents as the basis for the assessment. LASO future actions are based, in part, on LANS action plan.

If you have any questions regarding this Memorandum, you may contact Joseph Vozella, Assistant Manager Safety Operations, at (505) 606-1944.



Donald L. Winchell, Jr.  
Manager

#### Attachments

cc w/attachments:

F. Russo, NA-1, HQ/FORS  
D. Field, EE-3C, HQ/FORS  
J. McConnell, NA-171, HQ/FORS  
J. Winter, NA-171.2, HQ/FORS  
K. Loll, NA-1, HQ/GTN  
W. White, NA-171.2, HQ/FORS  
D. Nichols, NA-1, HQ/FORS  
R. Snyder, OOM, LASO  
J. Vozella, AMSO, LASO  
C. Keilers, AMFO, LASO  
D. Decker, SO, LASO  
C. Casalina, SO, LASO  
I. Richardson, DLD, LANS, MS-A100  
M. Mallory, PADOPS, LANS, MS-A102  
J. Cantwell, ADESHQ, LANS, MS- K491  
J. McNeel, ADESHQ, LANS, MS-K491  
B. Hargis, WSR-OFF, LANS, MS-K491  
Records Center, LASO  
Official Contract Files, LASO

## **Los Alamos Site Office Actions in Response to Defense Nuclear Facilities Safety Board Work Planning and Control Issues**

### **DNFSB Issue:**

The Los Alamos Site Office (LASO) does not have a work planning and control Subject Matter Expert (SME) on staff or a program focused on the oversight and assessment of Los Alamos National Security, LLC (LANS) activity level work planning and control. The schedule for Fiscal Year (FY) 2009 did not contain any plans for a LASO assessment and no such assessment has been accomplished. LASO's model for providing oversight of work planning and control includes shadowing the contractor's assessments, having Facility Representatives (FRs) and others observe work and evaluate such matters as conduct of operations, and implementing contract performance-based incentives. LASO has not institutionalized the prescribed criteria and review approach documents so that activity level work is routinely assessed by the Site Office. No dedicated work planning and control assessments have been conducted this year, nor are any planned for the future.

### **Recent Completed Activity**

1. The Los Alamos Site Office implements its oversight responsibilities via DOE Order 226.1A using a risk based approach. LASO oversight has been and will continue to be accomplished via FRs deployed at the Laboratory Nuclear Facilities and a number of the higher hazard facilities as well as functional SMEs, who are actively engaged in a wide variety of transactional and system oversight activities involving work planning and control. On an annual basis, LASO submits an annual Integrated Safety Management (ISM) declaration that is inclusive of the Laboratory's ISM declaration. As part of LASO's approval process of the Laboratory's ISM declaration, laboratory activities that form the basis of the declaration, including work planning and control, are shadowed and evaluated. Annually LASO develops an Integrated Assessment Schedule, which is executed by FRs and SMEs. This includes LASO independent assessments as well as the shadowing of Contractor Assessments. Facility Representatives and SMEs are actively engaged in daily operational awareness activities, and continue to shadow the Contractor's assessment activities involving work planning and control. LASO and the U.S. Department of Energy National Nuclear Security Administration (NNSA) maintain operational awareness of assessments performed by the contractor and independent organizations. It is accurate that LASO did not conduct any independent dedicated work planning and control assessments in FY 2009. However, LASO did perform work planning and control oversight throughout the year as follows:

- a. Facility Representative oversight at deployed facilities on a recurring basis;
  - b. Los Alamos Site Office shadowed Laboratory assessments that were inclusive of work planning and control subject area via Facility Centered Evaluations, Integrated Work Management (IWM) self-assessments, and the Director's ISM/IWM Assessments. For each of these assessments, LASO shadowed the assessments with a team of SMEs and/or FRs, and determined that the assessments were led and staffed by competent individuals with results that are considered dependable.
  - c. Los Alamos Site Office shadowed activities that formed the foundation of the LANS annual effectiveness review and ISM declaration. In FY 2008, the Laboratory's declaration was based on the Director's Institutional Assessment "Integrated Safety, Security, and Work Management Systems at Los Alamos National Laboratory" which concluded that work planning and control required improvement. In FY 2009, the effectiveness review and declaration were based on the "2009 Annual Integrated Safety Management System Review" in which safety performance and system improvements, inclusive of work control and planning were evaluated. It was determined that that the Laboratory "needs improvement" in the implementation of ISM Step 2 "hazard identification and analysis", and step 3 "control development and implementation".
  - d. Los Alamos Site Office addressed work planning and control deficiencies as part of the FY 2009 Performance Evaluation Process via subjective evaluation pointing out student accident/incident issues requiring management attention.
  - e. Los Alamos Site Office created two FY 2010 Performance Based Incentives to address improvements in Laboratory implementation of work planning and control.
2. On January 20, 2010, LASO issued a letter to LANS expressing concerns about worker safety associated with integrated work control in programmatic and research operations. LANS senior management is improving activity level work control initiatives per the attached action plan. LASO future actions are based, in part, on LANS action plan.

**LASO Future Actions:**

1. Los Alamos Site Office will continue to perform risk based oversight via DOE Order 226.1A implementation per LASO FY 2010 Integrated Assessment Schedule, inclusive of:

- a. Shadowing of Contractor assessments that include the scope of work planning and control, including:
    - Maintenance Work Order Control
    - Nuclear and High Hazard Operations Work Control
    - Maintenance Work-Planning, Scheduling, and Execution within Science and Technology Operations Facilities
    - Review of Work Control/Quality Assurance for Management Level-2 Packages
    - Standing Integrated Work Documents
    - Beryllium Program Requirements (Joint LANS/LASO Assessment)
    - Technical Area-21 10 Code of Federal Regulation 851 Subcontractor Self-Assessment
    - Nanotechnology
    - Student Mentoring
  - b. Continuing FR oversight of work planning and control at deployed facilities on a recurring basis.
  - c. Shadowing the planned Facility Centered Evaluation of the Radioactive Liquid Waste Treatment Facility; scope includes work planning and control.
  - d. Shadowing, evaluating, reviewing, and approving Laboratory's annual ISM effectiveness review and declaration inclusive of work planning and control.
2. Los Alamos Site Office will track and evaluate the LANS execution schedule and closure of LANS activity-level work planning improvement actions.
  3. Los Alamos Site Office, with support from other NNSA organizations, plans to conduct a focused work planning and control assessment in FY 2011 to assess the effectiveness of the Laboratory improvement activities and implementation of work planning and control at the activity level. This assessment will utilize the NNSA criteria and review approach documents as the basis for the assessment.
  4. In FY 2011, LASO and NNSA will make a decision on whether or not to conduct an ISM re-verification at the Laboratory.



*Office of the Director*

March 1, 2010

Donald L. Winchell, Jr., Manager  
U.S. Department of Energy  
Los Alamos Site Office  
3747 West Jemez Road  
Los Alamos, NM 87544

Dear Mr. Winchell:

**Subject: Activity-Level Work Planning Improvement Actions**

**Reference: DNFSB December 2, 2009 Letter to NNSA Administrator referring to DNFSB Staff Issue Report of September 17, 2009 – *Activity-Level Work Planning at Los Alamos National Laboratory***

Attached is a summary of Defense Nuclear Facilities Safety Board issues and corresponding LANL responses in support of the NNSA response to the DNFSB letter concerning activity-level work planning dated December 2, 2009.

Our goal is to achieve a proactive safety culture across the Laboratory that appropriately engages workers and managers in the implementation of our work management process. The LANL leadership team is committed to improving our work planning and execution activities. We feel strongly that the processes and tools that we have established support the safe execution of our work and that our efforts at improving implementation are appropriate. The actions summarized in the attachment focus on our nuclear facilities; however, we have included other actions that are more broadly focused to indicate our commitment to continuous improvement across the Laboratory.

Sincerely,

A handwritten signature in black ink, appearing to read 'I. E. Richardson III', with a long horizontal flourish extending to the right.

I. E. Richardson III  
Deputy Director

PO Box 1663, MS A100, Los Alamos, NM 87545  
505-667-5101 / FAX 505-665-2679

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National Nuclear Security Administration of the U.S. Department of Energy



Attachments: (1) LANL Actions in Response to DNFSB Work Planning and Control

Cy: D. Winchell, LASO-OOM, A316  
C. Keilers, LASO-FO, A316  
M. Mallory, PADOPS, A102  
J. Cantwell, ADESH&Q, K491  
J. McNeel, ADESH&Q, K491  
B. Hargis, ADESH&Q, K491  
R. McQuinn, ADNHHO, K778  
C. Anderson, ADNHHO, K778  
M. Neu, ADCLES, F629  
R. Erickson, ADCLES, F629  
C. Beard, ADSMS, E585  
T. George, ADSMS, E585  
S. Seestrom, ADEPS, A106  
R. Knapp, CAO-OFF, A147  
M. Clay, CAO-PF, G783  
J. Angelo, OS-DO, K778  
S. Waylett, MSS-DO, P903  
T. McNaughton, MSS-DO, P903  
IRM-RMMSO, A150  
DIR-10-135

## **LANL Actions in Response to DNFSB Work Planning and Control Issues**

The following provides a summary of DNFSB issues and corresponding LANL actions in support of the NNSA response to DNFSB letter dated December 2, 2009. The summary addresses the key issues with respect to LANL nuclear facilities. Additional actions specific to Research and Development (R&D) and Programmatic activities have been addressed in our response to LASO Director dated February 5, 2010. Unless otherwise indicated, a schedule for execution of the actions below will be delivered to LASO by April 16, 2010.

### **A. DNFSB Issue:**

Institutional-level directives for work planning and control are inadequate in that they do not clearly define the roles and responsibilities of those involved in work planning and control.

### **Recent Completed Activity**

1. The Integrated Work Management Procedure P300 was revised on 10/30/2009. All roles and responsibilities were re-verified and added to P300. The R&D Appendix of P300 was also changed to include clarification of the Integrated Work Management (IWM) process flow, and roles and definitions of R&D persons-in-charge (PICs)/planners consistent with other IWM requirements and, enhancement and clarification on utilization and engagement of Subject Matter Experts (SMEs).  
Completed 10/30/2009

### **B. DNFSB Issue:**

LANL does not have a documented and approved process for performing hazard analysis of activity-level work.

### **LANL Actions:**

1. LANL does have an institutional work control process (Integrated Work Management, P300) that endorses several systems for activity level hazard analysis that are typically facility-specific, including the Job Hazard Analysis (JHA) data system tool. An IWM focused Hazard Analysis Handbook will be developed to provide tools to support consistency and critical thinking during analysis of hazards and as work is being performed in our nuclear facilities.
2. Implementation will require a multi-step process:
  - i. Each line organization will review and update the list of activities as described in P300 and validate the processes used to maintain the list.
  - ii. Each Responsible Line Manager (RLM) will concurrently rank their IWDs based on types of operations (e.g. standing), hazard level, date of last review, etc. The RLM will review low hazard work activities to determine if additional hazard analysis is required. A determination will be made of which activities/integrated work documents (IWDs) will be reviewed applying an additional hazard analysis method.

- iii. Results of this activity with the determinations of what work activities will be re-evaluated will be submitted to the appropriate Division Leader for review and concurrence copies will be provided to the ESH&Q Managers who support the organization.
- iv. A schedule of hazard analysis review will be developed by each organization.

**C. DNFSB Issue:**

The pre-job briefing process and its execution process could be strengthened.

**LANL Actions:**

1. Develop and disseminate guidance to RLMs for effective conduct of pre-job briefs.

**D. DNFSB Issue:**

The document control system fails to ensure that correct revisions of work planning and control directives are used to plan work.

**LANL Actions:**

1. The maintenance work control document AP-WORK-002 will be modified to address the control of work package revisions. A follow-up self-assessment will be conducted to ensure the effectiveness of revision controls.

**E. DNFSB Issue:**

LANL management noted that the organization's feedback and continuous improvement process requires improvement. There is no mechanism in place to link lessons learned from post-job reviews with the work planning process.

**LANL Actions:**

1. The Maintenance and Site Services organization has developed a lessons learned program and is in the process of implementing it in the nuclear facilities. This new program gives planners access to activity level lessons learned and post-job review comments.
2. LANL is accelerating improvements in our lessons learned process. Enhancements will improve the ability to capture activity level lessons learned and make them available at the worker level.

**F. Additional LANL Improvement Actions:**

Additional, specific commitments that addressed safety improvement in work control were documented in correspondence to LASO in a February 5, 2010 letter from three Principal Associate Directors. These actions have been considered in our evaluation of the DNFSB concerns and are relevant to our non-nuclear operations as well. The work control improvements are focused in the following areas:

1. Setting clear expectations on direction, defining the safety envelope of the work and sharing knowledge around best practices.
2. Improving hazard identification, evaluation and mitigation.
3. Mature implementation of IWM through identification of best practices for hazard identification and mitigation by benchmarking, utilizing lab-wide working groups and leadership/management workshops.
4. Strengthening processes that integrate students, postdocs, and new hires into our work control activities.

**G. DNFSB Issue:**

Many of the deficiencies identified by the Board's staff during this review had not been previously identified by LANL management. Moreover, a Director's Institutional Assessment of Integrated Safety, Security, and Work Management Systems conducted in fall 2008 failed to identify any significant deficiencies in the activity-level work planning and control system.

**LANL Actions:**

LANL conducted a Director's Institutional Assessment of "Integrated Safety, Security and Work Management Systems Assessment of LANL" to evaluate the implementation and effectiveness of Integrated Safety Management (ISM), Integrated Safeguards and Security (ISSM) and IWM. Results concluded that there was systematic compliance with ISM, ISSM and IWM. IWM was evaluated using a tailored version of NNSA Attributes. Several opportunities for improvement were identified for IWM, which were defined as latent organization weaknesses. LANL will self-assess current implementation by performing the following:

1. Each Directorate in the Laboratory will conduct a Management Self-Assessment of Integrated Work Management required by the Laboratory Director using NNSA criteria tailored for the Institution. This self-assessment will focus on active work planning, hazard analysis and implementation of controls.
  - i. A cross-institutional review of the results will be performed.
  - ii. Contractor Assurance Office (CAO) will conduct an independent review of the IWM Management Self Assessments and prepare a report.
2. Follow-on Effectiveness Evaluation work will be conducted of applicable IWM Issues/Actions consistent with LANL issues management requirements. Targeted for the 2<sup>nd</sup> Qtr of FY11.
3. Commit to Lab-wide ISM/IWM Independent Assessment led by LANL with LASO/HSS engagement in 2011, using the NNSA "Attributes of Activity Level Work Planning" tailored to the Institution.