



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

November 21, 2003

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

Dear Mr. Chairman:

Enclosed are the letters the National Nuclear Security Administration (NNSA) received from the Lawrence Livermore National Laboratory, Los Alamos National Laboratory, and Sandia National Laboratories certifying processes exist for the selection, training, mentoring, and succession planning for weapons points-of-contact at the respective laboratories. Certification to NNSA was required by Commitment 4.2.4 in the Implementation Plan (IP) for the Defense Nuclear Facility Safety Board (DNFSB) Recommendation 2002-2, "U.S. Department of Energy Plan to Address and Resolve Weapons Laboratory Support of Defense Nuclear Complex."

The NNSA is reviewing the laboratory submittals and will brief the DNFSB in accordance with the IP. If you have questions, please contact me or Ms. Debra Volk at 505-845-5106.

Sincerely,

A handwritten signature in black ink, appearing to read "M. J. Schoenbauer", followed by a horizontal line.

Martin J. Schoenbauer  
Director  
Office of Nuclear Weapons Stockpile  
Defense Programs

3 Enclosures

cc w/enclosures:  
M. Whitaker, DR-1



03.2131

*Ideas That Change the World*  
*Office of the Director*

October 30, 2003

Ambassador Linton F. Brooks  
Administrator, National Nuclear Security Administration  
Department of Energy  
Room 7A-199  
1000 Independence Avenue S.W.  
Washington, D.C. 20585

Dear Ambassador Brooks:

Thank you for providing us with the opportunity to summarize our process for selection of the critical positions of weapon system points of contact. The majority of our weapons program managers (weapon system single points of contact) have been in place for over five years. These individuals were selected based on a system that relied heavily on management discretion and on significant mentoring by senior laboratory personnel (see Attachment).

This system has been in place for a long time and has served the US Nuclear Weapons Program and the Laboratory well in the past. However, I am now requiring resource-loaded plans for the execution of major weapons projects. These new responsibilities, combined with the expected loss of critical personnel over the next 5 years, make it an appropriate time to critically reevaluate and revise as appropriate the roles, responsibilities, and authorities of our weapons points of contact as well as subordinate leaders for weapons physics and engineering and for project controls. Formal training and selection processes based on the results of our evaluation can then be implemented.

The additional formality in the training and selection processes will help us ensure we have the appropriate personnel in these critical positions. Selection criteria for these positions will be established based on the essential skills and attributes we determine are required to meet the responsibilities of these positions. The skills and attributes will also be used to develop training and mentoring programs and provide career and educational guidance to individuals that may aspire to fill these positions. This process will help ensure there exists a pool of qualified individuals at the Laboratory to fill these positions whenever they come vacant.

I am looking forward to reporting our progress on our new process for mentoring and selection of weapons system points of contact in December.

Ambassador Linton Brooks  
DIR-03-450

-2-

October 30, 2003

Questions on this subject may be directed to Ray Juzaitis, Associate Director for Weapons Physics, at 505-665-4454.

Sincerely,

*Original Signed by*

G. Peter Nanos  
Director

Attachment: a/s

Cy: C. Mangeng, DIR, A100  
J. Immele, DD-NS, A148  
R. Juzaitis, AD-WP, A106  
R. Mah, AD-WEM, A107  
IM-5, A150  
DIR-03-450

## ATTACHMENT

### Weapons Point of Contacts

The Los Alamos weapons program managers are:

W88: Michael Haertling  
W76: Patrice A. Stevens  
B61: Roberta Izdorek  
W78: Ezekiel D. Aragon  
W80: David A. Trujillo

They will be supported by a design physicist and chief engineer for each weapon system. The design physicists and chief engineers will be identified in our follow-on letter to you in December.

#### Current Selection Criteria

- Senior-level LANL weapons personnel from – engineering/applied physics/nuclear materials organizations.
- In-depth technical knowledge of one or more LANL nuclear weapon designs.
- Detailed knowledge of LANL weapons programs: roles, responsibilities, functions, and processes.
- Broad knowledge of Nuclear Weapons Complex (DOE & DOD) organizations: roles, responsibilities, functions, and processes.
- Strong working relationships with LANL nuclear weapon program partners, customers, and sponsors.

#### Current Training

- Academic training in a technical field – engineering/physics/material science
- Extensive work experience in one of more of the core LANL nuclear weapons organizations.
- Demonstrated in-depth technical understanding of one or more of the LANL nuclear weapon designs.
- Extensive mentoring by Senior LANL technical personnel (complex recognized subject matter experts) - Weapons Engineers, Physics Designers, Material Scientists.
- Extensive mentoring by Senior LANL managers – Associate Directors, Deputy Associate Directors, Division Leaders, Program Managers.

#### Current Succession Planning

- Transfer programmatic and technical knowledge
  - One-on-one interactions with senior weapons program technical personnel.

- Multiple interactions with all levels of weapons program technical personnel ex. – Weapons Systems Action Councils, Integrated Product Teams, Project Officers Groups pre-meetings, Product Realization Teams, Significant Finding Investigations, etc.
- Sponsor weapon specific weapon system training, twice a year minimum, Joint Nuclear Explosive Training for Laboratory and Nuclear Weapon Complex personnel.
- Appoint – various qualified personnel fill in on a temporary basis, as required, to allow multiple individuals to gain some experience performing the duties of the Weapons Program Manager.



October 24, 2003

Ambassador Linton Brooks  
Administrator  
National Nuclear Security Administration  
DOE/NNSA  
Forrestal Building  
1000 Independence Avenue  
Washington, D.C. 20330-1480

Dear Ambassador Brooks:

Lawrence Livermore National Laboratory Director, Dr. Michael Anastasio, has asked that I respond to your request of August 11, 2003, that LLNL provide you a letter certifying that processes exist for the selection, training and mentoring, and succession planning for weapons points-of-contact. The following discussion describes the processes we have developed for selecting individuals holding these responsibilities, the training and mentoring that they and their successors have and will experience, and the methods by which they are evaluated. I am certain that to date our approach has been successful, and confident that our plans for identifying and training successors are appropriate for maintaining a continuing level of excellence in these positions.

### **Background**

On October 3, 2002, the Defense Nuclear Facilities Safety Board (Board) issued recommendation 2002-2, *Weapons Laboratory Support of the Defense Nuclear Complex*, in which the Board requested assurance from DOE that appropriate support be provided from both the Labs and the production complex to ensure continued safe operations on U.S. nuclear weapons systems. On June 4, 2003, the Secretary of Energy accepted the Board's recommendation, and has provided an implementation plan designed to ensure an effective management system for conduct of weapons operations.

Section 4.2 of this plan deals with ensuring the quality of individuals from the Laboratories who are designated as principal points-of-contact with the production complex. On August 11, 2003, LLNL received a letter from you that satisfies Commitment 4.2.1 of the IP:

**Commitment 4.2.1:** Issue a letter from NNSA to the Laboratories directing them to review and revise (if necessary) existing processes for the selection, training and mentoring, and succession planning for weapons points of contact.

This response from LLNL in turn satisfies Commitment 4.2.4:

**Commitment 4.2.4:** Issue a response letter from the Laboratories to NNSA certifying processes exist for the selection, training and mentoring, and succession planning for weapons points of contact and describe plans for improvement, if necessary.

#### **Context for Weapons POC**

At LLNL the Associate Director for Defense and Nuclear Technologies (AD/DNT) is responsible for LLNL work in support of weapon-specific activities and for maintaining and developing the technical capabilities and understanding needed for certification and assessment of the stockpile. The principal responsibilities for executing programmatic work for the AD/DNT are assigned to the leaders of three major programs: Weapons Engineering (W Program), Primary Design (B Program) and Secondary Design (A Program). The W Program Leader is responsible for LLNL interactions with the production complex, including LLNL surveillance of pits and detonators and support of Nuclear Explosive Safety Studies necessary for conduct of weapon operations.

The AD/DNT has designated five individuals to act as **system managers** for the five weapon systems for which LLNL has specific design responsibility. For each of these weapon systems, LLNL has also appointed a **system engineer**. We have also identified a system manager / system engineer for multi-system issues. System engineers are typically members of the W Program staff which is the lead organization interacting with the production complex. LLNL staff currently holding these positions were identified in an Information Engineering Release, *IER 20021243 LL, Rev. 3 (9/25/03)* (a document submitted in fulfillment of Commitment 4.2.3).

#### **Selection Criteria**

System managers are selected by the AD/DNT, with the advice of the A, B and W Program leaders. System engineers are selected by the W Program Leader (with advice from the A and B Program Leaders), with the concurrence of the AD/DNT. The selection criteria for both positions include:

1. Ability to integrate technical information from a wide variety of sources and draw sound conclusions
2. In-depth understanding of the particular weapon for which they are responsible
3. Experience and demonstrated expertise in dealing with technical issues associated with other LLNL-designed weapon systems.
4. Experience in dealing with the production complex
5. Ability to communicate effectively with team members, senior management and review or advisory groups
6. Ability to prepare clear and comprehensive technical reports

The weighting of these criteria is somewhat different for system managers than for system engineers. We have drawn our system engineers from our weapons engineering staff, who are typically the most experienced in dealing directly with the production complex (Criterion 4). Our system managers have been drawn from both our nuclear design and weapons engineering staffs. For system managers, we place relatively higher weight on Criteria 5 and 6.

The selection process for weapon system leadership is facilitated by the organizational structure of the LLNL weapons program. The AD/DNT relies heavily on the three major (A/B/W) program leaders, and on the dual control that each of these leaders maintains as leader of a technical discipline division and for personnel evaluation. This dual control provides great flexibility in personnel assignments and resource adjustments that allow the program leaders to continually evaluate personnel for future critical assignments. These leaders also have direct access, on a daily basis if needed, to the AD/DNT and to the weapon system managers and system engineers in their divisions.

### **Training and Mentoring**

For individuals selected as weapon system managers or system engineers, training beyond their formal education begins as they join their current organizations and are assigned to project teams. Both formal and informal mentoring by experienced personnel are key elements of the learning process. In addition, they expand their understanding of nuclear weapons through such resources as taped lecture series, specifically recommended archival documents, and short courses in weapons science and engineering. An extensive set of archived documents and drawings is available at the desktop to each scientist or engineer in the weapons program (restricted by specific need-to-know protocols).

Technical education in the weapons disciplines for all our personnel is supplemented by short, pointed training courses dealing with specific aspects of operational safety and security. Many of these courses include required refresher reviews on a yearly basis, with scheduling automatically done with the aid of a training database. Requirements for this training are established for specific job assignments. All our points of contact have variations of this training.

The most important "training" experience, of course, is performing hands-on technical work, reviewed closely by their technical peers as well as by project and group leaders. This work is also presented in "work-in-progress" seminars, in formal classified conferences such as Nuclear Explosive Design Physics Conferences and JOWOGs, and in project meetings and reviews. Published work receives careful review at the group leader and division leader level. Peer review by knowledgeable counterparts at Los Alamos and other organizations, and review by senior advisory groups such as LLNL Directorate Review Committees also provide detailed technical critique. Each individual receives a yearly performance appraisal that reviews quality and quantity of technical work.

### **Succession Planning**

The individuals selected as weapons system managers and system engineers (production complex points-of-contact) have demonstrated their excellence through their increasingly sophisticated contributions to the weapons program, as reviewed through the processes described above. In performing this work, however, they have always been part of a team. Our team leaders are not expected to be intimately knowledgeable about every nuance of a nuclear warhead system; no one is. Our succession planning relies on this team concept, in which individuals are assigned increasingly important work, and have the opportunity to rise to the top and assume leadership based on demonstrated performance.

Our current weapons system managers and system engineers are in mid-career. As they move to other assignments, we intend to replace them with mid-career individuals with similar background. Livermore has continuing responsibilities for weapons assessment and certification,



and for designing and evaluating possible modifications to the current stockpile. To meet these responsibilities, we must develop and maintain strong technical teams, capable of addressing all aspects of weapon safety and performance. These teams will be the source for successors to the current weapon POCs. We intend to continue the approach of entrusting strong performers, with the backgrounds described above, with these assignments.

While always vigilant for ways to improve this process, we believe that our existing process has provided highly capable people who can and do perform the critical duties associated with responsibility for LLNL weapons systems. For us to continue to develop our people, however, it is critical that a viable weapons program be maintained at LLNL, including continuing responsibility for weapon system refurbishment and other modifications.

Sincerely,

*Original Signed by*

Bruce T. Goodwin  
Associate Director for  
Defense and Nuclear Technologies

Distribution:  
Livermore Site Office  
Everet Beckner  
Martin Schoenbauer  
Michael Anastasio  
Richard Ward  
Charles McMillan  
Charlie Verdon  
Bret Knapp  
Jerry Dow



**Sandia National Laboratories**

Operated for the U.S. Department of Energy by  
**Sandia Corporation**

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**Thomas O. Hunter**  
Senior Vice President  
Defense Programs

October 30, 2003

Dr. Everet H. Beckner  
Deputy Administrator for Defense, NNSA  
NA-10/Forrestal Building  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, D.C. 20585

Dear Dr. Beckner:

Subject: Implementation Plan for DNFSB2002-02, Commitment 4.2.4 Response

Ref: Ltr, Ambassador Linton Brooks, to C. P. Robinson, dtd 8/11/2003

Sandia National Laboratories certifies that processes exist for the selection, training and mentoring, and succession planning for Sandia weapons points-of-contact.

The weapons points-of-contact serve under the auspices of the Chief Engineer for the nuclear weapons program at Sandia. They have been officially designated in their respective roles by executing an engineering release in accordance with the Interagency Engineering Procedure. The names of the weapons points-of-contact are listed in our attachment. They are trained and mentored consistent with a set of personal development programs focused on nuclear weapons staff and managers. They are selected by a process, executed under the direction of the Chief Engineer, that identifies candidates, specifies criteria for their roles as weapons system managers, evaluates candidates against criteria, and selects a candidate to be considered for approval by the weapons system director who reports directly to the Chief Engineer. Succession for these positions is addressed by maintaining a pool of managers and staff, with requisite experience, that are available as candidates for subsequent selection.

Recent reviews of this process have called for enhancements that include the elevation of the level of approval for designated managers, more explicit definition of roles and authorities, specific goals for points-of-contacts in annual performance plans, and compilation of a list of successors for each position. While we are implementing these improvements, we are continuing to assess our processes to identify any further areas to be strengthened. In fact, we are broadly implementing a performance excellence initiative, consistent with IS9000, that will address all of our management systems for the weapons program at Sandia. We expect even more strengthening of our staff and management development activities from this effort.

Please contact me should you have further questions or require additional information.

Sincerely,

A handwritten signature in black ink that reads "Thomas O. Hunter".

Attachment: Weapons Points-of-Contact List

*Exceptional Service in the National Interest*

Sandia Weapon Points of Contact

Org No.	Weapons	Weapon Project Manager
2111	B53 and B61-3/4/7/10/11	James D. (Doug) Mangum MS0447, 505-844-5283
2112	W78	Aaron L. Hillhouse MS0483, 505-844-3976
2113	W76-0 and W88	James O. Harrison MS0479, 505-844-2830
2132	W76-1 LEP	Mark A. Rosenthal MS0481, 505-844-3228
8221	B83-0/1	Alfred McDonald MS9034, 925-294-2291
8222	W84	Edward B. Talbot MS9036, 925-294-2669
8231	W56, W62, and W87	Robert E. Oetken MS9013, 925-294-2695
8241	W80-0/1 and W80-3 LEP	Douglas L. Gehmlich MS9014, 925-294-3078
8243	W79	Robert D. Monson MS9108, 925-294-2258
2113	Multiple Weapon Systems Single Point of Contact	James O. Harrison MS0479, 505-844-2830