



## Department of Energy

Washington, DC 20585

July 29, 2005

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:

Enclosed is the deliverable for Commitment 11 in the *Department of Energy (DOE) Implementation Plan to Improve Oversight of Nuclear Operations, Revision 1*, in response to Defense Nuclear Facilities Safety Board (Board) Recommendation 2004-1.

The enclosed report identifies highly-qualified and experienced personnel in the following five functional areas: Criticality Safety, Fire Protection Engineering, Civil/Structural Engineering, Nuclear Explosives Safety, and Safety Software Quality Assurance. These individuals were selected from among 28 nominees provided by headquarters and site offices and will serve as DOE Sponsors for their functional areas. Their roles include serving as the primary point of contact for reviewing and updating the technical content in the functional area qualification standards and serving as examining officials in the qualification of candidates, as requested by a site or headquarters office.

The Department has completed the actions identified under this commitment, and proposes closure of the commitment. If you have any questions, please contact me or have your staff contact Dan Hoag at 865-576-0511 or John Evans at 202-586-3887.

Sincerely,

A handwritten signature in black ink that reads "Roy J. Schepens".

Roy J. Schepens  
Chairman

Federal Technical Capability Panel

Enclosure

cc:

B. Carnes, S-2

J. Shaw, EH-1

J. Paul, NA-2

M. Whitaker, DR-1



## **Involvement of Highly-Qualified and Experienced Personnel in the Qualification of Others in DOE**

**Response to Commitment 11 in the DOE 2004-1 Rev. 1 Implementation Plan (June 2005)**

### **BACKGROUND**

The Department of Energy (DOE) Implementation Plan (IP), Revision 1, in response to Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2004-1, outlines actions DOE will take to upgrade federal safety assurance and oversight. Commitment 11 of the 2004-1 IP, Revision 1, is intended to improve the quality and rigor of technical qualifications across DOE. To achieve this, DOE will identify 2-3 people (i.e., "DOE Sponsors") who are the most experienced and technically capable in five selected functional areas and charge these individuals with a central role in the qualification of others. Once identified, these persons will assist DOE in improving overall technical capability. Activities may include providing technical exams to candidates in a particular functional area, reviewing technical qualification standards, evaluating ongoing proficiency standards, and reviewing ongoing training. These personnel could also provide training to others in particular functional areas. This will use the high-quality technical talent that exists within certain areas of DOE to raise the overall standard of technical qualifications across the DOE complex.

The commitment from the 2004-1 IP Rev. 1 is:

**Commitment 11: DOE will identify highly qualified and experienced personnel who will assist the Department in improving overall technical capability.**

**Lead Responsibility: Chairman, FTCP (as an agent for the Deputy Secretary)**

**Deliverable: A report identifying high-qualified and experienced personnel in select functional areas and describing their roles in improving overall technical capability, as well as a plan for implementing this concept and a mechanism for maintaining the list.**

**Due Date: July 2005**

### **ACTIONS TO COMPLETE THIS COMMITMENT**

To fulfill this commitment, the following actions were completed:

1. Select applicable technical functional areas.
2. Identify the roles that the highly-qualified and experienced personnel will fulfill.
3. Request nominations and select Primary and Alternate DOE Sponsors.
4. Identify how these roles will be institutionalized and how the roster of DOE Sponsors will be maintained.

### **ACTION 1: Select Applicable Technical Functional Areas**

The following criteria were used to determine which functional areas would be included initially in this commitment:

1. Functional areas are needed to ensure nuclear safety, and
2. Functional areas are applicable to high-consequence, low probability accidents, and
3. Functional areas are highly specialized, and
4. Functional areas have limited personnel within DOE (i.e., DOE sites typically have fewer than 3 people in these functional areas).

Based on these criteria, the following functional areas were initially selected to be included in this action:

- Civil/Structural Engineering (DOE-STD-1182-2004)
- Criticality Safety (DOE-STD-1173-2003)
- Fire Protection Engineering (DOE-STD-1137-2000)
- Nuclear Explosive Safety (DOE-STD-1185-2004)
- Safety Software Quality Assurance (DOE-STD-1172-2003)

After one year of implementing this process, other functional areas will be evaluated to be included in this process, using the above criteria.

### **ACTION 2: Identify Roles of Personnel**

For the functional areas above, highly-qualified and experienced people are designated to perform the roles described below. These individuals are the DOE Sponsors for the functional area. One Primary DOE Sponsor and two Alternates for each of the functional areas above were identified.

The DOE Sponsors are expected to be involved in the qualification of candidates in the functional area and to coordinate the increased involvement of other highly-qualified and experienced personnel in the functional area by performing the following roles:

1. Serve as the primary point of contact for reviewing and updating the technical content in the particular functional area qualification standard.
2. Serve as an examining official in the qualification of candidates within the particular functional area, if requested by a site or headquarters office. Examinations could be performed through an oral and/or written exam. The oral and/or written exam would serve as one of the final steps for qualifying personnel in a particular functional area. The oral/written exam would be focused on knowledge requirements and competencies from the applicable functional area qualification standard.
3. Evaluate proficiency standards.
4. Conduct training.
5. Be available as a resource to review and assist in the development of training in a particular functional area.
6. If available, participate in interviewing or recruiting new candidates in a particular functional area when requested by a site or headquarters office.

### **ACTION 3: Request Nominations and Select Primary and Alternate DOE Sponsors**

The DOE Sponsor should be a highly-qualified, experienced person who has demonstrated an exceptional level of scientific and technical capacity in the functional area. The DOE Sponsor should have extensive knowledge of the application of the functional area throughout DOE.

Personnel who will serve as a DOE Sponsor for a functional area were nominated by his/her Site Office Manager (for field personnel) or supervisor (for headquarters personnel). The nominations were submitted to a panel of senior managers representing various DOE programs and site offices. The panel provided recommendations for the DOE Sponsors to the FTCP Chairman for approval. The list of personnel will be maintained by the FTCP.

As guidelines for nominating and approving a DOE Sponsor, it is preferable that each possess the following:

1. Be fully qualified in the functional area.
2. Experience >15 years in the functional area, either at DOE or at a combination of DOE and other agencies.
3. Thorough knowledge of the application of functional area concepts and requirements at DOE sites, either through direct site office experience or by frequent assessment of sites and facilities.
4. Advanced degree in a discipline directly related to the functional area.
5. Professional certification in a discipline directly related to the functional area, if it exists.
6. Authorship of published technical paper(s) in topics directly related to the functional area.

<b>Functional Area Qualification Standard</b>	<b>DOE Sponsors</b>
Civil/Structural Engineering (DOE-STD-1182-2004)	John Treadwell, ORP (Primary) Shah Jaghoory, NA-117 (Alternate) Jeff Kimball, NA-2 (Alternate)
Criticality Safety (DOE-STD-1173-2003)	Jerry McKamy, NA-117 (Primary) Adolf Garcia, NE-ID (Alternate) Robert Wilson, EM-22 (Alternate)
Fire Protection Engineering (DOE-STD-1137-2000)	Dennis Kubicki, EH-24 (Primary) Craig Christenson, ORP (Alternate) Bill Boyce, EM (Alternate)
Nuclear Explosive Safety (DOE-STD-1185-2004)	Bill Pecsock, NNSA Serv Ctr (Primary) Jim Fingerlos, NNSA Serv Ctr (Alternate) Steve Munoz, NNSA Serv Ctr (Alternate)
Safety Software Quality Assurance (DOE-STD-1172-2003)	Shiv Seth, OA-40 (Primary) Subir Sen, EH-31 (Alternate) Teresa Perry, ORO (Alternate)

**ACTION 4: Institutionalizing the Process and Maintaining the List of DOE Sponsors**

This process will be described in the next revision to DOE M 426.1-1A, *Federal Technical Capability Manual*. The process will include renewal of nominations approximately every two years. After one year of implementing this process, other functional areas will be evaluated for inclusion in this process, using the criteria described herein.

The list of personnel will be maintained and updated on the FTCP web site.