Department of Energy
National Nuclear Security Administration
Washington, DC 20585

January 30, 2007

OFFICE OF THE ADMINISTRATOR

The Honorable A. J. Eggenberger
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, NW, Suite 700
Washington, DC 20004

Dear Mr. Chairman,

The purpose of this letter is to inform you that the Central Technical Authority for the National Nuclear Security Administration has completed Commitment 3 in Revision 2 of the Department's 2004-1 Implementation Plan. Specifically, the deliverable for this commitment is the enclosed memorandum to the Secretary declaring the CTA function is implemented and providing the basis for this declaration.

If you have any question, please contact me or have your staff contact James McConnell at (202) 586-4379.

Sincerely,

Thomas P. D'Agostino
Central Technical Authority
National Nuclear Security Administration

Enclosure

cc: C. Sell, Deputy Secretary
M. Whitaker, Departmental Representative
F. Russo, Senior Advisor for Environment, Safety and Health

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MEMORANDUM FOR THE SECRETARY

FROM: THOMAS P. D'AGOSTINO
CENTRAL TECHNICAL AUTHORITY
NATIONAL NUCLEAR SECURITY
ADMINISTRATION

SUBJECT: FULL IMPLEMENTATION OF THE CENTRAL TECHNICAL AUTHORITY FUNCTION WITHIN THE NATIONAL NUCLEAR SECURITY ADMINISTRATION

REFERENCE: U.S. Department of Energy Implementation Plan for DNFSB Recommendation 2004-1.

This memorandum documents that the National Nuclear Security Administration (NNSA) has fully implemented the Central Technical Authority (CTA) function. This letter satisfies commitment 3 of the referenced Implementation Plan for DNFSB Recommendation 2004-1 (2004-1 IP). The 2004-1 IP identifies seven core functions for the CTA and describes eight elements of the Department's plans for implementing the CTA concept. Each of those is discussed below.

Core Functions, Responsibilities and Authorities of the CTA:

The functions, responsibilities, and authorities of the CTA have been captured in DOE Manual M 411.1-1C, *Safety Management Functions, Responsibilities, and Authorities Manual,* through a directed revision issued by the Secretary of Energy on April 26, 2005.

The first four functions and authorities of the CTA relate to management of nuclear safety requirements. The processes to execute these authorities have been captured in the NNSA Supplemental Directive NA-1 SD 251.1-1, *Central Technical Authority Management of Nuclear Safety Requirements*, and amplified in the following NNSA Chief of Defense Nuclear Safety (CDNS) Operating Procedures:

- CDNS M 411.1-1, *Chief of Defense Nuclear Safety Management System Description*
- CDNS M 411.1-2, *Evaluating Requirements in Contracts*
- CDNS M 251.1-1, *Evaluating Exemption Requests*
- CDNS M 251.1-2, *Guidance and Expectations for Nuclear Safety Requirements*
- CDNS M 251.1-3, *Concurrence with Rules and Directives that Affect Nuclear Safety*

The fifth core function of the CTA is to maintain operational awareness of the implementation of nuclear safety requirements and guidance across all of NNSA. The foundation of the NNSA CTA's operational awareness program is the Biennial Review process. Biennial Reviews are described in the *NNSA Headquarters Biennial Review of Site Nuclear Safety Performance.* This protocol was approved by the NNSA Administrator in a letter dated July 18, 2005. NNSA has completed biennial reviews of six Site Offices that manage work involving nuclear hazards. The Kansas City Site Office does not oversee such work. The Biennial Review of the Los Alamos Site Office is scheduled for May 2007.

The sixth function of the CTA is to review and assess periodically whether NNSA is maintaining adequate numbers of technically competent personnel necessary to fulfill nuclear safety responsibilities. Overall NNSA leadership of the Technical Qualification Program has been delegated to the NNSA Environment, Safety, and Health Advisor (ES&H Advisor) who reports to, and supports, the CTA. This function includes ensuring that the proper technical qualification requirements are identified for NNSA employees and that NNSA employees complete their qualifications. The biennial reviews conducted by NNSA specifically address whether site offices have adequate numbers of technically competent personnel to carry out essential nuclear safety functions. In addition, the CDNS has implemented an office procedure, CDNS M 411.1-3, *Evaluating Delegations of Nuclear Safety Authority* that establishes a process to evaluate delegated nuclear safety authorities to ensure delegations are made only where the specific individuals have appropriate training, experience and qualifications. Finally, NNSA has taken steps to resolve a long-standing deficiency in the number of safety analysis professionals by establishing a Safety Basis Academy and a function within the Office of the CDNS to focus on training and development of safety analysis professionals.

The last function is to support DOE-wide nuclear safety-related research and development. NNSA nuclear safety research and development activities fall mainly within the responsibilities of the Deputy Administrator for Defense Programs (NA-10). The CTA has assigned overall NNSA responsibility for nuclear safety research and development to that organization. Each year, for the past two years, NA-10 has evaluated its needs for additional nuclear safety research and development as part of the annual planning, programming and budget execution cycle and provided input to the Administrator for his use in determining overall funding priorities.

Implementation and Institutionalization:

The 2004-1 IP identifies eight aspects of the Department's plan to implement the CTA concept. They are discussed below.

1) Define the detailed functions, responsibilities and authorities for the CTA; and

2) Update the Department Functions Responsibilities and Authorities Manual (FRAM).

As discussed previously, the DOE FRAM has been updated to include the CTA functions, responsibilities, and authorities. The directed revision to the FRAM was documented in a letter to the DNFSB dated April 26, 2005. The NNSA FRAM was updated and approved on February 28, 2006 to include detailed functions, responsibilities, and authorities of both the NNSA CTA and the CDNS.

3) Complete a staffing analysis for technical experts to support the CTA; and

4) Fill the positions for supporting technical experts.

The Office of the CDNS has been established, and eight key technical positions were identified:

- Chief of Defense Nuclear Safety
- Technical Lead for Operations and Readiness
- Technical Lead for Nuclear Facilities and Mechanical Systems
- Technical Lead for Electrical Engineering
- Technical Lead for Nuclear Materials and Criticality Safety
- Technical Lead for Authorization Bases
- Technical Lead for Chemistry and Chemical Engineering
- Technical Lead for Fire Protection

These positions have been established and filled with highly-qualified individuals. The results of the initial staffing of the Office of the CDNS were documented in a memorandum for the Secretary of Energy and a letter to the DNFSB dated January 31, 2006. During the two years that the Office of the CDNS has existed, there has been some turn-over of personnel. One position, the Technical Lead for Nuclear Facilities and Mechanical Systems, is currently vacant, but the efforts to find a new staff member are underway and a selection should be named soon. Additionally, three technical positions have been added to establish and implement the training and qualification program for safety analysts. Finally, two former Office of Environment, Safety, and Health employees have been added to the staff of the CDNS to strengthen the ability to evaluate the design and construction of new nuclear facilities.

5) Define technical qualifications for the CTA and the CTA support staff.

The CDNS and the seven "technical lead" positions have all been designated as Senior Technical Safety Managers (STSM) per the DOE technical qualification program. All of the personnel filling the technical positions identified above are either fully qualified as STSMs or are on schedule to complete their qualifications.

6) Define the processes and protocols for fulfilling the CTA roles and responsibilities.

As indicated previously, DOE Directives, NNSA Supplemental Directives, and CDNS Office Procedures exist to define the processes necessary to execute the CTA functions.

7) Describe how the CTA will interface with other organizations.

The functions and authorities of the CTA, as well as procedures and protocols for interacting with other DOE elements, have been added to DOE and NNSA Directives as those directives have been issued or revised. The CTAs identified a list of Directives that required revision on a letter dated November 8, 2005. Since that time several of the directives listed have been revised to include the CTAs, and others that were not originally included (e.g., O 413.3, *Project Management*) were also updated. However, not all the Directives listed in November 8, 2005 letter have come up for revision.

8) Establish an operating budget for fulfilling CTA duties.

The office of the CDNS and the Office of the ES&H Advisor have operating budgets to cover travel, training, and the use of outside experts and support service contractors necessary to support the functions of the CTA.

Record of Performance and Feedback

The CDNS recently completed a self-assessment that includes an evaluation of the implementation of CTA functions. This self-assessment validated the implementation of the CTA function, as described above.

Summary

The CTA function for NNSA has been implemented. The configuration of CTA roles and responsibilities is not static, but will continue to evolve as Departmental organizational roles and responsibilities change. In addition to the CTA functions described in the IP for Recommendation 2004-1, NNSA may add additional roles and responsibilities to the CTA as warranted. As organization roles and responsibilities evolve, the NNSA FRAM will be updated, and processes will be developed or modified, as necessary, to implement the changes. NNSA will also periodically assess its implementation of the CTA function and will develop actions for continuous improvement, where appropriate.

cc: Mark Whitaker