



The Secretary of Energy  
Washington, DC 20585

August 21, 2013

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DNF SAFETY BOARD

The Honorable Peter S. Winokur  
Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, NW, Suite 700  
Washington, DC 20004-2901

  
Dear Mr. Chairman:

The purpose of this letter is to notify you of the completion of all actions contained in the Department of Energy (DOE) Implementation Plan (IP) for Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2002-3, *Requirements for the Design, Implementation, and Maintenance of Administrative Controls*.

On December 11, 2002, the DNFSB issued Recommendation 2002-3. The Department issued its Implementation Plan for Recommendation 2002-3 on June 26, 2003, which identified the following actions to address the Recommendation:

- Review of existing requirements and guidance to determine whether supplemental guidance was needed to address specific administrative controls (SACs);
- Issue supplemental guidance on SACs and provide training;
- Evaluate the safety basis documents to determine whether existing administrative controls met Department expectations;
- Evaluate the field implementation of SACs; and
- Strengthen the Departmental processes to ensure that SACs are properly designed, implemented, and maintained.

The Department completed the actions to establish SAC guidance and strengthen Departmental processes for SACs by 2007; however, as identified in the DNFSB July 30, 2007, letter, additional actions were needed to ensure appropriate implementation of SACs in the field.

In response to the DNFSB letter, the Department performed a series of line management and independent oversight reviews to verify proper SAC implementation. The results of these reviews have confirmed that SACs have been appropriately implemented in the field and that processes are in place to continue oversight of their proper implementation.



The enclosed report describes all of the actions taken to meet the IP commitments. If you have any questions, please contact Dr. James O'Brien, Director, Office of Nuclear Safety, at (301) 903-1408.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ernest J. Moniz', with a stylized flourish at the end.

Ernest J. Moniz

Enclosure

**Report to the Defense Nuclear Facilities Safety Board:  
Completion of the Implementation Plan for Recommendation 2002-3,  
*Requirements for the Design, Implementation, and Maintenance of  
Administrative Controls***

**1.0 Background**

The Defense Nuclear Facilities Safety Board (DNFSB) issued Recommendation 2002-3, *Requirements for the Design, Implementation, and Maintenance of Administrative Controls*, on December 11, 2002. Recommendation 2002-3 noted concerns about the lack of rigor and quality assurance for some discrete operator actions or administrative controls that are required to control or mitigate the consequences of postulated accidents at Department of Energy (DOE) defense nuclear facilities. The DNFSB noted that the DOE Directives System did not contain adequate requirements for the design, implementation, and maintenance of important safety-related administrative controls to ensure that they will be effective and reliable. The Board recommended that DOE promulgate a set of requirements to establish appropriate expectations for the design, implementation, and maintenance of these important safety controls and that DOE ensure all existing administrative controls of this nature be evaluated against these requirements and upgraded as necessary to meet expectations.

On January 31, 2003, the Secretary of Energy accepted Recommendation 2002-3 and DOE submitted its Implementation Plan (IP) to the DNFSB on June 26, 2003. The IP listed specific commitments, which addressed the following criteria:

- Review of existing requirements and guidance to determine whether supplemental guidance was needed to address safety-related administrative controls, which are now called specific administrative controls (SACs);
- Issuance of supplemental guidance on SACs and provide training;
- Evaluation of safety basis documents to determine whether existing administrative controls met Department expectations and identification of actions to upgrade controls when necessary;
- Evaluation of field implementation of SACs; and
- Strengthening departmental processes to ensure that SACs are properly designed, implemented, and maintained.

On January 4, 2007, DOE transmitted a letter to the Board reporting that all IP commitments associated with Recommendation 2002-3 were completed. The list of IP commitments and their respective completion dates is included at the end of this report as Table 1, which was previously reported in the January 4, 2007, letter and is included here for ease of reference. With the completion of all IP commitments, the January 4, 2007, letter requested closure of this Recommendation.

Following the Board's field reviews at several defense nuclear facilities to assess the adequacy and effectiveness of DOE's efforts in implementing Recommendation 2002-3, the Board stated

in its response letter of July 30, 2007, that although considerable progress had been made toward addressing the issues outlined in Recommendation 2002-3, the Recommendation needed to remain open due to the fact that the DNFSB had determined a number of systemic weaknesses remained with SAC implementation. The Board stated that additional effort and attention by DOE in the area of review and evaluation of the effectiveness of SAC implementation was warranted before the Recommendation could be closed.

## **2.0 Assessments of SAC Implementation**

Since July 2007, the Department's activities have focused on ensuring full and effective implementation of SAC programs, to include proper Federal and contractor oversight as well as sharing of lessons learned across the DOE Complex. The Office of Health, Safety and Security (HSS) conducted an independent assessment of SAC implementation. Both the National Nuclear Security Administration (NNSA) and the Office of Environmental Management (EM) have conducted detailed reviews of SAC programs at their respective sites. These efforts are highlighted below. During the course of these reviews, DOE and NNSA provided briefings to the Board on the status of the implementation of Recommendation 2002-3 activities and also engaged in periodic staff-to-staff discussions on this topic.

### *2.1 HSS Independent Oversight Assessment of SAC Implementation*

The HSS review is addressed in a report titled, *Specific Administrative Controls at DOE Nuclear Facilities*, and was provided to the DNFSB staff in April 2010. This report analyzes and summarizes the results of reviews of implementation of SACs, which were included in 2008-2009 Independent Oversight assessments of selected DOE nuclear facilities. The Independent Oversight assessments focused on flowdown of SAC requirements to the working level and corresponding enhancements to procedures, work area postings, or other task-level instructions; integration into data management processes for radioactive/hazardous materials; and other necessary steps, such as personnel training and assessments. The report provides insights based on lessons learned and Independent Oversight assessments of SAC implementation across DOE nuclear facilities. Each site that was reviewed had formulated and implemented a systematic process for developing safety bases that addressed the guidance and requirements associated with SACs, as defined in the standards.

### *2.2 EM Assessment of SAC Implementation*

The EM approach for the review and assessment of SAC program implementation at eight major sites involved the following activities:

- Evaluation of safety basis documents (i.e., Documented Safety Analyses and associated Technical Safety Requirements (TSRs)) to determine whether existing administrative controls met DOE expectations and identification of actions to upgrade controls when necessary;
- Evaluation of field implementation of SACs; and
- Capturing the findings from the evaluations for tracking to resolution.

The EM review team was augmented by staff from the HSS, as well as participation by the NNSA and the Office of Science on several visits. The DNFSB staff also observed some of these reviews. The review team examined over 300 SACs and identified 53 findings and 34 observations, all of which were recorded into the EM corrective action system and are being tracked to closure. The conclusion of the EM SAC implementation assessments is that each site is effectively implementing a SAC program in accordance with DOE Standard (STD) 1186-2004, *Specific Administrative Controls*, and DOE-STD-3009-1994, *Preparation Guide for Department of Energy (DOE) Nonreactor Nuclear Facility Documented Safety Analyses*.

### 2.3 NNSA Assessment of SAC Implementation

The NNSA has also completed a number of reviews on SAC implementation. The result of these reviews indicated that the Field Offices and contractors have made significant progress in the effective implementation of SACs. In addition, the Field Offices and contractors continue to assess SACs and the implementing programs and processes as part of their oversight responsibilities. Thus, NNSA has concluded that all NNSA Sites have adequate programs and processes in place to effectively manage the implementation of SACs. In Fiscal Year (FY) 2012, NNSA conducted a number of reviews and assessments of SAC program implementation at NNSA Sites, which included the following:

- Review of Site Integrated Assessment Plans to verify that NNSA Site Offices and contractors continue to perform reviews of SAC implementation;
- Completion of SAC sampling reviews at selected NNSA Sites; and
- Compilation of a Summary Report on the institutionalization of SAC reviews at NNSA sites.

The NNSA summary report titled, *Summary Report of Fiscal Year 2012 Office of Nuclear Safety and Governance Reviews of Specific Administrative Controls*, was provided to the DNFSB staff in January 2013. The review covered multiple NNSA Sites over several months. This report includes a summary of the findings, recommendations for corrective actions, and specific FY 2013 follow-up activities to ensure that the issues have been properly addressed.

In FY 2013 and beyond, the NNSA Office of Environment, Safety, and Health will continue oversight activities in the area of TSR implementation, including SACs. In addition, NNSA Field Offices and their contractors will continue assessing and conducting oversight activities related to SAC development and implementation.

### 3.0 Conclusions

With the completion of all IP commitments, as well as a series of detailed HSS, EM and NNSA reviews and evaluations of SAC implementation programs, the Department is confident that it has appropriate requirements and guidance in place for SACs to ensure their effectiveness and reliability to prevent or mitigate accidents at DOE nuclear facilities. As the results of the SAC reviews indicate, DOE has integrated SACs into its safety basis infrastructure, institutionalized

the oversight process to include all safety controls, including SACs, ensured that adequate programs and processes are in place to effectively manage the implementation of SACs, established a sound set of requirements and processes to follow-up on corrective actions, and shared lessons learned.

The results of the SAC reviews also indicate that there are opportunities for improvement for which DOE will ensure that corrective actions are implemented. DOE will also continue to perform oversight activities on SACs, which will guide improvement efforts and also inform updates to DOE-STD-1186-2004. The revision to this Standard was initiated on April 16, 2013.

**Table 1**  
**Recommendation 2002-3 Implementation Plan Commitment Tracking Matrix**

| Commitment | Description  | Completion Date              | Comments   |
|------------|--|------------------------------|--|
| 4.1        | Analyze Existing Requirements and Guidance         | 7/31/03                      | Letter sent to Board on 7/31/03.   |
| 4.2.1      | Develop Nuclear Safety Technical Position          | 10/29/03                     | Nuclear Safety Technical Position developed and provided to Board in a letter dated 10/29/03.  |
| 4.2.2      | Submit Interim Guidance and New Technical Standard | 12/31/03                     | This commitment was completed on 12/31/03 with a letter from EH-1 to Board transmitting draft DOE-STD-XXXX-03, <i>Specific Administrative Controls</i> . By letter dated 12/8/03 to the Secretary, the Board provided an expectation that this new Standard be referenced in both DOE-STD-3009 and DOE-STD-3011 to fully complete the commitment. New commitment L04-512 was established 12/31/03 from Assistant Secretary Cook for the remaining action to update the two standards. Final DOE-STD-1186-2004, <i>Specific Administrative Controls</i> , was issued in August 2004. SEE BELOW FOR STATUS OF L04-512. |
| 4.3.1      | Develop Training Materials for Contractors         | 2/5/04                       | EH-22 developed the training materials on specific administrative controls. Training materials were provided to PSOs in early February 2004 and a letter to the Board was provided on 2/5/04.  |
| 4.3.2      | Develop Training Materials for Federal Employees   | 2/5/04                       | EH-22 developed the training materials on specific administrative controls. Training materials were provided to PSOs in early February 2004 and a letter to the Board was provided on 2/5/04.  |
| 4.4.1      | Report of Completed Training                       | EM: 7/29/05<br>NNSA: 5/26/05 | EM: Letter from EM-3 to Board on 7/29/2005 completed this commitment.<br><br>NNSA: Letter from NA-10 to Board on 5/26/05 reported that all NNSA sites completed the required initial training and made the appropriate changes to their training plans or programs to include training on DOE-STD-1186-2004.   |

| Commitment | Description  | Completion Date                       | Comments  |
|------------|--|---------------------------------------|---|
| 4.4.2      | Copies of Changes to Training Plans  | EM: 7/29/05<br>NNSA: 5/26/05          | EM: Letter from EM-3 to Board on 7/29/2005 completed this commitment.<br><br>NNSA: Letter from NA-10 to Board on 5/26/05 reported that all NNSA sites completed the required initial training and made the appropriate changes to their training plans or programs to include training on DOE-STD-1186-2004.  |
| 4.5.1      | Final Report of Safety Basis Reviews   | EM: 1/3/05<br>NNSA: 12/13/05          | EM: Summary report to the Secretary signed out on 12/28/04. Safety basis reviews conducted at EM facilities at Savannah River, Hanford, LLNL, Idaho, Nevada, Oak Ridge, and Carlsbad. EM provided a copy to Board on 1/3/05.<br><br>NNSA: NNSA summary report to the Secretary and the Board on NNSA's evaluation of SACs based on site reviews. All site reviews of safety basis documents completed.                                |
| 4.5.2      | Schedule for Completion of Corrective Actions from Results of Safety Basis Reviews | EM: 1/3/05<br>NNSA: 12/13/05          | EM: Summary report to the Secretary signed out on 12/28/04. Safety basis reviews conducted at EM facilities at Savannah River, Hanford, LLNL, Idaho, Nevada, Oak Ridge, and Carlsbad. EM provided a copy to Board on 1/3/05.<br><br>NNSA: NNSA Summary report to Board identified corrective actions required at NNSA sites and scheduled completion dates consistent with annual site reviews of updated documented safety analyses. |
| 4.6.1      | Schedule of Implementation Reviews   | EM: 2/2/04<br>NNSA: 2/3/04 and 4/5/04 | EM: EM schedule provided to the Board in a 2/2/04 letter from EM-3 to Chairman Conway.<br><br>NNSA: NA-10 letter to Board on 2/3/04 provided schedules except for LANL. NA-10 letter to Board dated 4/5/04 provided LANL schedule.  |
| 4.6.2      | Final Report Documenting Completion of Field Reviews                               | EM: 7/28/05<br>NNSA: 3/16/06          | EM: Letter from EM-3 to Board 7/28/05 completed this commitment.<br><br>NNSA: NNSA final report on field implementation noting field reviews are complete.  |
| 4.6.3      | Schedule of Corrective Actions for Field Review Findings                           | EM: 7/28/05<br>NNSA: 3/16/06          | EM: Letter from EM-3 to Board 7/28/05 completed this commitment.<br><br>NNSA: Corrective actions have been scheduled.   |
| 4.7.1      | EH Final Effectiveness Review  | EH: 1/27/06                           | EH: EH report sent to Board by Secretary indicated SAC implementation effective, but not yet complete as noted in 4.6.2 above.  |



| Commitment | Description                                     | Completion Date | Comments  |
|------------|---|-----------------|---|
| 4.7.2      | Report to Secretary on Effectiveness Review     | EH: 12/30/05    | EH: EH Report sent to Secretary.  |
| 4.8        | Revise Safe Harbor Standards                    | EH: 3/24/06     | DOE-STD-3009 revised incorporating DOE-STD-1186.  |
| L04-5 12   | Update STD-3009 and STD-3011 for Admin Controls | 3/24/06         | See 4.8 above. DOE-STD-3011 was determined not to require revision since it is incorporated by reference in DOE-STD-3009. |