# memorandum



DATE:

March 5, 2003

**REPLY TO** 

ATTN OF:

IG-30 (A02CF038)

Audit Report No.: OAS-L-03-12

SUBJECT:

Audit of the "Department of Energy's Safety Bases for Nuclear Facilities"

TO:

Assistant Secretary for Environmental Management, EM-1 Administrator, National Nuclear Security Administration, NA-1 Director, Office of Nuclear Energy, Science and Technology, NE-1

Director, Office of Science, SC-1

# INTRODUCTION AND OBJECTIVE

The Department of Energy (Department) has more than 300 nuclear facilities that contain radioactive and/or fissionable materials in such form and quantity that a nuclear or nuclear explosive hazard potentially exists. Due to continued safetyrelated problems at its nuclear facilities, in 2001, the Department enacted 10 CFR 830 (Rule), which requires contractors to submit a safety basis for their respective facilities by April 10, 2003. The safety basis analyzes safety at a nuclear facility and establishes the hazard controls needed to provide reasonable assurance that it can be operated safely. To ensure that each facility safety basis is adequate, the Rule also requires the Department to perform a timely and proper review of the documents received.

As of December 2001, less than 16 months before the due date, about 20 percent of the required documents had been submitted. Therefore, we initiated this audit to determine whether (1) the Department's contractors would meet the April 10, 2003 requirement, and (2) the Department can ensure timely and proper review and implementation of safety basis documents.

#### CONCLUSIONS AND OBSERVATIONS

Department contractors have made significant progress towards meeting the April 10, 2003 due date. A review of safety bases information at 5 selected sites showed that, as of November 2002, only 58 of 144 safety bases (40 percent) had been submitted to the Department. However, since then, the Department and its contractors initiated a number of positive actions to meet the April 2003 deadline, including providing technical assistance and guidance to supplement staff at those sites that were behind schedule and providing contractors with clear expectations. As a result, as of February 2003, about 70 percent of the required safety bases had been submitted, and the Department had granted exemptions for about 4 percent.

Department officials were optimistic that the remaining safety bases would be submitted on time.

Based on a limited sample of approved safety bases, we found that, on average, the review and approval process generally did not exceed 90 days. Although the Rule did not specify a timeframe, most of the program offices we contacted had established a 90-day review time.

Some Department officials had concerns about the timely implementation of the hazard controls identified in the safety documents. There were also concerns about not having a sufficient number of adequately trained personnel to maintain safety documentation, and the lack of criteria to address operations at those facilities for which a safety basis is not submitted by the April deadline. Therefore, to ensure that its workers, the public, and the environment are adequately protected, the Department should (1) ensure that all remaining safety bases are completed; (2) develop criteria to address operations at those facilities for which a safety basis will not be submitted by April 10, 2003; (3) ensure that hazard controls identified in safety bases are implemented in a timely manner; and (4) ensure that sufficient qualified personnel are available to maintain safety documentation.

### SCOPE AND METHODOLOGY

The audit was performed from April 2002 to February 2003 at the National Nuclear Security Administration (NNSA), Germantown, MD; Department of Energy Headquarters, Washington, DC; and the Oak Ridge Operations Office, Oak Ridge, TN. We also included information from the following sites: Nevada Operations Office, Las Vegas, NV; Idaho National Engineering and Environmental Laboratory, Idaho Falls, ID; Lawrence Livermore National Laboratory, Livermore, CA; and Los Alamos National Laboratory, Los Alamos, NM. The scope of the audit was limited to determining whether safety basis will be prepared and submitted by April 10, 2003. Additionally, we sought to determine whether Departmental managers could review and approve safety bases in a timely manner.

To accomplish the audit objective, we:

- Reviewed Federal and Departmental requirements related to the nuclear facilities;
- Reviewed prior external and internal reports regarding nuclear facilities including the Federal Managers' Financial Integrity Act;
- Determined whether annual updates and safety basis were current and up-to-date;
- Reviewed task plans to ensure milestones were being met;
- Discussed nuclear facilities with officials from Department Headquarters, Oak Ridge Operations Office, the Office of Environmental, Safety and Health and the Defense Nuclear Facilities Safety Board;

- Examined actual annual updates and safety basis studies to verify their existence; and,
- Reviewed Performance Measures established in accordance with the Government Performance and Results Act.

The audit was performed in accordance with generally accepted Government auditing standards for performance audits, and included tests of internal controls and compliance with laws and regulations to the extent necessary to satisfy the audit objective. Accordingly, we assessed the significant internal controls related to the nuclear facilities. Because our review was limited, it would not necessarily have identified all internal control deficiencies that may have existed. Additionally, we did not rely extensively on computer-processed data. In addition, we reviewed the implementation of the Government Performance and Results Act of 1993, as it related to nuclear facilities. This review did not assess the quality of safety bases documents submitted by the contractors.

Since no recommendations are being made in this letter report, a formal response is not required. We appreciate the cooperation of your staff during the audit.

William S. Maharay Assistant Inspector General

for Audit Services

Willem S. Miharay

Office of Inspector General

cc: Chief of Staff to the Deputy Secretary
Team Leader, Audit Liaison, ME-1.1
Director, Policy and Internal Controls Management, NA-66
Audit Liaison, Environmental Management
Audit Liaison, Office of Nuclear Energy, Science and Technology
Audit Liaison, Office of Science
Audit Liaison, Oak Ridge Operations Office

Director, Office of Nuclear and Facility Safety Policy

# memorandum

DATE:

March 12, 2003

**REPLY TO** 

ATTN OF:

IG-35 (A02CF038)

SUBJECT:

Final Report Package for Audit Report on "Department of Energy's Safety Bases for Nuclear

Facilities"

TO:

Director for Performance Audits and Administration

Attached is the required final report package on the subject audit. The pertinent details are:

1. Actual Staff Days: 362

Actual Elapsed Days: 310

The final report was signed on March 5, 2003. This report was initially prepared to be issued as a Blue Book. However, during the delays in the report writing process, Department officials implemented corrective measures to expedite the safety basis documentation submission process. Consequently, the decision was made to issue this report as a letter report.

2. Names of OIG audit staff:

Assistant Director: David Sedillo Team Leader: Lynda Crowder Auditor-In-Charge: Arlene Hunt

Audit Staff: Della Bobian, Tychelle Young

3. Coordination with Investigations and Inspections: We coordinated our efforts with Investigations and Inspections on May 2002 and March 2003.

Lawrence R. Ackerly, Division Director

NNSA Audits Division
Office of Inspector General

#### Attachments:

- 1. Monetary Impact Report
- 2. Audit Project Summary Report
- 3. Audit Database Information Sheet

# MONETARY IMPACT OF REPORT NO.: OAS-L-03-12

1. Title of Audit: Department of Energy's Safety Bases for Nuclear Facilities

2. Region/Office: NNSA Audits Division/Washington Audit Group

3. EIGPTS No.: A02CF038

4. Type of Audit:

6. Remarks:

Financial:	Performance:	X	
Financial Statement	Economy and Efficiency		. X
Financial Related	Program Result	ts	
Other (specify type):	•		

5.

FINDING		BETTER USED			QUESTIONED COSTS			MGT. POSITION	POTENTIAL BUDGET IMPACT	
(A)	(B) Title	(C) One Time	(D) Amount Per Year	Recurrin (E) No. Yrs.	g (F) Total Amount	(G) Questioned Portion	(H) Unsupported Portion	(I) Total	(J) C=Concur N=Noncon U=Undec	(K) · Y=Yes N=No
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7. Contractor: None	10. Approvals:
8. Contract No.: None	Division Director & Date - Colore 3/13/03
9. Task Order No.: None	Technical Advisor & Date

# Office of the Inspector General (OIG) Audit Project Summary Report (APS)

Report run on:

March 6, 2003 4:43 PM

Page 1

Ofc: CFA Title: NUCLEAR FACILITIES Audit#: A02CF038

	•				
	Profile	Planned End of Survey	Revised	Actual	
Entrance Conference:	22-APR-02	29-APR-02	29-APR-02	29-APR-02	
Survey Completed:	22-JUL-02	26-AUG-02	26-AUG-02	26-AUG-02	
Field Work Complete:			•		•
Draft Report Issued:		24-FBB-03	31-DEC-02		
Exit Conference:	•				
Completed with Report:	17-MAR-03	30-JUL-02	31-JAN-03	05-MAR-03	(R)
Elapsed Days	329	92	277	310	
Staff Days:	400	0		362	

Date Suspended:

Date Terminated:

Date Reactivated:

Date Cancelled:

DaysSuspended (Cur/Tot):

) Report Number:

OAS-L-03-12

0 ( Rpt Title: DEPARTMENT OF ENERGY'S SAFETY BASES FOR NUCLEAR FACILITIES

#### \*\*\*\* Audit Codes and Personnel \*\*\*\*

Aud Type: EAE ECONOMY & EFFICIENCY

Category: MPA MULTIPROGR. ACTIVITY AD: 84 CROWDER DOE-Org: NNS NATIONAL NUCLEAR SEC AIC: 747 HUNT Maj Iss: 035 Not Found HDQ-Mon: 432 GAMAGE MRA MULTI-REGION AUDIT Site: ARM: 152 SEDILLO

\*\*\*\* Task Information \*\*\*\*

Task No:

Task Order Dt:

CO Tech. Rep;

Orig Auth Hrs:

Orig Auth Costs:

Current Auth:

Current Auth Cost:

Tot Actl IPR Hr:

Tot Actl Cost:

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4	Emp/Cont. Name	Numdays	Last Date		÷	:
-	YOUNG, T	1.8	27-JUL-02		· · · · · · · · · · · · · · · · · · ·	
	CROWDER, L	24.9	22-FEB-03	•		
	BOBIAN, D	162.3	22-FEB-03			
	HUNT, A	173.1	08-MAR-03			
	Total:	362.1				

			****	ATC	Information	***		<del></del>	<del></del>
Atc	Atc Ran	k Atcdesc					•	•	•

### **AUDIT DATABASE INFORMATION SHEET**

1. Project No.: A02CF038

2. Title of Audit: Department of Energy's Safety Bases for Nuclear Facilities

3. Report No./Date: OAS-L-03-12 March 5, 2003

4. Significant Issue: Safety & Health

5. Presidential Mgmt Initiative: N/A

6. Secretary Priority/Initiative: Yes, Safety

7. Program Code: SC-6, NN-3, EM-1, NE, EH-1

8. Location/Sites: Headquarters, Oak Ridge, Tennessee

9. Finding Summary: Department contractors have made significant progress toward meeting the April 10, 2003 due date and Departmental officials were optimistic that the remaining safety bases would be submitted on time. However, some Department officials had concerns about the timely implementation of the hazard controls identified in the safety documents, not having a sufficient number of adequately trained personnel to maintain safety documentation, and the lack of criteria to address operations at those facilities for which a safety basis is not submitted by the April deadline.

10. Keywords: (include as many as you like)

- a. Safety Basis (SB)
- b. Nuclear Facilities
- c. Hazard Controls
- d. 10 CFR 830
- e. Safety Documentation
- f. Documented Safety Analysis (DSA)
- g. Safety Analysis Report (SAR)
- h. Safety Evaluation Report (SER)
- i. Technical Safety Requirements (TSR)