



Department of Energy

Washington, DC 20585

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June 9, 2000

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DNF SAFETY BOARD

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 is the approved Recommendation 98-1 implementation plan verification report dated May 31, 2000, which is a deliverable to the Defense Nuclear Facilities Safety Board (Board) under that plan.

The verification report concluded that the Department has made substantive progress toward implementing the corrective action management process described in the Department's March 10, 1999 plan. However, the verification team identified two key areas where it considered that DOE management attention should be brought to bear in order to consider implementation complete. These two areas concern: (1) the continuing need for adequate documentation of roles, responsibilities, authorities, and procedures covering the program, particularly at the Program Secretarial Office and Field Office levels, and (2) the forging of a stronger link between the corrective action management process now in place and the Department's lessons learned program.

The Department will evaluate incorporation of the identified opportunities for improvement into the current process and will be prepared to brief the Board on its plans for further process enhancements at the Board's request.

Sincerely yours,

Theodore A. Wyka
Director, Safety Management
Implementation Team



cc:

E. Livingston, OSE

M. Hurd, S-2

M. B. Whitaker, S-2

United States Government

Department of Energy (DOE)

memorandum

Savannah River Operations Office (SR)

DATE

MAY 31 2000

REPLY TO

ATTN OF SRD (Dayani/(803) 725-7721)

SUBJECT

Review Team Report on Effective Implementation of the Process for Resolving Issues Identified by the Office of Oversight (Your memo, 11/23/99)

TO Ted Wyka, Director, Safety Management Implementation Team

Per your request, attached is the subject report.

Many people from across the Department supported our review. In particular, I would like to express my appreciation to the team members for their hard work, and to yourself, team advisors, and the DNFSB staff for helping the team focus on the most significant areas.

If you have any questions or comments, please contact me at (803) 725-7721.

Mosi Dayani
DOE-SR

SRD:MD:cb

VD-00-068

Attachment:
Review Team Report

cc:

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DNFSB SAFETY BOARD

**REVIEW TEAM REPORT ON
EFFECTIVE IMPLEMENTATION OF
THE PROCESS FOR RESOLVING ISSUES IDENTIFIED BY THE
OFFICE OF OVERSIGHT**

by signature here, acknowledge that I concur with the TEAM LEADER in the findings and conclusions of this report.

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5/31/00

Date

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EXECUTIVE SUMMARY

DOE's implementation plan for DNFSB Recommendation 98-1 committed to review by June 1, 2000 whether the process to address and resolve safety issues identified during internal independent oversight reviews had been satisfactorily implemented. A team led by Mr. Mosi Dayani of Savannah River Operations Office carried out this review from January - May, 2000. This report contains the team's findings and recommendations.

The review showed that DOE has made commendable progress towards incorporating the commitments made in its implementation plan into its standard ways of doing business. Key achievements include the following:

- a. All issues identified by the DOE Office of Oversight since from 1995 to April 1, 1999 have been reviewed as "legacy issues," and field offices have either documented their closure or have developed action plans covering them.
- b. A DOE-wide computerized tracking system, the Corrective Action Tracking System (CATS) has been developed, and all legacy issues and issues from new reviews since 1999 have been entered into the system. The system, while still being improved, allows easy access to information on issues and the status of corrective actions for those issues.
- c. Key responsibilities and authorities for the process have been incorporated into DOE's FRAM, and overall process requirements have been issued as Attachment 2 of DOE O 414.1A, QUALITY ASSURANCE. Additional guidance material has been drafted and is currently in the directives commenting process.
- d. EH-2 has revised its internal protocols for conducting reviews and has developed guidance for its reviewers to use for commenting on CAPs. EH-72 has also issued thorough and comprehensive instructions for operating the CATS system.
- e. New reviews are being conducted in accordance with the revised protocols, and corrective action plans are being developed and implemented in a timely manner, generally in accordance with the established time limits and procedures.
- f. Two Secretarial quarterly reports have been issued, bringing awareness to the highest levels of DOE management of the actual status of independent oversight findings.

Although substantial progress has been made, there are still two issues that need to be completed before the process can be considered to be fully implemented: (1) Documentation of roles, responsibilities, authorities, and procedures covering the program, particularly at the PSO and field levels, needs to be completed and strengthened in order to ensure that the program will continue to operate as intended, and (2) a stronger link between the lessons learned program and this process is needed to ensure a more proactive approach to the resolution of safety issues.

The team also recommends certain other actions that would enhance institutionalization of the process. These include (1) the need for careful study and planning before expansion of the CATS system to avoid possible dilution of its effectiveness; (2) establishment of ownership for certain aspects of the system now performed by the ICAM; (3) the need for additional guidance and clarifications in existing guidance; and (4) enhancements to the CATS system to further improve its effectiveness. Specific recommendations related to these issues are listed in section 4.2 and 4.3.

INTRODUCTION AND BACKGROUND

The Department's process for addressing and resolving independent oversight findings is an important part of the Feedback and Improvement function within the Integrated Safety Management (ISM) System. On March 10, 1999, the Secretary issued an implementation plan for DNFSB Recommendation 98-1 formulating a process to address and resolve safety issues identified during internal independent oversight reviews. This plan called for a verification of the effective implementation of that process by June 1, 2000. The process described in the plan, although it responds to concerns raised by the Defense Nuclear Facilities Safety Board (DNFSB) in its Recommendation 98-1, applies to all DOE activities subject to review by the DOE Office of Oversight (EH-2), not just defense nuclear facilities.

According to the implementation plan, the verification review must determine the following:

- Question 1:** Whether the process described in the plan has been effectively incorporated into identified Department directives;
- Question 2:** Whether the process has been effectively applied, based on review of a sample of recently issued Office of Oversight assessment reports;
- Question 3:** Whether the process has been effectively applied, based on review of the Department's response to at least one multi-organization, multi-CSO safety issue identified by the Office of Oversight, and
- Question 4:** Whether the process has been effectively integrated into the ISM system.

The DOE Responsible Manager for this implementation plan is Mr. Theodore Wyka, the Director of the Safety Management Implementation Team (SMIT). Mr. Wyka selected Mr. Mosi Dayani from Savannah River Operations Office to lead the verification team and report back to him on the team's findings and recommendations. The letter appointing Mr. Dayani as team leader is included as Appendix A.

The review team included representatives from DOE headquarters, DOE field elements, and consultants. All participants have extensive experience in matters related to integrated safety management and DOE management systems. A list of team members and resource personnel, along with brief biographies for each, is provided as part of the team's review plan (See Appendix B).

The Review Plan also includes a discussion of the criteria used in this review, scope of the review, and how the review was conducted. This material is incorporated into this report by reference and is not repeated here except to note that sites undergoing ISM verifications were reviewed by the ISM verification teams and the results were forwarded for this review.

This report has been structured to address the four questions in the implementation plan, which are listed above. For each question, the criteria used by the review team to answer that question are listed, and findings with respect to each criterion are provided. Findings are a summation of information from a number of different sites and organizations. Appendix C contains a listing of sites, organizations and topics the team reviewed directly, and those where we obtained input from the ISM verification teams. Detailed review forms for each reviewed organization or issue are included as Attachment D. These have been provided to the contact points for each organization and concerns have been discussed with them.

REVIEW FINDINGS

3.1 Question 1: Whether the process described in the plan has been effectively incorporated into DOE directives and procedures.

3.1.1 Criterion 1: Appropriate DOE directives are issued and available in the directives system, and appropriate implementing documents have been issued. Revised documents provide for a consistent and disciplined process. Revised documents contain clear assignment of responsibilities and authorities for developing and implementing CAPs in response to issues identified by EH-2. Revised directives and procedures do not duplicate or conflict with existing directives language.

- a. DOE-wide Directives. Appropriate DOE-wide directives have been developed and issued, and further useful guidance is in the final concurrence process. Both DOE M 411.1-1A, FUNCTIONS, RESPONSIBILITIES, AND AUTHORITIES, of 10/18/99 (Section 9.6.3.2) and DOE O 414.1A, QUALITY ASSURANCE, of 9/2/9/00 (particularly Attachment 2) include requirements from the 98-1 Implementation Plan. These directives are readily available on the internet. In addition, a draft page change to DOE G 450.4-1A, INTEGRATED SAFETY MANAGEMENT GUIDE, is in coordination that will add 10 pages of useful guidance material on this topic in a proposed new Appendix G, section 3.4.

These directives provide a sound foundation for consistency and discipline, and leave adequate room for different implementation to suit site/organizational conditions. They do not conflict with or unduly duplicate other directives. However, the placement of this material into appendices of several different directives, none of which are directly related to the subject of assessments, makes it potentially difficult to locate within the DOE directives system.

There are a few areas in the current directives where confusion has occurred with respect to implementation of the process. For example, it is clear that authority to approve CAPs may be delegated, but it is not clear whether the PSO may delegate authority to approve extensions to the due dates for those CAPs or for specific action items included in them. EH personnel are aware of the need for clarification of this point. See sections 3.1.2 and 3.2.2 below for discussion of other areas where additional guidance or clarifications would improve the process.

- b. **EH Implementing Documents.** EH has developed several procedures and manuals that provide details on various aspects of their role in the oversight process. These documents include the following:
- A memorandum describing the process for dealing with "legacy issues," which was prepared by EH-2 and transmitted by the SMIT director to all field offices and CSOs on March 17, 1999. This memo included an attachment that identified significant safety issues included in EH-2 reviews issued since the beginning of 1995, along with instructions for closing out findings or preparing CAPS to cover them.
 - The revised "Environment, Safety, and Health Appraisal Process Protocols," issued in July 1999 and available on the Office of Oversight home page. This document fully addresses all 98-1 commitments, and requires that EH-2 reports categorize findings into safety issues, which require corrective action and formal tracking via CATS, and opportunities for improvement, which do not.
 - The "Corrective Action Tracking System (CATS) Users Guide for Direct Web Access," version 2, February 10, 2000, which describes detailed instructions on use of the CATS.
 - The "Office of Oversight Safety Issue Corrective Action Process Procedure," Rev. 0 (SP-EH-2.05.01), dated April 10, 2000. This document provides EH-2 reviewers with guidance on reviewing, evaluating, and following up on CAPS.

EH is working on a revision to its functions, responsibilities, and authorities (FRA) document that contains up-to-date authorities and responsibilities covering the 98-1 commitments. Its issuance is imminent. The current FRA dated July 31, 1997, contains information with respect to EH-2's role in oversight of nuclear safeguards and security programs which is no longer their responsibility following the creation of the Office of Independent Oversight and Performance Assurance.

Aside from the FRA, EH's internal implementing procedures contain clear assignments of authority and responsibility and support consistent and disciplined

application. They do not unduly duplicate or conflict with existing directives language. However, several personnel interviewed during the course of this review raised concerns over the subjectivity of EH-2's criterion for deciding which issues should be included in CATS. The EH-2 protocol document calls for all "safety issues" to require formal resolutions and tracking by line management, and defines safety issues as "conditions of concern ... that could have an adverse impact on the environment, safety, or health of the site, its workers, and/or the public." This must be a subjective judgment, but examples or further discussion on this definition in the protocol document might improve the perceived consistency of these judgments. It should be noted that site personnel have full opportunity to discuss findings with the EH-2 review team before issuance of the final report, and any concerns on the significance of the safety issues can be discussed at that time. EH-2 personnel indicated that they have provided suggested additional language on this definition as part of the comment process currently underway on DOE G 450.4-1A

EH is aware that these documents will need to be reviewed for continued accuracy in the light of the recent EH reorganization, the recent expansion of the CATS to include results from other types of reviews, and the imminent dissolution of the ICAM committee.

- c. Headquarters program offices. Documentation by some Headquarters program offices for the 98-1 program is not complete. Only one of the three program offices reviewed has updated and issued a FRA document implementing the 98-1 commitments. The others have draft FRA documents in various stages of development, and at least one has a draft modification to its Quality Assurance Plan (QAP) that will include QA Order requirements for oversight reviews as a part of its total QA program.
- d. Field Offices. At the field level, all nine of the offices reviewed have issued FRA documents, and about half have updated them to include the 98-1 requirements. Most of the others have drafts in various stages of development. About half of the offices have issued plans or procedures for addressing 98-1 commitments, or have drafts well along in the development process. The implementing documents we reviewed are adequate to provide a framework for consistency.

3.1.2 Criterion 2. Revised directives and procedures include requirements for preparation of formal CAPs in response to EH-2 issues; elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution; effective use of CATS; and identification and dissemination of lessons learned consistent with ISM implementation.

- a. Preparation of formal CAPs. DOE O 414.1A includes requirements for preparation of formal CAPs in response to EH-2 issues. The draft guidance material in DOE G 450.4-1A provides extra detail on how these requirements can

be met. All of the lower tier revised FRAs and implementing documents that we reviewed contained these requirements or a reference to them.

- b. Elevation of Issues. Revised DOE-wide directives clearly assign to line management the responsibility to elevate issues for resolution. The dispute resolution process is covered in DOE O 414.1A, Attachment 2, paragraph 4. Further guidance on this subject is included in the draft revision to Appendix G of DOE G 450.4-1A.

- c. Effective use of CATS. The QA Order clearly requires EH-2 to input safety issues from EH-2 reviews into CATS, and requires the line to use the CATS system for corrective actions and closeout information. CATS has also been used to track issues and corrective actions developed under DOE O 225.1, ACCIDENT INVESTIGATIONS, and the use of CATS for this purpose is documented in the CATS Users Guide, the draft Appendix G to DOE G 450.4-1A, and draft revisions to DOE O 225.1 and its associated Guide, which are currently in the comment process. Recently, the Deputy Secretary directed that issues and corrective actions related to HEPA filters and criticality safety will be added to the CATS. Also, the Implementation Plan for 98-1 says the CATS system will be expanded eventually to include other issues, but does not define the eventual scope and coverage of the program. The existing directives, implementing procedures, and guidance would need revision to cover the expanded use of CATS. Any changes to expand the CATS system to cover other issues need to be carefully considered and planned for, to ensure that the effectiveness of the CATS system as a tool for identification of items important to DOE senior management is not diluted. Also, the relationship of the CATS with site issues management systems needs to be studied and addressed to make sure that DOE develops integrated and logical systems that do not place excessive emphasis on one type of review over another, but instead focus on the significance of identified safety issues.

Neither the revised QA Order nor the DOE FRAM contain responsibilities for maintaining the CATS system or for producing the quarterly report for the Secretary. The quarterly report is one of the requirements contained in the Implementation Plan for DNFSB Recommendation 98-1, and is currently being done by the ICAM team. This report is extremely useful in ensuring management attention to corrective action items. However, responsibility for its continuation after ICAM dissolves needs to be determined and documented in the FRAM. The draft guidance in appendix G of DOE G 450.4-1A does mention that EH is responsible for developing and maintaining the CATS Users Guide.

EH's draft FRA includes responsibility for maintaining CATS, and the CATS users guide is thorough and complete. The revised Program and field office FRAs and implementing documents that we reviewed either reference the DOE QA Order or directly require use of the CATS system.

- d. Dissemination of Lessons Learned. There is a need to enhance the tie-in between DOE's lessons learned program and oversight reviews. Currently, the DOE FRAM in 9.6.2 states a general expectation that all DOE organizations are "accountable for becoming and remaining cognizant of all relevant sources of information bearing on their activities ... and from whom best current practices can be learned." There is also a general paragraph, 9.6.1.1, charging PSOs and FEMs to implement and participate in lessons learned programs. However, there are no specific process requirements in any DOE-wide directive that addresses use of CATS information and issues in the lessons learned program. A review of the current program shows that the technical standard and Handbook addressing the program do not contain any references to the CATS system or implementation of commitments from 98-1. The DOE-wide website maintained for lessons learned program, although it contains extensive links to other sources of DOE lessons learned data, does not contain any links to the CATS system. None of the information available on that website addresses the CATS program in any way, and a quick review of the data included in that system does not show lessons learned from any current EH-2 reports developed after 98-1 was implemented.

Implementing documents from the several Headquarters program offices reviewed (draft and issued FRA documents and the draft QA plan) either referenced or included the expectation for lessons learned resulting from EH-2 reviews, but provided little or no specifics on how this is to be done.

Several of the field sites have developed lessons learned programs that specifically incorporate experience gained from EH-2 reviews into a single, comprehensive site lessons learned program. Several have local issues tracking systems either up and running or in development, and have worked with EH to integrate these systems smoothly with the CATS system.

The ability of any person, including the public, to have access to the CATS data is a potentially powerful tool for implementing lessons learned, even though procedures for the lessons learned program do not yet adequately cover its use. Also, DOE is currently involved in a review of its lessons learned program, and enhancements made through that means may well address the concerns identified through this review.

3.1.3 Criterion 3. Changes to the directives and procedures provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2, in line with integrated safety management objectives.

With the exception mentioned in 3.1.2.d above with respect to the need for better linkage to the lessons learned program, most of the documents we reviewed at all organizational levels allowed for adequate integration of this program with other assessment and corrective action programs.

1.4 Criterion 4. DOE Field Offices have a process for ensuring that contractors do what is necessary to meet obligations of this program.

A variety of contractual tools are already in place that permit requirements for this program to be passed on to contractors. Most contracts include a Directives, Laws and Regulations Clause, which call for the identification of safety requirements through either a list of applicable DOE directives or an alternative process such as Standards/Requirements Identification Documents (S/RIDs) or Work Smart Standards (WSS). In addition, most contracts have a technical direction clause that permits DOE to provide written instructions on an ad-hoc basis, which must be honored provided they do not add to the overall cost of the contract.

Our review showed that most of the DOE field elements are making effective use of the existing contractual mechanisms and are able to use simple, informal means to pass on particular EH-2 reviews for action.

1.2 Question 2: Whether the process has been effectively applied, based on review of a sample of recently issued Office of Oversight assessment reports.

1.2.1 Criterion 1. The process for addressing and resolving EH-2 findings as outlined in directives and procedures (both applicable DOE-wide and local requirements) has been effectively applied at HQ and in the field. Reviews were done, corrective action plans were developed, and any issues were pointed out for improvement. Each organization understands its responsibility and did its part in conducting reviews and developing corrective action plans within established time frames.

During the course of this review, the team examined performance with regard to a large number of legacy issues and four recent EH-2 reviews. ISM verification teams provided information on three additional recent EH-2 reviews at sites they covered. Actual performance of EH and all sites reviewed was in accordance with the processes defined for this program, as discussed below.

EH-2 identified "legacy" safety issues from all reports since 1995, and provided this information to the field along with process instructions. All the field sites reviewed had a number of legacy issues, and all have now been either closed or CAPs have been developed to address them, as outlined in these memorandums. Full information on these issues is available in the CATS system.

New reports issued since revision of the EH-2 protocols have clearly identified safety issues so there is no question over which issues are expected to have CAPS prepared and formal tracking done. EH-2 has entered issues into the CATS system in a timely manner. Program offices and field sites have dealt with these reports appropriately and in a generally timely manner, and have entered appropriate information into CATS. There were a few start-up problems, such as confusion over who had authority to approve extensions to time limits for CAP due dates or CAP actions, but in general the process has worked well. EH-2 has provided comments in a timely manner to the

Cognizant Line Managers (CLMs) on the adequacy of the CAPS, and the CLMs have responded in a timely manner with improvements or explanations.

All organizations reviewed understand their roles and responsibilities for the program. Two out of three of the PSOs have delegated full authority for approving CAPs to the Field Managers. These delegations may cause some sticky issues for sites with multiple PSOs. It is unclear how the concept of "lead PSO" and delegations will apply to issues that are identified at a particular site but apply across the entire field office. Also, delegations need to be more carefully scoped with respect to level of action and degree of coordination with the PSO. For instance, if a field manager has been delegated authority to approve CAPs, does this include the authority to approve corrective actions that must be done by a headquarters unit?

The quarterly report to the Secretary has been effective in getting attention to prompt resolution of issues. It may, however, put too great an emphasis on correction of issues identified during oversight reviews and accident investigations, while there might be even more serious problems identified during self assessments that get less attention and resources. This ties in with a general concern over the eventual scope and coverage of the CATS system discussed above under 3.1.2.c.

3.2.2 Criterion 2. Safety issues were addressed, resolved, and verified adequately and in a timely manner. Each organization did its part in implementing, reviewing, and closing issues. Closure was independently verified, and resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.

From review of CATS data and interviews with field personnel, it appears as if most of the safety issues are being addressed, resolved, and verified adequately and in a timely manner.

PSO participation in closeout of items is mixed. Generally, where authority is delegated to the field to approve CAPs, there is little involvement by the PSO in verifying closure of actions. Most field sites are using some form of documented and rigorous independent verification of closeout, usually via team reviews of closure packages.

The CATS system is fulfilling its promised role as a useful tool for tracking items and reporting on status. It is relatively easy to use with little instruction, and is well-supported with a comprehensive Users Guide and a help desk. We did note a few minor areas where the usefulness of the data is in question or where system enhancements would benefit. These include:

- a. There is a discrepancy between the way different CLMs are reporting actions as closed within CATS. Some report actions as closed before verifications are completed (while still noting that verification has not yet been done), while others will not report an action closed until the verification is complete. Also, some sites show an action as overdue when the original due date is passed, even if a

formal extension was granted. These inconsistencies result in significant differences in the CATS data between sites with respect to timeliness of closing actions and the number of actions still shown as open. Currently, none of the guidance on the CATS system addresses this issue.

- b. There appear to be some additional discrepancies in reporting action items as open or closed. In one location within the CATS system an item might be shown as closed, and as open and overdue in another location. This is apparently due in part to the "closed fields" which cannot be edited without higher level approvals, and to problems that occur when entries in different fields are not subject to internal cross-checks and edits. These discrepancies may make it difficult to get a truly accurate picture of a site's performance, as one site had either four or six overdue actions depending on which part of CATS was reviewed.
- c. Additional CATS sorting/reporting capabilities would be useful to facilitate a review of site performance in addressing, resolving, and closing issues. Currently, issues and actions may be sorted by PSO, but there is no provision for a sort by a particular field office. For offices that report to a single PSO, this is not a problem, but for those with several PSOs, one must review several different PSO reports to get a full picture of that office's performance.

3.2.3 Criterion 3. Resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.

There is no DOE-wide tie-in between the CATS system and the lessons learned program. However, the CATS system is readily available on the internet, is relatively easy to use, and may be accessed by anyone to get information on similar situations and sites. In addition, several field offices and contractors have good systems for taking information from one review and passing it on to other organizations within the same site or under the same organization. Some also screen the EH website and the CATS for data from other sites with similar facilities or problems. In general, though, these efforts are very specific to a particular site and there are no specific DOE criteria or expectations for how CATS data will be used for lessons learned. Also see the discussion above at 3.1.2.d.

3.2.4 Criterion 4. Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e., the problems were actually fixed).

At the present time, it is still early to draw conclusions on the effectiveness of CAPs actions in fixing problems. There are no follow-up reviews that have been completed yet on sites where the initial review and the CAPS were all done using the full 98-1 process. However, we did review several follow-up reports of previous EH-2 reviews. In two cases there were a few items reported as closed that EH-2 still determined that further work was necessary, although they determined that substantial progress had been made. Overall, the system is working in that EH-2 specifically reviews previously identified safety issues as part of each new review, to see if they have been corrected.

Question 3: Whether the process has been effectively applied, based on review of the Department's response to at least one multi-organization, multi-CSO safety issue identified by the Office of Oversight.

For this question, the review team applied the same criteria used for Questions 1 and 2 to determine how effectively implementation of the 98-1 commitments has dealt with DOE-wide issues. The reports chosen were the "Independent Oversight Review of the DOE Quality Assurance Program for Suspect/Counterfeit Parts," of May 1996, and the "Independent Oversight Review of Aviation Safety Programs in the Department of Energy," dated August 1997. We also interviewed EH-2 personnel and the acting head of DOE's Aviation Safety Office and reviewed CATS data on corrective actions, timeliness, and status of completion. We found that the process was effective in dealing with multi-organization, multi-CSO safety issues, even those that had proved resistant to resolution in the past. Specifics are given below.

Neither the DOE FRAM nor the QA Order have any separate provisions addressing multi-site or multi-organizational reviews and findings. Draft Appendix G to DOE G 450.4-1A, however, contains a new process for determining which CSO will take the lead on issues involving multiple DOE organizations. This provides that the involved CSOs will mutually determine who is to take the lead, and if they cannot, the Deputy Secretary will appoint one. This documents the process used for determining who should take the lead on the suspect/counterfeit parts report. There is no additional time added to the 60 days for developing a CAP to cover extra time that might be involved in determining who should be the lead CSO or in getting responses from the many different offices that may need to be involved in a multi-site CAP.

Both of these reports were handled under the legacy issue process, as they were completed prior to 98-1 process changes. EH-2 reviewed both of these reports and identified issues they believed important enough to warrant corrective action and formal tracking through CATS, and prepared a memorandum for the SMIT Director's signature that was sent to the lead CSOs for resolution.

The Suspect/Counterfeit Parts report was assigned initially to the Office of Field Integration (FI), and included only one omnibus safety issue. A CAP containing 17 actions was approved by this office in a timely manner. FI was abolished in September 99, and following some discussion, the lead responsibility was reassigned to EM-1. EM re-approved the CAP on December 6, 1999, staffed the actions through the Field Management Council, and sent direction to field managers to implement in mid-December. The CAP showed that 16 of the items were closed during 1996 - 1998. The single open action called for each site to identify critical systems, inspect such systems for suspect/counterfeit parts, and take appropriate actions to dispose of any that are found. Each site was to document completion of each of the three steps or provide a corrective action plan, with a planned completion date of March 18, 2000. On March 28, 2000, the Assistant Secretary for ES&H sent a letter to EM-1 asking for a status update. EM's response included copies of supplemental CAPS for three offices, with final

completion dates of October 1, 2000. However, as of April 25, 2000, these items were still shown as overdue in CATS.

The Aviation Safety report was first assigned to the Assistant Secretary for ES&H for action in mid-April, 1999. One month later, the Office of Aviation Safety was reorganized and moved from EH to the Office of Management and Administration, and responsibility for the CAP was also transferred along with the office. The CAP was approved on June 30, 1999, only slightly past the 60 day time limit. The CAP included 8 separate action items to address the single omnibus safety issue. Three of these actions are shown as closed, one is overdue since November 99, and four are on schedule.

4.4 Question 4: Whether the process has been effectively integrated into the ISM system.

In answering this question, we considered all the criteria from questions 1, 2, and 3. We conclude that the process, while still in its youth, has good potential for being effectively integrated into the ISM system. Documentation, particularly at the PSO and field level, is still maturing, and there is a need to more carefully integrate this program with the lessons learned program to ensure that experience gained from EH-2 reviews can be efficiently applied to similar situations. However, great progress has been made in resolving old issues and providing a sound foundation for addressing future issues that may arise in a timely and effective manner.

4 CONCLUSIONS, RECOMMENDATIONS, AND OPPORTUNITIES FOR IMPROVEMENT

4.1 Conclusions. DOE has made commendable progress towards incorporating the commitments made in its implementation plan for DNFSB Recommendation 98-1 into its standard ways of doing business. Key achievements include the following:

- a. All issues identified by the DOE Office of Oversight from 1999 to April 1, 1999 have been reviewed as "legacy issues," and field offices have either documented their closure or have developed action plans covering them.
- b. A DOE-wide computerized tracking system, the Corrective Action Tracking System (CATS) has been developed, and all legacy issues and issues from new reviews since 1999 have been entered into the system. The system, while still being improved, allows easy access to information on issues and the status of corrective actions for those issues.
- c. Key responsibilities and authorities for the process have been incorporated into DOE's FRAM, and overall process requirements have been issued as Attachment 2 of DOE O 414.1A, QUALITY ASSURANCE. Additional guidance material has been drafted and is currently in the directives commenting process.

- d. EH-2 has revised its internal protocols for conducting reviews and has developed guidance for its reviewers to use for commenting on CAPs. EH-72 has also issued thorough and comprehensive instructions for operating the CATS system.
- e. New reviews are being conducted in accordance with the revised protocols, and corrective action plans are being developed and implemented in a timely manner, generally in accordance with the established time limits and procedures.
- f. Two Secretarial quarterly reports have been issued, bringing awareness to the highest levels of DOE management of the actual status of independent oversight findings.

Two items must be addressed, however, before implementation of all 98-1 commitments can be considered complete. These are:

- a. The documentation of roles, responsibilities, authorities, and procedures covering the program, particularly at the PSO and field levels, is lagging behind commitments made in the 98-1 Implementation Plan. In order to ensure that the program will continue to operate as intended, it is important that Headquarters offices and the sites finish and issue appropriate implementing instructions, including FRAs, QAPs, and other internal procedures, and keep these up to date as organization changes occur. (See 3.1.1.a, c, and d).
- b. There needs to be a stronger link between the 98-1 and the DOE lessons learned program. Identification and dissemination of lessons learned during every step of the process execution was identified as one of the four principal system requirements in Section 5 of DOE's 98-1 Implementation Plan, to ensure a more proactive approach to the resolution of safety issues identified by EH-2. (See 3.1.2.d. and 3.2.3.)

4.2 Recommendations. In order to achieve full implementation of this process, we recommend that completion of the two items listed above should be formally tracked to closure. In addition, we recommend consideration of the opportunities for improvement listed in section 4.3 below.

4.3 Opportunities for Improvement. In addition to the recommendations above, the team also identified several areas where improvements could be made to better institutionalize and enhance the process. These opportunities are as follows:

- a. Some directives and procedures would benefit from additional guidance or clarification.
 - (1) Documentation of responsibilities for maintaining the CATS system, producing the quarterly report from CATS for the Secretary, and any other responsibilities currently handled by ICAM that need to be continued past the end of September should be added to DOE M 411.1-

1A to enhance understanding and to keep responsibilities current. (See 3.1.1.b and 3.1.2.c.)

- (2) The determination by EH-2 reviewers of which concerns rise to the level of "safety issues" requiring formal corrective action and tracking within CATS could be improved to provide more clarity. This could be done by providing further discussion or examples within the EH-2 review protocol or in Appendix G of the ISMS Guide, as is already under consideration. (See 3.1.1.b.)
- (3) The ISM Team Leader's Handbook should be reviewed to determine whether it should be revised to include in future ISM verifications a review of the process for dispositioning EH-2 oversight issues.

b. Changes to the scope and coverage of CATS need to be carefully considered and implemented to avoid diluting its effectiveness. (See 3.1.2.c. and 3.2.1.)

c. Delegations of authority to approve CAPs need further work. Delegations and the processes used to make such delegations need to be reviewed to see if they describe adequate boundaries and provide information on how to deal with situations where a particular field office might have an issue that applies to multiple PSOs. (See 3.2.1.)

d. Enhancements to the CATS system would improve its effectiveness.

- (1) Guidance on the conditions that should be met before reporting items as closed, and whether an item should be shown as overdue when a time extension has been granted, would be helpful to ensure that CATS provides a consistent picture of inter-site performance. (See 3.2.2.a.)
- (2) The system should be reviewed to verify the reasons for contradictory data on whether certain items are open or closed, and appropriate steps should be taken to reduce or eliminate the problem. (See 3.2.2.b.)
- (3) Capability to sort status of actions by field office would be useful. (See 3.2.2.c.)



Department of Energy

Washington, DC 20585

November 23, 1999

MEMORANDUM FOR MOSI DAYANI
SAVANNAH RIVER OPERATIONS OFFICE

FROM:


TED WYKA
DIRECTOR, SAFETY MANAGEMENT
IMPLEMENTATION TEAM

Subject: Verification of the Department's Process to address and resolve safety issues by the Office of Oversight

The Department's process for addressing and resolving independent oversight findings is an important and integral component of the Feedback and Improvement function within the Integrated Safety Management System. The Secretary's March 10, 1999 implementation plan to address and resolve safety issues identified by internal independent oversight, in response to Defense Nuclear Facilities Safety Board recommendation 98-1, calls for a verification of the effectiveness of the process that was developed and implemented by that plan. As responsible manager for the Department's 98-1 implementation plan, I am requesting that you lead this verification.

According to the plan, this verification activity needs to determine the following:

- Whether the described process has been effectively incorporated into identified Department directives, and the requirements incorporated into lower-level Functions, Responsibilities, and Authorities documents, Quality Assurance Plans, and implementing Safety Management System procedures,
- Whether the process - encompassing evaluation, resolution, and closure of EH-2 identified safety issues - has been effectively applied at headquarters and in the field, based on review of a sample of recently-issued Office of Oversight assessment reports, and
- Whether the process - encompassing evaluation, resolution, and closure of EH-2 identified safety issues - has been effectively applied, based on review of the Department's response to at least one multi-organization, multi-Cognizant Secretarial Officer safety issue identified by the Office of Oversight.

The plan calls for the Department's verification approach to be established in December 1999 and the verification to be completed, with a final verification report, by June 1, 2000. The verification report should also provide any recommendations that you and your team have for improving the Department's process or its implementation.

Ted Wyka Memo
November 23, 1999
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To the extent possible, the verification approach should make use of ongoing ISM verification activities conducted by site-based teams and should not duplicate or replicate these ongoing efforts. To facilitate review by ISM verifications planned in the near future, please provide to me by December 20, 1999, for transmission to ISM verification teams any supplementary Criteria and Review Approach Documents (CRADs) identified by your verification team.

The following persons have agreed to serve on the verification team:

- Mr. John Adachi, Chicago Operations Office
- Mr. Roger Wilbur or designee, Idaho Operations Office
- Mr. Rabi Singh, DP Headquarters
- Mr. Joseph Hassenfeldt, S-3.1 Headquarters
- Mr. Bill Miller, EH-2 Oversight (in an informational/advisory role).

Please finalize your team and approach, and provide me with your plan for this verification by December 20, 1999. Call me at (202) 586-1418 with any questions you might have on this matter.

Ted Wyka Memo
November 23, 1999
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cc:

T. Gioconda, DP-1
D. Reicher, EE-1
D. Michaels, EH-1
C. Huntoon, EM-1
R. Gee, FE-1
W. Magwood, NE-1
L. Barrett, RW-1
M. Krebs, SC-1
R. Glass, Manager, Albuquerque Operations Office
R. San Martin, Manager, Chicago Operations Office
B. Cook, Manager, Idaho Operations Office
K. Carlson, Manager, Nevada Operations Office
L. Dever, Manager, Oak Ridge Operations Office
J. Turner, Manager, Oakland Operations Office
S. Brechbill, Manager, Ohio Field Office
K. Klein, Manager, Richland Operations Office
R. French, Manager, Office of River Protection
J. Roberson, Manager, Rocky Flats Field Office
G. Rudy, Manager, Savannah River Operations Office
F. McCoy, Deputy Manager, Savannah River Operations Office
E. Livingston, OSE
M. Whitaker, S-3.1
D. Stadler, EH-2
SMIT Points of Contact
I-CAM Members
Verification Team Members

**REVIEW PLAN
FOR
VERIFYING EFFECTIVE
IMPLEMENTATION
OF
THE PROCESS FOR RESOLVING ISSUES
IDENTIFIED BY THE OFFICE OF
OVERSIGHT**

Developed by: _____
Mosi Dayani, Team Leader

Approved: _____
Ted Wyka, Director, SMIT

REVIEW PLAN FOR VERIFYING EFFECTIVE IMPLEMENTATION OF THE PROCESS FOR RESOLVING ISSUES IDENTIFIED BY THE OFFICE OF OVERSIGHT

INTRODUCTION AND BACKGROUND

The Department's process for addressing and resolving independent oversight findings is an important and integral component of the Feedback and Improvement function within the Integrated Safety Management (ISM) System. On March 10, 1999, the Secretary issued an implementation plan for DNFSB Recommendation 98-1 formulating a process to address and resolve safety issues identified during internal independent oversight reviews. This plan also called for a verification of the effective implementation of that process. The process described in the plan, although it responds to concerns raised by the Defense Nuclear Facilities Safety Board (DNFSB) in its Recommendation 98-1, will apply to all DOE activities subject to review by the DOE Office of Oversight (EH-2), not just defense nuclear facilities.

According to the implementation plan, the verification review needs to determine the following:

- Whether the process described in the plan has been effectively incorporated into identified Department directives;
- Whether the process has been effectively applied, based on review of a sample of recently issued Office of Oversight assessment reports;
- Whether the process has been effectively applied, based on review of the Department's response to at least one multi-organization, multi-CSO safety issue identified by the Office of Oversight, and
- Confirm effective integration of the process into the ISM system.

The DOE Responsible Manager for this implementation plan is Mr. Theodore Wyka, the Director of the Safety Management Implementation Team (SMIT). Mr. Wyka appointed Mosi Dayani, of the Savannah River Operations Office, to lead a verification team for this effort.

Scope of Review

The verification team (the Team) will verify DOE's implementation of the requirements established in the Department's Implementation Plan for DNFSB Recommendation 98-1. This will include review of both DOE Headquarters and field actions described above. The Team will also review a sample of responses to the "legacy issues" identified in the implementation plan to ensure that the system for dealing with these issues is working effectively. Verification of the Corrective Action Tracking System (CATS) database is being handled by a separate team, as described in commitment 5.3.4 of the 98-1 Implementation Plan. The Team will review this report, which is scheduled for completion by March 1, 2000, to ensure adequate coordination between all parts of the implementation review. The Team will review line management application of the CATS as a tool to facilitate tracking, reporting, and closing of the issues.

Team deliverables are (1) a description of the verification approach, by the end of December, 1999 (this Review Plan), and (2) a report due June 1, 2000 documenting the results of the verification and any recommendations for further steps needed, if any, to complete implementation of an effective process.

Approach

The Team will conduct its work by reviewing documentation and conducting interviews and observations. The Team will make use of ISM verification activities conducted by site teams to gather information on those field sites that are scheduled for review during January - April 2000. Their feedback (to be obtained on a schedule and in a format and level of detail mutually discussed and agreed upon with the verification team leader) will be included in our review and report conclusions. Phase 1 reviews will use Objective 1 and Phase 2 reviews will use Objective 2 of the attached CRADs. We expect the DOE subteam will be assigned responsibility for this portion of the review, but it is up to the team leader to determine which subteam will be used. Currently, 15 reviews are scheduled during this time frame at facilities under Chicago, Idaho, Nevada, Oakland, Ohio, and Oak Ridge Operations Offices, and at the Albany Research Center under Fossil Energy. The attached CRADs will be provided to the DOE Heads of Contracting Authority and to the ISM Team Leaders for these reviews, and a modified set will be provided as part of the recommendations in the team report for inclusion in the Team Leaders' Handbook.

For field offices that do not have ISM or EH-2 reviews scheduled during the next several months, such as Albuquerque, Rocky Flats, and Savannah River, our team will conduct other reviews as necessary in order to ensure an adequate sample. In addition, the team will review a sample of headquarters organizations including Defense Programs, Environmental Management, Science, and EH. To accomplish these reviews, trip(s) to Headquarters and other field sites will be necessary. In the attached CRADs, the Team has identified which verification activities it will complete itself and which activities it will pass back to ISM verification teams for input (i.e., those focused in the field).

Results of specific reviews performed under each CRAD will be incorporated into the final report, along with recommendations for improvement where appropriate. In order to ensure the adequacy of findings and recommendations, the results of the review will be coordinated with EH-2 and various line management organizations prior to issuance of the report.

Team communications will be primarily through phone calls, E-mails, and bi-weekly conference calls to discuss progress and make assignments. We anticipate that a face-to-face meeting may be necessary near the end of the review to ensure that findings are thoroughly discussed and that agreement is reached on documentation of findings and recommendations. Additional meetings may be scheduled as needed.

Process implementation will continue during the time the Team is conducting its review. For example, updates to field office and program office Functions, Responsibilities, and Authorities

Documents are scheduled to be completed by March 1, 2000. A preliminary schedule is provided below; the detailed schedule will be adjusted as necessary to ensure that verification reviews for such activities are conducted after the expected implementation date, to make maximum use of ISM and other reviews that are ongoing, and to provide a final report by the June 1 due date. To ensure that reviews are not done prematurely, each organization to be reviewed will be asked to verify that it believes the process is fully implemented before the review is done. If the organization states it is not ready, this will be noted and the review will be rescheduled as appropriate. If an extension to the June 1 date is needed, the Team will notify the SMIT Director at least a month in advance of the due date.

Schedule:

- 1 Develop verification plan and CRADs (this review plan).
- 2 Select sample EH-2 reviews and legacy issues to be reviewed. 1/21/00
- 3 Discuss review and provide CRADs to ISM Team Leaders and EH-2. 1/21/00
- 4 Review DOE-wide directives for effective inclusion of process requirements. 2/29/00
- 5 Verify inclusion of process requirements in organization FRA documents and QA plans. 4/15/00.
- 6 Complete review of HQ and field office implementation of process. 5/1/00
- 7 Coordinate findings and recommendations with line managers and EH-2, by 5/19/00
- 8 Draft report and briefing to SMIT director, by 5/20/99
- 9 Finalize report and recommendations. 6/1/00.

Team membership

The Team includes people from both Headquarters and field organizations. The team will be assisted by two advisors and two support persons provided by the SMIT team. Names and organizational affiliations are provided below. Brief biographical sketches are provided in Attachment 2.

Mosi Dayani, Savannah River Operations Office, Team Leader
John Adachi, Chicago Operations Office
Herbert Bohrer, Idaho Operations Office
Rabi Singh, DP Headquarters
Henry Himpler, EM Headquarters

Joseph Hassenfeldt, S-3.1 Headquarters (Advisor, 98-1 Implementation Plan)
William E. Miller, EH-2 (Advisor, EH independent oversight process)
Tom O'Brien, SMIT Team support
Karen Edwards, SMIT Team support

CORE REQUIREMENTS AND CRITERIA AND REVIEW APPROACH DOCUMENTS

The following core requirements were developed from the requirements in DOE's Implementation Plan in response to DNFSB Recommendation 98-1 and the fundamental attributes which support implementation of the Integrated Safety Management System. Each core requirement is accompanied by an explanatory paragraph which can be used to assist the team in tailoring a Criteria and Review Approach Document (CRAD) for a specific review. The elements of the explanatory paragraph, when developed into criteria for the CRAD, should ensure all the objectives of the Implementation Plan are met.

OBJECTIVE

1. **Implementation Plan requirements have been effectively included in DOE directives and implementing documents.**

Criteria

1. Appropriate DOE directives are issued and available in the directives system, and appropriate implementing documents have been issued. The directives and implementing documents provide for a consistent and disciplined process, with clear assignment of responsibilities and authorities for developing and implementing CAPs in response to issues identified by EH-2. Revised directives and procedures do not duplicate or conflict with existing directives language. Documents to be reviewed include:
 - a.¹ DOE-wide directives, including DOE O 414.1A, DOE M 411.1-1A, DOE G 414.1-2, and DOE G 450.4-1, as appropriate.
 - b. PSO and field directives and documents, including lower-level FRA documents, QA Plans, and implementing procedures and instructions. HQ FRA documents are to be revised by January 14, 2000; Field FRA documents are to be complete by March 1, 2000, and field changes to QA plans are due January 4, 2000.
2. Revised directives and procedures include requirements for (1) the preparation of formal CAPs in response to EH-2 issues; (2) elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution; and (3) effective use of CATs; and identification and dissemination of lessons learned consistent with ISM implementation.

¹This criteria does not apply to field reviews

- Changes to the directives and procedures provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2 with other corrective action programs, in line with integrated safety management objectives.
- 1 DOE field offices have a process for ensuring that contractors do what is necessary to meet obligations of this program.

Approach

The verification team will review the DOE FRAM, appropriate DOE-wide directives, selected PSO FRA documents, QA plans, and various other implementing documents to ensure that appropriate changes have been made.

The verification team will sample DOE field office directives and FRA documents at selected sites to ensure that appropriate changes have been made. For these offices, they will also review documentation to verify that field offices have ensured that contractors appropriately respond to EH-2 issues. They will review contractor procedures to verify that they adequately address reporting, documentation, tracking, and prioritization of corrective actions resulting from EH-2 reviews and the CATs system.

SMS Verification teams will review DOE field office directives and FRA documents to ensure that appropriate changes have been made. For these offices, they will also review documentation to verify that field offices have ensured that contractors appropriately respond to EH-2 issues. They will review contractor procedures to verify that they adequately address reporting, documentation, tracking, and prioritization of corrective actions resulting from EH-2 reviews and the CATs system.

OBJECTIVE

- 2 **The process for addressing and resolving safety issues identified by EH-2 as outlined in directives and procedures has been effectively applied at headquarters and in the field.**

Criteria

- a The process was followed (both applicable DOE-wide and local requirements, if any). Reviews were done, corrective action plans were developed, and any issues were pointed out for improvement. Each organization understands its responsibility and did their part in conducting reviews and developing and approving corrective action plans within established time frames.
- b Safety issues were addressed, resolved, and verified adequately and in a timely manner. Each organization did their part in implementing, reviewing, and closing issues, and closure

was independently verified.

Resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.

Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e., the problems were actually fixed).

Approach

Record Reviews:

The verification team will review (1) the Secretary's Quarterly Reports on Corrective Action Status for coverage of identified issues, (2) a sample of Office of Oversight assessment reports issued since April 1999, and (3) a sample of legacy issues identified and entered into CATs. This will include review of at least one multi-organization, multi-Cognizant Secretarial Officer safety issue, EH-2 individual site reports for selected field offices, and a sample of legacy issues for these offices.

ISMS Verification Teams will review any EH-2 individual site reports for field offices that are being reviewed during January-April 2000.

Interviews:

The verification team will interview DOE Headquarters personnel responsible for development and use of the Secretary's Quarterly Report on Corrective Action Status to determine its usefulness and future plans for its use.

The verification team will interview EH-2, PSO and selected field office and contractor line managers and safety personnel to discuss how particular issues were handled and whether any problems were identified in the process. If problems were identified, how were these addressed, and are there any recommendations for improvement in the process. Also, the process for reviewing and applying lessons learned at other sites will be discussed.

ISMS Verification Teams will interview selected field office and contractor line managers and safety personnel to discuss how particular issues were handled and whether any problems were identified in the process. If problems were identified, how were these addressed, and are there any recommendations for improvement in the process. Also, the process for reviewing and applying lessons learned at other sites will be discussed.

(O)bservations:

The verification team and ISMS Verification Teams, for assigned organizations: If possible observe actual discussions (including meetings involving the development of CAPs) within and between contractors and DOE field offices, and between DOE field offices and HQ organizations, to observe the practical application and results of the procedures.

BIOGRAPHICAL SKETCHES REVIEW TEAM

Team Members:

Mosi Dayani, Team Leader. Mosi Dayani is currently the senior technical advisor on Standards and Regulatory Programs at the U.S. Department of Energy, Savannah River Operations Office. He is also program manager for the development and implementation of the site-wide Integrated Safety Management System (ISMS). His responsibilities include the site's Standards/Requirements Identification Document and implementation of environment, safety, and health standards, regulations, and DOE directives, including the Price-Anderson nuclear safety Rules. He is also the DOE-SR member of the Safety Management Implementation Team (SMIT). Mosi has 20 years of experience in defense and civilian nuclear industry in the areas of systems engineering and project and program management.

John Adachi. John is employed by DOE's Chicago Operations Office as a Safety and Technical Services/Senior QA Engineer. He also serves as Chicago's ISMS Coordinator. John has a B.S. degree in Civil Engineering from the Illinois Institute of Technology; 1976 and an M.S. in Management of Technology from the National Technological University; 1995. Work experience includes 11 years in the commercial nuclear power industry prior to joining DOE in 1988. He has served on accident investigation teams and a number of ISMS verification teams, including two as team leader.

Herbert A. Bohrer. Mr. Bohrer is currently serving as Director of ES&H Oversight for the DOE-ID Office of Program Execution. In this role he is responsible for the coordination of line management oversight conducted by DOE-ID as well as for oversight of performance monitoring and trend analysis activities. Mr. Bohrer has over thirty-five years of nuclear experience beginning in the Naval Nuclear Propulsion program. He has served in a variety of operations line management positions as well as in ES&H management positions. He has participated in a variety of assessment activities throughout his career. He has been employed by Westinghouse Electric Corporation Bettis Atomic Power Laboratory, EG&G Idaho, Science Applications International Corporation, and Lockheed-Martin prior to joining the Department of Energy. Mr. Bohrer holds a Bachelor of Science in Mechanical Engineering from the University of Oklahoma.

Henry P. Himpler, Jr. Mr. Himpler is employed by DOE's EM-5 Safety & Health Team. He is the newly designated Environmental Management member of the Safety Management Implementation Team (SMIT) and a designated Verification Team Leader. He is also a certified Quality Assurance Lead Auditor who has led (or participated in) many audits, assessments, and Operational Readiness Reviews since 1985. Although he did not join DOE until 1991 as a manager in the Nuclear Energy self-assessment program, he has supported DOE since 1978 in a number of Technical Support Capacities while employed by the ARINC Research Corporation and

the SCIENTECH Corporation.

He joined Environmental Management in 1994 as a Quality Assurance Manager in the Office of Waste Management and subsequently became Safety and Health Team Leader from 1996 until the current EM reorganization.

Mr. Himpler began his professional career in 1955 after U.S. Navy Korean War service. He worked for over twenty years as an equipment designer, test engineer, and Engineering and Maintenance Manager for Westinghouse Electric, General Electric, and Raytheon Companies in radar, sonar, and telecommunications specialties. He subsequently became a consultant for the Navy Tomahawk Cruise Missile and Sonobuoy programs and the Electric Power Research Institute (EPRI) in Reliability and Cost Effectiveness technical support. He became dedicated to DOE and Energy R&D programs beginning in 1978.

Mr. Himpler holds undergraduate degrees in Electrical Engineering and Industrial Technology from Johns Hopkins University and Roger Williams University, respectively.

Robindra N. Singh, Assistant to the Associate Deputy Assistant Secretary for Technical Support, Defense Programs. Mr. Singh has twenty six years of broad-based engineering, management, and safety assessment experience in the nuclear field (commercial nuclear power plants and the nuclear weapons complex). This includes ten years in the commercial nuclear industry, seven at the Nuclear Regulatory Commission, and nine at the Department of Energy. Most recently, Mr. Singh led a Department wide effort to improve the efficiency of line Environment, Safety, and Health oversight. The effort resulted in DOE P450.5, Line Environment, Safety and Health Oversight Policy. Mr. Singh has Masters degrees in Mechanical Engineering and Business Administration, and is a Registered Professional Engineer.

Advisors and Support:

Karen Edwards, consultant. Karen has been with Pegasus Consulting Corporation for nearly four years, with assignments for DOE's SMIT Team, the Headquarters directives group, the EH-10 enforcement group, Savannah River Operations, Oak Ridge Operations, Albuquerque Operations, and several DOE contractors. Previously she was employed at DOE's Oak Ridge Operations for more than 25 years. During the last 5 years she headed up a group responsible for developing and implementing programs for standards identification, compliance assessments against directives requirements, coordinating Price-Anderson implementation planning activities, and other matters associated with directives and standards. She was a charter member of the Department Standards Committee, served on the group that developed the implementation plan for DNFSB recommendation 95-2, the Rules Implementation Steering Group, the 90-2 Steering Group, the Directives System Improvement Process, and other DOE-wide policy-setting groups. She holds a bachelor's degree and additional graduate course work in labor economics, Russian language, literature, and area studies.

Joseph J. Hassenfeldt. Joe holds a Bachelor of Science Degree from the U.S. Naval Academy, where he graduated with Merit in 1986. He entered the Navy's Nuclear Propulsion Program and served as a Division Officer on a TRIDENT class Ballistic Missile Submarine. In 1991, he joined the Department of Energy's New Production Reactors (NPR) Program as a Nuclear Engineer working and reviewing Heavy Water Reactor design.

He was DOE's Action Officer for the development of DOE's Business Management Oversight Pilot, the process by which performance expectations are developed, self-assessed, and overseen by the Field and Headquarters offices. This is the model upon which Policy 450.5, *Line ES&H Oversight*, was based.

From 1994 to 1999, Joe led the Department's Facility Representative Program for the Office of Field Management, including liaison with the DNFSB, policy development, and program improvements. Joe now works in the Office of the Departmental Representative to the DNFSB, on safety issues regarding Pantex, the Chicago Operations Office, and the National Labs, specifically, DNFSB recommendations 98-1, 98-2, and 99-1.

William E. Miller. Mr. Miller is an Operations Technical Advisor in the Office of EH Residents with the Office of Oversight of the U.S. Department of Energy. He has responsibility to coordinate and provide technical and administrative support to the EH Residents at three field locations which are Rocky Flats, Los Alamos and Oakland. Previous to this assignment, Mr. Miller provided within DOE Defense Programs oversight for ES&H issues for several Los Alamos National Laboratory facilities when assigned to the Office of Research Development and Test Facilities. He also led and participated in several Defense Programs Technical Safety Appraisals while with the Office of Inspections. Mr. Miller spent five years in nuclear submarine engineering in the Navy and worked for seven years in commercial nuclear power with the New York Power Authority during which he obtained his NRC Senior Reactor Operator's License. He holds a degree in mechanical engineering from Cornell University.

Thomas O'Brien. Twenty-nine years' experience in the management of facility operations and in the areas of maintenance, logistics, technical procedure development, regulatory compliance and training. Directed an industrial production facility employing 1,300 personnel. Organized and developed the staff of a newly chartered office responsible for cost, schedule and technical performance of classified research, development and acquisition programs and successfully promoted the programs during complex budget negotiations. Participated in a Congressionally-directed cost and operational effectiveness analysis of a major defense acquisition program. Conducted oversight of the operations, maintenance, logistics, personnel readiness and training of twelve pressurized water reactor plants for over two years. Monitored volume reduction, packaging, and transshipment preparations for low-level radioactive waste and ensured compliance with all local, state and DOT regulations.

For the last three years, as a Vista Technologies, Inc., employee, Mr. O'Brien has been providing technical and administrative support to the Director, Safety Management Implementation Team,

While supporting and promoting DOE's Integrated Safety Management Program across the DOE complex. Prior to his current task, Mr. O'Brien was employed by Coleman Research Corporation as a "Conduct of Operations" expert supporting the FERMCO Waste Management Division at DOE's Fernald Environmental Management Project and as a technical expert supporting DOE's Office of Environmental Management at DOE Headquarters. Prior to that assignment, he was Director, Government and International Programs for the Field Operations and Training Division of Halliburton NUS Corporation, where he coordinated, managed and provided oversight of all government and international program activities of the division and served successfully for 18 months as the day-to-day program manager of an international, defense-related program requiring frequent diplomatic coordination with an on-site project team and the Washington, DC embassy of the nation involved.

POTENTIAL EH-2 ASSESSMENTS FOR REVIEW SAMPLE

Non-Legacy EH-2 Oversight Assessments

EH-2 "Non-Legacy" Assessments (i.e., issues specifically identified in reports and required CAPs developed per 98-1)

- NTS Focused Safety Management Evaluation – April 1999
- RFETS Focused Safety Management Evaluation – March 1999
- Focused Review of the Yucca Mountain Project – April – May 1999
- BNL Focused Safety Management Evaluation – June 1999
- Focused Review of the SRS – November 1999
- Phase I Independent Investigation of the PGDP – October 1999 (EM, ORO/PSO, BJ)
- Follow-up Review of ISM Implementation at LANSCE – (Target date: Dec 1999)

EH-2 Assessments with specific issues identified in report and CAP developed in response (Transitioning Phase in Recognition of 98-1 Recent Issuance)

- Y-12 Safety Management Evaluation – December 1998

Organizations Involved in CAP Development and Implementation

EH-2 Assessments (from above) that required the Principle DOE Headquarters Program Office, Operations Office/Area Office and the contractor to develop a CAP

- NTS Focused Safety Management Evaluation – DP, NV, BN
- RFETS Focused Safety Management Evaluation – EM, RFFO, K-H
- BNL Focused Safety Management Evaluation – SC, CH/BHG, BNL
- Phase I Independent Investigation of the PGDP – EM, ORO/PSO, BJ

EH-2 Assessments (from above) that required only the Operations Office/Area Office and the contractor to develop a CAP

- Focused Review of the Yucca Mountain Project – YMSCO, TRW
- Focused Review of the SRS – SR, WSRC
- Y-12 Safety Management Evaluation – OR/YSO, LMES

- Follow-up Review of ISM Implementation at LANSCE – AL/LAAO, LANL (Note: CAP development will have to be coordinated with DOE ISMV and DOE Off-Ramp assessment findings)

EH-2 Assessments (from above) that cited issues within the report that required the involvement/coordination of more than one Program Office

- NTS Focused Safety Management Evaluation – DP, EM, NN (Note: In addition, NV had to coordinate with AL and OAK Operations Office due to complex arrangement of LANL and LLNL has primary users)
- BNL Focused Safety Management Evaluation – SC, NE, EM
- Phase I Independent Investigation of the PGDP – EM, NE
- Y-12 Safety Management Evaluation – DP, EM, SC (Note: Issue involves implementation of Oak Ridge Emergency Management Reservation Plan)

DOE Complex-Wide/Generic Issues

EH Assessments/Reports citing Complex-wide Generic Issues in CATS

- Independent Oversight Evaluation of Emergency Management Programs Across the DOE Complex – July 1998
- Independent Oversight Review of Aviation Safety in the Department of Energy – October 1996
- Independent Oversight of the Department of Energy Quality Assurance Program for Suspect/Counterfeit Parts – May 1996, Revision 1
- Selected Type A Accident Investigation Judgments Of Need

Ongoing Reviews

- Type A Y-12 Accident Investigation Report, January 2000 (scheduled)
- Phase I Independent Investigation of the Portsmouth Gaseous Diffusion Plant, April 2000 (scheduled)

LISTING OF SITES, ORGANIZATIONS, OR TOPICS REVIEWED

Reviewed directly by the 98-1 Review Team:

DOE-Wide Topics

1. DOE-Wide Directives: DOE M 411.1-1A, DOE O 414.1A, and DOE G 450.4-1
2. DOE-Wide Legacy Issues: Suspect/Counterfeit Parts and Aviation Safety

Headquarters Organizations

1. Office of Environment, Safety, and Health (EH)
2. Office of Environmental Management (EM)
3. Office of Science (SC)
4. National Security Administration Office of the Deputy Administrator for Defense Programs (DP)

Field Organizations

1. Albuquerque Operations (AL)
2. Nevada Operations (NV)
3. Savannah River Operations (SR)
4. Rocky Flats Environmental Technology Site (RFETS)

Information Supplied by ISM Verification Teams:

1. Chicago Operations Office (CH)
2. Idaho Operations Office (ID)
3. Oak Ridge Operations Office (OR): Decon and Recovery Services of Oak Ridge, LLC, and Bechtel Jacobs Company
4. Pantex Site Office (part of AL)
5. Oakland Operations Office (OAK)

REVIEW FORMS

On the following pages are copies of the review forms completed for each of the reviewed organizations. These provided the raw data for this report. The forms are included in the same order as the list in Appendix C.

REVIEW FORM FOR 98-1 IMPLEMENTATION REVIEW

Office/Subject of Review: DOE -Wide Directives
Reviewers: Mosi Dayani & Karen Edwards

Date: 5 /19/00

Method of Review: In preparing this form, we reviewed DOE O 414.1A, DOE M 411.1-1A, and draft revisions to DOE G 450.4-1A. We also talked to EH personnel responsible for these directives.

Objective 1: Implementation Plan requirements have been effectively included in DOE directives and procedures.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.a.	Appropriate DOE directives are issued and available in the directives system, and appropriate implementing documents have been issued.	<p>Implementation plan requirements have been documented in DOE M 411.1-1A, FUNCTIONS, RESPONSIBILITIES, AND AUTHORITIES, of 10/18/99, and in DOE O 414.1A, QUALITY ASSURANCE, of 9/29/99. Both of these directives are readily available on the Explorer home page.</p> <p>Section 9.6.3.2 of the FRAM defines the EH Oversight process and assigns responsibilities to the Field Element Managers (FEMs), CSOs, EH-2, and the Office of Deputy Secretary for ensuring effective development and implementation of corrective actions.</p> <p>The QA Order requires the DOE Elements to respond to the issues identified in the Office of Oversight (EH-2) reports using a written corrective Action Plan (CAP). Attachment 2 of the Order contains additional information on roles and responsibilities for the safety issue corrective action process and the use of the CATS system.</p> <p>In addition to the QA Order and FRAM, draft guidance titled "Process for Resolution of Safety Issues Identified by the Office of Oversight" has been developed and is currently in formal review. This material will be included in Appendix G to DOE G 450.4-1A, INTEGRATED SAFETY MANAGEMENT SYSTEM GUIDE. Publication is expected before the end of the summer. This guidance contains useful procedural information based on questions received and problems identified during the first year of operation of the new system. It also includes a process for determining who will take the lead on issues involving multiple organizations.</p> <p>The issuance of appropriate implementing documents will be assessed in various site and other organizational reviews.</p>

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.b.	Revised documents provide for a consistent and disciplined process;	<p>The FRAM and the QA Order provide sufficient information to support a consistent and disciplined approach to implementation of 98-1 commitments. Issuance of revised appendix G to the ISMS Guide, however, will enhance the quality of DOE's process documentation.</p> <p>Assignment of responsibilities and description of process in the QA Order and FRAM are of sufficient detail, consistent, and complementary to each other.</p>
1.c.	Revised documents contain clear assignment of responsibilities and authorities for developing and implementing CAPs in response to issues identified by EH-2;	Assignment of responsibilities is brief but adequate.
1.d.	Revised directives and procedures do not duplicate or conflict with existing directives language.	A brief review of other directives did not reveal any conflicts in how to deal with EH-2-identified issues.
2.a.	Revised directives and procedures include requirements for – Preparation of formal CAPs in response to EH-2 issues;	Preparation of CAPs is appropriately assigned to the line management organizations in both the QA Order and the FRAM.
2.b.	Revised directives and procedures include requirements for – Elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution;	<p>Section 9.6.3.2, paragraphs c and d of the FRAM assigns EH-2 the responsibility for identifying the issues (concerns) associated with inadequate implementation of CAPs to the line management, and for elevating disputes to the next higher level of management if not satisfied with the proposed resolution. This responsibility covers both adequacy and timeliness of implementation.</p> <p>The QA Order, Attachment 2, paragraph 4, describes the general process for elevating disputes and defines criteria that such a system must include. Details are not provided here, so it is necessary to refer to various implementing procedures and guidance for more information.</p> <p>Draft appendix G to DOE G 450.4-1A includes a section 3.4. E that discusses elevation of safety issues for resolution, and provides more details on the intended process.</p>

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
2.c.	Revised directives and procedures include requirements for – Effective use of CATs	<p>The QA Order, Attachment 2, lays out responsibilities for completing various CATS sections. It assigns responsibility to EH-2 for completing the “Report” and “Issue Information” data fields, and to line management for completing corrective action data fields. However, there are no assignments covering maintenance of CATS or issues related to its effective use.</p> <p>The FRAM does not address maintenance of the CATS system, except perhaps for the very general statement in the introduction of 9.6.3.2, “EH-2...is responsible for the development of evaluation methods and technologies...”. While this may not be necessary as it is covered to some extent in the QA Order, it would be better if the FRAM were revised to address responsibilities for use of the CATS system similar to the way the ORPS system is addressed in 9.6.1.2.</p> <p>Also, the implementation plan for 98-1 requires a quarterly report which addresses effectiveness of the CATS system and whether the corrective action system is working adequately to correct safety issues. Published DOE-wide directives do not document responsibility for this task, which is currently being done by the ICAM team. Discussions are ongoing concerning where this responsibility will be assigned following completion of the ICAM’s task. When this decision is reached, we recommend that the responsibility should be clearly documented in the FRAM.</p>
2.d.	Revised directives and procedures include requirements for – Identification and dissemination of lessons learned consistent with ISM implementation	Lessons learned from EH-2 issues are handled the same as lessons learned from other sources. The lessons learned program is currently being reviewed and strengthened, and improvements in this program will enhance dissemination of lessons learned from EH-2 reviews. Also, the CATS system, as an overall DOE-wide corrective action tracking system accessible to all sites, will help ensure that other sites have access to information that can be used to improve their programs.
3	Changes to the directives and procedures provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2, in line with integrated safety management objectives	<p>No conflicts between this program and other corrective action/assessment programs were identified. However, the distinction between independent assessment (to be conducted by line managers) and independent oversight (only by EH-2) is not always clear in the 414 Guides, the FRAM, and the QA Order.</p> <p>The assignment of responsibilities for CAP development does provide adequate integration between line organizations (both field and CSO) and EH-2, and is consistent with the principles of Integrated Safety Management – specifically “line management responsibility for safety.”</p>
4	DOE field offices have a process for ensuring that contractors do what is necessary to meet obligations of this program.	Implementation of the QA Order and FRAM by DOE Field Offices will be reviewed and documented separately under review of selected Field Offices.

Objective 2: The process for addressing and resolving EH-2 findings as outlined in directives and procedures has been effectively applied at HQ and in the field.

Criterion	Description of Criterion	Description of Review; findings, observations, and suggestions for improvement
1	<ul style="list-style-type: none"> a. The process was followed (both applicable DOE-wide and local requirements, if any). b. Reviews were done, corrective action plans were developed, and any issues were pointed out for improvement. c. Each organization understands its responsibility and did its part in conducting reviews and developing corrective action plans within established time frames. 	Application of the process by Field Offices and HQ will be reviewed and documented for each selected Field Office and Program Office.
2	<ul style="list-style-type: none"> a. Safety issues were addressed, resolved, and verified adequately and in a timely manner. b. Each organization did its part in implementing, reviewing, and closing issues, and c. Closure was independently verified. 	NA
3	Resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.	NA
4	Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e., the problems were actually fixed).	NA

REVIEW FORM FOR 98-1 IMPLEMENTATION REVIEW

Office/Subject of Review: DOE-Wide Legacy Issues
Reviewers: Mosi Dayani , Herb Bohrer, & Karen Edwards

Date: April 25, 2000

Method of Review: We reviewed two reports to see how implementation of the 98-1 commitments is able to deal with DOE-wide issues. The reviews chosen were the "Independent Oversight Review of the DOE Quality Assurance Program for Suspect/Counterfeit Parts," of May 1996, and the "Independent Oversight Review of Aviation Safety Programs in the Department of Energy," dated August 1997. We also talked to EH-2 personnel regarding these reports, the acting head of the DOE aviation safety office, and reviewed CATS data pertaining to the reports.

Objective 1: Implementation Plan requirements have been effectively included in DOE directives and procedures.

Cri-terion	Description of Criterion	Description of Review; findings, observations, and suggestions for improvement
1.a.	Appropriate implementing documents have been issued and are readily available.	DOE M 411.1-1A, SAFETY MANAGEMENT FUNCTIONS, RESPONSIBILITIES, AND AUTHORITIES MANUAL, of 10/18/99, does not contain any responsibilities that are specific to dealing with cross-organizational issues. Similarly, DOE O 414.1A, QUALITY ASSURANCE, of 9/29/99, is also silent with respect to process and responsibilities for DOE-wide issues. Draft Appendix G to DOE G 450.4-1A, INTEGRATED SAFETY MANAGEMENT SYSTEM GUIDE, however, contains a new process for determining which CSO will take the lead on issues involving multiple DOE organizations. Section 3.3.4, subsection 1, 3 rd sentence states that the CSOs will mutually determine which of them will have the lead, and if they are unable to agree, the Deputy Secretary will appoint a lead. There is no time added to the 60 days for for developing a CAP to cover time involved in determining a lead CSO, although this could be a lengthy process.
1.b.	Revised documents provide for a consistent and disciplined process.	When issued, the draft will document a common-sense approach to dealing with this issue.
1.c.	Revised documents contain clear assignment of responsibilities and authorities for developing and implemnting CAPs in response to issues identified by EH-2;	When the revision to the Guide is issued, this criterion will be met.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.d.	Revised directives and procedures do not duplicate or conflict with existing directives language.	The draft Guide provision does not duplicate or conflict with any existing directives on this subject; the other directives are silent.
2.a.	Revised directives and procedures include requirements for – Preparation of formal CAPs in response to EH-2 issues;	See sheets on DOE-wide directives. Processes are the same.
2.b.	Revised directives and procedures include requirements for – Elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution;	See sheets on DOE-wide directives. Processes are the same.
2.c.	Revised directives and procedures include requirements for – Effective use of CATs	See sheets on DOE-wide directives. Processes are the same.
2.d.	Revised directives and procedures include requirements for – Identification and dissemination of lessons learned consistent with ISM implementation	See sheets on DOE-wide directives. Processes are the same.
3	Changes to the directives and procedures provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2, in line with integrated safety management objectives.	See sheets on DOE-wide directives. Processes are the same.
4	DOE field offices have a process for ensuring that contractors do what is necessary to meet obligations of this program.	See individual site reports for discussion on this subject.

Objective 2: The process for addressing and resolving EH-2 findings as outlined in directives and procedures has been effectively applied at HQ and in the field.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1. a.	The process was followed (both applicable DOE-wide and local requirements, if any).	<p>Both of the subject reports were completed before the 98-1 enhancements. As part of its legacy issue process, EH-2 reviewed both reports and identified issues that were important enough to warrant corrective action. A description of how these reports were handled is provided below.</p> <p>1. <u>Independent Oversight Review of the DOE Quality Assurance Program for Suspect/Counterfeit Parts</u>, DOEW-03/01/1996-0001-R). This report, containing one omnibus issue, was assigned initially to the Office of Field Integration (FI), and a CAP was approved by this office on July 19, 1999. FI was abolished in a reorganization in September 1999. EM-1 (Ms. Carolyn Huntoon) was selected as the new lead CSO because EM is the current sponsor of the DOE-wide QA Working Group. Ms. Huntoon signed the CAP on December 6, 1999. Prior to its issuance to the field, it had to go through the Field Management Council, and was subsequently sent to field element managers on December 15, 1999.</p> <p>The CAP identified 17 actions to address the open issue. Sixteen of those actions are shown as completed during 1996 - 1998. The final action calls for each site to identify critical systems, inspect such systems for suspect/counterfeit parts, and take appropriate actions to dispose of any that are found. Each site was to provide documentation of completion of each of the 3 steps, or provide a corrective action plan. The planned completion date was March 18, 2000.</p> <p>On March 28, 2000, the Assistant Secretary for ES&H sent a memo to Ms. Huntoon requesting a status update. Ms. Huntoon provided such, and included copies of each office's Letters of Certifications or (for 3 offices) supplemental CAPs. The last action item in the supplemental CAPs is due 10/1/20, so Ms. Huntoon has revised the open action in her CAP to reflect a completion due date of 10/1/00.</p> <p>This memo is posted on CATS; however, the CAP data on this action issue has not been updated to reflect the new completion date or to reflect the current status information. It is still shown as overdue.</p>

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.a., con't.		<p>2. <u>Independent Oversight Follow-up Review of Aviation Safety Programs in the Department of Energy (DOEW-11/01/1998-0002-R)</u>. This report, containing one omnibus issue, was assigned first to the Assistant Secretary for ES&H (EH-1) for action, on April 16, 1999. On May 17, 1999, the Office of Aviation Management was formed within the Office of Management and Administration, and all aviation staff from EH were transferred to this office. Effective with that date, responsibility for this CAP was also assigned to MA-10. The CAP was approved on June 30, 1999, with 8 separate actions. Three of these actions are closed, one is overdue since 11/1/99, and four are on schedule.</p>
1.b.	Reviews were done, corrective action plans were developed, and any issues were pointed out for improvement.	On both these reports, the legacy issues were identified and corrective action plans were developed. The abolishment of FI and the need to reassign the counterfeit parts issue showed the need for guidance on the selection of a Cognizant Line Manager for DOE-wide reports, and modifications to the ISM guidance are underway to address this issue.
1.c.	Each organization understands its responsibility and did its part in conducting reviews and developing corrective action plans within established time frames.	Each organization appeared to understand its responsibility and did its part in conducting reviews and developing corrective action plans. Time limits are perhaps too tight for multi-site issues, where there may need to be some discussion on selection of a CLM and the need for multiple organizations to respond to action items. Also, the CATS system contains contradictory information on the status of the action item for counterfeit parts report
2.a.	Safety issues were addressed, resolved, and verified adequately and in a timely manner.	Both these reports contained old issues that had not been satisfactorily addressed under the old system. The enhanced system as a result of 98-1 is bringing attention and closure to these long-standing issues. There is no verification information contained in the CATS concerning the aviation safety report; verification is indicated on the closed items of the counterfeit parts report.
2.b.	Each organization did its part in implementing, reviewing, and closing issues.	Yes.
2.c.	Closure was independently verified.	Information is missing on the 3 closed aviation safety actions, but verification is indicated on the closed counterfeit parts actions.
3	Resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.	Unclear.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
4	Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e, the problems were actually fixed)	No followup reports yet on these issues.

Additional issues and comments: None

REVIEW FORM FOR 98-1 IMPLEMENTATION REVIEW

Office/Subject of Review: Office of Environment, Safety, and Health (EH)
Reviewers: Mosi Dayani , Herb Bohrer, & Karen Edwards

Date: May 2, 2000

Method of Review: Mosi Dayani and Karen Edwards spent 2 days on-site at DOE Headquarters discussing the ICAM team and its activities and the EH involvement in the 98-1 commitment implementation. We spoke with several representatives of EH-2, EH-3 (the personnel responsible for maintenance and development of the QA Order, the DOE FRAM, the ISMS Guide, and the EH FRAM), and EH-72, the people responsible for maintenance of the CATS system. In addition, we reviewed the various directives implementing the 98-1 commitments, the implementing procedures, the CATS system, various review and accident investigation reports, samples of correspondence between EH-2 and line organizations concerning adequacy of CAPs or issues relating to system implementation, and copies of reports from EH's internal system for tracking actions related to their part of the process. We also reviewed the DOE Lessons Learned Program documents and website to see if it included material gleaned from the CATS system.

Objective 1: Implementation Plan requirements have been effectively included in DOE directives and procedures.

Criterion	Description of Criterion	Description of Review findings, observations, and suggestions for improvement
1.a.	Appropriate implementing documents have been issued and are readily available.	<p>Appropriate implementing documents have been issued and are readily available.</p> <p>The current EH FRAM, "Safety Management Functions, Responsibilities, and Authorities of the Office of the Assistant Secretary for Environment, Safety, and Health," dated July 31, 1997, is available on the internet (ISM home page, under FRAMS). This document was issued before the date of the 98-1 implementation plan and does not contain authorities and responsibilities for the 98-1 commitments. It does describe the general role of EH-2 as DOE's independent oversight organization for ES&H, nuclear safeguards, and security programs. EH is presently in the throes of a major reorganization, part of which involves sorting out responsibilities between EH and the new NNSA organization. EH-2 will no longer have responsibility for safeguards and security oversight. We reviewed part of a draft revision to the EH FRAM, which reflects changed responsibilities for oversight program coverage and for maintenance of the CATS system. There is no date fixed yet for issuance of a revised FRAM.</p> <p>Although the FRAM itself is not current, EH has done a good job of issuing implementing procedures that address the commitments from the 98-1 implementation plan. These include the following:</p> <p>(Con't on next page)</p>

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
<p>Criterion 1a, con't</p>		<p>(1) The process for dealing with "legacy issues" was described in a memorandum that was provided to all field offices and PSOs. An attachment to this memorandum included a listing of significant safety issues identified in EH-2 reviews issued since the beginning of 1995. Each office was asked to provide information on the status of each issue, and provide a corrective action plan for issues that had not yet been adequately addressed.</p> <p>(2) The revised "Environment, Safety, and Health Appraisal Process Protocols" were issued in July 1999 by the Office of Oversight (EH-2). This document is available for review on the Office of Oversight home page. It fully addresses all 98-1 commitments. Particularly noteworthy are the changes calling for clearly identifying and sorting findings into those that require corrective actions and those that do not. However, the definition of safety issue is very general ("a condition of concern ... that could have an adverse impact...will require formal resolutions and tracking by line management." Additional examples or further discussion may be helpful in making these judgment calls more consistent.</p> <p>(3) The "Office of Oversight Safety Issue Corrective Action Process Procedure" Rev. 0, (SP-EH-2.05.01), dated April 10, 2000, provides EH-2 reviewers with guidance on reviewing, evaluating, and following up on CAPS. This procedure may eventually be included in the Process Protocol document. The "Corrective Action Tracking System (CATS) Users Guide for Direct Web Access," document number EH-72-1999-09-0001, ver.2, February 10, 2000, is also available on the internet at the same location as the CATS system. This document provides a step-by-step guide to operation, data entry, and reporting functions for the CATS. It is supported by a Help Desk that answers questions from system users and the "Corrective Action Tracking System (CATS) Data Dictionary," December 8, 1999, which is available at the same location.</p> <p>(4) The ICAM charter lists responsibilities and authorities for this cross-organizational group responsible for developing policy to implement 98-1 commitments for development and maintenance of the CATS. This group is slated to terminate by September 2000, and some of the tasks included in charter will need to continue past that date. These include responsibility for pulling together issues that apply across organizational lines, responsibility for determining the need for changes to the CATS system, responsibility for the quarterly Secretarial report, and responsibility for overseeing timeliness of corrective action plan development and completion of action plan items. The ICAM is currently working on a paper that will discuss options and present recommendations for addressing these ongoing needs.</p>

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.b.	Revised documents provide for a consistent and disciplined process;	With the exception of the FRAM, which has not yet been revised, the implementing procedures developed by EH to implement the 98-1 commitments are compatible with each other and provide adequate detail to support consistent and disciplined application. However, it must be noted that recent changes in coverage of the EH-2 program and expansion of the CATS to include other areas may cause the need for further revisions to these procedures.
1.c.	Revised documents contain clear assignment of responsibilities and authorities for developing and implementing CAPs in response to issues identified by EH-2;	Revised EH implementing procedures contain clear assignment of responsibilities and authorities for conducting oversight reviews, identifying safety issues that are significant enough to warrant inclusion in CATS, developing adequate CAPs, and tracking status of items using the CATS system. The only exceptions are the EH FRAM and the fate of issues that are currently being handled by ICAM following its September 2000 demise (see 1.a. above).
1.d.	Revised directives and procedures do not duplicate or conflict with existing directives language.	Revised EH implementing procedures do not duplicate or conflict with existing directives language. However, as noted above, the EH FRAM is not current and contains information on program coverage that is different from actual practice and from the procedures.
2.a.	Revised directives and procedures include requirements for – Preparation of formal CAPs in response to EH-2 issues;	Preparation of CAPs is addressed in the EH protocol, which covers information on which issues require CAPS. Additional guidance on the content of adequate CAPS, and instructions to EH reviewers on evaluating and following up on implementation of CAPS are included in SP-EH-2.05.01. Responsibility for entering safety issues and CAPs information into CATS is covered fully in the CATS manual.
2.b.	Revised directives and procedures include requirements for – Elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution;	<p>SP-EH-2.05.01, of 4/10/00, includes a dispute resolution process covering CAP content or CAP implementation. This is contained in section 3.6, and provides for elevation through various levels of the line up to the Office of the Secretary. This covers situations where corrective actions are not being completed in a timely manner or are not being properly resolved or verified, and the cognizant line manager is not taking adequate action to correct this problem. It might also be appropriate as a result of trending and monitoring of CATS data, which is not specifically mentioned in the procedure. This procedure is specific to EH-2.</p> <p>Section 6 of the Protocol includes a process for ensuring that sites reviewed have an opportunity to see the findings before they are finalized and provide additional information on factual accuracy or interpretations. The draft FRAM assigns responsibility to EH-1 to assist whatever PSO is designated as responsible for providing quarterly reports to the Secretary on the effectiveness of the corrective action</p> <p>(Continued on next page)</p>

Cri-terion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
2.b., con't.		<p>process, and to EH-2 to monitor process implementation effectiveness. EH also clearly has responsibility to serve as the Secretary's chief safety advisor, and in this role is responsible for general trending and may raise any issue it desires to the Secretary. However, neither the EH current or draft FRAM, nor the protocol document addresses EH's responsibility for monitoring 98-1 system performance and trends, and elevating issues to a higher authority.</p>
2.c.	<p>Revised directives and procedures include requirements for – Effective use of CATs</p>	<p>The current EH FRAM does not include any responsibility for CATs. The draft revision assigns responsibility to EH-3 for providing information and assistance in CATs applications, and to EH-7 for maintaining the CATs database.</p> <p>The CATs Users Guide is thorough and complete, and includes guidance on accessing the system, performing data entry, viewing data, linking data to source documents, searching, editing, requesting changes to closed field, and creating reports. The Guide was issued in February 10, 2000, replacing an earlier version dated July 1999, and reflects recent system enhancements. The CATs system is also supported by a help desk which provides "live" assistance to users.</p>
2.d.	<p>Revised directives and procedures include requirements for – Identification and dissemination of lessons learned consistent with ISM implementation</p>	<p>The draft revision to the EH FRAM assigns responsibility to EH-3 for both the Lessons Learned program and CATs application. There is no specific mention of how the CATs data will be reflected in the lessons learned program. However, the entire lessons learned program is currently being reviewed and strengthened, and improvements in this program will enhance dissemination of lessons learned from EH-2 reviews.</p>
3	<p>Changes to the directives and procedures provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2, in line with integrated safety management objectives</p>	<p>No conflicts between EH's internal implementing procedures and other corrective action/assessment programs or directives were identified. EH's role in this program, as reflected in the implementing documents, recognizes the primary line responsibility for safety and is consistent with the principles of Integrated Safety Management.</p> <p>With regards to integration of this program with related programs, there is a need to enhance the relationship between the 98-1 commitments and the lessons learned program, and between the CATs system and lower-level corrective action tracking systems. With regard to the DOE Lessons Learned Program, there are no links on the Lessons Learned Home Page to the CATs site, and a brief review of the lessons included in the database did not include any gleaned from post-98-1 EH reports.</p>

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
4	DOE field offices have a process for ensuring that contractors do what is necessary to meet obligations of this program.	Not applicable.

Objective 2: The process for addressing and resolving EH-2 findings as outlined in directives and procedures has been effectively applied at HQ and in the field.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.a.	The process was followed (both applicable DOE-wide and local requirements, if any).	<p>Legacy issues were handled via a special, one-time process. First, EH-2 reviewed all reports issued since the beginning of 1995 to identify those safety issues that were significant enough to warrant corrective action. The 1700 actions identified during this review were referred to the appropriate offices for review and disposition in April 1999. All the issues were included in the CATS, and for each action, the cognizant line manager either declared the item to be already corrected or provided a CAP to address the issue. The first quarterly report to the Secretary (January 2000) reflects tremendous progress in dealing with legacy issues.</p> <p>However, it must be determined through future EH-2 reviews whether those issues declared as closed by line management have in fact been satisfactorily resolved. Recent reviews at Savannah River and Rocky Flats indicate that the process generally worked as intended, although there were some actions reported as closed that were not adequately implemented.</p> <p>Reports issued since April 99, and particularly since the completion of the protocol revisions in July 99, have followed the new process. Reviews now clearly identify those issues considered to be significant enough to warrant inclusion in CATS and development of formal CAPs. There have been some start-up problems, such as confusion over responsibility for approving time extensions, poorly written initial CAPs, slow action on multi-organizational issues, and difficulties in operating the CATS system. These problems have largely been worked through and have resulted in additional guidance and system modifications, some of which are still in review. For specifics, see reviews of the individual sites and the multi-organizational safety issues.</p>

Crite- rion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.b.	Reviews were done, corrective action plans were developed, and any issues were pointed out for improvement.	EH-2's perspective is that the process is working reasonably well and has resulted in great progress in fixing issues. Following our review of the CATS system, various EH-2 reviews, and discussions with EH personnel, we agree that the process is working reasonably well. For details on particular reviews, see individual site forms.
1.c.	Each organization understands its responsibility and did its part in conducting reviews and developing corrective action plans within established time frames.	<p>EH's role as a whole is undergoing some change with the current reorganization, including the splitting out of responsibilities for NNSA. As with any reorganization, it will take a while before responsibilities shake out and documentation catches up with the new order. Also, the responsibilities currently carried out by the ICAM team will need to be sorted out and assigned to other groups, and this is likely to add responsibilities to various EH offices.</p> <p>EH-2 has a good understanding of its responsibilities and did its part in conducting reviews, reviewing and commenting on corrective action plans, and generally monitoring CATS to see how the system is working. Their implementation of the 98-1 commitments has been enthusiastic, supportive of line management, and timely, as demonstrated by their performance in handling the legacy issue review, clarifying their expectations concerning reviews, and developing guidance and procedures as needed.</p> <p>EH-72 is fully aware of their responsibility for maintaining the CATS system and their relationship to the ICAM. They are also responsible for the ORPS system and various EH websites, and have demonstrated a lot of expertise in computer applications. Our review of the database, the Users Guide, and discussions with EH-72 personnel shows that the CATS has adequate functionality. It is not as intuitive and user-friendly as some, but with a modest amount of experience this is not a problem. It is difficult to change material inputted into certain fields of the CATS; special permissions are needed to change material once input, and actual changes have to be made by EH-72 following receipt of all approvals. Although this is cumbersome, it provides for more system integrity. This may also lead to one of the problems we noticed during our review, which is that the data in one area does not always match up with the data in another area. In researching Albuquerque's open items, for example, we discovered four separate actions that are shown as closed in one area, and open and overdue in another.</p> <p>EH-72 periodically asks users for improvement suggestions, and has recently completed some upgrades to enhance functionality. Additional reporting capabilities would be helpful, particularly one which would enable field offices to look at all their actions at once, rather than individually by various PSOs. EH-72 states that this report would be easy to add if the ICAM indicated that they wanted it to be added. In</p> <p>(Continued on next page)</p>

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.c, Continued		<p>addition to CATS, EH-72 has developed some other internal computer tracking tools that help it determine if corrective actions are being carried out in a timely manner.</p> <p>EH-3 has a thorough understanding of its role in serving as the Office of Primary Interest for the DOE directives related to ES&H, including those that implement the 98-1 commitments. They have a great deal of experience in this area, and are fully familiar with the directives system and the technical standards process for developing and issuing DOE-wide requirements and guidance.</p>
2.a.	<p>Safety issues were addressed, resolved, and verified adequately and in a timely manner.</p>	<p>Legacy issues: the campaign to address and close out legacy issues has been very effective and has resulted in closeout of nearly 1,600 issues and development of corrective action plans for the remainder.</p> <p>Current issues: the CATS and internal EH systems are in place to track progress, and show that most issues are being addressed in a timely manner. The most recent quarterly report, dated April 3, 2000, shows that 376 actions were active and of these, 133 were completed during the quarter, 174 are on schedule, and only 69 are late. Of CAPS under development for new reports issued this quarter, 1 out of 5 is late. Two other plans are overdue for reports issued last quarter. This report goes to the Secretary, which puts a lot of pressure on line management to keep actions on schedule.</p>
2.b.	<p>Each organization did its part in implementing, reviewing, and closing issues, and</p>	<p>EH does not have a direct role in implementing, reviewing, and closing issues; this is a line management responsibility. They do, however, monitor timeliness of actions, and have raised questions and issued reminders when items fell behind schedule. Also, they have conducted two recent reviews at Savannah River and Rocky Flats, where they looked (among other things) at site performance in implementing, verifying closure, and closing CAP actions.</p>
2.c.	<p>Closure was independently verified.</p>	<p>This is not an EH responsibility, and CATS contains no information on whether closure was independently verified. As discussed above, site performance in these areas this was addressed in several recent EH-2 reviews.</p>
3	<p>Resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.</p>	<p>The DOE lessons learned process is being revised. At the present time, there is no inclusion of CATS data in the formal DOE lessons learned program. However, lessons learned can be gleaned from CATS informally through reviews of CATS data which is publicly available on the internet</p>
4	<p>Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e, the problems were actually fixed)</p>	<p>This will be determined through specific reviews. However, the system is new enough that there are no second reviews yet at sites that have had initial reviews using the full 98-1-enhanced process.</p>

Additional issues and comments:

1. The 98-1 Implementation Plan says the CATS system will be expanded eventually to include other issues besides EH-2 reviews and recommendations from accident investigations. Recently, the Deputy Secretary directed that corrective actions and issues related to HEPA filters and criticality safety be added to the CATS. We believe any expansion of the CATS should be carefully planned and implemented to ensure that the impact of the system is not lessened. The relationship of the CATS system to the lessons learned program and local corrective action tracking systems should also be reviewed and enhancements made in this relationship. We also suggest that an orderly plan for expanding the system to its intended scope should be developed, to permit timely scheduling of actions including modifications to implementing procedures, and logical data base development.

REVIEW FORM FOR 98-1 IMPLEMENTATION REVIEW

Office: Office of Environmental Management

Date: May 2, 2000

Reviewer: **Rabi Singh, Herb Bohrer**

Method of Review:

Objective 1: Implementation Plan requirements have been effectively included in DOE directives and procedures.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1	<ul style="list-style-type: none"> a. Appropriate DOE directives are issued and available in the directives system, and appropriate implementing documents have been issued. b. Revised documents provide for a consistent and disciplined process; c. Revised documents contain clear assignment of responsibilities and authorities for developing and implementing CAPs in response to issues identified by EH-2. d. Revised directives and procedures do not duplicate or conflict with existing directives language. 	<p>EM FRAM, Rev 2, February 2000, Table 1, Section 6.8, EH Oversight, identifies responsibilities for CAPs and refers to DOE M 411.1-1A and DOE O 411.1A as applicable directives. These responsibilities are restated in Appendix D of the FRAM. There are no other EM specific plans, directives or procedures for implementing 98-1.</p>
2	<p>Revised directives and procedures include requirements for –</p> <ul style="list-style-type: none"> a. Preparation of formal CAPs in response to EH-2 issues; b. Elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution; c. Effective use of CATs d. Identification and dissemination of lessons learned consistent with ISM implementation 	<p>See above</p>

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
3	Changes to the directives and procedures provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2, in line with integrated safety management objectives	See above.
4	DOE field offices have a process for ensuring that contractors do what is necessary to meet obligations of this program.	Not applicable.

Objective 2: The process for addressing and resolving EH-2 findings as outlined in directives and procedures has been effectively applied at HQ and in the field.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1	<ul style="list-style-type: none"> a. The process was followed (both applicable DOE-wide and local requirements, if any). b. Reviews were done, corrective action plans were developed, and any issues were pointed out for improvement. c. Each organization understands its responsibility and did its part in conducting reviews and developing corrective action plans within established time frames. 	As stated above, there are no EM specific plans, directive or procedures for implementing 98-1. However, a review of CATS indicates that EM has been meeting the intent of DOE 98-1 Implementation Plan. It appears that the review and approval of CAPS prepared by the field are being done in a timely and adequate manner.
2	<ul style="list-style-type: none"> a. Safety issues were addressed, resolved, and verified adequately and in a timely manner. b. Each organization did its part in implementing, reviewing, and closing issues; and c. Closure was independently verified. 	See above.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
3	Resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.	See above.
4	Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e, the problems were actually fixed)	See above.

REVIEW FORM FOR 98-1 IMPLEMENTATION REVIEW

Office: Office of Science, DOE-HQ

Date: April 27, 2000

Reviewers: H. Himpler, EM-5; T. O'Brien, SMIT Staff

Objective 1: Implementation Plan requirements have been effectively included in DOE directives and procedures.

Criterion	Description of Criterion	Description of Review; findings, observations, and suggestions for improvement
1	<ul style="list-style-type: none"> a. Appropriate DOE directives are issued and available in the directives system, and appropriate implementing documents have been issued. b. Revised documents provide for a consistent and disciplined process; c. Revised documents contain clear assignment of responsibilities and authorities for developing and implementing CAPs in response to issues identified by EH-2; d. Revised directives and procedures do not duplicate or conflict with existing directives language. 	<p>Implementing documents were not available. The SC FRA document was incomplete at the time of the review. Persons responsible for the CATS process within SC considered the SC FRA document "too general" to cover detailed 98-1 requirements.</p> <p>All of the SC 98-1 "Legacy issues" required Brookhaven National Laboratory (BNL) actions. BNL issued procedure BHG-OA-19, Rev. 0, 4/13/00, <i>External Assessment Response</i>, which addresses verification of completed corrective actions.</p>
2	<p>Revised directives and procedures include requirements for –</p> <ul style="list-style-type: none"> a. Preparation of formal CAPs in response to EH-2 issues; b. Elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution; c. Effective use of CATs, and d. Identification and dissemination of lessons learned consistent with ISM implementation 	<ul style="list-style-type: none"> a. SC HQ and field entities had completed 206 of 224 actions assigned (92%). SC HQ had 3 actions assigned, all of which were completed and were documented by internal memoranda. BNL reported that 5 actions for which it was coded as "Late" on the 4/3/00 Quarterly Report were actually completed, but that delays have been encountered in forwarding data to CH for entry into CATS. b. There was no evidence of an SC requirement or process of "independent" verification of closure of actions reported completed (as required by the 98-1 Implementation Plan). c. CATS appears to have been effectively implemented, but the SC process is not (well) documented. d. 98-1 process lessons learned are not procedurally addressed. Lessons Learned sharing within SC appears to be on an "ad hoc" basis.

Criterion	Description of Criterion	Description of Review, findings, observations, and Suggestions for improvement
3	Resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.	Not observed
4	Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e, the problems were actually fixed)	Not observed.

REVIEW FORM FOR 98-1 IMPLEMENTATION REVIEW

Office: Headquarters, Office of Defense Programs

Date: Draft 5/5/00

Reviewer: Karen Edwards and Hank Himpler

Method of Review: Information for this review was obtained through telephone conversations with DP's Quality Management Officer in the DP-45 Office of Technical Support. This conversation occurred after sending him the list of questions and a copy of the completed draft forms on Albuquerque, so we could discuss interface issues. We also reviewed the draft DP Quality Assurance Plan and the current DP draft FRAM, as well as data in the CATS system on several DP sites.

Objective 1: Implementation Plan requirements have been effectively included in DOE directives and procedures.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.a.	Appropriate DOE directives are issued and available in the directives system, and appropriate implementing documents have been issued.	<p>DP has not issued a revision to their FRA document. There are still a number of issues related to NNSA which must be resolved before the FRA can be revised. The draft in progress does assign responsibilities for implementing 98-1 commitments, except as noted below.</p> <p>DP is also in the process of revising their QA Plan, titled "National Nuclear Security Administration Office of the Deputy Administrator for Defense Programs headquarters Quality Management Program." This draft was dated 4/30/2000. Its issuance is also pending resolution of various reorganization issues. The draft assigns to the Deputy Administrator for Defense Programs the responsibility to approve all CAPs resulting from EH internal independent oversight reports, unless delegated (2.4.3 and 3.1.h). It references DOE O 414.1A, Attachment 2 (Safety Corrective Action Process, Supplemental Quality Requirements for DOE Elements), but does not provide any additional process detail.</p> <p>The Deputy Administrator has delegated authority to all DP field organizations the authority to approve CAPs, except for Nevada Operations. Delegation to them is underway. The delegations do not contain detailed information on how approvals will operate in the event a particular issue requires both HQ and field actions.</p>

Criterion	Description of Criterion	Description of Review findings, observations, and suggestions for improvement
1.b.	Revised documents provide for a consistent and disciplined process;	The draft documents, when issued, will be adequate as a skeleton process for handling this program within DP. It would be better if the delegations or the QAP provided some process for dealing with CAPs that require multi-level actions.
1.c.	Revised documents contain clear assignment of responsibilities and authorities for developing and implementing CAPs in response to issues identified by EH-2.	The draft FRAM and QAP clearly designate the Deputy Administrator as having responsibility for preparing and approving CAPs or for delegating such responsibility. Delegation memos clearly delegate this responsibility to the field managers.
1.d.	Revised directives and procedures do not duplicate or conflict with existing directives language.	The draft QAP and the draft FRA are generally consistent with each other and with DOE M 411.1-1A and DOE O 414.1A .
2.a.	Revised directives and procedures include requirements for – Preparation of formal CAPs in response to EH-2 issues;	The draft QAP and FRA assign responsibilities; the draft QAP references DOE O 414.1A for process information.
2.b.	Revised directives and procedures include requirements for – Elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution;	This is not addressed in the draft QAP or in the FRA.
2.c.	Revised directives and procedures include requirements for – Effective use of CATs	This is not addressed in the draft QAP or in the FRA.
2.d.	Revised directives and procedures include requirements for – Identification and dissemination of lessons learned consistent with ISM implementation	This is not addressed in the draft QAP. The FRA contains a fairly substantial section on lessons learned, which would also cover EH oversight issues.
3	Changes to the directives and procedures provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2, in line with integrated safety management objectives.	Draft documents provide an overall skeleton for the management and administration of responsibilities dealing with 98-1 commitments and other corrective action/lessons learned programs.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
4	DOE field offices have a process for ensuring that contractors do what is necessary to meet obligations of this program.	NA

Objective 2: The process for addressing and resolving EH-2 findings as outlined in directives and procedures has been effectively applied at HQ and in the field.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.a.	The process was followed (both applicable DOE-wide and local requirements, if any).	<p>DP is shown as responsible for 841 actions included in CATS. These cover 4 different Operations Offices. 39 issues are shown as open, with 120 associated actions. The remaining 721 actions are closed. None of the reports issued during 1999 and 2000 have any direct actions for DP Headquarters, as EH-2 rarely looks at HQ roles/performance in its reviews.</p> <p>DP delegated authority to approve CAPS for 3 of the 4 Operations Offices and was not involved in CAPs review and approval for these. See the NV review for a discussion of Nevada findings. Delegation was done without confirmation that the Operations Offices had adequate procedures to address the process; this was left up to the sites themselves. No coordination is required in the delegation memos for CAPs that may require Headquarters actions.</p> <p>The DP Quality Management Officer has played an active role in ICAM and has provided training to DP-HQ line personnel on the 98-1 process and the CATS system. He has advised AI on the process requirements and reviewed and made suggestions on their draft procedures. He has been active in reviewing the drafts of the first 2 Secretarial CATS reports and advising the DP-10 and DP-20 line managers on actions to take to clarify information shown in the report before it is sent to the Deputy Secretary.</p>

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.b.	Reviews were done, corrective action plans were developed, and any issues were pointed out for improvement.	As discussed above, DP has not been involved in development and approval of CAPs except for NV.
1.c.	Each organization understands its responsibility and did its part in conducting reviews and developing corrective action plans within established time frames.	The DP Quality Management Officer serves on the ICAM and is very aware of DP's roles and responsibilities. He has provided training to the appropriate DP line managers on the CATS system and the 98-1 process commitments.
2.a.	Safety issues were addressed, resolved, and verified adequately and in a timely manner.	DP has not been substantively involved in this area for Operations Offices with full delegations, except as discussed in 2b below. For NV experience, see the Nevada review.
2.b.	Each organization did its part in implementing, reviewing, and closing issues, and	Line managers in DP-10 and DP-20 are expected to review the CATS data once a month and follow up with the field on the status of open actions.
2.c.	Closure was independently verified.	DP-HQ has not been involved in verifying closure of actions to date.
3	Resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.	There is no direct tie-in between 98-1 issues and the lessons learned program. The quality Management Officer stated that the general expectation is there, but neither DOE nor DP has provided any process on how CATS data will be integrated into the lessons learned program. DP leaves this area up to the Operations Offices and hopes that they will review CATS data for applicable lessons learned at their sites. DP does not have an internal lessons learned program.
4	Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e, the problems were actually fixed)	See site reviews for information on this topic.

REVIEW FORM FOR 98-1 IMPLEMENTATION REVIEW

Office: Albuquerque Operations Office

Date: 5/26/00

Reviewer: Karen Edwards and Hank Himpler

Method of Review: Information for this review was obtained through a questionnaire filled out by Albuquerque personnel, telephone conversations with several individuals in AL's Environment, Safety, and Health Division; review of the AL FRAM and CATS procedure (including a draft revision), discussion with the DP representative to the ICAM, review of a variety of accident investigation, ES&H, and special reports pertaining to Albuquerque sites, and review of associated data in the CATS system. We did not make a field visit to AL.

Objective 1: Implementation Plan requirements have been effectively included in DOE directives and procedures.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.a.	Appropriate DOE directives are issued and available in the directives system, and appropriate implementing documents have been issued.	<p>AL's FRA document is maintained online and the database portion has been updated to include all changes in the October 1999 DOE M 411.1-1A. A revision to the AL System Description is in draft, and is scheduled for completion in August 2000.</p> <p>In addition, AL has issued a procedure on the CATS, titled "Environment, Safety & Health Corrective Action Tracking System (CATS) Procedure." We reviewed revision 0.0 of this procedure, which was approved 11/19/99. It assigns responsibility for completing necessary actions for responding to ES&H issues. This procedure assigns responsibilities and provides process flowcharts for conduct of reviews, development of CAPs, and issue evaluation/disposition. It also includes references to appropriate DOE directives and the AL Contractor Performance Assessment Program. AL notes that the procedure is currently being revised to provide AL and AL contractors with more detail on how the process is to work. They have been working closely with DP and EH to clarify HQ expectations of the field with regard to this process. The draft revision, which we also reviewed, is currently in management review, and Albuquerque hopes to have it issued by summer. This revision will provide solid guidance to AL on the conduct of the 98-1 process.</p>

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.b.	Revised documents provide for a consistent and disciplined process;	The current CATS procedure, read together with the referenced material in DOE directives, adequately implements the 98-1 commitments. The draft is likely to improve the consistency and discipline of application by providing more information on how the process will work within the Albuquerque complex.
1.c.	Revised documents contain clear assignment of responsibilities and authorities for developing and implementing CAPs in response to issues identified by EH-2.	The current CATS procedure contains clear assignment of responsibilities and authorities within AL for developing and implementing CAPs.
1.d.	Revised directives and procedures do not duplicate or conflict with existing directives language.	The CATS procedure does not conflict with DOE directives or the current AL FRAM.
2.a.	Revised directives and procedures include requirements for – Preparation of formal CAPs in response to EH-2 issues;	The AL CATS procedure assigns responsibilities and provides several process flowcharts for preparation, approval, and closure of CAPs.
2.b.	Revised directives and procedures include requirements for – Elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution;	Page 4 of the CATS procedure shows a process flowchart of the issue elevation process.
2.c.	Revised directives and procedures include requirements for – Effective use of CATs	The AL CATS procedure assigns responsibilities for input of appropriate material into CATS to the Director, Environment, Safety and Health.
2.d.	Revised directives and procedures include requirements for – Identification and dissemination of lessons learned consistent with ISM implementation	This is not covered in the current CATS procedure. AL relies on its lessons learned program to address this issue.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
3	Changes to the directives and procedures provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2, in line with integrated safety management objectives.	This procedure appears to fit in with other AL programs for assessment and oversight, and the AL Contractor Performance Assessment Procedure is referenced.
4	DOE field offices have a process for ensuring that contractors do what is necessary to meet obligations of this program.	<p>AL uses a combination of List Bs, Work Smart Standards, and S/RIDs for laying contractual requirements on contractors. DOE O 414.1A has been added to the majority of AL contracts, and this Order contains the basic process requirements for responding to EH-2 safety reviews.</p> <p>The AL CATS procedure applies generally to contractors, but has not formally been added to contracts. Currently, the procedure provides that the Cognizant Line Manager (the Manager or Area Office Manager, as delegated by the Manager) is responsible for directing necessary contractor actions. The procedure also contains specific responsibilities and actions for the "Responsible Organization," which may be the contractor.</p> <p>With respect to corrective actions, AL sends out emails to the area offices reminding them when it is time to complete the monthly status updates.</p> <p>The revised CATS procedure will add additional responsibilities and requirements which are expected to apply to contractors, although the procedure's applicability is currently limited to AL organizations and employees. There has not been a decision yet on whether the revised procedure will be formally included on AL contracts. We recommend that it should be added, so there is no question of contractor obligations with respect to this program.</p>

Objective 2: The process for addressing and resolving EH-2 findings as outlined in directives and procedures has been effectively applied at HQ and in the field.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.a.	The process was followed (both applicable DOE-wide and local requirements, if any).	<p>AL has 415 actions included in CATS. These cover 14 reports and 131 separate issues. Only 16 actions are still open (this number may be 14 – CATS data is contradictory), and of these, 6 are overdue (or maybe 4 – again, the CATS data is contradictory). See attached sheet for specifics</p> <p>In addition, two other reports with a total of 13 issues have recently been issued. One of these has a CAP approved on 3/20/00, but none of the corrective actions have yet been entered into the CATS. The other one does not yet have an approved CAP. This CAP was reported as overdue for some time, as there was some confusion in figuring out who had the authority to approve a time extension. This has since been worked out between AL and Headquarters, with EH-2 involvement, and a new due date for the CAP has now been set.</p> <p>A review of the data included in CATS and the recent reports issued during 1999 and 2000 show that the process is generally being followed, although as mentioned above there has been some confusion over responsibilities which is being actively worked out and should result in improvements to the overall clarity of the process.</p>
1.b.	Reviews were done, corrective action plans were developed, and any issues were pointed out for improvement.	<p>The legacy process was followed and resulted in the bulk of the legacy issues being closed out. Corrective action plans were provided for the remaining open issues.</p> <p>The new reviews and accident investigation done since the 98-1 commitments were implemented clearly identify issues for which a CAP is needed. An action plan has been developed for two of these reports, and the other is under development. The confusion over responsibility for approving extensions to CAP development deadlines was pointed out to EH-2 personnel, and they plan to clarify this issue in future guidance changes.</p>

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.c.	Each organization understands its responsibility and did its part in conducting reviews and developing corrective action plans within established time frames.	Based on our review of the actions in the CATS system, discussions, and the draft documents, it is evident that AL organizations involved have an adequate understanding of their responsibilities in this process. As with any new program, there has been some confusion over particular areas, but AL is working actively with DP Headquarters, EH-2 personnel, and their Area Offices to work out these issues. There are some problems with timeliness in inputting information into CATS – action items from the CAP covering the Emergency Preparedness Followup Review of TSD have not been input into the system as of 4/24/00, although the CAP was approved on 3/20/00. Also, there are 4 action items in CATS that are reported as closed in one location, and open/overdue in another location. This may be a problem with the process for updating certain CATS data fields, which requires extensive approvals, but it makes for confusing data and uncertainty as to which information is accurate.
2.a.	Safety issues were addressed, resolved, and verified adequately and in a timely manner.	<p>We spot-checked nearly 50 of the action items that were shown as closed out for various issues. Most of these were legacy issues, but we did look at information available on the 1999 Type A accident investigation covering the courier fatality in the Southeast Courier Section.</p> <p>For most of these actions, information provided in CATS was thorough and complete and demonstrated that the issues were addressed, resolved, and verified adequately and in a timely manner. The summary descriptions in CATS usually provided some information on various boards or groups involved in the verification process, and attached documents described the verification process in detail. AL quickly dealt with the legacy issues (most of which had already been closed), and is for the most part operating on a current basis with the remaining actions from the Type A investigation -- only one out of 5 actions are late, and it is less than a month overdue at the present time.</p>
2.b.	Each organization did its part in implementing, reviewing, and closing issues, and	As discussed above, there have been some startup issues such as confusion over the proper authority for approving time extensions for CAPS development, but all involved parties appear to be working together cooperatively to resolve these issues.
2.c.	Closure was independently verified.	See 2.a. above.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
3	Resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.	There is no evidence how CATS data is being used in the lessons learned program. AL personnel are unaware of any steps being taken to more closely tie the 98-1 process in with the lessons learned program.
4	Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e, the problems were actually fixed)	<p>The record is mixed on this issue. Of the three reports issued since 98-1 commitments were made, one finds that previous problems identified were fixed, one finds that they were not, and the remaining report shows that lessons learned were not adequately implemented in another AL organization. It should be noted, however, that all of these were following up on reports made prior to full implementation of the 98-1 commitments.</p> <p>The LANSCE followup review specifically mentioned that the issues identified in a 1996 accident investigation at the same facility have been effectively closed, and gives high marks to LANL's ongoing ISM program for making those changes.</p> <p>The Emergency Preparedness Followup Review of TSD issued 2/09/00, found that, although progress had been made, some of the weaknesses found in the 1998 review had not been fixed (the CATS contains contradictory information on whether the action pertaining to this earlier issue is closed or not). This followup review identified continuing problems with AL's corrective action management process.</p> <p>The Type A Accident Investigation of the 4/99 courier fatality found that 3 out of 7 of the commitments made by the TSD in response to lessons learned from the Type A investigation of the fatality of a Pantex Plant security police officer "have not been met." These commitments were not in direct response to specific judgments of need stated in the Pantex report (which applied to a different organization within AL), but instead were in response to a lessons learned request from the AL Manager.</p>

REVIEW OF CATS DATA ON ALBUQUERQUE OPERATIONS

04/24/00

#	Site/Report	# of Issues	Open actions	On sched	late
1	LANSCE -12/22/99-0001-R Followup Review	9	All (no cap yet)	-	-
2	LANL-03/31/95-0001-R Fatal shooting accident During a Limited Scope Performance Test at LANL on 12/20/94	29	0	-	-
3	LANL-01/01/96-0002-R Forklift Accident at the LANL on 11/22/95	8	0	-	-
4	LANL-04/01/96-0001-R Electrical Accident with Injury in TA-21, Tritium Science & Fabrication Facility	29	I-0009-0002-A 3/31/97 I-0009-0003-A 3/31/97	0	2
5	LANL-08/01/96-0004-R Type A Accident Investigation Board Report 7/11/96 Electrical Shock at TA-53, Bldg MPF-14	9	0	-	-
6	LANL-10/01/96-0003R Independent Oversight Evaluation of the ES&H Programs at LANL	17	I-0003-0001-A 12/15/00 I-0004-0001-A 12/31/99	1	1
7	LANL-08/08/98-0001R Independent Oversight Evaluation of Emergency management Programs Across the DOE Complex (LANL site)	1	I-0001-0009-A 12/31/99	0	1 ¹
8	PP-03/01/96-0001-R Fatality of Security Police Officer Involved in a Physical Fitness Qualification Test on 12/16/95	4	0	-	-
9	PP-10/01/96-0002-R Independent Oversight of the ES&H Programs at the Pantex Plant	8	I-0004-0001-A 12/15/00 I-0008-0001-A 09/30/01	2	0

#	Site/Report	# of Issues	Open actions	On sched	late
10	SNL-08-01/97-0001-R Office of Oversight Evaluation of ISM at SNL	6	0	-	-
11	SNL-08/01/98-0001-R Independent Oversight Evaluation of Emergency management Programs Across the DOE Complex (SNL site)	1	0	-	-
12	SNL-10/28/0001-R Evaluation of SNL-New Mexico Emergency Response Exercise	7	I-0002-0014-A 04/30/00 I-0005-0004-A 04/30/00 I-0007-0002-A 05/30/00	3	0
13	TSD-11/10/97-0001R Independent Oversight Review of the Radiation Protection Program at the ALO TSD	3	0	-	-
14	TSD-08/01/98-0001R Independent Oversight Evaluation of Emergency management Programs Across the DOE Complex (TSD Site)	1	I-0001-0001-A 09/30/99.	0	1 ²
15	TSD-06/01/99-0001R Type A Accident Investigation Board Report of the 4/19/99 Special Agent Fatality at the Southeast Courier Section, Oak Ridge, TN	8	I-0001-0001A 04/30/00 I-0004-0001A 08/31/00 I-0006-0001A 09/30/00 I-0007-0001A 03/31/00 I-0008-0001A 09/30/00	4	1
16	TSD-02/09/00-0001-R Emergency Preparedness Followup Review of TSD	4	CAP approved 3/20/00; actions not yet up on CATS as of 4/24/00.		

1. "View/CAP/status/approved page says work on these items complete and actions verified. Still shown as open on the "view/action/site" page.

2. "View/CAP/status/approved page says work on these items complete and actions verified. Still shown as open on the "view/action/site" page.

REVIEW FORM FOR 98-1 IMPLEMENTATION REVIEW

Office: Nevada Operations Office

Date: May 2, 2000

Reviewer: Mosi Dayani

Objective 1: Implementation Plan requirements have been effectively included in DOE directives and procedures.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.a.	Appropriate DOE directives are issued and available in the directives system, and appropriate implementing documents have been issued.	A. DOE/NV has a FRAM (Manual NV M 111.X, dated 12-15-99) which contains a relatively detail assignment of responsibilities for organizational elements and various management and staff positions. DOE/NV also has an Oversight Management System which includes programs and processes for self assessment as well as assessment of contractors. Program responsibility for management of this system including the Oversight Tracking System which is an electronic issue tracking system has been assigned to the Office of Assistant Manager for Technical Support (AMTS). The FRAM does not specifically address assignment of responsibility for coordination of EH-2 reviews and resolution of resulting safety issues (DNFSB recommendation 98-1). However, based on interviews with management and staff, it is clear that the responsibility has been assigned to the AMTS. Corrective Action Plans have been developed for the safety issues identified by EH-2 focused review conducted in 1999 and are being entered into the CATS.
1.b.	Revised documents provide for a consistent and disciplined process;	Details of the process for disposition of EH-2 safety issues are not addressed in DOE/NV FRAM.
1.c.	Revised documents contain clear assignment of responsibilities and authorities for developing and implementing CAPs in response to issues identified by EH-2.	Responsibilities for tracking and closure of EH-2 safety issues have been assigned to appropriate individuals within DOE/NV. AMTS has developed a desktop procedure to facilitate the corrective action tracking and closure process between DOE/NV and the contractor, and a staff of AMTS has been assigned to track the disposition and closure of these issues.

Criterion	Description of Criterion	Description of Review findings, observations, and suggestions for improvement
1.d.	Revised directives and procedures do not duplicate or conflict with existing directives language.	The DOE/NV procedures and processes are compatible with that expected by the DOE FRAM and QA Order.
2.a.	Revised directives and procedures include requirements for – Preparation of formal CAPs in response to EH-2 issues;	a. The FRAM and desk top procedure do not specifically address development of CAPs.
2.b.	Revised directives and procedures include requirements for – Elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution;	The desk to procedure requires that DOE/NV staff verify contractor’s corrective actions and acquire the necessary technical support for this verification when needed. It also requires the responsible DOE staff to return the unacceptable corrective actions to the contractor with comments. Presumably, this would include managerial and budget issues.
2.c.	Revised directives and procedures include requirements for – Effective use of CATs	The responsible DOE/NV administrator, who monitors the status of CAPs and input to the CATs was highly complementary of the CATs. She indicated that “CATs is extremely user friendly” and she has no problem using the CATs and revising the CATs fields or obtaining support from HQ in doing so.
2.d.	Revised directives and procedures include requirements for – Identification and dissemination of lessons learned consistent with ISM implementation	
3	Changes to the directives and procedures provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2, in line with integrated safety management objectives	The desk top procedure provides sufficient level of detail about assignment of issues to individuals within DOE/NV and their role to interface with the contractor (or internally within DOE), follow-up on the issue resolution, and verify proper closure actions. The DOE/NV CAP has a log with all the issues and responsible parties and monitors the status of each issue. This process appears efficient. No inconsistencies with ISMS principles were observed.
4	DOE field offices have a process for ensuring that contractors do what is necessary to meet obligations of this program.	Process is simple and not documented. Initially DOE/NV forwards the EH report to the contractor and requests a CAP. CAP is then reviewed, issues resolved, and when acceptable the CAP entered into the CATs.

Objective 2: The process for addressing and resolving EH-2 findings as outlined in directives and procedures has been effectively applied at HQ and in the field.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.a.	The process was followed (both applicable DOE-wide and local requirements, if any).	A. Development and incorporation of Corrective Action Plans are consistent with DOE requirements and was coordinated with the DP line management at HQ.
1.b.	Reviews were done, corrective action plans were developed, and any issues were pointed out for improvement.	EH-2 conducted a review of NV in 1999. As stated above, CAPs were developed and inputted into the CATS.
1.c.	Each organization understands its responsibility and did its part in conducting reviews and developing corrective action plans within established time frames.	DOE/NV organizational assignments for tracking, review, and closure of issues are clear. DP has also reviewed the CAPs. A memorandum from the Acting Deputy Administrator for DP to DOE/NV, dated March 20, 2000, indicates that DP has been involved in review of CAPs. This memo. Approves extension of completion dates for a number issues and delegates responsibility for future actions to DOE/NV.
2.a.	Safety issues were addressed, resolved, and verified adequately and in a timely manner.	A. Work in this area is currently in progress and many of the issues have been closed. As stated above, completion dates for several issues have been extended.
2.b.	Each organization did its part in implementing, reviewing, and closing issues, and	DOE/NV ha a developed a log that lists the issues and identifies the lead responsible person for the issue and also a DOE person that would review and certify the closure.
2.c.	Closure was independently verified.	DOE/NV responsible staff sign (certify) the closure package provided by the contractor indicating required verification.
3	Resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.	No specific examples were available for review in this area.
4	Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e, the problems were actually fixed)	EH-2 has not conducted an assessment since 1999 and therefore this criteria could not be effectively evaluated.

REVIEW FORM FOR 98-1 IMPLEMENTATION REVIEW

Office: Savannah River Operations Office

Date of Review: April 18-19, 2000

Reviewer: Rabindra Singh, DP; and John Adachi, CH

Objective 1: Implementation Plan requirements have been effectively included in DOE directives and procedures.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1	<p>a. Appropriate DOE directives are issued and available in the directives system, and appropriate implementing documents have been issued.</p> <p>b. Revised documents provide for a consistent and disciplined process;</p> <p>c. Revised documents contain clear assignment of responsibilities and authorities for developing and implementing CAPs in response to issues identified by EH-2.</p> <p>d. Revised directives and procedures do not duplicate or conflict with existing directives language.</p>	<ul style="list-style-type: none"> • SR has documented its 98-1 related functions and responsibilities in its FRA procedure, which is contained in Chapter 1 of SRM-300.1.1A. The latest revision of its FRAP was issued on 3/17/00. The SR FRAP addresses 98-1 related functions and responsibilities in its Part 1, Section 7.0 "Matrix of Functions, Responsibilities and Authorities", as well as in Part 2, Section 5.6 Responsibilities of ES&H Evaluation and Performance Division which has responsibility for CATS at SR. • SR is currently revising its QA Program Manual, SRM-414.1.1B (the "B" revision is the version currently in development) to address SR's 98-1 related activities. It will be addressed in Section 6 Quality Improvement of the SR QAPM. The target date for issuance of the new revision is May, 2000. • SR is currently developing a Savannah River Implementation Procedure (SRIP), number SRIP-223.4, which will address, among other feedback & improvement topics, SR's implementation level procedure for implementing the Department's 98-1 commitments including corrective action plan requirements, CAP processing and reporting format, CATS entries, etc.
2	<p>Revised directives and procedures include requirements for –</p> <p>a. Preparation of formal CAPs in response to EH-2 issues;</p> <p>b. Elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution;</p> <p>c. Effective use of CATs</p> <p>d. Identification and dissemination of lessons learned consistent with ISM implementation</p>	<ul style="list-style-type: none"> • Commitment has been made in SR FRAP that SRIP 223.4 will include requirements to meet these criteria. • The SR SMS Description Manual SRM 400.1A provides details of the Lessons Learned Program and further states that SR is currently developing a Lessons Learned Program to focus on DOE related lessons learned that will complement the Contractor Program.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
3	Changes to the directives and procedures provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2, in line with integrated safety management objectives	<ul style="list-style-type: none"> • See entries for #1 and #2 above.
4	DOE field offices have a process for ensuring that contractors do what is necessary to meet obligations of this program.	<ul style="list-style-type: none"> • SR is currently following the requirements and process delineated in the Department's 98-1 Implementation Plan, and is conveying such direction to their Contractor via letter from the SR Manager to the Contractor. • As noted in the entry for #1 And #2 above, SR is in the process of documenting its 98-1 related functions and process in SRIP-223.4. That document will document SR's process; it will still require SR to send a letter to their Contractor conveying the corrective action format and reporting requirements for each oversight report received from EH. • WSRC implements 98-1 through their established Corrective Action Procedure 5.35. In addition, WSRC has a draft procedure out for comments that will implement DII 410.1.1A. This DII provides direction to WSRC regarding Conduct of Operation and Corrective Action Plans.

Objective 2: The process for addressing and resolving EH-2 findings as outlined in directives and procedures has been effectively applied at HQ and in the field.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1	<p>a. The process was followed (both applicable DOE-wide and local requirements, if any).</p> <p>b. Reviews were done, corrective action plans were developed, and any issues were pointed out for improvement.</p>	<p>SR's handling of the July-August 1999 Focused Review by EH was reviewed to evaluate whether SR is following the process required by the Department's 98-1 Implementation Plan for developing and processing corrective actions for EH-originated issues. The corrective action plan (CAP) was reviewed; CATS entries for the CAP were viewed on the CATS screens. It was evident from this review that SR followed the Department's process for developing and processing CAPs for EH originated issues.</p>

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1	<p>c. Each organization understands its responsibility and did its part in conducting reviews and developing corrective action plans within established time frames.</p>	<p>CATS entries for SR's remaining open legacy issues (SRS-01/01/1996-0006-1) which dealt with the need to add sprinkler systems to F and H Canyons, were viewed. Required CATS entries for this issue had been accomplished. The committed completion date is 4/30/00; so the issue remains open as of the time of this review.</p> <p>Interviews of SR and WSRC personnel demonstrated that they understand their functions and responsibilities for developing and processing corrective action plans related to EH originated issues, as delineated in the 98-1 Implementation Plan.</p>
2	<p>a. Safety issues were addressed, resolved, and verified adequately and in a timely manner.</p> <p>b. Each organization did its part in implementing, reviewing, and closing issues, and</p> <p>c. Closure was independently verified.</p>	<ul style="list-style-type: none"> Based on discussions with SR and WSRC, it appeared that the criteria were met. Detail reviews of the adequacy of corrective actions for specific safety issues were not performed.
3	<p>Resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.</p>	<ul style="list-style-type: none"> SR personnel were interviewed to learn how the site has handled the review to determine site applicability, and the application of lessons learned, from EH accident investigations. SR's response to the information learned from the INEEL fatality from the fire suppression system accident was reviewed. SR directed the Contractor to identify similar installations, and take action to mitigate or eliminate such hazards. Documentation of the site's plan of action, and the resulting corrective actions taken, were reviewed. Also reviews of SR/WSRC responses to Y-12 NaK incident and Hanford Tank Explosion accident indicated that these criteria were fully met.
4	<p>Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e., the problems were actually fixed)</p>	<ul style="list-style-type: none"> See response to #4 above.

REVIEW FORM FOR 98-1 IMPLEMENTATION REVIEW

Office: Rocky Flats Environmental Technology Site

Date: April 26, 2000

Reviewer: **Herb Bohrer, Rabi Singh**

Method of Review: Herb Bohrer spent one day on site at RFETS to review the issues management process and interview selected individuals on their role in the process. Personnel responsible for the issues management system were interviewed, procedures were reviewed, and closure files were examined. The site lessons learned process was reviewed, and a demonstration of the issues management system was conducted.

Objective 1: Implementation Plan requirements have been effectively included in DOE directives and procedures.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1	<ul style="list-style-type: none"> a. Appropriate DOE directives are issued and available in the directives system, and appropriate implementing documents have been issued. b. Revised documents provide for a consistent and disciplined process; c. Revised documents contain clear assignment of responsibilities and authorities for developing and implementing CAPs in response to issues identified by EH-2. d. Revised directives and procedures do not duplicate or conflict with existing directives language. 	<p>RFFO Order 221.1 meets all requirements, and provides adequate direction to insure HQ issues are properly managed through closure verification.</p>
2	<p>Revised directives and procedures include requirements for –</p> <ul style="list-style-type: none"> a. Preparation of formal CAPs in response to EH-2 issues; b. Elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution; c. Effective use of CATs d. Identification and dissemination of lessons learned consistent with ISM implementation 	<p>RFFO Order 221.1 meets these requirements. RFETS 1-MAN-017-LLGI-RM, Site Lessons Learned/Generic Implications Requirements Manual contains sufficient guidance for the identification and dissemination of lessons learned.</p>

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
3	Changes to the directives and procedures provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2, in line with integrated safety management objectives	Yes, no deficiencies identified. RFFO has a draft revision to the Issues Management procedure that will meet requirements.
4	DOE field offices have a process for ensuring that contractors do what is necessary to meet obligations of this program.	Yes, the RFFO issues management process assigns responsibility for the management of issues to the AM and requires him to monitor contractor performance.

Objective 2: The process for addressing and resolving EH-2 findings as outlined in directives and procedures has been effectively applied at HQ and in the field.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.a.	The process was followed (both applicable DOE-wide and local requirements, if any).	The Rocky Flats issues management process is governed by RFFO Order 221.1, Rocky Flats Field Office Issues Management Program, dated 09/10/99. This order governs management of issues identified through routine oversight, special assessments, or external assessments including those identified by RFFO or external sources. The definition of external assessments includes organizations outside RFFO, including DOE-EH. Interviews were conducted with Richard Schassburger and Dero Sargent to determine compliance to the specified processes. Observed that the process was being adequately implemented. The process was sufficiently detailed to insure adequate management of issues, and that the process included sufficient requirements for the involvement of senior management in assuring the adequacy of corrective actions and verifications.
1.b.	Reviews were done, corrective action plans were developed, and any issues were pointed out for improvement.	A review of the closure files for issues was conducted. The review shows that the corrective action and closeout process for validation was being followed and that the evidence of closure was adequate. RFFO letter AMFPA:RJS:07719 transmitted to EM-1 the RFFO response for legacy closure plans and corrective action plans. This letter transmitted eight closure plans and one corrective action plan for the nine legacy issues identified for RFFO.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1.c.	Each organization understands its responsibility and did its part in conducting reviews and developing corrective action plans within established time frames.	Discussion with Richard Schassburger, Dero Sargent confirm that organizations understand and comply with requirements. For issues requiring contractor action, the responsible AM is assigned responsibility for the action and is held accountable for its management.
2.a.	Safety issues were addressed, resolved, and verified adequately and in a timely manner.	Yes, based on review of closure packages.
2.b.	Each organization did its part in implementing, reviewing, and closing issues;	Yes, based on interviews and review of closure packages.
2.c.	Closure was independently verified.	Yes. In most cases verification has been conducted by Dero Sargent, a member of the Deputy Manager's Corporate Technical Group.
3	Resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.	A review was conducted of the site lessons learned process. In the course of this review the contractor site lessons learned integrator, Jim McLaughlin was interviewed and he provided a demonstration of the site lessons learned web site. The process is governed by the Site Lessons Learned/Generic Implications Requirements Manual, RFETS 1-MAN-017-LLGI-RM. This manual identifies EH Bulletins, Assessments, Audits, and Appraisals as potential sources of information for the lessons learned program.
4	Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e, the problems were actually fixed)	None found

REVIEW FORM FOR 98-1 IMPLEMENTATION REVIEW

Office: Chicago Operations Office (CH)

Date: April 26, 2000

Reviewer: John Adachi, CH Safety & Technical Services

OBJECTIVE 1: Implementation Plan requirements have been effectively included in DOE directives and procedures.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1	<ul style="list-style-type: none"> a. Appropriate DOE directives are issued and available in the directives system, and appropriate implementing documents have been issued. b. Revised documents provide for a consistent and disciplined process; c. Revised documents contain clear assignment of responsibilities and authorities for developing and implementing CAPs in response to issues identified by EH-2. d. Revised directives and procedures do not duplicate or conflict with existing directives language. 	<ul style="list-style-type: none"> • Within CH, implementation of the Department's commitments for DNFSB recommendation 98-1, requires that the requirements and process for developing and tracking corrective actions for EH-2 issues be documented in the CH FRAM, CH QA Program, and CH implementation-level procedure(s). • The CH FRAM (CH M 411.1) is being revised to reflect the latest revision of the DOE FRAM (DOE M 411.1). This latest revision to the CH FRAM addresses the functions, responsibilities and authorities for implementing the 98-1 commitments within CH. The revised CH FRAM is currently in the review cycle via the CH Directives System. • CH's QA Program has been incorporated into the latest revision of the CH FRAM. • CH is developing an implementation-level document on its process for developing and processing corrective actions, and use of CATS, which satisfies the commitments made in the Department's 98-1 Implementation Plan. This document will be a CH Manual in our directives system. It is currently in the review cycle via the CH Directives System. • CH's status relative to the 98-1 commitments will again be reviewed during the BNL ISMS Verification, scheduled for May 1-12.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
2	<p>Revised directives and procedures include requirements for –</p> <ul style="list-style-type: none"> a. Preparation of formal CAPs in response to EH-2 issues; b. Elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution; c. Effective use of CATs d. Identification and dissemination of lessons learned consistent with ISM implementation 	<ul style="list-style-type: none"> • The CH Manual for developing and processing corrective actions, and the use of CATS, which is currently in review through our directive system, addresses the criteria in #2.
3	<p>Changes to the directives and procedures provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2, in line with integrated safety management objectives</p>	<p>See above.</p>
4	<p>DOE field offices have a process for ensuring that contractors do what is necessary to meet obligations of this program.</p>	<ul style="list-style-type: none"> • In the time since the Department's 98-1 Implementation Plan was issued, CH and its site offices have had one opportunity to implement the DOE's 98-1 commitments. This was for the EH Focused Safety Management Evaluation of Brookhaven National Laboratory (report date 9/30/99). The process outlined in the 98-1 Implementation Plan was followed, including corrective action plan requirements; processing, approval, and approval delegation requirements; as well as timeframes. The information has been entered into CATS.

OBJECTIVE 2: The process for addressing and resolving EH-2 findings as outlined in directives and procedures has been effectively applied at HQ and in the field.

Criterion	Description of Criterion	Description of Review findings, observations, and suggestions for improvement
1	<ul style="list-style-type: none"> a. The process was followed (both applicable DOE-wide and local requirements, if any). b. Reviews were done, corrective action plans were developed, and any issues were pointed out for improvement. c. Each organization understands its responsibility and did its part in conducting reviews and developing corrective action plans within established time frames. 	<ul style="list-style-type: none"> • ANL has not been the recipient of EH-2 review since the institution of the Department's commitments to 98-1. Therefore implementation of the 98-1 process could not be reviewed as part of the recent ANL ISMS Verification. • BNL has received EH-2 oversight (an EH Focused Safety Management Evaluation of BNL; report dated 9/30/99) since the institution of the Department's commitments to 98-1. CH and its Brookhaven site office (BHG), in concert with the LPSO (SC), followed the Department's process for developing, reviewing, approving, and tracking (including entering the data into CATS) for the resulting EH-2 issues.
2	<ul style="list-style-type: none"> a. Safety issues were addressed, resolved, and verified adequately and in a timely manner. b. Each organization did its part in implementing, reviewing, and closing issues, and c. Closure was independently verified. 	See above.
3	Resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.	
4	Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e., the problems were actually fixed)	

IDAHO NATIONAL ENGINEERING AND
ENVIRONMENTAL LABORATORY

INTEGRATED SAFETY MANAGEMENT SYSTEM
PHASE II, PART II
VERIFICATION

FINAL REPORT
Volume II

March 2000

U.S. Department of Energy
Washington, D.C.

Sub-Team: DOE

FUNCTIONAL AREA: EH-1

DATE: March 23, 2000

Department of Energy Resolution of EH Items

This incorporates the recently mandated requirements to assess the Resolution of Items identified by DOE-EH. This CRAD adapts the combined objective principles of those requirements.

OBJECTIVE:

EH.1 The process for addressing and resolving safety issues identified by EH-2 as outlined in directives and procedures has been effectively applied.

CRITERIA:

1. The directives and implementing documents provide for a consistent and disciplined process, with clear assignment of responsibilities and authorities for developing and implementing Corrective Action Plans (CAPs) in response to issues identified by EH-2. (As adapted from mandated EH Requirements)
2. Directives and procedures include requirements for (1) the preparation of formal CAPs in response to EH-2 issues; (2) elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution; and (3) effective use of a Corrective Action Tracking System; and identification and dissemination of lessons learned consistent with ISM implementation. (As adapted from mandated EH Requirements)
3. DOE field offices have a process for ensuring that contractors do what is necessary to meet obligations of this program. (As adapted from mandated EH Requirements)
4. Reviews were done, corrective action plans were developed, and any issues were pointed out for improvement. Each organization understands its responsibility and did their part in conducting reviews and developing and approving corrective action plans within established time frames.
5. Safety issues were addressed, resolved, and verified adequately and in a timely manner. Each organization did their part in implementing, reviewing, and closing issues, and closure was independently verified.
6. Resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.

7. Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities.

APPROACH:

Record Review: Review the INEEL identified issues, a sample of the Office of Oversight assessment reports for INEEL issued since April 1999, and a sample of legacy issues identified and tracked by INEEL. Review a sample of documentation for closure of identified issues.

Interviews: Interview DOE-ID personnel responsible to discuss how particular issues were handled and whether any problems were identified in the process. If problems were identified, how were these addressed, and are there any recommendations for improvement in the process. Also, the process for reviewing and applying lessons learned at other sites will be discussed.

Observations: As possible, observe actual meetings involving the development of CAPs within and between contractors and the DOE-ID office, and between the DOE-ID and HQ organizations, to observe the practical application and results of the procedures. As possible, observe the DOE-ID process to validate closure of the contractor's issues.

Record Review

- DOE-ID Notice 450.A, Environment, Safety, Health, and Quality Assurance Oversight, 8/27/99
- DOE-ID Order 220.A, DOE ID Self-Assessment, 8/20/99
- DOE-ID Order 414.1, Quality Assurance Program, 7/26/99
- DOE-ID OPEM 410.C-1, DOE ID OPE Operational Excellence Manual, 4/7/99
- DOE-ID Technology Programs and Operations (TPO) Draft AM Manual, 3/00
- DOE-ID AM Organization Quality Program Plans (QPPs) for IFF and SMC, (series)
- DOE-ID Order 210.A, DOE-ID Performance Measures, Trend Analysis, and Communications, 8/27/99
- DOE-ID Order 410.A, DOE-ID Issue Management, 5/10/99
- DOE-ID Manual, ID M-410.A-1, Rev 0, Issue Management Manual, 5/10/99
- DOE-ID Order O 220.A, DOE-ID Self-Assessment, 8/20/99
- DOE-ID G230.A-1, Lessons Learned Program Management, 11/12/98
- DOE-ID Order 450.A, Line Environmental, Safety and Health (ES&H) Oversight, 8/27/99
- DOE-ID N 450.B, Imminent Danger Response Action and Stop Work, 6/16/97
- DOE-ID-10671, INEEL/EX-98-01172, Rev 4, INEEL CO2 Accident Corrective Action Implementation Plan Report, 9/99
- DOE-ID IFF and SMC Self-Assessment and Oversight Reports, 1999-2000, including: the IFF and SMC Facility Management Team Roles and Responsibilities Self-Assessments for IFF and SMC of January and March 2000 (respectively), SMC Radiological Control Manual Surveillance of March 2000, IFF and SMC Lockout and Tagout Surveillances of November and December 1999, and March 2000 (respectively)
- INEEL ESH&QA Performance Measures and Tracking Report (Issue #8) of January 2000, for IFF and SMC
- INEEL Overview Presentation by the Contractor, DOE ID, IFF and SMC for the ISMS Phase II Verification Team, 2/28/00 (series)

- Bechtel BWXT Idaho (BBWI), CCN-00-002362, INEEL Independent Assessment Annual Summary of 16 December 1999
- Samples of DOE-ID Tracking of Corrective Actions through completion for items identified through Oversight and Self-Assessments at IFF and SMC of 1999-2000 with notes, (series)
- Samples of DOE-ID Recommendations, Lessons Learned, and Suggestions for Improvement for activities associated with the 1998 Fatal Accident at the INEEL (TPO-AM-00-012) of 1999 and 2000
- DOE-ID CO2 Accident Corrective Action Project (CAP) Report for January 2000, CCN 00-004496, of 16 February 2000
- DOE-ID CO2 CAP Implementation Plan Report for January 2000 with Draft Forwarding Letter of February 2000
- DOE-ID INEEL CO2 CAP Implementation Plan, DOE/ID-10671, INEEL/EXT-98-01172, Revision 4 of September 1999
- DOE-ID INEEL CO2 CAP Implementation Plan, DOE/ID-10671, INEEL/EXT-98-01172, Draft Revision 5 of February 2000, as of 16 February 2000
- EH Oversight Legacy Issues (DNFSB 98-1) Corrective Action Implementation Plan
- BBWI CCN 00-005702 CO2 Accident Corrective Action Project Report for February 2000 of 10 March 2000
- BBWI CCN 00-005857 INEEL EH Oversight Legacy Issues Corrective Action Project Report for February 2000 of 10 March 2000
- Samples of packages of Corrective Actions, including briefings and reports, closure documentation, plans, references, reports, status reports, and supporting documentation (samples, series)

Interviews Conducted

- DOE-ID Assistant Manager (AM) for Environmental Management (EM)
- DOE-ID Deputy AM for EM
- DOE-ID AM for Technical Support
- DOE-ID Operational Safety Division Director
- DOE-ID AM for Technology Programs and Operations
- DOE-ID Director of the INEEL ISMS Project Office
- DOE-ID Test Reactor Area (TRA) and Specific Manufacturing Capability (SMC) Program Director
- BBWI INEEL Site Operations Director (SOD)
- DOE-ID Project Manager for Implementation of DNFSB 98-1 for INEEL EH Legacy Issues
- DOE-ID Assistant Project Manager for Implementation of DNFSB 98-1 for EH Legacy Issues at the INEEL
- DOE-ID Environmental Programs and Settlement Agreement Division Director
- DOE-ID Performance Assurance Division Director
- DOE-ID Issues Management and Lessons Learned Program Manager
- DOE-ID Issues Management Project Manager
- General Manager, ESH&QA
- Deputy Manager, QA
- Program Manager, CAPO

Observations

- DOE-ID and BBWI ISMS Status Presentations (series)
- Demonstration of the INEEL Lessons Learned Net Access
- Senior Operational Review Board (SORB) Meeting
- Site Area Director (SAD) Weekly Meeting

Discussion of Results

The implementing documents that are in place at INEEL within DOE-ID and within BBWI are based on the Corrective Action Project Management Approach for the corrective actions of the Test Reactor Area (TRA) CO₂ Accident. With the identification of the requirements to develop a formal corrective action plan for those previously identified EH issues, BBWI integrated all similar items within the process being utilized for the CO₂ accident. The remaining issues were placed in an identical process called the EH Oversight Legacy Issues Corrective Action Implementation Plan.

The Legacy Issues process also utilized the project management approach. The initial issue of this plan was in June 1999; Revision 1 was issued in September 1999, and Revision 2 was issued in March 2000. The sources of these Legacy Issues included the EH 1995 ES&H Oversight Assessment, the EH 1998 Emergency Response Assessment, the Radioactive Waste Management Complex (RWMC) Fall Accident Corrective Actions, the TRA Electrical Shock Corrective Actions, and the TRA CO₂ Accident Corrective Actions.

These issues were integrated into their approach in June 1999 and managed by a Joint DOE-ID/M&O Contractor Team under the guidance of the Joint DOE-ID/M&O Contractor Corrective Action Steering Board (CASB). Senior DOE-ID and Contractor Management personnel, who included management, operations, and subject matter experts, led the CASB.

This Team managed the corrective action approach for both identical projects that included tracking, closure, validation processes, as well as issuing status reports and identifying hard to solve issues or logging corrective actions to the BBWI SORB and to the CASB. These issues could be safety, technical, managerial, prioritization of resources or inadequate corrective actions. The Lessons Learned from the corrective action programs are being disseminated through the ISMS developed program.

As of 29 February 2000, the Team reported that all corrective actions were closed with the exception of one contractor and three DOE-ID CO₂ corrective actions that are to be completed in conjunction with the final implementation of the ISMS and the corrective actions from the ISMS Verifications Phase II (ISMSV-II). There is also one additional DOE-ID corrective action still in progress to address the EH-95-6 issue to continue the improvement of Federal Employee training.

The next actions are to complete the validation and verification processes. Validation is their process to provide assurance of institutionalization of the corrective actions to minimize the possibility of recurrence of the issue. These validations are currently scheduled for completion by the end of June 2000, with the exception of the EH-95-6 issue, which is scheduled to be completed by the end of December 2000.

The review of a sample of documentation and the interviews with DOE-ID contractor personnel indicated that this process is formal and thorough. It requires independent reviews by BBWI and DOE-ID. The process has demonstrated that it is a useful and adequate process. DOE-ID and M&O contractor personnel have established a sound rapport, the address problems through direct face-to-face meetings and they are working to improve their processes. DOE-ID has demonstrated that they are ensuring high standards in the closure and validation processes. During the very brief period of this ISMSV the status of legacy issues was discussed during the SORB Meeting of 20 March.

Overall, it appears that the Joint DOE-ID/M&O Contractor process is adequate. It provides sufficient rigor and discipline to address the identified issues, and the correction process is on schedule for completion.

However, letters of direction and oral agreements established this process. DOE-ID and BBWI do not have directives, or procedures in place to address the process to be utilized for future EH issues that are identified or are directed to be included in the CATS program. (EH 1-1) Both organizations are considering formalizing a process that will be institutionalized either within their documentation and processes. Additionally, DOE-EH needs to identify the type of issues and who is responsible for inputting new issues into the existing systems for continuing operations. (EH 1-2)

Conclusion The Objective has been met.

Issue(s)

- DOE-ID and BBWI do not have directives, or procedures in place to address the process to be utilized for future EH issues that are identified or are directed to be included in the CATS program. (EH 1-1)
- DOE-EH needs to identify the type of issues and who is responsible for inputting new issues into the existing systems for continuing operations. (EH 1-2)

Strength(s)

- None.

Inspector _____ Robert Baeder	Team Leader _____ Roy Schepens
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ISMS VERIFICATION ASSESSMENT FORM
Combined Phase I and II Verification of Decon and Recovery Services of Oak Ridge, LLC
Phase II Assessment Form

FUNCTIONAL AREA Management/DOE (MG)	OBJECTIVE: MG.4 DATE: April 7, 2000
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OBJECTIVE - (THIS OBJECTIVE HAS BEEN DETERMINED TO BE THE SAME AS MG.6)

The process for addressing and resolving safety issues identified by the DOE Headquarters Office of Independent Oversight (EH-2) as outlined in directives and procedures has been effectively applied at the field level.

Criteria and Discussion of Results

MG.4-1 The process was followed (both applicable DOE-wide and local requirements, if any). Reviews were done, Corrective Action Plans (CAPs) were developed, and any issues were pointed out for improvement. Each organization understands its responsibility and did their part in conducting reviews and developing and approving CAPs within established time frames.

Discussion of Results –

MG.4-2 Safety issues were addressed, resolved, and verified adequately and in a timely manner. Each organization did their part in implementing, reviewing, and closing issues, and closure was independently verified.

Discussion of Results –

MG.4-3 Resultant corrective actions have been communicated to other contractors, facilities, sites, or programs for application to similar hazardous conditions.

Discussion of Results –

MG.4-4 Repeated problems of the same type have not been identified in subsequent reviews at the same contractor/site/facilities (i.e., the problems were actually fixed).

Discussion of Results –

Record Review

Interviews

ISMS VERIFICATION ASSESSMENT FORM

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Phase II Assessment Form**

FUNCTIONAL AREA Management/DOE (MG)	OBJECTIVE: MG.4 DATE: April 7, 2000
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Observations of Work

Conclusion

Opportunities for Improvement

Noteworthy Practices

Team Leader: _____ Harold Monroe
Date: _____

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Phase I Assessment Form

FUNCTIONAL AREA Management/DOE (MG)	OBJECTIVE: MG.6 DATE: April 7, 2000
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OBJECTIVE

The requirements from the DOE Implementation Plan for Recommendation 98-1 have been effectively included in DOE-ORO directives and implementing documents.

Criteria and Discussion of Results

MG.6-1 **Appropriate DOE directives are issued and available in the directives system. The directives and implementing documents and guidance provide for a consistent and disciplined process, with clear assignment of responsibilities and authorities for developing, implementing, and approving CAPs.**

Discussion of Results – DOE-ORO is in the process of implementing a web-based tracking system that will include tracking of EH-2 findings and CAPs. The DOE-ORO FRAM will address the responsibilities and authorities for all of the managers concerning CAPs and tracking.

This criterion was not met.

MG.6-2 **DOE-ORO's procedures and/or mechanisms provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2 or from other independent or self-assessment programs.**

Discussion of Results – DOE-ORO has mechanisms in place to ensure a coordinated response to safety issues identified by EH-2 or other independent or self-assessment programs. There are no AMAU procedures that cover these mechanisms. The DOE-ORO FRAM and the ORO M 110 identify the roles and responsibilities of the responsible organizations and managers.

This criterion was met.

MG.6-3 **DOE-ORO line managers have a process for verifying that contractors do what is necessary to meet the obligations of this program and implement identified corrective actions.**

Discussion of Results – The AMAU organization has processes in place for verifying that contractors meet their obligations and implement corrective actions. However, these processes though are not documented in AMAU procedures.

This criterion was met.

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FUNCTIONAL AREA Management/DOE (MG)	OBJECTIVE: MG.4 DATE: February 17, 2000
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OBJECTIVE

The process for addressing and resolving safety issues identified by the DOE Headquarters Office of Independent Oversight (EH-2) as outlined in directives and procedures has been effectively applied at the field level.

Criteria and Discussion of Results

MG.4-1 The process was followed (both applicable DOE-wide and local requirements, if any). Reviews were done, Corrective Action Plans (CAPs) were developed, and any issues were pointed out for improvement. Each organization understands its responsibility and did their part in conducting reviews and developing and approving CAPs within established time frames.

Discussion of Results – *The EH-2 Phase I Independent Investigation of the Paducah Gaseous Diffusion Plant was applicable to this review. The investigation report contained 14 significant issues requiring corrective actions. The process used for developing CAPs for the 14 significant issues was driven by the Defense Nuclear Facilities Safety Board Recommendation (DNFSB) 98-1, Resolution of DOE Internal Oversight Findings, and the EH plan for implementing Recommendation 98-1. Thirteen significant issues were assigned to BJC and one to DOE. Each organization's representative understood their responsibility in reviewing the significant issues and developing CAPs.*

This criterion was met.

MG.4-2 Safety issues were addressed, resolved, and verified adequately and in a timely manner. Each organization did their part in implementing, reviewing, and closing issues, and closure was independently verified.

Discussion of Results – *All 14 significant issues involved safety and environmental issues. The CAPs were transmitted to the Assistant Secretary for EM and the Director, Office of Nuclear Energy, on December 22, 1999, after the initial response and comment period that began November 18, 1999. The CAPs were transmitted from EM and Nuclear Energy to EH in February 2000. However, the CAPs have not been approved by EH-2. Each CAP involves several corrective actions resulting in a total of 77 corrective actions identified. Twenty-one of the 23 corrective actions scheduled to be completed by the end of January 2000 were completed on time. Independent verification of the completed actions will not occur until the corrective actions are accepted by EH and the CAPs are entered in the EH corrective action tracking system. Therefore, none of the significant issues have been closed. Both DOE ORO and BJC did their parts in reviewing issues and developing the CAPs. Program support and subject matter experts were involved from ES&H, EM, UE, Office of Chief Counsel, and the Office of the Assistant Manager for Administration.*

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FUNCTIONAL AREA Management/DOE (MG)	OBJECTIVE: DATE:	MG.4 February 17, 2000
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This criterion was met.

- MG.4-3** Resultant corrective actions have been communicated to other contractors, facilities, sites, or programs for application to similar hazardous conditions.

Discussion of Results – *The resultant corrective actions have been communicated to Portsmouth and ETTP where there is a potential for similar issues. An EH independent review is currently being conducted at Portsmouth, with the report expected to be issued in May 2000. ETTP is scheduled for an independent review by EH in June. The EH report has been made available to other contractors, facilities, sites, and programs via the DOE Headquarters' EH home page. BJC entered its proposed corrective actions in its internal corrective action tracking system. ORO is developing a tracking system that will supplement the EH CATS with a plan for implementation by August 2000.*

This criterion was met.

- MG.4-4** Repeated problems of the same type have not been identified in subsequent reviews at the same contractor/site/facilities (i.e., the problems were actually fixed).

Discussion of Results – *Corrective actions have not been closed at the Paducah site and subsequent reviews have not been completed at the same contractor/site/facilities. This criterion is not applicable at this time.*

This criterion is not applicable at this time.

Record Review

- DOE EH Office of Oversight, *Phase I Independent Investigation of the Paducah Gaseous Diffusion Plant, October 1999*
- DNFSB Recommendation 98-1 to the Secretary of Energy, *Resolution of DOE Internal Oversight Findings, September 28, 1999*
- DOE Plan to Address and Resolve Safety Issues Identified by Internal Independent Oversight, *Implementation Plan for DNFSB Recommendation 98-1, March 10, 1999*
- BJC/OR-453/R1, *Corrective Action Plan in Response to Phase I Independent Investigation of the Paducah Gaseous Diffusion Plant, December 1999*
- ORO Memorandum, subject: "DOE and BJC Final Corrective Actions for the Phase I ES&H Investigation Report on the Paducah Gaseous Diffusion Plant", from the ORO AMEM and AMUES to the NE-1 and EM-1, December 22, 1999
- EH2PUB/09-97-05SR, *Special Review: Safety Management Evaluation of Facility Disposition Programs at the East Tennessee Technology Park, September 1997*
- ORO Paducah Gaseous Diffusion Plant Phase I Independent Investigation Corrective Action Status Report, January 2000

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FUNCTIONAL AREA Management/DOE (MG)	OBJECTIVE: DATE:	MG.4 February 17, 2000
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Interviews

- BJC Deputy General Counsel, Operations
- ORO Executive Director for Uranium and Engineering Services
- EM ORO Point of Contact for Paducah
- Team Leader, ORO Quality Management Systems Team

Conclusions

The objective was met.

Opportunities for Improvement

None.

Noteworthy Practices

None.

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FUNCTIONAL AREA Management/DOE (MG)	OBJECTIVE: MG.6 DATE: February 16, 2000
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Team Member: _____ /S/ Donna Riggs	Team Leader: _____ /S/ John D. Rothrock
Team Member: _____ /S/ Kathy Richardson	Date: _____ 2/18/2000
Subteam Leader: _____ /S/ Robert Dempsey	

OBJECTIVE

The requirements from the DOE Implementation Plan for Recommendation 98-1 have been effectively included in ORO directives and implementing documents.

Criteria

MG.6-1 Appropriate DOE directives are issued and available in the directives system. The directives and implementing documents and guidance provide for a consistent and disciplined process, with clear assignment of responsibilities and authorities for developing, implementing, and approving CAPs.

Discussion of Results – *The DOE directives and ORO implementing documents and guidance provide for a consistent and disciplined process, with clear assignment of responsibilities and authorities, for developing, implementing, and approving CAPs for contractor organizations. The guidance does not contain comparable requirements for the preparation; review and approval; and tracking and evaluation of findings related to ORO organizations. The specific requirements to implement the Departmental Commitment in response to DNFSB Recommendation 98-1 have not been included in the ORO FRAM or other ORO directives. Appendix C, "Functions to Reference Documents Crosswalk," has not been revised because the draft Program Secretarial Office FRAMs have not been finalized since their creation in 1998. An effort to update the ORO FRAM is underway, with an expected completion date of March 1, 2000.*

This criterion was not met.

MG.6-2 DOE-ORO's procedures and/or mechanisms provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2 or from other independent or self-assessment programs.

Discussion of Results – *ORO's procedures provide for efficient response to safety issues identified by EH-2 or from other independent or self-assessment programs. The AMEM*

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FUNCTIONAL AREA Management/DOE (MG)	OBJECTIVE: DATE:	MG.6 February 16, 2000
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and AMUES have named ISMS coordinators and tasked these individuals to track issues and ensure that the correct information is included in the Headquarter's Corrective Action Tracking System (CATS). These coordinators work closely with one another to ensure that cross-cutting issues are properly resolved. A change control process has been established to oversee changes to the scopes or schedules in CAPs. An ES&H subject matter expert sits as a member of the Change control Board. The Assistant manager for Environment, Safety, and Quality (AMESQ) serves as the focal point for EH-2 and other oversight activities, provides ES&H experts to verify closure of EH-2 findings, and has appointed an ISMS coordinator to oversee ORO-wide ISM implementation, including feedback and improvement.

This criterion was met.

MG.6-3 **DOE-ORO line managers have a process for verifying that contractors do what is necessary to meet the obligations of this program and implement identified corrective actions.**

Discussion of Results – *The AMUES and AMEM receive monthly feedback on the status of CAPs. Facility Representatives and ES&H subject matter experts are tasked to verify that contractors do what is necessary to implement identified corrective actions.*

This criterion was met.

Record Review

- ORO M 411.1-1A1, MANUAL OF SAFETY MANAGEMENT FUNCTIONS, RESPONSIBILITIES, AND AUTHORITIES, Level II, October 31, 1998
- ORO O 450, Chapter IV, ENVIROMENT, SAFETY, AND HEALTH (ES&H) OVERSIGHT PROGRAM, December 29, 1999
- *Integrated Safety Management System, Phase I EM Pilot Verification Assessment Summary Report, August 1999*

Interviews

- AMEM
- AMUES
- Acting ORO Manager, ETTP Site Office
- Group Leader, ORO Environmental Services Group (COR for BJC)
- Group Leader, ORO ORR Remediation Management Group
- Team Leader, ORO Directives Management Group
- Team Leader, ORO Quality Management Systems Team
- Team Leader, ORO EM Y-12

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FUNCTIONAL AREA Management/DOE (MG)	OBJECTIVE: DATE:	MG.6 February 16, 2000
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- Group Leader, ORO EM Facility Representatives
- Team Leader, ORO Waste Management and Technical Integration

Conclusions

This objective was met.

Opportunities for Improvement

MG.6-1-OFL.1 *The specific requirements to implement the Departmental Commitment in response to DNFSB Recommendation 98-1 should be included in the ORO FRAM and other appropriate ORO directives by the Directives Management Group.*

Noteworthy Practices

None.

Team Member: _____ /S/ Donna Riggs	Team Leader: _____ /S/ John D. Rothrock
Team Member: _____ /S by Robert Dempsey/ Kathy Richardson	Date: _____ 2/18/2000
Subteam Leader: _____ /S/ Robert Dempsey	

REVIEW FORM FOR 98-1 IMPLEMENTATION REVIEW

Office: Amarillo Area Office

Date: April 14, 2000

Reviewer: **Joe Hassenfeldt**

Method of Review: This evaluation was conducted during the Phase I Integrated Safety Management Verification at the Pantex Plant, April 3-14, 2000.

Objective 1: Implementation Plan requirements have been effectively included in DOE directives and procedures.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement.
1	<ul style="list-style-type: none"> a. Appropriate DOE directives are issued and available in the directives system, and appropriate implementing documents have been issued. b. Revised documents provide for a consistent and disciplined process; c. Revised documents contain clear assignment of responsibilities and authorities for developing and implementing CAPs in response to issues identified by EH-2. d. Revised directives and procedures do not duplicate or conflict with existing directives language. 	<p>1.a. Not applicable with respect to issuance of DOE-wide directives.</p> <p>This criterion is not met. Neither the AAO Quality Assurance Plan nor the AAO Functions, Responsibilities, and Authorities manual specifically address the roles, responsibilities, and functions to utilize the corrective action process or enter required data into the Corrective Action Tracking System (CATS).</p>
2	<p>Revised directives and procedures include requirements for –</p> <ul style="list-style-type: none"> a. Preparation of formal CAPs in response to EH-2 issues; b. Elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution; c. Effective use of CATs d. Identification and dissemination of lessons learned consistent with ISM implementation 	<p>See above</p>

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
3	Changes to the directives and procedures provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2, in line with integrated safety management objectives	See above.
4	DOE field offices have a process for ensuring that contractors do what is necessary to meet obligations of this program.	The criterion is met. The AAO Assessment Program requires the contractor, Mason & Hangar Corporation (MHC), to address external assessments with corrective actions plans developed using the MHC Corrective Action Process standard. This process meets the requirements defined in DOE O 414.1A, <i>Quality Assurance</i> .

Objective 2: The process for addressing and resolving EH-2 findings as outlined in directives and procedures has been effectively applied at HQ and in the field.

Criterion	Description of Criterion	Description of Review, findings, observations, and suggestions for improvement
1	<ul style="list-style-type: none"> a. The process was followed (both applicable DOE-wide and local requirements, if any). b. Reviews were done, corrective action plans were developed, and any issues were pointed out for improvement. c. Each organization understands its responsibility and did its part in conducting reviews and developing corrective action plans within established time frames. 	This criterion was not met. Legacy issues assigned to the Pantex Plant were dispositioned as spelled out in the 98-1 legacy issue process, but since there are no written requirements, it is not clear that the process is repeatable.

Criterion	Description of Criterion	Description of Review: findings, observations, and suggestions for improvement
2	a. Safety issues were addressed, resolved, and verified adequately and in a timely manner. b. Each organization did its part in implementing, reviewing, and closing issues; and c. Closure was independently verified.	See above.
3	Resultant corrective actions are being applied to similar hazardous conditions at other facilities, sites, or programs.	Not evaluated.
4	Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e, the problems were actually fixed)	Not evaluated.

ASSESSMENT FORM
Department of Energy

Functional Area: DOE	Objective No.: 3	Date: May 8, 2000
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OBJECTIVE: Implementation Plan requirements for DNFSB Recommendation 98-1 have been effectively included in DOE directives and implementing documents (98-1 CRAD).

Criteria

Appropriate DOE directives are issued and available in the directives system, and appropriate implementing documents have been issued. The directives and implementing documents provide for a consistent and disciplined process, with clear assignment of responsibilities and authorities for developing and implementing CAPs in response to issues identified by EH-2. Revised directives and procedures do not duplicate or conflict with existing directives language. Documents to be reviewed include PSO and field directives and documents, including lower-level FRA documents, QA Plans, and implementing procedures and instructions. HQ FRA documents are to be revised by January 14, 2000; Field FRA documents are to be completed by March 1, 2000, and field changes to QA plans are due January 4, 2000.

Revised directives and procedures include requirements for (1) the preparation of formal CAPs in response to EH-2 issues; (2) elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution; and (3) effective use of CATs; and identification and dissemination of lessons learned consistent with ISM implementation.

Changes to the directives and procedures provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2 with other corrective action programs, in line with integrated safety management objectives.

DOE field offices have a process for ensuring that contractors do what is necessary to meet obligations of this program.

Approach

Record Review: The verification team will review the DOE FRAM and appropriate DOE-wide directives against the OAK FRA document(s), QA plans, and various other implementing documents to ensure that appropriate changes have been made.

The verification team will sample OAK directives and FRA documents to ensure that appropriate changes have been made. Review documentation to verify that OAK ensures that contractors appropriately respond to EH-2 issues. Review contractor procedures to verify that they adequately address reporting, documentation, tracking, and prioritization of corrective actions resulting from EH-2 reviews and the CATs system.

Record Review:

- OAKSDM411.1-2, Oakland Operations Office Environment, Safety & Health Functions, Responsibilities & Authorities Manual (FRAM), Rev. 4, 3/31/00
- AMLS-SOP-126-01.0, DOE/OAK/AMLS/AMEN/AMOS, Standard Operating Procedure: Issues Management, Rev. 01.0, 4/20/00
- AMLS-PLA-001-01.0, DOE/OAK/AMLS, Livermore Site Integration Safety And Security Management Plan, Rev. 01.0, 4/17/00
- Total Quality Improvement Program, Oakland Operations Office, (copy from Web site: <http://oakweb.oak.doe.gov/DIVISION/Cos/tqm.htm>), February 2000
- DOE O 414.1A, Quality Assurance, 9/29/99
- DOE M 411.1-1A, Safety Management Functions, Responsibilities, and Authorities Manual, 10/18/99
- CATS Users Guide (<http://tis.eh.doe.gov/portal/ism/CATS.htm>)
- CATS Data sheets for all corrective actions responding to the Integrated Safety Management Evaluation of Lawrence Livermore National Laboratory, November 1997

Interviews Conducted:

- Director, Environment, Safety and Health Division, AMOS
- Site Operations Team Lead, LSOD, AMLS
- DP Operations Team Lead, LSOD, AMLS
- Director, Livermore Safety Oversight Division, AMLS
- LLNL Assurance Review Manager
- LSOD Management Analyst (CATS database)
- Chief of Staff, OAK
- Information Management Director, OAK

Observations:

- Livermore Site ES&H Management Meeting
- Use of CATS by CATS Coordinator (LSOD Management Analyst)

Discussion of Results:

1. **Appropriate DOE directives are issued and available in the directives system, and appropriate implementing documents have been issued. The directives and implementing documents provide for a consistent and disciplined process, with clear assignment of responsibilities and authorities for developing and implementing CAPs in response to issues identified by EH-2. Revised directives and procedures do not duplicate or conflict with existing directives language. Documents to be reviewed include PSO and field directives and documents, including lower-level FRA documents, QA Plans, and implementing procedures and instructions. HQ FRA**

documents are to be revised by January 14, 2000; Field FRA documents are to be completed by March 1, 2000, and field changes to QA plans are due January 4, 2000.

As a result of the 98-1 Implementation Plan commitments, two major DOE directives were revised to include all aspects of the 98-1 Corrective Action Plan process: DOE O 414.1A, Quality Assurance and DOE M 411.1-1A, Safety Management Functions, Responsibilities, and Authorities Manual. DOE O 414.1A provides the detailed process requirements for developing and approving Corrective Actions Plans in response to EH-2 Assessment findings. DOE M 411.1-1A provides the DOE roles and responsibilities for the Corrective Action Plan process as well as key process elements. New requirements in DOE O 414.1A will necessitate each DOE Program and Field Office to review and amend their Quality Assurance Program Plan to reflect these requirements. It must be noted that the new DOE O 414.1A requirements do not directly apply to contractors and therefore, there is no expectation that contracts need to be modified. It is expected that the DOE-OAK FRAM contain the appropriate roles and responsibilities concerning the Corrective Action Plan process that are contained in the DOE-OAK Quality Assurance Plan should these contain new requirements.

DOE-OAK has developed a document entitled the Total Quality Improvement Program (TQIP), which has been recently revised 2/00. The preamble states that the TQIP is designed to satisfy the requirements of DOE O 414.1A as well as the DOE-OAK Quality Improvement Program. The requirements in DOE O 414.1A for corrective action plans and action tracking were not found in this document. The recently revised DOE OAK-FRAM (Revision 4) does have roles and responsibilities for responding to and developing Corrective Action Plans for EH-2 findings, and maintenance and updating the CATS tracking system required by both Orders. The Issue Management Standard Operating Procedure (AMLS-SOP-126-01.0) covers many of the key aspects of the 98-1 process. However, it does not address critical time frame expectations (e.g., CAP approval in 60 days) nor some of the specific CAP content requirements (e.g., a description of proposed mechanisms for independent verification of closure) specified in Attachment 2 of DOE O 414.1A. The complete set of requirements in DOE O 414.1A (Attachment 2) were not found in required DOE-OAK documents (i.e., DOE-OAK Quality Assurance Plan/TQIP) and implementing procedures (AMLS-SOP-126-01.0). **(Issue DOE3-1)**

Since recent DOE-OAK directives and procedures do not have references to the DOE O 414.1A (dated 9-29-99), there is a potential problem with the DOE-OAK Directive Management System—at least for issues involving Quality Assurance. **(Issue DOE3-2)**

Note that a recent DOE Headquarters reorganization resulted in the Office of Emergency Management Oversight now being assigned to the Office of Independent Oversight and Performance within the Office of Security and Emergency Operations. The Office of Emergency Management Oversight requirements (DOE O 470.2A) for CAP development, in general, follow the requirements set out for ES&H Reports from EH-2 (DOE O

414.1A).

However, at this time there are still some differences in the two processes and therefore, the revised directives (DOE O 470.2A and DOE O 414.1A) partially conflict with each other. These conflicts have caused problems for DOE-OAK.

2. Revised directives and procedures include requirements for (1) the preparation of formal CAPs in response to EH-2 issues; (2) elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response or other issues for resolution; and (3) effective use of CATs; and identification and dissemination of lessons learned consistent with ISM implementation.

The revised DOE OAK FRAM and the Issue Management procedure (AMLS-SOP-126-01.0) establish the need to prepare formal Corrective Action Plans (CAPs) in response to EH-2 issues.

These documents also provide a process where DOE will review the proposed LLNL corrective actions and address issues such as inadequate responses and timeliness issues through a formal response back to LLNL. However, issues of timeliness are not directly referenced to the critical milestone requirements laid out in DOE O 414.1A for the EH-2 Corrective Action process. The SOP procedure does not formally address the issues of budget and as noted in Criteria 3 (below) the issue of prioritization is not clearly defined.

The Corrective Action Tracking System (CATS) is centrally administered under the Director, SOD, which controls CATS data entry in accordance with the requirements of the CATS User Guide (<http://tsi.eh.doe.gov/portal/ism/CATS.htm>). This central function also acts as a gatekeeper and assures that key aspects of the tracking process are implemented. Status reports with monthly update reminders are part of this process. The key individual who maintains the CATS system has received appropriate training on the system and is a member of the CATS Users Group.

A routine, systematic process that would specifically identify and disseminate lessons learned from EH-2 findings and resultant corrective actions was not in place (See DOE2 and related issues).

3. Changes to the directives and procedures provide for efficient integration and functioning of corrective action programs responding to safety issues identified by EH-2 with other corrective action programs, in line with integrated safety management objectives.

The Deputy Assistant Manager for the Livermore Site has developed guidance for the evaluation, reporting, and tracking of ES&H issues or findings identified in the course of all line management ES&H oversight activities at LLNL, as well as findings or issues identified by external organization such as the DNFSB and EH-2 that pertain to or impact the Livermore Site Office or contractor (Issue Management, AMLS-SOP-126-01.0). This procedure also provides guidance and requirements for communication of issues to the appropriate level of both DOE and contractor management, the request for all corrective actions from the contractor, the follow-up

of the corrective actions and verification, and validation and close-out of the corrective action. Finally, the Issue Management SOP provides guidance for “ranking” of identified issues or findings with the ultimate decision for ranking issues resting at the Assistant Management level. However, for some set of issues and findings, the term “ranking” appears to apply primarily to the level of DOE management involvement in resolving the issue. Issues from external (to Oakland) organizations, such as EH-2, are automatically ranked as “Major” issues. Such issues automatically receive high management level attention. However, it is not clear how “safety” is factored into the “ranking” process for those issues automatically categorized as “Major.” As part of the 98-1 Corrective Action Process, it is imperative that DOE-OAK/AMLS review all issues from EH-2 and determine their safety significance, importance, and priority in comparison to other findings/activities at the Livermore site. This seems especially important once the FICHE system become operational and as the LLNL assessment programs become more robust. The ranking and integration of EH-2 issues and other external oversight corrective actions compared to internal findings at the Livermore Site are not always indicative of true safety priority. (Issue DOE3-3)

4. DOE field offices have a process for ensuring that contractors do what is necessary to meet obligations of this program.

For those activities involving the Livermore Site, the Standard Operating Procedure for Issue Management, AMLS-SOP-126-01.0, defines the methods and processes to task contractors to provide corrective actions for those issues identified by EH-2. This tasking involves formal tasking memos from the Assistant Manager for the Livermore Site to the appropriate LLNL manager. An Issue Management Process Diagram in AMLS-SOP-126-01.0 includes various feedback loops between LLNL staff and DOE Issues Owners once the task memo has been received by LLNL. This procedure also requires that those corrective actions tasked to LLNL be developed for DOE review and approval with 30 days of receipt of the task memo. The DOE Issue Managers are responsible for tracking progress of corrective action development.

Conclusion: The Objective has not been met. The requirements provided in DOE O 414.1A define a precise Corrective Action Process as was committed by the Department in its response to Board Recommendation 98-1. These requirements are directed solely to the DOE staff with the intention that they be documented in appropriate DOE Headquarters and Field required documents (i.e., DOE site specific Quality Assurance Plans and FRAMs). DOE-OAK Quality Assurance Plan (TQIP) does not contain the requirements of DOE O 414.1A nor were they contained in other implementing procedures such as the Issue Management SOP (DOE-OAK/AMLS) as well as the DOE-OAK FRAM. Furthermore, the DOE-OAK/AMLS staff did not always appear to be aware of critical process steps required by the process, especially mandated times and the need for specific distribution of approved CAPs and changes to CAPS.

Strength(s):

- None.

Issue(s):

- The complete set of requirements in DOE O 414.1A(Attachment 2) were not found in required DOE-OAK documents (i.e., DOE –OAK Quality Assurance Plan/TQIP) and implementing procedures (AMLS-SOP-126-01.0). (DOE3-1)
- There is a problem with the DOE-OAK Directive Management System—at least for issues involving Quality Assurance. (DOE3-2)
- The ranking and integration of EH-2 issues and other external oversight corrective actions, compared to internal findings at the Livermore Site, are not always indicative of true safety priority. (DOE3-3)

Team Member: <u> /S/ </u> Gerry Gears	Team Leader: <u> /S/ </u> James Winter
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ASSESSMENT FORM
Department of Energy

Functional Area: DOE	Objective No.: 4	Date: May 8, 2000
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(OBJECTIVE: The process for addressing and resolving safety issues identified by EH-2 as outlined in directives and procedures has been effectively applied at DOE-OAK (98-1 CRAD).

Criteria

- 4. The process was followed for both applicable DOE-wide and local requirements, reviews were done, corrective action plans were developed, and any issues were pointed out for improvement. Each organization within DOE-OAK understands their responsibilities, appropriately interfaces with other DOE organizations, and did their part in conducting reviews and developing and approving corrective action plans within established time frames.**
- 5. Safety issues were addressed, resolved, and verified adequately and in a timely manner. Each DOE-OAK organization did their part in implementing, reviewing, and closing issues, and closure was independently verified.**
- 6. Lessons learned from EH-2 safety issues are being applied to similar hazardous conditions at other facilities, sites, or programs.**
- 7. Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e., the problems were actually fixed).**

Approach

Record Review: Review documents applicable to LLNL, including (1) the Secretary's Quarterly Reports on Corrective Action Status for coverage of identified issues, (2) a sample of Office of Oversight assessment reports issued since April 1999, and (3) a sample of legacy issues identified and entered into CATS. Review at least one multi-organization, multi-Cognizant Secretarial Officer safety issue, EH-2 individual site reports for LLNL, and a sample of legacy issues for LLNL. Review any EH-2 individual site reports for DOE-OAK. Finally, review the Sitewide ISMS Phase IA/IIA verification final report Volume 1, Section 7 and sample closure documentation of legacy issues from the 1997 EH SME are closed out.

Interviews: The verification team will interview DOE Headquarters personnel responsible for development and use of the Secretary's Quarterly Report on Corrective Action Status to determine its usefulness and future plans for its use.

Interview selected field office and contractor line managers and safety personnel to discuss

how particular issues were handled and whether any problems were identified in the process. If problems were identified, how were these addressed, and are there any recommendations for improvement in the process. Also, the process for reviewing and applying lessons learned at other sites and sharing lessons learned with other sites should be discussed.

Observations: If possible, observe meetings involving the development of CAPs between the contractor and DOE-OAK field office and/or between DOE-OAK field office and HQ organizations, to observe the practical application and results of the procedures.

Record Review:

- Office of Environment, Safety and Health, Integrated Safety Management Evaluation of Lawrence Livermore National Laboratory, November 1997
- Office of Independent Oversight and Performance Assurance, Emergency Management Program Follow-up Review at the Lawrence Livermore National Laboratory, December 1999
- DOE Oakland Operations Office Memorandum from M. Hooper, AMLS to G. Podonsky, E. Habiger, T. Gioconda: Subject, Final Corrective Action Plan for Emergency Management Program Follow-up Review at the Lawrence Livermore National Laboratory, April 18, 2000
- CATS Data sheets for all corrective actions responding to the Integrated Safety Management Evaluation of Lawrence Livermore National Laboratory, November 1997
- DOE O 470.2A, Security and Emergency Management Independent Oversight and Performance Assurance Program, 3/1/00
- AMLS-SOP-126-01.0, DOE/OAK/AMLS/AMEN/AMOS, Standard Operating Procedure: Issues Management, Rev. 01.0, 4/20/00
- The Secretary's Quarterly Reports on Corrective Action Status for coverage of identified DOE/LLNL issues (<http://tis.eh.doe.gov/portal/ism/cats.htm>), 01/01/00 to 03/31/00
- Integrated Safety Management System, Phase IA/IIA Verification at LLNL, Section 7.0, Safety Management Evaluation Issues, December 1999

Interviews Conducted:

- Director, Environment, Safety and Health Division, AMOS
- Site Operations Team Lead, LSOD, AMLS
- Deputy Director, Health & Safety Operations, LSOD, AMLS
- DP Operations Team Lead, LSOD, AMLS
- Director, Livermore Safety Oversight Division, AMLS
- LLNL Assurance Review Manager
- LSOD Management Analyst (CATS database)
- Deputy Director, Environmental & Radiation Protection, LSOD

Observations:

- Use of CATS by CATS Coordinator (LSOD Management Analyst)

Discussion of Results:

1. The process was followed for both applicable DOE-wide and local requirements, reviews were done, corrective action plans were developed, and any issues were pointed out for improvement. Each organization within DOE-OAK understands their responsibilities, appropriately interfaces with other DOE organizations, and did their part in conducting reviews and developing and approving corrective action plans within established time frames.

Examination of the most recent Corrective Actions Plan (Final Corrective Action Plan for Emergency Management Program Follow-up Review at the Lawrence Livermore National Laboratory, April 18, 2000, indicates that AMLS has followed a process that has resulted in the acceptable identification of corrective actions for externally identified safety issues.

As noted in DOE3, the current set of DOE-OAK/AMLS documents and procedures do not address all aspects of the 98-1 process. Managers within AMLS were knowledgeable about the formality of the CAP process but were not always aware of key features of the process such as timing aspects and important notification steps (e.g., when and how to notify EH-2 upon CAP approval or important changes to approved CAP milestones). Also, certain aspects of CAP content requirements were not always well understood (e.g., the need for a description of the planned verification process as part of the CAP). However, the recent timely development of the CAP to address an Emergency Management follow-up review report within the LSOD organization indicates excellent organizational follow through in the CAP development process.

Note that a recent DOE headquarters reorganization resulted in the Office of Emergency Management Oversight is now assigned to the Office of Independent Oversight and Performance within the Office of Security and Emergency Operations. The Office of Emergency Management Oversight requirements (DOE O 470.2A) for CAP development, in general, follow the requirements set out for ES&H Reports from EH-2 (DOE O 414.1A). However, at this time there are still some differences in the two processes. The key LSOD lead for development of the CAP to respond to the Emergency Management Follow-up Review Report is very aware of these differences although it was indicated that the DOE-OAK/AMLS Issue Management procedure does not provide sufficient detail for Oakland personnel to understand both processes. (Issue DOE4-1)

2. Safety issues were addressed, resolved, and verified adequately and in a timely manner. Each DOE-OAK organization did their part in implementing, reviewing, and closing

issues, and closure was independently verified.

A formal AMLS verification process has only recently been documented (AMLS-SOP-126-01.0). In the same procedure, validation of results has also been defined as a requirement. The importance of an effective DOE verification and validation process is evident from a review of the findings of the DOE Office of Independent Oversight and Performance Assurance follow-up on the Emergency Management Program. This follow-up review provided to DOE-OAK on March 7, 2000 looked at issues resulting from the 1997 Integrated Safety Management Evaluation of Lawrence Livermore National Laboratory. Although it found progress in improving the overall Emergency Management Program at LLNL, it also identified there was an inconsistency between LLNL's determination of the status of the 1997 ISM corrective actions

and the status of the identified weaknesses observed by the Independent Oversight evaluation team. The March 7, 2000 report states that many items have not been corrected in contrast to both DOE/AMLS' and LLNL's corrective action management systems.

The 1997 Integrated Safety Management Evaluation of Lawrence Livermore National Laboratory Report resulted in the development of corrective actions prior to the formal requirements established in DOE O 414.1A as part of DOE response to DNFSB 98-1. DOE-OAK and LLNL developed corrective action plans to address issues in this report. EH was asked to review the proposed corrective action plans and final approval of these CAPS occurred in 1998. At the same time, the Board issued Recommendation 98-1 and DOE responded with an Implementation Plan that required, among other things, an EH-2 review of all its reports prior to 1998 with a roll-up of significant issues for each report (so-called legacy issues). Seven legacy safety issues from the 1997 Report were formally transmitted to the DOE Program and Field Office in April 1999. Using the previously approved Corrective Actions Plans, DOE-OAK reviewed the completion status of the corrective actions applied to these seven legacy issues and provided their status in CATS. Review of the Secretary's Quarterly Report indicated that the CATS system had been effectively updated by AMLS/LSOD to show the current status of Legacy Issues. As appropriate, responsible managers had closed many of the corrective actions on the CATS. Those that remain open are being tracked through LSOD, and monthly status reports are requested from all DOE Responsible Managers. Where it was determined that projected completion dates required changing by AMLS, all such changes were formally approved in accordance with his delegated authority and responsibility. EH-2 and DP-HQ were notified, as required, of such changes. A new verification and validation process has been put into place. Its results are addressed below in criterion 4.

3. Lessons learned from EH-2 safety issues are being applied to similar hazardous conditions at other facilities, sites, or programs.

A routine, systematic process that would specifically identify and disseminate lessons learned from EH-2 findings and resultant corrective actions was not in place at DOE-OAK/AMLS. Therefore, AMLS lessons learned are not being applied to similar hazardous conditions at other facilities, sites, or programs. (Issue DOE4-2)

4. Repeated problems of the same type have not been identified in subsequent reviews at the same site/facilities (i.e., the problems were actually fixed).

Recent reviews by the Office of Independent Oversight indicate that problems are not getting fixed in the area of Emergency Planning (refer to Criterion 2 above). Some of this is due to the finding that there is a lack of attention in carrying out the promised corrective actions. Using the 1997 Integrated Safety Management Evaluation of Lawrence Livermore National Laboratory Report and resultant legacy issues, many of the actions have been completed and through recent AMLS verifications inspections, there appears to be good evidence that most of the identified issues have been corrected. Verification of legacy issues was not a formally mandated requirement. Some concerns have been noted on the CATS system for closed items upon verification. The staff of LSOD has informed LLNL of the need to further understand the status of these actions before final closure can be reached. AMLS has also begun a validation process as described in AMLS-SOP-126-01.0. Validation by the Responsible Manager involves ensuring that the implemented corrective action actually addresses and corrects the deficiency described in the issue statement. At this point the requirements for verification and validation, as stated in AMLS-SOP-126-01.0, are relatively new.

The recent commitments by AMLS in its April 18, 2000 memo forwarding the approved CAP in response to the DOE Office of Independent Oversight and Performance Assurance Follow-up Report recognize the need for a more effective verification and validation program. The verification/validation requirements were recently issued as part of AMLS-SOP-126-01.0. As noted in several CATS items, the results of the validation process call into question the status of both completed actions and effectiveness of the action.

A review of the Site-wide ISMS Phase IA/IIA Verification Final Report Volume 1, Section 7.0 did not show any specific findings used in this assessment.

Conclusion: The Objective has been met. Corrective Action Plans have been developed, actions are being tracked on CATS, management is now aware of progress in resolving CATS items, process steps are outlined in the Issue Management SOP, especially the verification and validation steps, are beginning to take effect. However, the process for addressing and resolving safety issues identified by EH-2 is not mature and should receive continued management attention.

Strength(s):

- None.

Issue(s):

- The DOE-OAK/AMLS Issue Management procedure does not provide sufficient detail for DOE-OAK/AMLS personal to understand the CAP process differences resulting from application of DOE 414.1A and DOE O 470.2A. (DOE4-1)
- AMLS lessons learned from EH-2 issues are not being applied to similar hazardous conditions at other facilities, sites, or programs. (DOE4-2)

Team Member: _____ Gerry Gears	Team Leader: _____ James Winter
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