The Secretary of Energy
Washington, DC 20585

March 10, 1999

The Honorable John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, NW, Suite 700
Washington, D.C. 20004

Dear Mr. Chairman:

We are pleased to forward the enclosed Implementation Plan (Plan) for Defense Nuclear Facilities Safety Board's (Board) Recommendation 98-1, *Department of Energy Plan to Address and Resolve Safety Issues Identified by Internal Independent Oversight*.

This Plan addresses the Department's need for a clearly defined, systematic, and comprehensive process to address and resolve safety issues identified by internal independent oversight. Specifically, the Department is taking the following actions to address its needs:

- We are establishing a disciplined process and clarifying roles and responsibilities for the identification of, and response to, safety issues.
- We are establishing clearer direction on elevating any disputed issues for resolution to the Office of the Secretary, if necessary.
- We are establishing a tracking and reporting system to manage completion of corrective actions effectively.

The Plan directly supports implementation of Integrated Safety Management and was prepared by a cross-organizational team reporting directly to me. I have assigned Mr. Richard Crowe, Director of the Safety Management Implementation Team, as my Responsible Manager for executing this Plan. Mr. Crowe can be reached at (202) 586-1418.

We appreciate the advice and support provided by the Board and its staff during the development of this Plan.

Yours sincerely,

Bill Richardson

Bill Richardson

Enclosure

U. S. Department of Energy
Plan to Address and Resolve Safety Issues Identified by Internal Independent Oversight

Implementation Plan
for
Defense Nuclear Facilities Safety Board
Recommendation 98-1

March 10, 1999

Executive Summary

On September 26, 1998, the Defense Nuclear Facilities Safety Board (Board) issued Recommendation 98-1, concerning the effectiveness of the Department of Energy (Department) process to address and resolve the safety issues identified by its internal, independent oversight organization (Office of Oversight or independent oversight). Specifically, the Recommendation identifies specific weaknesses in the existing process, and recommends that the Department make improvements to several process elements, including: roles and responsibilities, issue/dispute resolution process, senior management involvement, content of corrective action plans (CAPs), tracking, reporting, and verification approaches. On November 20, 1998, the Department accepted Board Recommendation 98-1.

The central safety issue identified by Recommendation 98-1 and addressed by this Plan is that the Department currently needs a clearer, comprehensive, and systematic process to address and resolve environment, safety and health issues identified by the Office of Oversight (identified safety issues). If such improvements are not made, existing conditions could lead to situations where safety issues identified by independent oversight activities are not addressed and resolved adequately or in a timely manner, or the resultant corrective actions may not be applied to similar hazardous conditions at other facilities, sites, or programs.

The Department will take the following actions to address this need:

- Establish a consistent, disciplined process and clear roles, responsibilities, and authorities for developing and implementing CAPs in response to identified safety issues.
- Establish clear direction on the process for elevating identified safety issues to higher authority for resolution, up to the Office of the Secretary (OS) if necessary.
- Establish effective tracking and reporting of CAP progress.

The Department's Office of Oversight, established in December 1994 within the Office of Environment, Safety and Health (EH), is solely responsible for the Department's internal independent oversight function. Its mission is to provide information and analysis needed to ensure that the Secretary of Energy (Secretary), Department and contractor managers, and the public have an accurate, comprehensive understanding of the effectiveness, vulnerabilities, and trends of the Department's environment, safety, and health policies and programs.

The independent oversight function is "independent" from the Department's line program offices (line management) in that the Office of Oversight has no responsibilities for operations or programs, policy development, or assistance to line managers. This independent oversight complements line management oversight efforts conducted in accordance with DOE Policy 450.5, *Line Environment, Safety and Health Oversight.* Line management is responsible for safety, and for effective resolution of safety issues identified by the Office of Oversight while integrating and prioritizing such resolution activities with other safety management activities.

Effective implementation of the crosscutting activities identified in this Implementation Plan (Plan) is considered an important element of the Department's overall Integrated Safety Management (ISM) system. The desired outcome of Plan implementation is the efficient integration and functioning of corrective action programs responding to identified safety issues across all Departmental organizations with defense nuclear facilities responsibilities. Plan implementation will include the development of requirements, responsibilities and guidance applicable to the Department's federal workforce associated with these organizations. The federal workforce may invoke existing authorities to employ contractor resources as appropriate to meet its obligations under this Plan.

The process will be institutionalized via incorporation into the directives system. Department field and headquarters elements with defense nuclear facilities responsibilities subject to independent oversight by the Office of Oversight will be required to develop and maintain an effective process to address and resolve identified safety issues. This process shall include, as a minimum: a) the preparation of formal CAPs in response to safety issues identified in Office of Oversight reports (see section 5.1), b) elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response, or other issues arising from line management's development, implementation, and verification of closure of CAPs for resolution by higher authority in accordance with the approach described in section 5.2, c) effective use of the "DOE Corrective Action Tracking System" described in section 5.3, and d) identification and dissemination of lessons learned during each stage of process execution consistent with ISM implementation. The remaining process attributes described in the Plan represent an acceptable response method, and will be incorporated into appropriate directives guidance documents for consideration. As a part of this institutionalization effort, proposed modifications to the directives system will be evaluated to ensure that they neither duplicate nor conflict with existing directives language.

Figure 2 illustrates the Department's organizational structure for managing independent oversight issues and associated CAPs. The Office of Oversight is responsible for conducting internal independent oversight, and the line management is responsible for developing, approving, implementing, completing and verifying closure of CAPs in response to these issues. The Office of the Secretary will ultimately resolve issues arising from CAPs, if such resolution is not achievable at a lower organizational level. The Responsible Manager for execution of the Plan is the Director of the Safety Management Implementation Team (SMIT) who reports to the Chief Operating Officer (COO) on the Department's efforts to implement ISM. In this capacity, the Responsible Manager will ensure that associated actions, deliverables, and commitments are accomplished. The various lead responsible organizations identified in the Plan are accountable to the Responsible Manager with regard to the completion of deliverables. The Office of Oversight will coordinate its actions associated with this Plan with the Responsible Manager, but will maintain its necessary independence relative to its oversight activities.

Table 1 summarizes the commitments in this plan, which are described further in Section 5.

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1. Background

On September 26, 1998, the Defense Nuclear Facilities Safety Board issued Recommendation 98-1, concerning the effectiveness of the Department of Energy process to address and resolve the safety issues identified by its internal, independent oversight organization. Specifically, the Recommendation identifies specific weaknesses in the existing process, and recommends that the Department make improvements to several process elements, including: roles and responsibilities, issue/dispute resolution process, senior management involvement, content of corrective action plans, tracking, reporting, and verification approaches. If such improvements are not made, existing conditions could lead to situations where safety issues identified by independent oversight activities are not addressed and resolved adequately or in a timely manner, or the resultant corrective actions may not be applied to similar hazardous conditions at other facilities, sites, or programs. On November 20, 1998, the Department accepted Board Recommendation 98-1.

Recommendation 98-1 represents a continuation of the Board's oversight of the Department's safety management program; focusing on the implementation and effectiveness of the feedback and improvement function. The Board highlighted its concerns and observations regarding this function in its March 20, 1998, letter to the Department. In its June 3, 1998, letter and June 24, 1998, public meeting presentations to the Board, the Department responded to these concerns, and proposed several actions. Subsequently, the Board noted in its September 16, 1998, letter to the Department that many of the proposed feedback and improvement actions were commendable. However, the letter noted that the Department's proposed actions did not address improvement of the closure process for safety issues identified by the Office of Oversight. This continuing concern led to the issuance of Recommendation 98-1.

Office of Oversight. The Department's Office of Oversight, established in December 1994 within the Office of Environment, Safety and Health, is solely responsible for the Department's internal independent oversight function. Its mission is to provide information and analysis needed to ensure that the Secretary, Department and contractor managers, and the public have an accurate, comprehensive understanding of the effectiveness, vulnerabilities, and trends of the Department's environment, safety, health, and safeguards and security policies and programs. The independent oversight function is guided by the principle of having consistent, multi-disciplinary processes that are focused on significant issues.

Independent oversight is an integral element of the Department's ISM system, providing important feedback to management on whether activities are being accomplished in a manner which protects the environment, workers, the public, and national security interests.

The independent oversight function is "independent" from the Department's line program offices in that the Office of Oversight has no responsibilities for operations or programs, policy development, or assistance to line managers. This independent oversight complements line management oversight efforts conducted in accordance with DOE Policy 450.5, *Line*

Environment, Safety and Health Oversight. Benefits of effective independent oversight include: objective, unbiased evaluations from a complex-wide perspective; an unbiased source of information on safety effectiveness to Department senior managers; and increased confidence and credibility with outside constituents.

DOE P 450.4, *Safety Management System Policy*, DOE Order 414.1, *Quality Assurance*, and DOE Manual 411.1-1, *Manual of Safety Management Functions, Responsibilities, and Authorities*, address requirements and functions associated with Office of Oversight assessment activities, including the identification and communication of safety issues to line management through its appraisals, studies, reviews, and reports. A hallmark of the independent oversight process is its commitment to open communications and verification of factual accuracy before reports are finalized. The Office of Oversight employs a large variety of oversight activities to accomplish its broad responsibilities. Some oversight activities, such as ongoing resident surveillances and site profiles are largely informational, for the direct use of line managers. The following upper level oversight activities are those used by senior Department managers to understand safety effectiveness, and the reports and issues from these major activities are within the scope of this plan:

Evaluations. Evaluations are regularly scheduled, comprehensive, in-depth, multi-disciplinary appraisals of the environment, safety, and health, or safeguards and security programs at a facility. Performance ratings are assigned to evaluate programs.

Special Reviews. Reviews are conducted using techniques similar to those of evaluations, but are typically smaller efforts, focusing on a limited number of disciplines and issues. They are frequently conducted on short notice and may employ multi-disciplinary teams, but usually on a smaller scale than evaluations.

Special Studies. Special studies are analytical efforts addressing a particular issue, program, or discipline across the Department or a cross-section of the Department.

Type A Accident Investigations. Type A Accident Investigations are led by independent oversight personnel to investigate accidents which result in significant human, environmental, property, or other effects, as defined by DOE O 225.1A, *Accident Investigations*. The Office of Oversight also conducts Type B Accident Investigations as requested for accidents with less severe effects; however, most Type B accidents are investigated by line offices.

Attachment A provides a listing of major independent oversight reports developed since the Office of Oversight was established. The safety issues identified by these reports, as well as any associated corrective action status, will be identified and evaluated for continued relevancy by both the Office of Oversight and the line as part of Plan implementation and are referred to as legacy issues. By mutual agreement, all issues and corrective actions with continued safety significance will be updated, and tracked to completion as described in section 5.

2. Underlying Causes

As discussed in section 1, the Department agrees that its feedback and improvement action plan described in its June 3, 1998, letter to the Board does not address the need to improve the process to address and resolve safety issues identified by the Office of Oversight. With this Plan, the Department is committed to establishing the following processes and tools to resolve the conditions which ultimately resulted in the issuance of Board Recommendation 98-1:

- A comprehensive, systematic process for responding to identified safety issues. This will include documentation describing:
  1) Clear roles, responsibilities, and authorities for the conduct of internal independent oversight, via processes that are well-understood by the line.
  2) Explicit requirements for the development of formal CAPs in response to identified safety issues.
  3) Clear roles, responsibilities, and authorities to respond to identified safety issues, and;
  4) A consistent, disciplined framework for developing, approving, tracking, and implementing CAPs in response to identified safety issues. Also, identify criteria for developing CAPs, and fully integrate and prioritize CAPs within an overall line management feedback and improvement process.

- Clear direction on the process for elevating issues for resolution by higher authority, up to the Office of the Secretary if necessary.

- Effective tracking and reporting of CAP progress, closure, and verification, consistent with ISM implementation.

3. Baseline Assumptions

In the development of this Plan, the following assumptions are made:

- Line management is responsible for safety, and for effective resolution of identified safety issues. This includes integration and prioritization of corrective actions with all other safety management activities. The actions under this plan are in accordance with and complement the Department's overall feedback and improvement function under ISM.

- The Department will obtain the funds necessary to meet its commitments under this Plan. Although additional evaluation is required to identify the potential costs associated with development of the "DOE Corrective Action Tracking System," implementation of the other elements of the Plan will not require significant funding.

- This Plan is applicable to Department field and headquarters elements with defense nuclear facilities responsibilities subject to independent oversight by the Office of Oversight.

- The Office of Oversight has a role in ensuring that line management understands identified safety issues, and in evaluating and monitoring the effectiveness and implementation of the line's CAPs.

- Reporting activities conducted during implementation of this Plan do not relieve Department elements of existing reporting requirements established by other means.

4. Related Activities

This Plan builds on and complements the Department's feedback and improvement action plan described in the Deputy Secretary's June 3, 1998 letter to the Board. That feedback and improvement action plan focused on four broad areas:

- Accelerating implementation of DOE P 450.5;
- Improving the Department's tracking and follow-up processes;
- Improving the Department's Lesson Learned processes; and
- Improving implementation of DOE M 411.1-1 relative to feedback and improvement.

Effective implementation of the crosscutting activities identified in this Plan is considered an important element of the Department's overall ISM system. The desired outcome of Plan implementation is the efficient integration and functioning of corrective action programs responding to identified safety issues across all Departmental organizations with defense nuclear facilities responsibilities.

5. Central Safety Issue: Effective Process to Address and Resolve Safety Issues Identified by Independent Oversight

The central safety issue identified by Recommendation 98-1 and addressed by this Plan is that the Department currently requires a more clear, comprehensive, systematic and effective process to address and resolve identified safety issues. Specifically, the Plan improves the current process by:

- Establishing a disciplined framework, clear roles, responsibilities, and authorities for development and timely implementation of CAPs in response to identified safety issues.

- Establishing clear direction on the process for resolving issues at the lowest possible organizational level, but also including clear direction for elevating issues for resolution by higher authority, up to the Office of the Secretary if necessary.

- Establishing effective tracking and reporting of CAP progress, closure, and verification that is integrated with other significant safety issues.

If such improvements are not made, existing conditions could lead to situations where safety issues identified by independent oversight activities are not addressed and resolved adequately or in a timely manner, or the resultant corrective actions may not be applied to similar hazardous conditions at other facilities, sites, or programs.

In order to address this central safety issue, the Department will develop and implement a clear, comprehensive, and systematic process to address and resolve identified safety issues. The specific attributes of this process are described in the resolution approaches detailed below, followed by specific Departmental commitments and deliverables designed to demonstrate the effective implementation and institutionalization of an adequate process.

Plan implementation will include the development of requirements, responsibilities and guidance applicable to the Department's federal workforce associated with these organizations. The federal workforce may invoke existing authorities to employ contractor resources as appropriate to meet its obligations under this Plan.

The process will be institutionalized via incorporation into the directives system. Department field and headquarters elements with defense nuclear facilities responsibilities subject to independent oversight by the Office of Oversight will be required to develop and maintain an effective process to address and resolve identified safety issues. This process shall include, as a minimum: a) the preparation of formal CAPs in response to safety issues identified in Office of Oversight reports (see section 5.1), b) elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response, or other issues arising from line management's development, implementation, and verification of closure of CAPs for resolution by higher authority in accordance with the approach described in section 5.2, c) effective use of the "DOE Corrective Action Tracking System" described in section 5.3, and d) identification and dissemination of lessons learned during each stage of process execution consistent with ISM implementation. The remaining process attributes described in the Plan represent an acceptable response method, and will be incorporated into appropriate directives guidance documents for consideration. As a part of this institutionalization effort, proposed modifications to the directives system will be evaluated to ensure that they neither duplicate nor conflict with existing directives language.

The initial focus of this process will be the management of safety issues and corrective actions resulting from Office of Oversight assessments. However, consistent with the June 3, 1998, feedback and improvement plan of action, it may be beneficial to expand this process at some point to address other assessment issues, such as those resulting from the DOE P 450.5 and DOE O 414.1 implementation (especially self-assessment issues), external assessments, and emergency response reviews.

5.1 Issue 1: Process Framework

A. Issue Description:

The Department has not formally established a clear, comprehensive, systematic, and timely process for resolution of identified safety issues. The Department has not clearly established the functions, responsibilities, and authorities for effectively responding to identified safety issues. Effective response includes: clear understanding of identified safety issues; consensus/mutual understanding of resolution approach; preparation and approval of responsive corrective actions; implementation of corrective actions, and verification that identified safety issues are resolved; completion and independent verification of closure of corrective actions, and effective tracking and timely reporting of progress.

> *Board Recommendation 1: Establish by policy statement, directives, or other protocols, the manner in which the Secretary expects Cognizant Program Secretarial Officers (Assistant Secretaries) and Field managers to address and resolve findings of its independent internal corporate safety organization (Assistant Secretary for ES&H).*
>
> *Board Subrecommendation 1.1: Consideration should be given to direction and guidance for establishing authority and responsibility for conducting and responding to independent oversight, preparing and approving corrective action plans, reporting on progress toward timely and adequate closure of findings, and subsequent closure, including independent verification of closure.*
>
> *Board Subrecommendation 1.3: Consideration should be given to direction and guidance for describing the purpose and content of corrective action plans responsive to oversight findings (e.g., cause identification, actions to correct immediate problem, lessons learned, actions to prevent recurrence).*
>
> *Board Subrecommendation 1.4: Consideration should be given to direction and guidance for scheduling the time frames within which the evaluation and process activities must occur.*

B. Resolution Approach: The Department commits, as part of its overall feedback and improvement process under ISM, to formally establishing a clear, comprehensive, and systematic process that addresses the Board's concerns and recommendations regarding the need to address and resolve identified safety issues effectively. This is achieved by formalizing within the Department directives system a process that contains attributes similar to the rigor of the CAP process prescribed in DOE O 225.1A, *Accident Investigations*, and its associated implementation guide, DOE G 225.1A-1. The linkage of the Plan process to the generalized feedback and improvement process under ISM is discussed below and illustrated in Figure 1.

Generalized Process for Feedback and Improvement

Feedback and Improvement is one of the five core safety functions within the Integrated Safety Management System. Specific feedback and improvement processes can and do vary based on the specific source and type of feedback information. Regardless of the specific feedback mechanism, this core safety function is accomplished through the following generalized steps:

Identify Issues. Feedback information is collected from a variety of sources, including management self-assessments, line management oversight, independent oversight, and external oversight. Assessments, appraisals, analyses, evaluations, reviews, and other feedback mechanisms provide clear, factually accurate information, issues, and areas for improvement.

Evaluate Issues. Cognizant line managers evaluate identified issues and determine appropriate corrective actions, if any, including plans, schedules and relative priorities compared to other ongoing safety improvements. Dispositions include cause identification, actions to address the immediate issue, actions to prevent recurrence, and lessons learned for broader application.

Resolve Issues. Cognizant line managers implement corrective actions to resolve issues as determined by their dispositions. Implementation status is tracked and reported on to ensure timely and adequate issue resolution.

Close Issues. Cognizant line managers complete corrective actions and verify completion. Issues are closed upon review that the original feedback issue has been effectively resolved by the actions taken.

In applying this generalized process to specific feedback mechanisms, such as independent oversight activities, more detailed process requirements need to be established and agreed-upon, including: specific roles and responsibilities, specific formats and mechanisms, elevation of issues to higher authority for resolution if necessary, time requirements, and tracking and reporting tools.

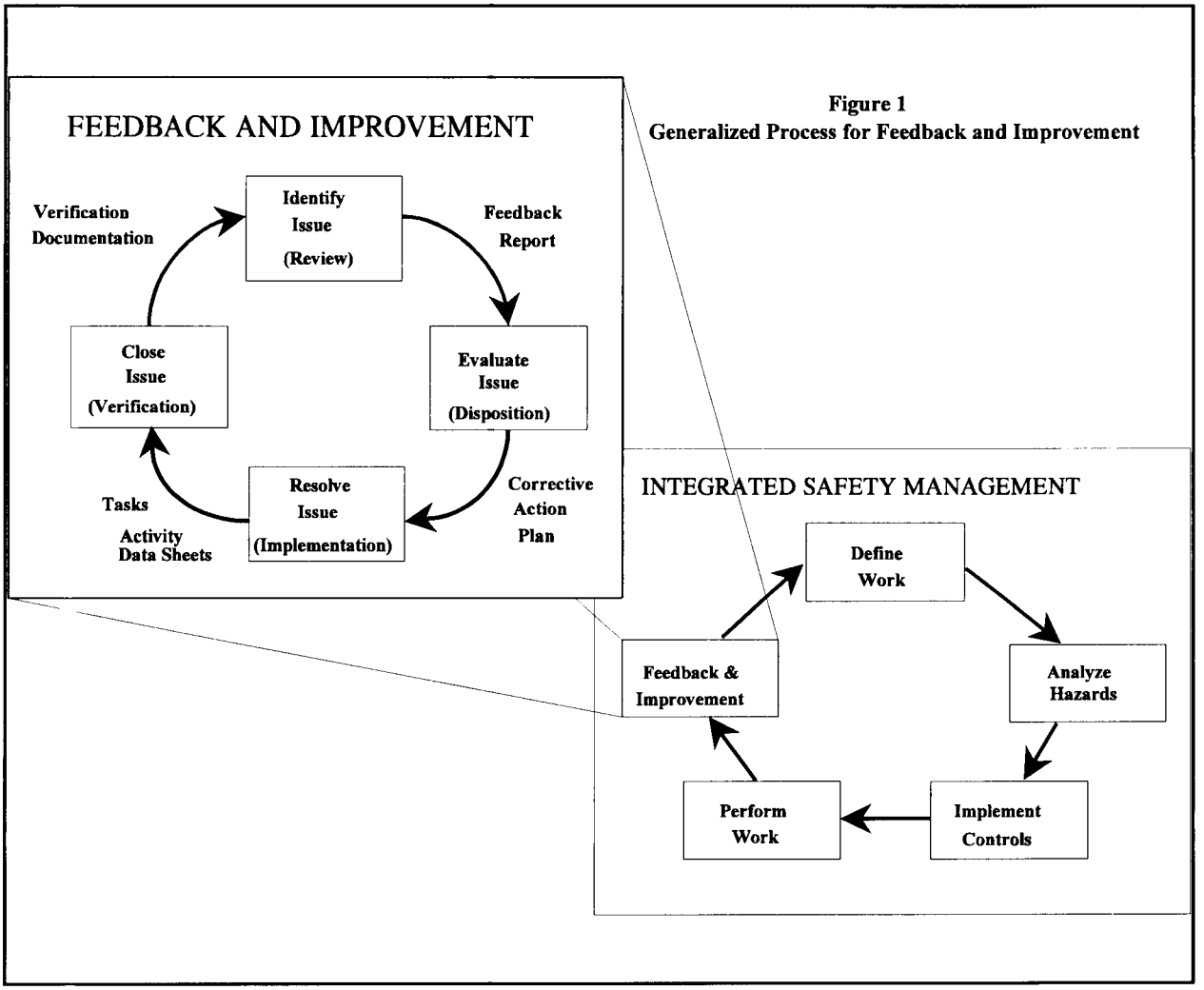


Figure 1
Generalized Process for Feedback and Improvement

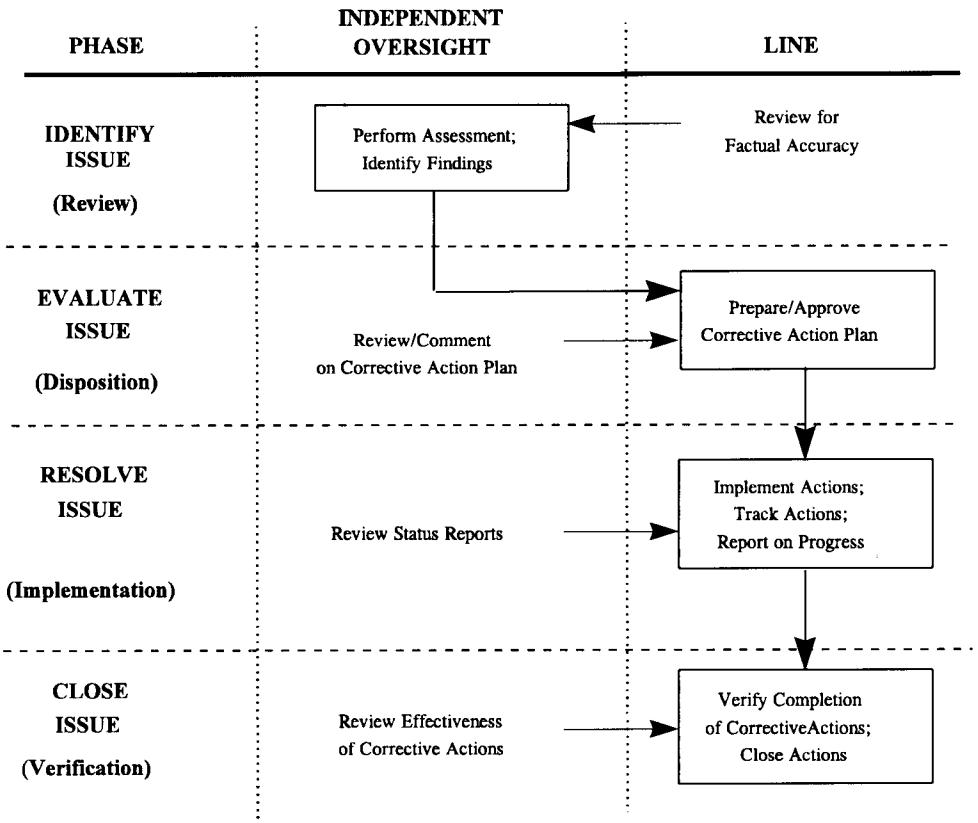
Specific Process for Feedback and Improvement Related to Office of Oversight Assessments and Associated Line Response.

The basic process steps for addressing and resolving identified safety issues are illustrated in simplified form in Figure 2 for clarity.

Detailed Process Description. The following summary provides a detailed description of the major process steps, requirements, functions, responsibilities, authorities, and guidelines that support the simplified process shown in Figure 2.

Figure 2

DOE Organizational Structure for Managing Independent Oversight Issues and Associated CAPs



Step 1a. The Office of Oversight conducts an independent assessment of safety management at a specific Department site or program.

The Office of Oversight has developed protocols to define its process for planning, scheduling, and conducting its duties to undertake independent oversight assessments, studies, and audits. These protocols contain the following elements to ensure the factual accuracy of their assessments, studies and audits:

- The Office of Oversight team members, during their on-site assessment activities, interact on a regular basis with their line organization counterparts to ensure communication of issues, both positive and negative. Line organization counterparts provide feedback to the Office of

Oversight team members on the factual accuracy of information obtained and recommend additional personnel to interview and documentation to review in order to provide additional perspective to the Office of Oversight's team members.

- Determination of factual accuracy is also conducted during and/or at the conclusion of interviews, walkthroughs, and observation of work performance to ensure that there is a shared understanding of the facts observed by the Office of Oversight team members.

- The Office of Oversight team members debrief site management on a daily basis. Both positive and negative impressions from the previous day's evaluation activities are presented, as well as any identified imminent risks or emerging concerns. Site management is expected to identify areas of disagreement and work with the Office of Oversight team members to correct factual accuracy problems. During the conduct of the assessment, or later in the reporting phase, a safety issue may arise that requires prompt corrective action. The formal corrective action process described in this Plan should not impede line management from taking prompt action to protect the public, workers, or the environment from imminent risk.

- Draft reports from the Office of Oversight evaluation are provided to the site and appropriate Cognizant Secretarial Officers (CSOs) for factual accuracy reviews before the reports are published. This permits the line organization to communicate factual accuracy concerns to the Office of Oversight during the final validation process before issuance of the Office of Oversight report.

One of the most critical outcomes of an independent oversight assessment is the generation of a report that clearly describes each identified safety issue (e.g., clearly identified variances from established requirements). The Office of Oversight will review and modify as necessary its existing protocols in support of this desired outcome, both to ensure that this goal is met and to support the line in its efforts to understand fully the identified safety issues in order to develop appropriate corrective actions.

Step 1b. The Office of Oversight submits its formal assessment report simultaneously to the cognizant line manager and applicable line CSO.

When the Office of Oversight approves its assessment report, in accordance with defined protocols, copies are provided to the cognizant line manager and the CSO. When independent oversight reviews identify safety issues that apply to multiple organizations and/or CSOs, then a lead CSO is mutually agreed-to or appointed by the COO. Also, a cognizant line manager is appointed for each organization. If necessary, the issue elevation process described in section 5.2 is applied.

This action establishes "day 0" for the CAP approval and comment time frames described below.

Upon issuance of its formal report, the Office of Oversight enters identified issues into the tracking and reporting system described in section 5.3. This action ensures historical integrity of the identified issue and ultimately links the issue to the line organization's CAP. After development and approval of the CAP, the line organization will load or enter all required corrective action information into the system.

Step 2a. The cognizant line manager, in consultation with the applicable CSO, prepares the CAP to address the issues raised in the formal independent oversight assessment report.

The cognizant line manager prepares the CAP on a schedule that supports CAP approval within 60 days of the issuance of the formal independent oversight assessment report (see Step 2b approval requirement).

The cognizant line manager and the CSO review the formal independent oversight assessment report and evaluate the potential impact of the identified safety issues described in the report. If the cognizant line manager for preparing the CAP is not obvious, the CSO assigns one. When necessary, the CSO, Secretary, or other senior line managers direct a response be made that is broader than the scope of the report.

The cognizant line manager, in coordination with the CSO, prepares a single, comprehensive CAP that responds to the issuance of a formal report for each of the independent assessment activities listed above, addressing the identified safety issues. An essential element of a successful CAP is clear understanding and ownership of the safety issues contained in the independent oversight report, and this is the initial focus of the line's evaluation. The cognizant line manager raises questions involving the identification, meaning, or scope of the identified safety issues to the Office of Oversight via an appropriate means, and achieves an appropriate understanding/resolution before developing corrective actions. When the line has ensured that the identified safety issues are fully understood, the appropriate entity is tasked to prepare corrective actions to address those issues.

Structure and Content of CAPs:

Existing requirements, responsibilities, and guidance related to corrective actions are contained in DOE O 414.1, DOE M 411.1-1, and various Departmental guidance documents (e.g., DOE G 450.4-1, G 414.1-1, and G 414.1-2). The CAP elements described below will be incorporated as improvements to these requirements and guidance, as appropriate, per the commitments and milestone deliverables described in this Plan.

For accident investigations, specific protocols and milestones have already been established by the Department addressing the management of CAPs, and must be followed. For all other reports covered by this Plan the following process applies:

a. The cognizant line manager prepares a single, comprehensive CAP to address the identified issues contained in a single independent oversight assessment report. CAPs include both field and headquarters corrective actions, as appropriate, if the oversight assessment includes both field and headquarters issues. Field cognizant line managers develop corrective actions that address the independent oversight issues pertaining to their activities, while headquarters cognizant line managers and CSOs are responsible for corrective actions to address issues directed at their organizational elements.

b. CAPs include actions to correct any clear variance from established requirements, and actions to determine root causes and prevent recurrence of the issue. Corrective actions may be taken during the assessment process or prior to the report being issued, especially when a significant hazard or imminent risk must be mitigated. The objective of the CAPs is to describe actions that will correct the safety issues identified in the independent oversight report.

c. CAPs provide the cognizant line management's basis for disposition of the identified safety issues. If the cognizant line manager determines that no action should be taken in response to a given issue, the CAP provides the basis for this determination, demonstrating how safety will be maintained. CAPs should indicate the following for each safety issue requiring specific corrective actions: the responsible individual, the date of action initiation, the date of expected completion of action, how actions will be tracked to closure, and provide a mechanism for verification of closure and assurance that such actions are appropriate to prevent recurrence. Weaknesses and opportunities for improvement should be addressed by the cognizant line manager, but need not be included in the CAP.

If the CAP cannot be prepared on a schedule that will allow for review and approval by the approval authority within the 60 day requirement described in Step 2b, the cognizant line manager formally requests an extension from the applicable CSO. This request includes a description of the conditions causing the delay, and an estimated completion date. The CSO may approve an extension and set a new due date. A copy of the extension request is provided to the Office of Oversight for review and comment.

Step 2b. The applicable CSO, or designee, approves the CAP within 60 days of the issuance of the formal independent oversight assessment report.

The CSO has the ultimate approval authority for CAPs. The CSO may delegate this authority to the cognizant line manager or other designee. If the CSO delegates CAP approval authority to the cognizant line manager, the cognizant line manager must prepare and approve the CAP within 60 days of the issuance of the formal independent oversight assessment report. However, if the CSO retains approval authority (or delegates approval authority to someone other than the cognizant line manager), the cognizant line manager must prepare the CAP on a schedule to allow for review and approval by the approval authority within 60 days of issuance of the formal independent oversight assessment report. Upon approval, the cognizant line manager forwards a copy of the CAP to the Office of Oversight for its review.

The field cognizant line manager approves corrective actions addressing issues related to contractor and field element activities (if delegated such authority by the applicable CSO). If the CAP is to include both field and headquarters actions, the CAP is submitted to the designated headquarters cognizant line manager for incorporation of corrective actions addressing issues related to headquarters activities. The applicable CSO approves headquarters corrective actions, and also approves field corrective actions (unless such authority has been delegated).

Upon approval of the CAP, the cognizant line manager enters information related to the associated corrective actions (i.e., scope of action, status of action, due date, and responsible individual) into the appropriate fields in the tracking system. Information is also entered into the tracking system addressing the target schedule for CAP finalization.

Upon approval of the CAP, the cognizant line manager initiates corrective actions, as appropriate. Corrective actions are commenced as part of an integrated and prioritized, overall line management feedback and improvement effort that evaluates safety issues identified by the Office of Oversight in context with other significant safety issues.

Step 2c. The Office of Oversight reviews the CAP within 30 days of its approval by the line, and provides comments to the cognizant line manager and applicable CSO.

For Office of Oversight Safety Management Evaluations, this step provides an opportunity to: review the line's proposed corrective actions against the issues identified in its report, provide follow-up support to the line by ensuring that identified safety issues are understood by the line before corrective actions are taken, and assess if the CAP adequately addresses those issues (assuming that the CAP is properly implemented and completed by the line). This review and comment period in no way diminishes the responsibility of the line organization to analyze and assess the identified safety issues against their own self-assessment issues. Nor does it conflict with the independent nature of the assessments conducted by the Office of Oversight.

Within 30 days of receipt of the CAP, the Office of Oversight completes its review and provides any relevant comments to the applicable CSO and the cognizant line manager regarding the proposed corrective actions, including timeliness and adequacy issues as appropriate. It is anticipated that this review will result in one of the following two outcomes:

- The Office of Oversight concludes that the timely and effective implementation of the corrective actions are reasonable for resolving the identified safety issues; or,

- The Office of Oversight concludes that the corrective actions do not appear to adequately address all or part of the identified safety issues, and provides the basis for this conclusion to the applicable CSO and the cognizant line manager. The issue elevation process described in section 5.2 is applied, if necessary.

The cognizant line manager enters information into the tracking system addressing the status of any comments received from the Office of Oversight.

Step 2d. The cognizant line manager, in consultation with the CSO, determines whether the CAP needs to be revised to address the Office of Oversight comments, and revises the CAP appropriately.

If the CSO and cognizant line manager are unable to concur with the independent oversight comments (i.e., safety concerns) then the issue elevation process is applied (section 5.2).

If the CAP is revised, the cognizant line manager updates the associated information contained in the tracking system. The date that the CAP is revised is also entered into the tracking system.

Step 2e. The applicable CSO provides an opportunity for the Department's COO or designee to be briefed by the cognizant line manager, the Office of Oversight, and the Assistant Secretary for EH on the identified safety issues, the CAP and planned corrective actions, and any associated resource issues.

This step supports the COO's leadership role in the Department's effort to achieve full implementation of ISM.

Step 3. The cognizant line manager implements the approved CAP and completes the associated corrective actions.

Upon approval of the CAP, the cognizant line manager is responsible for ensuring the timely and effective implementation of corrective actions by the Department and contractor organizations.

As stated in step 2b, at the appropriate time after CAP approval, the cognizant line manager initiates corrective actions, as part of an overall line management feedback and improvement effort that integrates and prioritizes corrective actions addressing safety issues identified by the Office of Oversight with other significant safety issues, and emphasizes correction of root causes to minimize recurrence.

The cognizant line manager ensures that corrective actions are effectively tracked to closure. This activity includes the establishment and maintenance of milestones used by interested parties to track and report progress toward completion. These milestones include specific tracking numbers cross-referenced to the independent oversight issues. The corrective action tracking system described in section 5.3 is used as a tool for maintaining awareness about the status of corrective actions during CAP implementation. The tracking system contains the following information fields for each corrective action: action description, deliverable, due date, responsible individual, completion status (open/complete), descriptive status, and closure verification status. If an action is overdue, the cognizant line manager provides the following information in the descriptive status field: reasons for delay, ongoing activities, and anticipated

completion date. The cognizant line manager is responsible for maintaining accurate status for all assigned corrective actions, and reviews and updates status at least monthly. The CSO, the Office of Oversight, and the Office of the Secretary have unfettered access to the tracking system data, and review status as necessary to support management and oversight activities. On a quarterly basis, a cross-organizational, overall summary of the status of corrective actions addressing identified safety issues will be developed and provided to the Secretary. The details of the format and management of this report will be developed by the Integrated Corrective Action Management Team described in section 5.3.

As part of future routine or for-cause assessments, the Office of Oversight will review the adequacy of corrective action implementation and report unsatisfactory progress to the appropriate officials (i.e., cognizant line manager and CSO). If desired, the issue elevation process may be employed (see section 5.2).

Step 4. The cognizant line manager coordinates with the field organization, headquarters line organization, and CSO to ensure that all closed corrective actions have been verified by persons with sufficient independence from those who performed the work described in the CAP.

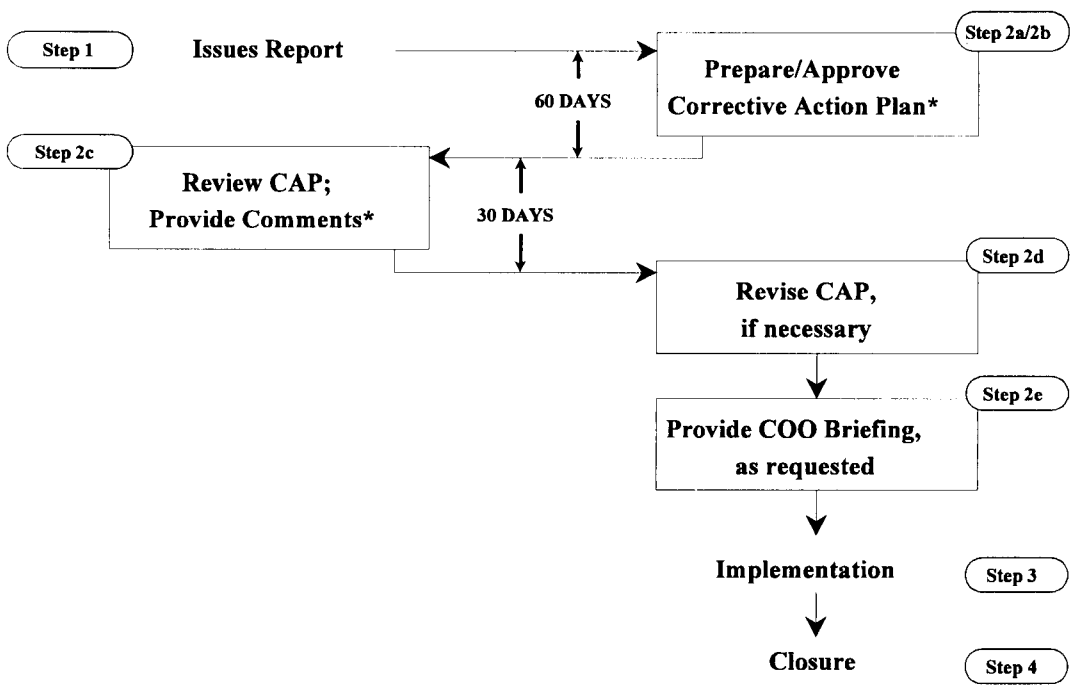
Closure verification will be conducted by line organizations and support staff that are independent of the cognizant line manager and staff responsible for development, implementation and closure of corrective actions. Line management applies the Independent Assessment criteria from DOE O 414.1 to obtain an objective and independent verification of CAP completion.

As part of its activities, the Office of Oversight may choose to examine the closure documentation and the physical activities that have been taken to resolve the identified safety issues. Thus, such documentation should be maintained by the cognizant line manager.

Process Summary. The process described above, and illustrated in the Figure 3 timeline shown below, clearly acknowledges the Office of Oversight's responsibility and authority for conducting internal independent oversight of the Department, while specifying that cognizant line managers and line CSOs have responsibility and authority for responding to this independent oversight, to include preparation, approval and the tracking to closure of CAPs.

Figure 3

TIMELINE FOR ISSUE EVALUATION / DISPOSITION STAGE



* For a CAP where the CSO or the Office of Oversight raises issues on the adequacy of the proposed CAP, the issue elevation process described in section 5.2 is applied. It is assumed that within 15 days of stated objections, most areas of dispute can be resolved without resorting to OS involvement. However, if such resolution cannot be gained, then the issue is elevated up the chain of command with the expectation that the dispute be resolved within 30 days of issue identification. The CAP would then be approved by the CSO or designee no later than 120 days from issuance of the Office of Oversight report.

Verification of Effective Plan Implementation. To verify whether the described process has been effectively implemented, the Responsible Manager for Plan implementation will coordinate activities to determine the following: 1) whether the described process has been effectively incorporated into identified Department directives, 2) whether the process has been effectively applied, based on review of a sample of recently issued Office of Oversight assessment reports, 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 4) confirm effective integration of the process into the ISM system. To the extent possible, the Responsible Manager will take steps to incorporate this verification of the oversight issue resolution process into ongoing ISM verification activities conducted by the line.

Commitment 5.1.1:	The Office of Oversight will review and modify as necessary its existing protocols to enhance line management understanding of identified safety issues.
Lead Responsibility:	Office of Oversight (EH-2)
Deliverable:	Report addressing review scope and results, and description of any modifications made.
Due Date:	July 1, 1999

Commitment 5.1.2:	The process to address and resolve safety issues identified by the Office of Oversight described in the resolution approach will be incorporated into appropriate directives documents; functions, responsibilities and authorities for effective response will be defined.
Lead Responsibility:	Office of Nuclear Safety Policy and Standards (EH-31)
Deliverable:	Process requirements, functions, responsibilities, authorities, and guidance incorporated into DOE O 414.1, DOE M 411.1-1, DOE G 414.1-1, and DOE G 450.4-1, as appropriate
Due Date:	October 1, 1999

Commitment 5.1.3:	Verify that the Department's process to address and resolve safety issues identified by the Office of Oversight has been effectively implemented.
Lead Responsibility:	Responsible Manager for Plan implementation
Deliverables:	1) Briefing to the Board on the Department's verification approach Due Date: December 1, 1999 2) Approved Recommendation 98-1 Implementation Plan verification report, with a copy provided to the Board Due Date: June 1, 2000

5.2 Issue 2: Elevation of Safety Issues for Resolution

A. Issue Description:

The process for elevation of safety, technical, managerial, budget, prioritization, timeliness, inadequate response, or other issues arising from line management's development, implementation, and verification of closure of CAPs is not well defined.

Board Subrecommendation 1.2:

Consideration should be given to direction and guidance for elevating cases of inadequate or untimely response to findings to the Office of the Secretary for resolution.

Board Recommendation 2:

The Department of Energy should make explicit the Secretarial Officer or designee assigned the resolution function.

B. Resolution Approach:

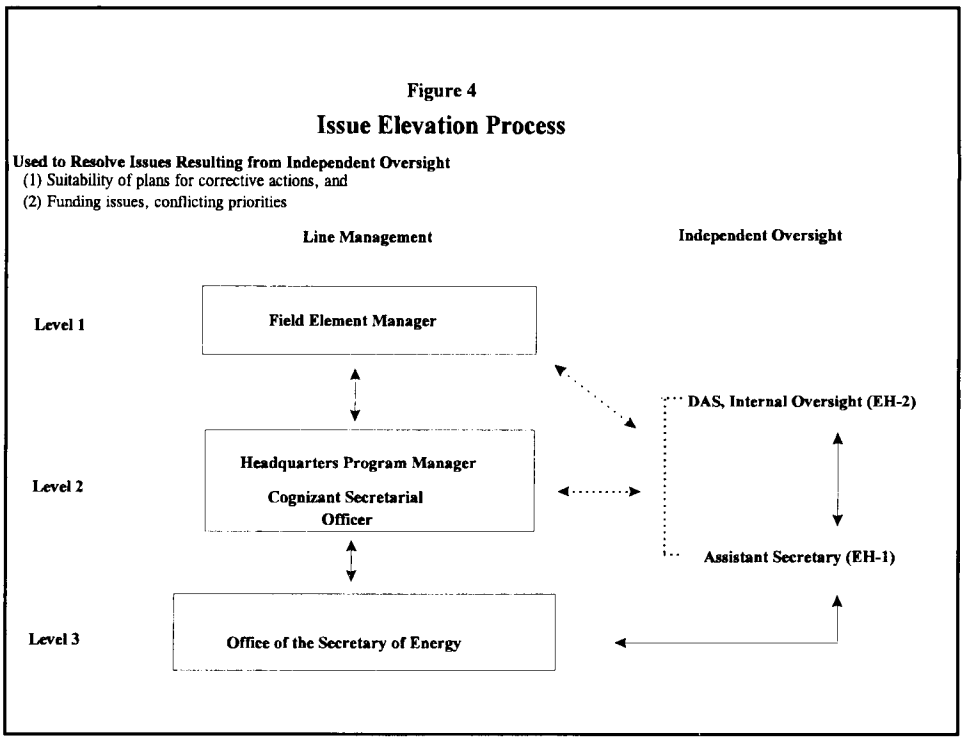
The process described in section 5.1 to disposition and resolve identified safety issues contains several points where issues may arise that require resolution. Examples include:

- Disagreement between line organizations regarding the completeness, priority, cost-effectiveness or funding of the proposed CAP (step 2)
- Office of Oversight disagreement with the adequacy of the line's CAP (step 2)
- Office of Oversight or line disagreement with the adequacy of CAP efforts at some time after implementation has begun (step 3)
- Technical or funding issues that arise during CAP implementation (step 3)
- Disputes identified during the CAP completion/closure verification process (step 4)

When an issue is initially identified during this process, attempts are normally made to resolve it at the lowest organizational level possible using a traditional process of discussion and mutual consent during meetings between appropriate representatives of the affected organizations.

Figure 4 illustrates this resolution approach. Both oral and written communications are considered effective tools for focusing issues, stating facts and rationale, and communicating information consistently to all interested parties. If informal discussions successfully resolve the issue, then the agreed-to resolution will be documented in a mutually-agreeable way.

If an identified issue between the Office of Oversight and one or more line organizations; or among two or more line organizations cannot be resolved by informal discussions, then it is elevated for resolution via a systematic process that incorporates the following attributes, as appropriate:



- The issue or dispute is appropriately documented to support its consideration by higher authority, with each party having equal opportunity for input on such documentation.

- The appropriate higher authorities are solicited to negotiate or arbitrate the issue.

- In general, issues or disputes are elevated to the minimum extent necessary to reach resolution, following the chain-of-command of the organizations involved.

- Resolution is pursued as a priority, and tracked as an open item if necessary. As a target, issue resolution by higher authority is obtained within 30 days. If additional information or action is required, or if a mutual decision is reached to elevate the issue to the next organizational level, such action is taken within the 30 day target period.

- In general, discussions between organizations are publicized in advance and coordinated to ensure full participation of all parties.

- If reached, resolution will be documented in a mutually-agreeable way.

In the exceptional case where an issue is not resolved via the above process, it is elevated to the Office of the Secretary (OS) for resolution via a systematic process that incorporates the following attributes:

- The issue or dispute is appropriately documented to support its consideration by OS, each party has equal input on such documentation, and the heads of the affected organizations concur with the documentation.

- The heads of the affected organizations work together to identify and brief the appropriate individual within the OS organization. An initial briefing may be provided at the senior policy/program advisor level, or the parties may prefer to discuss the matter directly with the Secretary or designee.

- Resolution by the Secretary or designee is documented in accordance with established OS methods. The heads of the affected organizations provide any additional documentation required to support this effort.

The resolution process described above will be incorporated into existing Department directive system documents as an important element of the overall independent oversight issue disposition and resolution process described within this Plan.

Notwithstanding the above, as the chief safety officer of the Department, the Assistant Secretary for EH may discuss safety issues with the Secretary at any time as appropriate

Commitment 5.2:	Develop direction and guidance for elevating safety, technical, managerial, budget, prioritization, timeliness, inadequate response, or other issues arising from line management's development, implementation, and verification of closure of CAPs. This direction and guidance will define a systematic process for elevating issues to the Office of the Secretary for resolution, including explicitly assigned roles and responsibilities.
Lead Responsibility:	Office of Nuclear Safety Policy and Standards (EH-31)
Deliverable:	Process requirements, functions, responsibilities, authorities, and guidance incorporated into DOE O 414.1, DOE M 411.1-1, DOE G 414.1-1, and DOE G 450.4-1, as appropriate
Due Date:	October 1, 1999

5.3 Issue 3: Tracking and Reporting

A. Issue Description:

The Department needs a more effective process for tracking and reporting the status of corrective actions in response to oversight issues.

Board Subrecommendation 1.5: Consideration should be given to direction and guidance for periodically reporting the status of corrective actions by the responsible entity.

Board Subrecommendation 1.6: Consideration should be given to direction and guidance for tracking findings and corrective actions to closure with a system accessible to DOE line management and the independent oversight organization.

B. Resolution Approach:

To establish an appropriate tracking system solution, the Department first conducted a survey of senior managers from twenty field and headquarters organizations to define the system design requirements. The survey identified the following as significant senior management expectations for an acceptable tracking system:

- Facilitate primary purposes of 1) tracking status of corrective actions, and 2) evaluating performance of responsible managers
- Sort, view and print out data in a variety of formats
- Sort, view and print out data which can be integrated across multiple sites
- Remote access and status update capability available to responsible line managers, and
- Expandability to accommodate additional sets of corrective action in addition to those responsive to Office of Oversight issues

Additionally, these senior management surveys identified other system process and performance expectations, including:

- Line must "own" data on corrective actions and control write-access for changes to this information.
- Headquarters desires status updates at least every quarter, while field offices want capability to update status more real-time, at least monthly.
- Capability to electronically up-link data from field tracking systems, and;
- No imposed requirement for double-entry and double-tracking by the field.

With the expectations defined by senior management, the Response Team identified the following existing action tracking systems as solid potential candidates to be used as a foundation for developing the required corrective action tracking system:

- EH-2 Strategic Issues Management System (EH-2 SIMS) – A Web-accessible, Lotus Notes-based system under development to manage issues identified by Office of Oversight personnel
- S-3.1 Safety Issues Management System – A Web-accessible, Microsoft Access-based system used to manage Department commitments to the Defense Nuclear Facilities Safety Board
- EH-73/CH Strategic Issues Management System – A Web-accessible, Microsoft Visual Foxpro system used to manage and track a variety of issues and actions and fulfill ES&H Management Plan and Unicall requirements
- RW Assignment Tracking System – A LAN-accessible, Lotus-Notes based system used to control workflow and action item tracking

- EH-3 Occurrence Reporting and Processing System – A Web-accessible, Oracle database system used for reporting occurrence information and tracking related corrective actions

A new system was also considered as a possibility, but the Department determined that building upon an existing system for this application would be more efficient and less expensive.

In evaluating potential systems, the Department evaluated each of the candidates using a multi-attribute decision matrix that included the following attributes:

- Data Manipulation and Sorting (Required)
- Integration Across Multiple Sites (Required)
- Allows Status Tracking (Required)
- Allows Performance Evaluation (Required)
- Remote Access and Update (Required)
- Expandability – to add additional functional capabilities
- Scalability – to add additional sets of corrective action
- Compatibility with DOE information architecture
- Adaptability – to change existing system to meet required functions
- Currently in use and of value to the line/field offices
- Software performance, reliability, and expected future support
- Initial cost and time needed to meet required functions
- Cost and effort for administration and maintenance
- Ease of use, and
- Funding source and availability of funding

Based on this evaluation, the Department selected the EH-2 SIMS as the foundation for building the desired corrective action tracking system. While four of the potential candidates were determined to be fully acceptable and able to be adapted to meet the required functionality within a short time and at low costs, the EH-2 SIMS was selected primarily to allow the Department to pursue an approach towards development of an integrated environment, safety and health network.

The development and implementation of the DOE Corrective Action Tracking System (CATS) will be managed by the Integrated Corrective Action Management (I-CAM) Team to ensure ownership and value to all affected Department organizations. The membership of this team will include representatives from field offices, headquarters line offices, the Office of Field Management (FM), EH, the Office of the Chief Information Officer, and the Office of the Secretary. The group will be jointly chaired by FM and EH. The roles and responsibilities of this group will include:

- Represent line users
- Establish detailed system design requirements
- Establish procedures and protocols for use

- Establish schedule milestones
- Accept tracking system for use
- Evaluate feedback from line organizations on effectiveness of procedures and protocols during implementation of the CATS
- Facilitate solutions regarding disputes on system administration and legacy issues
- Review and approve system/procedure changes
- Define roles and responsibilities in implementation plan
- Coordinate planning for integration with other tracking systems
- Coordinate the evaluation and loading of legacy safety issues as discussed below

The I-CAM will be responsible for obtaining consensus between the line and EH on: 1) the required modifications to the existing EH-2 SIMS necessary to support its conversion into the CATS, and 2) the required format, configuration, and linkage requirements necessary to support the connection of existing field site data bases to the CATS. After consensus is reached, based on the identified detailed system design requirements, EH will be responsible for funding modifications to the EH-2 SIMS and for the development of a systems users guide and training manual. Each field site will be responsible for any costs associated with configuring and linking its existing systems to the CATS.

Legacy issues. Attachment A provides a listing of major independent oversight reports developed since the Office of Oversight was established. The following steps will be completed to address the scope of legacy safety issues:

- The Office of Oversight will review the past reports and identify the legacy safety issues that are relevant.
- The Office of Oversight will forward a list of identified relevant legacy safety issues to the line.
- The line will review this list and may provide comments on the identified safety issues. The Office of Oversight and the line will work together to resolve any disagreements.
- The Office of Oversight will enter identified safety issues information into the CATS database.
- The line will identify corrective actions for each identified relevant legacy safety issue.
- The line will enter information about the corrective actions into the CATS database.
- The Office of Oversight will review the line corrective actions and may provide the line with comments on the corrective actions. The line and the Office of Oversight will work together to resolve any disagreements.

Once identified and agreed-upon, all issues and corrective actions with continued safety significance that are loaded into the CATS database will be resolved and tracked to completion in accordance with the process established by this Plan. Issues or disagreements arising from the completion of the steps described above may be resolved by employing the issue elevation process described in section 5.2

Based on the above evaluations and decisions, each of following actions will be completed to resolve the tracking system issue:

Commitment 5.3.1:	Develop and approve a charter for the Integrated Corrective Action Management (I-CAM) Team.
Lead Responsibility:	Lead, I-CAM Team
Deliverable:	Charter
Due Date:	April 1, 1999
Commitment 5.3.2:	Fully develop the "DOE Corrective Action Tracking System", consistent with the direction of the I-CAM Team and issue system protocols for users.
Lead Responsibility:	Lead, I-CAM Team
Deliverable:	Operable system, accepted for use by the I-CAM, with copies of appropriate system documentation and operational demonstration provided to the Board.
Due Date:	June 1, 1999
Commitment 5.3.3:	Populate the "DOE Corrective Action Tracking System" with information on relevant safety issues and corrective actions associated with the legacy assessment reports issued by the Office of Oversight since August 1995.
Lead Responsibility:	Responsible Department managers
Deliverable:	Populated database system, with a printout of the database showing the relevant safety issues and associated corrective actions provided to the Board.
Due Date:	September 1, 1999
Commitment 5.3.4:	Provide a report summarizing tracking system ownership, funding, maintenance and effectiveness of the CATS, with any recommended changes, if necessary.
Lead Responsibility:	Lead, I-CAM Team
Deliverable:	Summary Report
Due Date:	March 1, 2000

The completion of these four commitments will signify the completion of the I-CAM Team's charter.

6. Organization and Management

Figure 2 illustrates the Department's organizational structure for managing independent oversight issues and associated CAPs. The Office of Oversight is responsible for conducting internal independent oversight, and the line management is responsible for developing, approving, implementing, completing and verifying closure of CAPs in response to these issues. The Office of the Secretary will ultimately resolve issues arising from CAPs, if such resolution is not achievable at a lower organizational level. The Responsible Manager for execution of the Plan is the Director of the Safety Management Implementation Team (SMIT) who reports to the Chief

Operating Officer (COO) on the Department's efforts to implement ISM. In this capacity, the Responsible Manager will ensure that associated actions, deliverables, and commitments are accomplished. The various lead responsible organizations identified in the Plan are accountable to the Responsible Manager with regard to the completion of deliverables. The Office of Oversight will coordinate its actions associated with this Plan with the Responsible Manager, but will maintain its necessary independence relative to its oversight activities.

6.1 Change Control

Complex, long-range plans require sufficient flexibility to accommodate changes in commitments, actions, or completion dates that may be necessary due to additional information, improvements, or changes in baseline assumptions. The Department's policy (as stated in DOE M 140.1-1) is to (1) provide prior, written notification to the Board on the status of any implementation plan commitment that will not be completed by the planned milestone date, (2) have the Secretary approve all revisions to the scope and schedule of plan commitments, and (3) clearly identify and describe the revisions and bases for the revisions. Fundamental changes to the plan's strategy, scope, or schedule will be provided to the Board through formal reissuance of the implementation plan. Other changes to the scope or schedule of planned commitments will be formally submitted in appropriate correspondence approved by the Secretary, along with the basis for the changes and appropriate corrective actions.

6.2 Reporting

To ensure that the various Department implementing elements and the Board remain informed of the status of plan implementation, the Department's policy is to provide periodic progress reports until implementation plan commitments are completed. During the first year of Plan implementation, the Department will provide either a quarterly report, or a briefing to the Board and its staff as part of the briefings provided to the Board in support of the Department's Implementation Plan for Board Recommendation 95-2 and ISM implementation. Reports or briefings required after the first year of implementation will be provided semi-annually. Briefings will also be provided as requested by the Board, and will be requested by the Department at the discretion of the Responsible Manager.

Table 1. Summary of Implementation Plan Commitments and Deliverables/Milestones

Commitment	Deliverable/Milestone	Due Date	Responsibility
5.1.1 The Office of Oversight will review and modify as necessary its existing protocols to enhance line management understanding of identified safety issues.	Report addressing review scope and results, and description of any modifications made.	July 1, 1999	Office of Oversight (EH-2)
5.1.2 The process to address and resolve safety issues identified by the Office of Oversight described in the resolution approach will be incorporated into appropriate directives documents; functions, responsibilities and authorities for effective response will be defined.	Process requirements, functions, responsibilities, authorities, and guidance incorporated into DOE O 414.1, DOE M 411.1-1, DOE G 414.1-1, and DOE G 450.4-1, as appropriate	October 1, 1999	Office of Nuclear Safety Policy and Standards (EH-31)
5.1.3 Verify that the Department's process to address and resolve safety issues identified by the Office of Oversight has been effectively implemented.	1) Briefing to the Board on the Department's verification approach 2) Approved Recommendation 98-1 Implementation Plan verification report, with a copy provided to the Board	December 1, 1999 June 1, 2000	Responsible Manager for Plan implementation Responsible Manager for Plan implementation
5.2 Develop direction and guidance for elevating safety, technical, managerial, budget, prioritization, timeliness, inadequate response, or other issues arising from line management's development, implementation, and verification of closure of CAPs. This direction and guidance will define a systematic process for elevating issues to the Office of the Secretary for resolution, including explicitly assigned roles and responsibilities.	Process requirements, functions, responsibilities, authorities, and guidance incorporated into DOE O 414.1, DOE M 411.1-1, DOE G 414.1-1, and DOE G 450.4-1, as appropriate	October 1, 1999	Office of Nuclear Safety Policy and Standards (EH-31)
5.3.1 Develop and approve a charter for the Integrated Corrective Action Management (I-CAM) Team.	Charter	April 1, 1999	Lead, I-CAM Team
5.3.2: Fully develop the "DOE Corrective Action Tracking System" consistent with the direction of the I-CAM Team and issue system protocols for users.	Operable system, accepted for use by the I-CAM Team, with copies of appropriate system documentation and operational demonstration provided to the Board.	June 1, 1999	Lead, I-CAM Team
5.3.3: Populate the "DOE Corrective Action Tracking System" with information on relevant safety issues and corrective actions associated with the legacy assessment reports issued by the Office of Oversight since August 1995.	Populated database system, with a printout of the database showing the relevant safety issues and associated corrective actions provided to the Board.	September 1, 1999	Responsible Department managers
5.3.4: Provide a report summarizing tracking system ownership, funding, maintenance and effectiveness of the CATS, with any recommended changes, if necessary.	Summary Report	March 1, 2000	Lead, I-CAM Team

ATTACHMENT A: Office of Oversight Assessments

Type	Topic	Organization	Report Date
SR	Radiation Protection Program of Transportation Safeguards Division	Albuquerque Ops. Office	November 1997
E	Independent Technical Review of Radiation Contamination Incident	Argonne National Lab. - West	December 1998
E	Integrated Safety Management Evaluation	Brookhaven National Lab.	April 1997
SR	Status of Groundwater Tritium Plume Recovery Activities	Brookhaven National Lab.	October 1997
AI	Construction Fatality at BNL	Brookhaven National Lab.	September 1997
E	Evaluation of ES&H Programs	Fernald	May 1996
E	Evaluation of ES&H Programs	Hanford	April 1996
E	Evaluation of ES&H Programs	Idaho	October 1995
AI	Electrical Shock at TRA-609, Test Reactor Area	Idaho	September 1996
AI	Fall Fatality at Radioactive Waste Management Complex Transuranic Storage Area - Retrieval Enclosure	Idaho	April 1996
AI	Fatality and Multiple Injuries Resulting from Release of Carbon Dioxide at Building 648 on 7/28/98	Idaho	September 1998
E	Independent Oversight Evaluation of ES&H Programs	Los Alamos National Lab.	October 1996
AI	Electrical Shock at Technical Area 53, Building MPF-14	Los Alamos National Lab.	August 1996
AI	Forklift Accident on 11/22/95	Los Alamos National Lab.	January 1996
AI	Electrical Accident with Injury in Technical Area 21, Tritium Science and Fabrication Facility	Los Alamos National Lab.	April 1996
E	Integrated Safety Management Evaluation	Los Alamos National Lab.	November 1994
E	Integrated Safety Management Evaluation	Livermore National Lab.	November 1997
E	Integrated Safety Management Evaluation	Miamisburg	July 1998
SR	ETTP Facility Disposition	Oak Ridge, ETTP	September 1997

Type	Topic	Organization	Report Date
AI	Welding and Cutting Fatality at the K-33 Building	Oak Ridge, ETTP	March 1997
SR	Oak Ridge Molten Salt Reactor Experiment	Oak Ridge National Lab.	October 1995
E	Evaluation of ES&H Programs	Pantex	October 1996
E	Evaluation of ES&H Programs	Rocky Flats	August 1995
E	Integrated Safety Management Evaluation	Sandia National Laboratories	August 1997
E	Evaluation of ES&H Programs	Savannah River	January 1996
AI	Security Rappel Tower Fatality	Savannah River	August 1995
E	Evaluation of ES&H Programs	Strategic Petro. Reserves	June 1996
E	Independent Technical Review of the West Valley Demonstration Project Event	West Valley Demo. Project	April 1997
SR	Compliance-Based Evaluation of Industrial Hygiene Program	Yucca Mountain	January 1997
SS	Radiological Protection Programs	DOE Complex	May 1996, April 1995
SS	Baseline Assessment of the Effectiveness of Safety Management Programs	DOE Complex	April 1996
SS	Potential Safety Concerns in Safeguards and Security	DOE Complex	March 1996
SS	Effectiveness of ES&H Management Systems	DOE Complex	December 1996
SS	Increased Fissile Inventory Assurance	DOE Complex	January 1995
SS	Occurrence Reporting Programs	DOE Complex	November 1995
SS	Aviation Safety Programs	DOE Complex	October 1997, October 1996
SS	Unclassified Computer Systems	DOE Complex	December 1998
SS	Year 2000 Compliance	DOE Complex	October 1998
SS	Emergency Management Programs	DOE Complex	August 1998, July 1995

Type	Topic	Organization	Report Date
SS	Hoisting and Rigging Incidents	DOE Complex	October 1996
SS	Quality Assurance Program for Suspect/Counterfeit Parts	DOE Complex	May 1996, November 1995

Key to EH-2 Assessment Types
AI - Type A Accident Investigation
E - Inspection Report
SR - Special Review
SS - Special Study

Note: Many of these reports are available at: http://www.tis.eh.doe/oversight/bookcase2.html

ATTACHMENT B: List of Acronyms

CAP - Corrective Action Plan

CATS - DOE Corrective Action Tracking System

COO - Chief Operating Officer

CSO - Cognizant Secretarial Officer

EAPRO - Employer Assistance Program Referral Option

EH-2 SIMS - EH-2 Strategic Issues Management System

I-CAM - Integrated Corrective Action Management

ISM - Integrated Safety Management

SME - Safety Management Evaluation

SMIT - Safety Management Implementation Team

ATTACHMENT C: Glossary

Cognizant Line Manager - The Department of Energy field or headquarters element manager with direct safety responsibilities for defense nuclear facilities, who is also directly responsible for the development, approval (when delegated such authority by the Cognizant Secretarial Officer), and implementation of CAPs and associated corrective action completion, tracking and reporting. The cognizant line manager is also responsible for initiating action to elevate issues associated with CAP development, implementation, and completion to higher authority for resolution when necessary.

Cognizant Secretarial Officer - That first-tier Headquarters office having responsibility and authority for the particular activity under consideration.

Field Element - A non-Headquarters DOE organization that is geographically distinct. Field elements can be area offices; or offices located at environmental restoration, construction, or termination sites.

Identified Safety Issues - Environment, safety and health issues identified by the Office of Oversight.

Program Office - A Headquarters organization responsible for executing program management functions, and for assisting and supporting field elements in safety and health, administrative, management, and technical areas. [DOE Glossary] As used in this document, a program office is a DOE first-tier organization having responsibility for one or more of the Department's congressionally established missions. These offices report to the Assistant Secretaries for Defense Programs; Energy Efficiency and Renewable Energy; Environmental Management; and Fossil Energy, and the Offices of Civilian Radioactive Waste Management; Science; Fissile Materials Disposition; Nonproliferation and National Security; and Nuclear Energy, Science and Technology. Some secretarial offices commonly refer to their component organizations having responsibilities for specific program elements as being "program offices".

Support Office - A DOE organization that provides administrative, legal, technical, independent oversight, policy, and standards support to program offices for safety management functions. Examples of Headquarters support offices include those that report to the Assistant Secretary for Environment, Safety and Health; the Office of Management and Administration; the Office of General Counsel; and the Office of Field Management

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

625 Indiana Avenue, NW, Suite 700, Washington, D.C. 20004-2901
(202) 208-6400

September 28, 1998

The Honorable Bill Richardson
Secretary of Energy
1000 Independence Avenue, SW
Washington, DC 20585-1000

Dear Secretary Richardson:

On September 28, 1998, the Defense Nuclear Facilities Safety Board (Board), in accordance with 42 U.S.C. § 2286a(a)(5), unanimously approved Recommendation 98-1, which is enclosed for your consideration. Recommendation 98-1 deals with Integrated Safety Management and the Department of Energy (DOE) facilities.

42 U.S.C. § 2286d(a) requires the Board, after receipt by you, to promptly make this recommendation available to the public in DOE's regional public reading rooms. The Board believes the recommendation contains no information which is classified or otherwise restricted. To the extent this recommendation does not include information restricted by DOE under the Atomic Energy Act of 1954, 42 U.S.C. §§ 2161-68, as amended, please arrange to have this recommendation promptly placed on file in your regional public reading rooms.

The Board will publish this recommendation in the Federal Register.

Sincerely,

John T. Conway
Chairman

c: Mr. Mark B. Whitaker, Jr.

ATTACHMENT D

DEFENSE NUCLEAR FACILITIES SAFETY BOARD
RECOMMENDATION 98-1 TO THE SECRETARY OF ENERGY
Pursuant to 42 U.S.C. § 2286a(a)(5)
Atomic Energy Act of 1954, As Amended.

Dated: September 28, 1998

On October 11, 1995, the Defense Nuclear Facilities Safety Board (Board) issued to the Secretary of Energy its Recommendation 95-2, entitled *Safety Management*. The Recommendation proposed adoption by the Department of Energy (DOE) of a concept termed "Integrated Safety Management" (ISM) as a means of improving assurance of safety at DOE's defense nuclear facilities. The Secretary of Energy provided an implementation plan for the Recommendation on April 18, 1996, which the Board accepted in turn. In accordance with the implementation plan, DOE issued its Policy Statement 450.4 to be the basis for initiation and conduct of ISM at its facilities.

DOE and its contractors are making good progress in implementing the concept of ISM at defense nuclear facilities. One of the central functions of ISM called out both in the Recommendation and the implementation plan is "feedback and improvement." That function is exercised both in planning work and establishing safety controls at the outset, and in subsequent assessment of the diligence in application and the success in achievement of safety.

DOE has established through its directives system its expectation of actions by both the federal work force and contractor management in assessing the effectiveness of its safety management programs as they are practiced. Such safety assessments include both observance of work and determination of long term trends. They are accomplished principally through two major kinds of assessments for feedback and improvement.

- Self-assessment by the contractor of site/facility/activity programs responsive to DOE Policy 450.5, and parallel oversight by DOE line managers and facility representatives responsible for the missions and contractor performance. This is assessment by line management.

- Corporate level assessments by DOE safety specialists (ES&H), independent of the line, responsible for capturing and sharing lessons learned, preparing trend analyses, performing special investigations and otherwise performing corporate-level reviews in support of the Secretarial Offices. This is independent assessment.

These assessments and the corrective actions taken in response to them are important elements of the internal safety management program of DOE.

In the course of its oversight of DOE's safety management program, the Board has noted considerable variability in implementation and effectiveness of the feedback and improvement function as performed by the numerous federal and contractor entities. There appears to be much

collection of data (about 30 DOE directives drive the process) but less evidence of follow-up. To facilitate a closer examination of the matter, the Board in a March 20, 1998, letter stated its observations, and requested a report on how the function was being performed at defense nuclear facilities. DOE, by letter dated June 3, 1998, provided such a report. The report and the matter in general were the subject of discussions with representatives of DOE and its contractors at a public meeting held by the Board in Washington, D.C., on June 24, 1998.

The outcome of these exchanges to date has been a mutual understanding of a number of improvements that are merited. An action plan presented to the Board in DOE's letter of June 3, 1998, proposes to focus on four areas:

- Accelerating implementation of DOE Policy 450.5,
- Improving DOE's tracking and follow-on processes,
- Improving DOE's Lessons Learned processes, and
- Improving implementation of the Functions, Responsibilities, Accountability Manual (FRAM) relative to feedback and improvement.

The Board commends DOE for these initiatives. As worthy as they are, however, they are not, in the Board's view, sufficient to cover all aspects of DOE's feedback and improvement of its safety management programs. The Board has noted that the initiatives for improvement, particularly DOE's actions on findings, are limited to results of oversight by line operations. They do not address deficiencies in feedback and improvement based on results of independent oversight by the Office of the Assistant Secretary for Environment, Health and Safety (EH)—more specifically that of the Deputy Assistant Secretary for Oversight (EH-2). The purpose of this recommendation is to address that matter.

For many years, it has been commonplace for DOE's Headquarters to conduct independent assessments of safety management by the field offices and their contractors, in relation to performance of DOE's hazardous work. This parallels a normal practice of headquarters of commercial hazardous industries which have multiple product lines and facilities and which therefore delegate primary responsibility for doing work safely to officials of a facility or a product line. But assessment of safety is not sufficient. To be effective, the constructive criticisms must be brought to the attention of corporate management. There they must be evaluated, and course corrections must be directed, if the benefits of assessment are to be achieved. This is especially true where resource issues are involved and allocation or re-allocation of funds is required.

Recognizing that at times there is a need for Secretarial involvement at levels above the program offices and the corporate role of the independent assessors, in September 1989 Secretary Watkins established the Office of Nuclear Safety (ONS), reporting directly to him as described in SEN-6E-92. That led to Secretarial review of all findings of ONS, and an opportunity for response at the Secretarial level if necessary. With the change in Administration in 1994, this Office was assigned to report to the Assistant Secretary for ES&H, and it was redesignated as

EH-2 with direction by a Deputy Assistant Secretary. In that capacity, EH-2, according to the DOE Manual of Safety Management Functions, Responsibilities, and Authorities (DOE M 411.1-1), performs corporate level assessments, independent of the safety management programs as implemented by DOE program offices and associated contractors.

Evaluations are provided to the Secretary of Energy, Congress, Cognizant Secretarial Offices, Field Managers and Contractors. However, under this organizational arrangement, most of the assessments and findings by EH-2 are treated largely as advisories. Such follow-up actions as are taken are no longer subjected to a deliberative process involving, when appropriate, the Office of the Secretary of Energy (Secretary, Deputy Secretary, Under Secretary). Rather, they become discretionary to lower levels of DOE line management (such as cognizant Secretarial Officers and Field Managers). An exception to this general discretionary pattern occurs when an accident results in death or serious injury of workers, or threatens the public. For example, Type A accident investigations require, among other things, corrective action plans (CAPs), approval of the CAPs by the cognizant secretarial officer, and completion of corrective actions subject to independent verification. These requirements, in DOE Order 225.1A, *Accident Investigations*, November 26, 1997, and supporting guidance effectively close the loop on accident investigations.

EH-2 does make a practice of requesting a CAP after submission of a report on other types of investigation, and usually receives one from the cognizant party. Proposed corrective actions in these CAPs are frequently incomplete and are sometimes only loosely related to findings in the oversight report. Some CAPs are no more than commitments to provide a CAP in the future. The Department of Energy has not identified criteria for adequate CAPs, nor has DOE authorized EH-2 to require adequate CAPs which are responsive to evaluation reports. As a result, problems identified as accident precursors are not handled with the same rigor as accidents themselves. The end effect is that corrective action under the current system is reactive rather than proactive.

Nothing prevents EH-2 from elevating safety issues via its management (Assistant Secretary for ES&H), but the process of elevation is now ad hoc, not institutionalized and protocol driven. There is a natural tension between those charged with doing work safely and those tasked by management to monitor and evaluate how well the doers perform. There is also a natural resistance to having to reallocate resources when deficiencies are found. Such factors cause outcomes to depend highly on the forcefulness of the personalities involved. It is precisely at this interface between the Secretarial Program offices and the independent reviewers of safety performance (EH-2) that DOE's safety management program merits additional attention. The need for an institutionalized protocol for content and treatment of a CAP, and for addressing and resolving differences are the central points of issue.

The Board is of the opinion that the Department of Energy should take additional action with respect to its program for improvement of feedback and safety for defense nuclear facilities by establishing clearer lines of authority and responsibility for resolution of safety findings of its internal, independent safety organization. Towards such end, the Board recommends that the Department of Energy:

1. Establish by policy statement, directives, or other protocols, the manner in which the Secretary expects Cognizant Program Secretarial Officers (Assistant Secretaries) and Field managers to address and resolve findings of its independent internal corporate safety organization (Assistant Secretary for ES&H). In so doing, consideration should be given to direction and guidance for the following:

   - Establishing authority and responsibility for conducting and responding to independent oversight, preparing and approving corrective action plans, reporting on progress toward timely and adequate closure of findings, and subsequent closure, including independent verification of closure.

   - Elevating cases of inadequate or untimely response to findings to the Office of the Secretary for resolution.

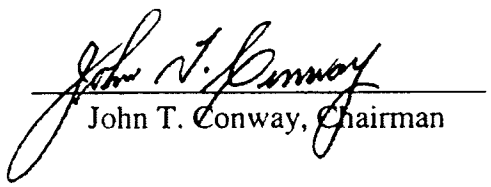
   - Describing the purpose and content of corrective action plans responsive to oversight findings (e.g., cause identification, actions to correct immediate problem, lessons learned, actions to prevent recurrence).

   - Scheduling the time frames within which the evaluation and process activities must occur.

   - Periodically reporting the status of corrective actions by the responsible entity.

   - Tracking findings and corrective actions to closure with a system accessible to DOE line management and the independent oversight organization.

2. Make explicit the Secretarial Officer or designee assigned the resolution function.



John T. Conway, Chairman