U.S. NUCLEAR REGULATORY COMMISSION

DIRECTIVE TRANSMITTAL

TN: DT-06-16

To: NRC Management Directives Custodians

Subject: Transmittal of Management Directive 6.8, "Lessons-Learned Program"

Purpose: Directive and Handbook 6.8 are being issued to implement a new agencywide program that will provide reasonable assurance that major organizational problems identified by lessons learned will not recur and that the knowledge gained from the lessons learned is retained and disseminated in a manner that will maximize its benefit and usefulness to the staff.

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OFFICE OF ADMINISTRATION

Lessons-Learned Program

Directive 6.8

Contents

Lessons-Learned Program
Directive 6.8

Policy
(6.8-01)

It is the policy of the U. S. Nuclear Regulatory Commission to continuously self-evaluate and improve agency processes, procedures, and programs. This directive and handbook provide guidance to NRC personnel to implement an agencywide program that will ensure that knowledge gained from significant lessons learned is retained and disseminated in a manner that will maximize its benefit to the agency.

Objectives
(6.8-02)

- To establish a formal and rigorous process to ensure correction of significant agency deficiencies. (021)

- To provide reasonable assurance that major organizational problems identified by lessons learned will not recur. (022)

- To institutionalize the knowledge gained through the corrective action processes and develop solutions for long-term organizational retention. (023)

- To confirm the long-term effectiveness of corrective actions. (024)

Organizational Responsibilities and Delegations of Authority

(6.8-03)

Executive Director for Operations (EDO)

(031)

- Ensures that management officials throughout the agency understand the value of lessons learned and are responsive to corrective action recommendations. (a)

- Ensures that lessons-learned recommendations are resolved and that corrective actions are assigned, tracked, and completed. (b)

- Charters agency lessons-learned task forces. (c)

- Designates the Lessons-Learned Program Manager (LLPM) and the members of the Lessons-Learned Oversight Board (LLOB). (d)

- Assigns and schedules lessons-learned activities to the LLPM, the LLOB, office directors, and regional administrators. (e)

Office Directors and Regional Administrators

(032)

- Identify potential lessons learned and make recommendations regarding the designation as a lessons-learned item. (a)

- Assign staff to conduct and participate in lessons-learned activities assigned by the EDO. (b)

- Nominate a Senior Executive Service level representative and an alternate to serve on the LLOB when requested by the EDO. (c)

Organizational Responsibilities and Delegations of Authority

(6.8-03) (continued)

Office Directors and Regional Administrators

(032) (continued)

- Conduct reviews of lessons-learned recommendations, as assigned by the EDO. (d)

- Complete action plans, root cause analyses, corrective actions, and effectiveness reviews for lessons-learned recommendations, as assigned by the EDO. (e)

- Coordinate lessons-learned reviews and corrective action activities with other potentially affected offices. (f)

- Take prompt corrective actions, as warranted, prior to completion of the lessons-learned process. (g)

Applicability

(6.8-04)

The policy and guidance in this directive and handbook apply to all NRC employees.

Handbook

(6.8-05)

Handbook 6.8 provides guidance for implementing the NRC's Lessons-Learned Program.

Definitions

(6.8-06)

Configuration management - The maintenance and documentation of internal processes and procedures designed to ensure that changes

Definitions

(6.8-06) (continued)

made to incorporate corrective actions taken for lessons learned will not be subsequently altered or removed without adequate review.

Effectiveness review - An assessment conducted to decide if completed corrective actions have addressed the identified root cause of the problem and that the actions have been institutionalized and remain effective.

Knowledge Management - A continuous, disciplined, and timely process of identifying, collecting, and using information to better accomplish the job.

Lessons-learned item - A potential item that the Lessons-Learned Oversight Board (LLOB) has determined has met the lessons-learned threshold criteria.

Lessons-learned threshold - A set of criteria established to ensure that the rigor and formality of the Lessons-Learned Program is applied only to those items that are worthy of this level of resource investment and management review. NRC has other internal processes and programs that provide mechanisms for assigning corrective actions for items identified by the staff that do not reach the threshold of this program. A potential lessons-learned item will be designated a lessons-learned item if the LLOB determines that it meets the lessons-learned threshold criteria described in Section II(B) of the handbook.

Potential lessons-learned item - A finding, weakness, or recommendation identified by an input source in Section II(A) of the handbook where the resulting corrective action(s) should be considered for oversight by the Lessons-Learned Program.

References
(6.8-07)

"Degradation of the Davis-Besse Nuclear Power Station Reactor Pressure Vessel Head Lessons Learned Report," dated September 30, 2002.

"Effectiveness Review of Lessons Learned Task Force Reports," dated August 2, 2004.

NRC Management Directives

4.4, "Management Controls."

6.1, "Resolution and Followup of Audit Recommendations."

8.3, "NRC Incident Investigation Program."

Staff Requirements Memorandum, "Briefing on Status of Davis-Besse Lessons Learned Task Force Recommendations," dated December 15, 2004.

Lessons-Learned Program

Handbook

6.8

Contents

Contents (continued)

Part I
Introduction

Program Overview (A)

The Lessons-Learned Program (LLP) described in this handbook is a set of processes, procedures, and oversight that is designed to collectively ensure that significant agency deficiencies are identified and corrected in such a way that they do not recur. This goal is accomplished by using a rigorous process to identify significant lessons learned, developing detailed corrective action plans, subjecting those plans to formal review and approval, and ensuring that the plans have been effective and have not had any unintended consequences. Each corrective action plan must include an explanation of what actions will be taken to institutionalize the knowledge gained through the identification of a lesson learned to help prevent its recurrence. Because deficiencies entered into this program are expected to require significant resources to correct, and because the agency already has many corrective action mechanisms that function at the office level and below, a high threshold has been established for entering deficiencies into the LLP. (1)

The LLP uses two existing agency systems to help fulfill its objectives: the EDO's Action Tracking System (EDATS) and the Agencywide Documents Access and Management System (ADAMS). EDATS is used to initiate, assign, and track actions. ADAMS is used to store the products produced as a result of the taskings. Together the two systems are able to provide a retrievable record of how each lessons-learned recommendation entered into the LLP is addressed. (2)

Program Personnel (B)

The EDO will select a Lessons-Learned Program Manager (LLPM) to administer and implement the LLP. The LLPM will be a member of the EDO's staff and will be responsible for the day-to-day

Program Personnel (B) (continued)

implementation of the LLP. A detailed list of the LLPM's duties and responsibilities is contained in Part V of this handbook. (1)

The EDO will also designate a Lessons-Learned Oversight Board (LLOB), composed of senior managers nominated by office directors and regional administrators, to provide oversight to the LLP and to provide an independent review and approval of proposed corrective action plans and their eventual closeout. Additional duties and responsibilities are contained in Part V of this handbook. (2)

The LLOB will operate under procedures approved by the EDO, subject to the specific requirements discussed in this handbook. (3)

Major Process Steps (C)

The LLP consists of the major steps described below. Figure 1 is a simplified graphical depiction of these steps: (1)

- Potential lessons-learned items are identified by internal or external sources. (a)

- Potential lessons learned are entered into EDATS for tasking and tracking, and the associated reference documents are entered into ADAMS. (b)

- The LLOB will make a determination as to which of these recommendations constitute a lesson learned by applying the program's threshold criteria. (c)

- Items determined to be lessons learned will be assigned to a lead office to create a corrective action plan. Items that did not meet the threshold will continue to be tasked through existing processes. (d)

- Upon completion of the corrective action plan, the lead office will present the plan to the LLOB for review and approval. (e)

Major Process Steps (C) (continued)

- Upon completing the implementation of the approved corrective action plan, the lead office will present a closeout package to the LLOB for approval. (f)

- Once closeout of the corrective action plan has been approved by the LLOB, the LLPM will ensure that the effectiveness review is scheduled by entering the task into EDATS in accordance with the approved corrective action plan. (g)

- The LLPM will ensure that all related reference documents have been properly entered into ADAMS so that a retrievable record exists of the recommended action, the corrective action plan, and the plan as implemented. Effectiveness reviews are also entered into ADAMS at the time of their completion. (h)

Additional details regarding each process step are explained in this handbook. (2)
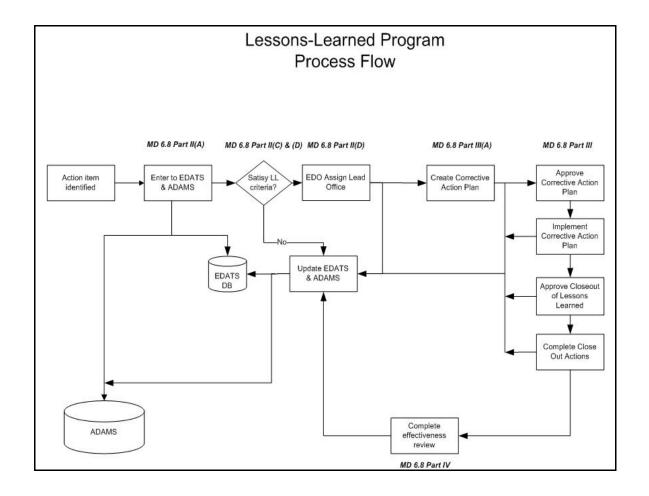
Major Process Steps (C) (continued)

Figure 1

Part II
Identification and Tracking
of Lessons Learned

Identification of Potential
Lessons-Learned Items (A)

Recommendations resulting from the following sources will be considered potential lessons-learned items: (1)

- Accident Review Groups (a)

- Incident Investigation Teams (IITs) (b)

- Lessons-Learned Task Forces chartered by the EDO (c)

- Office of the Inspector General (OIG) reports (d)

- Government Accountability Office (GAO) reports (e)

The EDO may designate recommendations from other internal and external sources as potential lessons-learned items, as appropriate. (2)

Lessons-Learned Threshold (B)

A potential lessons-learned item must meet all of the following criteria to be designated a lessons-learned item:

- The item has significant organizational, safety, security, emergency preparedness, or generic implications; (a)

- A need exists to institutionalize corrective action for this item because the failure to do so would reasonably be expected to challenge the ability of the agency to meet any of the strategic outcomes designated in the Strategic Plan,

Lessons-Learned Threshold (B)

(continued)

or

the corrective action would substantially improve the safety or security of NRC employees; (b)

- A root cause exists – or can be identified; (c)

- The apparent resolution is actionable. (d)

Lessons-Learned Oversight Board (C)

The Lessons-Learned Oversight Board (LLOB) is responsible for ensuring that the criteria listed above are appropriately applied to all potential lessons-learned items. (1)

The EDO will create and maintain procedures that govern the makeup, selection, and conduct of the LLOB. The LLOB should include at least one Senior Executive Service (SES) representative from each major program office. The EDO may also designate representatives from other offices as members of the LLOB. The EDO is provided the flexibility to modify the LLOB charter and procedures to ensure its continued effectiveness and efficiency as experience is gained with the Lessons-Learned Program. (2)

The LLOB member from the lead office will not participate in the review and approval of corrective action plans, and completed action plans, from their office. (3)

Assignment of Lessons-Learned

Items for Corrective Action (D)

The EDO will assign a lead office for each lessons-learned item on the basis of a recommendation from the LLOB.

Timeliness Goals (E)

The EDO will establish timeliness goals to –

- Ensure that each potential lessons-learned item is promptly considered to determine if it should be processed as a lessons-learned item. (a)

- Ensure that a lead office is promptly identified and tasked for each lessons-learned item. (b)

- Ensure that the lead office completes review and develops corrective action plans within an appropriate time frame. (c)

- Ensure that corrective actions are promptly implemented once approved. (d)

Part III
Corrective Action Plans

Corrective Action Plan Development (A)

The lead office assigned the responsibility for the lessons-learned item will develop a corrective action plan within the schedule established by the EDO. (1)

The corrective action plan should, at a minimum, include the following: (2)

- A summary statement describing the lessons-learned item. (a)

- The results of the root cause analysis. (The root cause analysis will be completed by an individual trained in a root cause analysis methodology and a subject matter expert in the area(s). The root cause analysis should be conducted with the rigor commensurate with the complexity of the issue.) (b)

- Proposed corrective actions to address the root cause(s). (c)

- Any immediate corrective actions, or compensatory measures, taken or in progress. (d)

- The results of any extent of condition review and corrective actions taken or planned to prevent recurrence, with milestones for completion. This discussion should also state whether the issue is recurring or repetitive. (e)

- The configuration management plan. (f)

- An estimate of the resources required to implement the plan and the expected impact on any other work if the plan is implemented as proposed. (g)

- A communication plan. (h)

- A preliminary effectiveness review plan and schedule. (i)

Corrective Action Plan Acceptance Criteria (B)

The Lessons-Learned Oversight Board (LLOB) will use acceptance criteria to ensure that the corrective action plan is complete and addresses the lessons-learned item. At a minimum, the following will be included in the criteria:

- The root cause analysis and associated conclusions are scrutable and supported by the facts. (a)

- The proposed corrective actions address the root cause(s) and appropriately consider the results of the extent of condition review. (b)

- The configuration management plan will ensure that the proposed corrective actions will be sufficiently institutionalized. These could include approaches such as bases documents, generic communications, training programs, and qualification programs. (c)

- The basis for the resource estimate is reasonable. The schedule is resource loaded using established agency processes. (d)

- The communication plan will ensure a broad sharing of the knowledge gained from the lessons learned with stakeholders and the public. (e)

- The preliminary effectiveness review plan identifies specific success criteria, the time when the review will be conducted, the need for an independent review, and a general description of the methodology that will be used. (f)

Corrective Action Plan Review and Approval (C)

The LLOB will review and approve the corrective action plan. The LLOB may require the lead office to modify the proposed corrective action plan so that it meets the corrective action plan acceptance criteria. In such cases, the LLOB will give the lead

Corrective Action Plan Review and
Approval (C) (continued)

office a schedule for submitting the modified corrective action plan. (1)

If the LLOB and the lead office are unable to agree on an appropriate action plan, the EDO will be consulted. (2)

The LLOB will determine which completed corrective action plans require a corrective action plan completion acceptance review by the LLOB. If not designated as requiring a review by the LLOB, the acceptance reviews will be completed by the Lessons-Learned Program Manager (LLPM). (3)

Corrective Action Plan Implementation (D)

The lead office will manage implementation of the approved corrective action plan according to the schedule identified in the plan. The lead office will inform the LLPM of any schedule changes and resource issues. (1)

The OEDO Assistant for Operations (AO) will review any proposed changes to the corrective action plans and approve minor adjustments to the plan. The AO will forward major changes to the LLOB for approval. (2)

Lessons-Learned Item Closeout
Package (E)

A memorandum from the lead office to the LLOB is required for the closeout of the lessons-learned item. This memorandum should include— (1)

- A summary of the lessons learned and corrective actions, using the template shown in Exhibit 1. (a)

- A listing of the agency procedures, processes, and documents changed or created and the associated Agencywide Documents

Lessons-Learned Item Closeout
Package (E) (continued)

Access and Management System (ADAMS) Accession Numbers. (b)

- Documentation that demonstrates implementation of the configuration management plan. (c)

- Documentation that demonstrates implementation of the communication plan. (d)

- Final effectiveness review plan. (e)

- Final resource expenditure data. (f)

- Recommendations or suggestions to improve the Lessons-Learned Program (LLP). (g)

Access to lessons-learned information should be unlimited for NRC internal user communities and limited for external communities by sensitive information requirements. (2)

Corrective Action Plan Completion
Acceptance Review (F)

The LLOB will determine if the corrective action closeout package for the lessons-learned item is acceptable. The LLOB must consider whether—

- The corrective actions have been completed and institutionalized. (a)

- The corrective actions have addressed the root cause of the problem. (b)

- The extent of the condition was considered and addressed, as appropriate. (c)

Corrective Action Plan Completion
Acceptance Review (F) (continued)

- The communication plan was completed. (d)

- The effectiveness review is planned and scheduled. (e)

Lessons-Learned Item Administrative
Closeout (G)

The LLPM will ensure that before the closeout of the lessons-learned item in the EDO action tracking system that— (1)

- The lead office has entered into ADAMS the documentation necessary to close the lessons-learned item. (a)

- The effectiveness review has been scheduled. The LLPM will assign an EDO Action Tracking Item to track the completion of the effectiveness review. (b)

- Resource expenditure data have been documented. (c)

The LLPM will address any recommendations for improving the LLP. (2)

Part IV
Effectiveness Reviews

Conduct of Effectiveness Reviews (A)

Following implementation of the corrective actions for the lessons-learned items, the lead office will review the effectiveness of the corrective actions to confirm that the completed actions have addressed the root cause(s) of the problem. These reviews will normally include the following: (1)

- Assessment of whether the problem has recurred. (a)

- Determination of whether the completed corrective actions are in place and will remain in place (i.e., institutionalized). (b)

- Assessment of whether the corrective actions have been effective at addressing the root cause of the original problem. If the corrective actions have not been effective, a determination of what further action is needed to ensure the problem does not recur. (c)

- Assessment of whether the corrective actions have introduced a new problem. (d)

The lead office should consider the following elements when developing an effectiveness review plan: (2)

- Independence of the reviewer. (a)

- Knowledge of the reviewer. (b)

- Method of review (e.g., audit, survey, self-assessment, metrics). (c)

- Success criteria. (d)

Conduct of Effectiveness Reviews (A)
(continued)

- Time elapsed between completion of corrective actions and the review (i.e., sufficient experience has been gained following completion of the corrective actions to evaluate the effectiveness of the completed actions). (e)

Effectiveness Review Report (B)

The lead office reviewer will document the effectiveness review in a report submitted to the Lessons-Learned Program Manager. If the reviewer determines that the corrective actions are ineffective, the report should include the actions the lead office will implement to correct the identified issues. The report should also state whether another effectiveness review should be conducted in the future. An Effectiveness Review Report Template is provided in Exhibit 2.

Part V
Program Oversight and Administration

Lessons-Learned Program
Manager (A)

The EDO will assign a Lessons-Learned Program Manager (LLPM) to administer and implement the Lessons-Learned Program (LLP). The duties of the LLPM will include the following:

- Forwarding to the Lessons-Learned Oversight Board (LLOB), in a timely manner, potential lessons-learned items received from the input sources. (a)

- Maintaining a broad awareness of NRC activities in order to make sound recommendations to the EDO for including appropriate potential lessons-learned items. (b)

- Ensuring that lessons-learned items are assigned to a lead office for action according to program requirements. (c)

- Supporting the review and approval activities of the LLOB. (d)

- Tracking and coordinating the status and documentation of lessons-learned items. (e)

- Performing or coordinating the LLP activities according to NRC policies and the requirements of this management directive. (f)

- Maintaining LLP documents and implementing procedures. (g)

- Performing preliminary reviews of proposed corrective action plans and forwarding these reviews to the LLOB for its consideration. (h)

- Performing acceptance reviews of completed corrective action plans. (i)

Lessons-Learned Program

Manager (A) (continued)

- Independently assessing the results of effectiveness reviews for the LLOB. (j)

- Preparing monthly status reports for the EDO on the status of open lessons learned, including any approved changes to the corrective action plans. (k)

- Conducting an annual review of the LLP to evaluate the effectiveness of the program, disposition of recommendations for improving the program, and recommend process changes. (l)

- Drafting Lessons-Learned Task Force charters, as assigned by the EDO. (m)

- Managing effectiveness reviews and information-gathering activities for legacy lessons-learned items conducted to support the program. (n)

- Identifying future needs and managing additional systems development that may be needed to ensure that the program remains efficient and effective. (o)

- Maintaining the bases (i.e., supporting) documents for the LLP. (p)

Lessons-Learned Oversight Board (B)

An LLOB will be assigned by the EDO to provide program oversight and approve corrective action plans and closeout. The LLOB responsibilities will include the following:

- Reviewing potential lessons-learned items. (a)

- Defining the scope of lessons-learned recommendations. (b)

Lessons-Learned Oversight Board (B)
(continued)

- Determining whether potential lessons-learned items meet the program threshold. (c)

- Reviewing and approving corrective action plans. (d)

- Reviewing changes to approved corrective action plans. (e)

- Approving the closeout of completed corrective action plans. (f)

- Providing recommendations to the EDO for improvements in the LLP. (g)

Part VI
Program Performance Monitoring

Performance Reviews (A)

Monthly Status Reports (1)

The Lessons-Learned Program Manager (LLPM) will prepare a monthly report on the status of open lessons-learned items for the EDO. The report will include any approved changes to the corrective action plans and identify any overdue corrective actions.

Annual Program Reviews (2)

The LLPM will conduct an annual review of the Lessons-Learned Program to evaluate the implementation of the program, identify program successes, and recommend process improvements. (a)

The annual program review report will be provided to the EDO and the Commission. (b)

Performance Measures (B)

The LLPM will monitor the performance of the program using performance measures. (1)

Examples of useful performance measures that should be considered in the monitoring of the program are included in Exhibit 3. (2)

The EDO will determine the appropriate program performance metrics that should be included in office-level operating plans. (3)

Part VII
Background and Bases

Background (A)

NRC has conducted many lessons-learned reviews to assess its internal programs and processes because of significant plant events or organizational failures. Consistent with this practice, the EDO directed the formation of an NRC task force in response to the issues associated with the extensive degradation of the reactor pressure vessel head at the Davis-Besse Nuclear Power Station (DBNPS). The degraded reactor pressure vessel head was identified by the licensee for DBNPS on March 5, 2002. On September 30, 2002, the Davis-Besse Lessons-Learned Task Force (DBLLTF) completed its evaluation of the NRC's regulatory processes related to the Davis-Besse event. Appendix F of the DBLLTF report noted that issues in several previous lessons-learned reports were similar to issues identified in the DBLLTF review. The task force recommended that NRC conduct an effectiveness review of the actions taken in response to past lessons-learned reviews. (1)

The Office of Nuclear Reactor Regulation (NRR) established an Effectiveness Review Lessons-Learned Task Force (ERLLTF) to determine whether recommendations from previous lessons learned had been adequately implemented. The ERLLTF was also tasked with identifying root and contributing causes for any corrective actions that had not been effectively implemented, and to make recommendations to prevent recurrence. In its report of August 2, 2004, the ERLLTF found that some corrective action issues that occurred prior to the Davis-Besse event had not been effective and identified four root causes: (1) the lack of a corrective action program, (2) the lack of effectiveness reviews, (3) the lack of a centralized tracking system, and (4) weaknesses in the line organizations' closeout practices. (2)

Some of the specific problems that led to recurrence were (1) subsequent reversal of corrective actions that had initially been

Background (A) (continued)

effective, (2) corrective actions that were partially addressed or completed, (3) corrective actions that failed to address the weakness, (4) recommendations that did not result in measurable action, and (5) corrective actions that were closed out before the work was completed. On the basis of these findings, the ERLLTF recommended that the staff develop an agencywide corrective action program that focuses on the corrective actions from major lessons-learned reports and high-priority commitments. The report also suggested that corrective actions from recommendations identified by the Office of the Inspector General, the Advisory Committee on Reactor Safeguards, and the Government Accountability Office be considered for the program. (3)

At a briefing for the Commission on December 8, 2004, on the status of the DBLLTF recommendations, the staff described a proposal to develop and implement a program for institutionalizing agency lessons learned. In Staff Requirements Memorandum M041208B dated December 15, 2004, the Commission endorsed the proposal to establish the program. (4)

On the basis of the ERLLTF findings, the EDO chartered a team on January 24, 2005, to (1) develop a process, program, or system that will provide reasonable assurance that for the lessons learned from major organizational failures, the problems noted above will not recur and (2) ensure by whatever means necessary that the knowledge gained from future lessons learned is retained and disseminated in a manner that will maximize its benefit and usefulness to the agency over time. (5)

Bases (B)

The use of lessons-learned information is a principal component of an organizational culture committed to continuous improvement. The methods to instill lessons learned as a part of an organizational culture can vary. The nature of the work and the complexity of the organization are prime determinants of cultural and infrastructure support for lessons learned. Cultural

Bases (B) (continued)

methods often include setting expectations, providing support and incentives, monitoring and feedback, and continuous improvement. Infrastructure mechanisms typically include clear definition of resources, processes, and procedures by which personnel are supported to identify, share, and use lessons learned. The infrastructure mechanisms are often called Lessons-Learned Programs (LLPs). (1)

An ideal LLP includes four basic processes. The first is a rigorous administrative process that includes identification, documentation, assigning and tracking, and validation of a lesson learned. The second is a formal corrective action process that includes evaluation of root causes, identification of actions that will be taken because of the lessons learned, allocating resources to complete the actions, and followup to ensure that appropriate actions were taken. The third is a configuration management process that provides assurance that the changes made to incorporate corrective actions taken for lessons learned will not be subsequently altered or removed without adequate review. The fourth is a Knowledge Management process that disseminates the lessons learned to appropriate personnel and ensures that a library of historical lessons-learned information is maintained. In addition to these four basic elements, LLPs should include a process for evaluating and measuring the effectiveness of the LLP such that the costs and benefits of lessons learned can be assessed on periodic basis. (2)

For the Knowledge Management element to be effective, all individuals in NRC should have ready access to lessons-learned information. Access mechanisms should include a variety of communication media. The lessons-learned access media should be responsive and customized to match user needs (types of information, level of detail, sorting tools, and presentation and display options). Both push and pull information technology should be used. Simple search mechanisms should be available. Access to lessons-learned information should be unlimited for NRC internal user communities and limited for external communities by sensitive information requirements. (3)

Bases (B) (continued)

It is expected that the development, communication, and use of lessons-learned information should be part of everyone's job. The EDO will establish and maintain the lessons-learned infrastructure that supports the LLP. It is expected that the program offices will work with the EDO to ensure corrective actions taken to address lessons learned are institutionalized, and that they will seek continuous improvement of the LLP. (4)

Attributes (C)

In development of the LLP, the staff collected insights and best practices from other LLPs and corrective action programs. The staff conducted benchmarking visits with other Government agencies, external organizations, and licensees. The staff used the insights collected in the benchmarking activities, along with the insights gained by the staff from previous lessons-learned efforts, inspection of licensee corrective action programs, and experiences with the internal corrective action process, to develop a list of desired attributes for the program. These attributes, and the recommendations provided by the staff in the ERLLTF previously discussed, were used to develop and shape the program described in this handbook. A complete listing of the desired attributes developed by the staff is included in Exhibit 4. (1)

One of the desired attributes noted during the benchmarking activities was that the program should contain performance measures and metrics. The staff evaluated the measures and metrics used by other organizations and developed a list of example metrics that could be used to monitor the program. These metrics are listed in Exhibit 3. (2)

The LLP will apply a high threshold so that only the most important issues will be entered into the program. The program will consider recommendations from Accident Review Groups, Incident Investigation Teams, EDO-chartered Lessons-Learned Task Forces, Office of the Inspector General reports, and Government Accountability Office reports as potential lessons-learned items. In addition, the EDO has discretion to enter other items into the

Attributes (C) (continued)

program. The decision on applying a high threshold was based on a desire to maximize the impact of the agency resources expended, to ensure the specific problems identified by the DBLLTF and the ERLLTF are addressed, and to keep senior management focused on the most important lessons learned. (3)

Exhibit 1
Lessons-Learned Template

Title:

Assign a short title that describes the event or condition of interest.

Summary:

Give a brief one-paragraph summary of the event or condition (for the summary page on the Web).

Date:

List the date of the event or report that initiated the agency response.

Description/Discussion:

Include a general discussion of the event, a summary of the major issues and lessons, and any discussion needed to understand the issues and help put them in context. The executive summary of a report could be used for this field.

Lessons Learned/Findings:

List each lesson learned, or finding, from the event or condition and include a general discussion of any amplifying details or needed clarification.

Root Causes/Contributors:

If any root causes or contributing causes were identified as part of the review, include those items here. If a root cause was not established (e.g., legacy items), put "Not Evaluated." Indicate if this issue is a recurring historical lesson learned.

Recommendations/Corrective Actions:

Include a tabular listing of each recommendation and the corrective actions taken in response to those recommendations. If the recommendation was not implemented, or no action was taken, describe the rationale for not taking

Exhibit 1 (continued)

	the action. Also include references that document completion of the corrective actions.
Status/Effectiveness Review:	Provide a summary of the results of the effectiveness review.
Primary References:	Provide a listing of each reference directly related to the analyses or investigation of the event, lessons learned, the recommendations, and followup correspondence on the corrective actions.
Related References:	Provide a listing of any references that may be related to the topics at hand or that provide a basis for the corrective action decisions.
Keywords:	List keywords that will assist the staff in locating lessons learned about specific subjects. Limit the list to the primary keywords.
Programs/Processes:	List any agency programs and processes, and the governing documents and internal procedures, that include corrective actions taken in response to this event or condition.

Exhibit 2

Effectiveness Review Report Template

Introduction/Background   Discuss the purpose of the effectiveness review and any background information needed to understand the need for the review.

Scope of Effectiveness Review: Discuss the specific corrective actions or recommendations that are being evaluated.

Methodology/Success Criteria: Discuss the general approach used to conduct the effectiveness review, the rationale for using the approach, and the success criteria established for the review.

Results of Effectiveness Review: Provide the results of the effectiveness review, including any relevant data or document references.

Effectiveness Review Conclusion: Provide the overall conclusions of the review.

Recommendations: Provide recommendations for closeout of the action, followup corrective actions, or further effectiveness reviews.

Exhibit 3

Examples of Performance Measures

Timeliness of corrective action completion (within original schedule) (process effectiveness/efficiency)

Number of references in documents derived from lessons learned (value-added success)

Success rate/failure rate of effectiveness reviews (effectiveness)

Recurrence of issues for which previous lessons-learned corrective actions have been completed (effectiveness)

Resource expenditures (efficiency)

Number of visits to the Lessons-Learned Web Page (outreach success)

Number of searches on the Lessons-Learned Web Page (outreach/value-added success)

Timeliness of process steps (efficiency)

• Time to designate as a lessons-learned item

• Time to submit action plan to the Lessons-Learned Oversight Board (LLOB)

• Timeliness of original action plan schedules

Quality of action plans (quality)

• Percentage of action plans requiring revision/rework

• Results of effectiveness reviews

• Accuracy of resource estimates

Exhibit 4

Desired Attributes of a Lessons-Learned Program

Management Support

A program that—

• Possesses management commitment, support, and involvement
• Contains sufficient resources to implement and maintain the program
• Contains sufficient resources to implement corrective actions
• Clearly defines its ownership
• Is accountable for correction of issues

Formal and Rigorous Program

A program that—

• Is formally defined in a management directive
• Addresses high-level, multi-office, or agency-level findings
• Ensures timely resolution of issues
• Incorporates an agency-level tracking system (centralized)
• Tracks issues to full completion
• Possesses clear thresholds and criteria for what actions will be tracked
• Uses management review boards to approve entry of new findings and proposed corrective actions
• Uses a priority and classification scheme and links planned actions to the budget
• Uses root cause evaluations
• Completely and accurately identifies the problem
• Contains corrective actions that address the root cause of the problem and prevent recurrence
• Considers the extent of condition/program implications
• Includes effectiveness reviews of corrective actions conducted, where appropriate
• Includes formal closeout review and approval of actions by a management review board
• Implements processes that ensure corrective actions are not removed without review
• Ensures the quality of information entered into the system

Exhibit 4 (continued)

Program Assessment and Review

A program that—

- Contains performance measures and metrics
- Periodically assesses program effectiveness
- Periodically reviews system information for relevancy

Integration With Other Systems and Processes

A program that—

- Minimizes duplication of existing tracking systems (and maximizes use of current systems)
- Includes a process to make changes and revisit previous corrective actions
- Is integrated with other agency Knowledge Management initiatives
- Is integrated with other existing agency processes and programs

Communication to Staff and Stakeholders

A program that—

- Clearly communicates to the staff and appropriate stakeholders the agency actions taken
- Places retrievable history and status in a centralized system available to all staff
- Ensures that a basis for process or procedural changes is maintained
- Conducts initial training of staff for program rollout and ensures continuing online training
- Uses storytelling in a lessons-learned information system