



Department of Energy

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MEMORANDUM FOR THE SECRETARY

THROUGH:

ROBERT G. CARD
UNDER SECRETARY

FROM:

JESSIE HILL ROBERSON
ASSISTANT SECRETARY FOR
ENVIRONMENTAL MANAGEMENT

SUBJECT:

INFORMATION: Annual Review of ES&H Assessments
At Environmental Management (EM) Facilities

ISSUE:

Commitment No. 20 of the Department's Implementation Plan for Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2000-2 states: "Annually, Lead Program Secretarial Offices will review the results of Environment, Safety and Health (ES&H) assessments performed during the previous year and provide the Secretary with a summary report for each of their sites." The due date established in DOE N 231.1, "Environment, Safety, and Health Reporting Notice" on January 15, 2002, is the end of April 2002. The summary report for meeting this commitment is attached.

BACKGROUND:

In Recommendation 2000-2, the DNFSB recommended that the Department of Energy (DOE) ensure safety system status, as well as supporting programs, are scrutinized as a regular part of assessments performed by line management. In accepting the DNFSB's Recommendation, DOE committed to a review of line oversight of contractor programs to determine whether safety systems, as well as programs essential to system operability, are being included in those programs.

DOE Policy 450.5, "Line Environment, Safety and Health Oversight", sets forth the expectations for ES&H oversight.

In order to provide senior leadership with information obtained from these oversight and feedback processes, DOE committed to begin a regular practice of annually reviewing ES&H assessments performed at each site and summarizing the results for the Secretary.



SENSITIVITIES: None.

POLICY IMPACT: In accordance with DOE's Implementation Plan for DNFSB Recommendation 2000-2, the Assistant Secretary for Environment, Safety and Health has institutionalized the annual review of ES&H assessments as a requirement in the Directives system through DOE N 231.1 as of January 15, 2002. Because of the limitations on the effective life of Notices, a new or revised policy or order will be needed for the long term.

NEXT STEPS: The attached summary report provides information on ES&H assessments at EM sites. We are using this feedback to (1) improve operability of safety systems at our sites, and (2) determine how best to succinctly capture their status in future annual summaries. EM management will work with our sites to accomplish these objectives and with the Office of Environment, Safety and Health to assure this and related reports are fully coordinated.

Attachments

cc:

M. Whitaker, S-3.1

E. Blackwood, EH-3

**ENVIRONMENTAL MANAGEMENT
ANNUAL ES&H
SUMMARY REPORT**

**Office of Environmental Management
Year 2001 Annual Summary Report
Environment, Safety and Health Assessments**

Background:

In Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2000-2, *Configuration Management, Vital Safety Systems*, the Board recommended that the Department of Energy (DOE) ensure that safety system status and support programs are scrutinized as a regular part of assessments performed by line management. In order to provide senior DOE management with information obtained from these oversight and feedback processes, DOE committed to review Environment, Safety and Health (ES&H) assessments performed by the operating contractor and DOE site organizations, and to summarize the results for the Secretary. Commitment Number 20 of the Implementation Plan reads as follows: *Annually, LPSO's will review the results of ES&H assessments performed during the previous year and provide the Secretary with a summary report for each of their sites.*

HQ Guidance:

In accordance with DOE's Implementation Plan for DNFSB Recommendation 2000-2, the Assistant Secretary for Environment, Safety and Health (EH-1) is responsible for institutionalizing the annual summary of ES&H assessments as a requirement in the Directives System. In the interim, limited guidance for the Year 2000 Annual Summary Report was provided in the Implementation Plan. Subsequently, with the release of DOE N 231.1, *Environment, Safety, and Health Reporting Notice*, of January 15, 2002, further guidance was provided, including assessments for non-defense nuclear facilities. The Notice also required that DOE Field Elements submit their reports to the LPSO/CSO by the end of March and that LPSO/CSO prepare a summary report to the Secretary by the end of April each year. Also, on January 29, 2002, EM-3 provided supplemental guidance on format and content for the annual report so that it would satisfy both the requirements of the Implementation Plan and the additional requirements of DOE N 231.1.

Introduction:

This ES&H assessment summary is provided to fulfill the commitment for calendar year 2001 for the Office of Environmental Management (EM). The EM site assessment summary reports address the following objectives listed in DOE N 231.1:

- Briefly describe the implementation of DOE Policy 450.5, Line ES&H Oversight, and Integrated Safety Management;
- Summarize the schedule and scope of ES&H assessments;
- Summarize the significant issues from ES&H assessments, corrective actions to

- address significant issues, and status of incomplete actions;
- Discuss any significant lessons learned and improvements; and
- Provide an appendix listing ES&H assessments consolidated by assessment type.

Consistent with Section 4.e of DOE N 231.1, this report has the overall objective of summarizing the review of the individual site office reports and informing the Secretary of:

- Actions taken to address significant issues that are crosscutting, actions taken at individual sites, and actions taken by the Headquarters Line organization.
- Significant Issues for which field element managers requested assistance.

Office of Environmental Management ES&H Assessment Summary Results:

Each EM site submitted a summary report of ES&H assessments as required.

- All EM sites have reported that their ES&H assessment programs have been modified to integrate the requirements of “Line Management ES&H Oversight” per DOE Policy P 450.5 and have incorporated ES&H assessments as a substantive element of Field Office and Site Integrated Safety Management Systems (ISMS). This integration is demonstrated as part of the site ISMS verification activity.
- The sites provided summaries of the schedules and types of assessments performed by the DOE and contractor organizations as well as descriptions of the results.
- Sites reported a number of issues related to material conditions, operational performance, and implementation effectiveness. The sites also reported aggressive corrective actions, either completed or still in process, to compensate for, or remediate, identified issues.
- The reports included Lessons Learned and Opportunities for Improvement related to the individual issues they identified. The sites used these Lessons Learned to identify and verify the elements of their ES&H assessment programs most in need of improvement. Many sites reported an ability to obtain broader assessment coverage by integrating assessments, sharing resources, and focusing the scope of assessments on specific activities needing improvement. Enhanced scheduling is also a frequently cited example of assessment improvement, while enhanced training of technical personnel was frequently cited as a requirement resulting from root-cause analyses and corrective actions. Other improvements included strengthening already successful efforts (such as the Facility Evaluation Boards) to include focus areas related to ISMS implementation.
- The sites provided a table of ES&H assessments including the assessment type and scope, the organization(s) performing the assessments, the numbers of assessments including overall totals and the numbers related to Safety Systems and related programs, and the identification of the Safety Systems/Programs involved.

A site-by-site summary of significant issues and lessons learned is attached. Full site reports are available upon request.

With regard to the two issues requiring Secretarial notification:

- The reports from EM sites did not reveal any significant crosscutting issues that required coordinated actions by multiple sites or the Headquarters line organizations. However, analysis of these reports indicates that there is some common themes among the sites which can be used to focus oversight activities both by EM headquarters and field elements:
 - Development and implementation of hazard controls
 - Work planning and controls
 - Conduct of operations, and
 - Feedback and improvement mechanisms.
- No EM site requested or required assistance from Headquarters to resolve significant ES&H assessment issues.

Assessments of Vital Safety Systems

Combined DOE and contractor reported ES&H assessments for EM sites exceeded 3400. Of these, over 800 assessments focused on safety systems and related programs that protect the public, the workers or the environment. It is noted that the sites defined "assessments" differently. A few sites limited reporting to safety systems activity and/or planned and documented, performance analysis driven, 'major' assessments. Most sites reported on all assessment activity as defined in DOE Orders and the Nuclear Safety Rules that includes inspections, testing, and surveillance activity, as well as major assessments. Guidance provided did not specify the scope of assessments required in the reports, which will be addressed for subsequent reporting. The numbers reported by the sites have been adjusted to provide for comparability. In addition, sites reported more than 8000 management walk-throughs, surveillances, and similar related investigations, inspections and activities. This is a substantial improvement from last year and can be attributed to:

- Phase I and II assessments conducted under DNFSB Recommendation 2000-2.
- Correction of gaps identified during preparation of last year's ES&H Summary.
- Lessons learned from Phase I and II assessments.
- Efforts to institutionalize assessment criteria for vital safety systems.

Conclusions and Opportunities for Improvement:

The ES&H assessment reports for CY 2001 from the Office of Environmental Management summarized the schedule and scope of assessment, significant issues, and lessons learned. While CY01 was an improvement when compared to the previous year, especially with an increased emphasis on safety systems, more will be needed going forward to change the paradigm. Simply put, the need for performing assessments must go from being a requirement to becoming an operational necessity. A good assessment

program is at the heart of a safe organization as well as an organization that meets its commitments and continues to improve. EM is working with its field elements in CY02 to ensure:

- Assessments are integrated
- That, as an organization, EM do fewer but more effective assessments
- That assessments are well thought out and planned
- That safety systems are adequately scrutinized
- That there is a configuration control process used when the assessment schedule needs to be changed
- That EM and sites go back to ensure corrective actions taken have had the positive impact on performance that they were intended to have
- That the organization learns effectively from this process

Enclosure: Site-by-Site Summary Table

**ES&H Annual Assessment Reports
Assessment Program Issues & Improvements Summary**

Carlsbad (WIPP)

Assessment Performed:

- The DOE field office, headquarters, and contractor combined to perform 32 assessments of varying scope
- 27 of 32 assessments addressed safety systems and related programs
- Phase I assessments included all identified VSS
- Phase II assessment of Waste Handling Bldg. HVAC
- The report included thousands of inspections and equipment checks conducted

Significant Issues and Corrective Actions:

- No significant issues related to VSS were identified
- Need to update underground CAMS identified
- Waste handling equipment needs reliability improvements (completed)
- Need for upgrading central monitoring system (technology & ergonomics)
- Issues identified in FY 2000 report were addressed

ES&H Assessment Program Improvements:

- Combined ISM, VPP, and WPP assessments eliminating considerable duplication.
- Joint Workplace Walkarounds initiated in 2001 have improved communications in the workplace - over 2000 were conducted.

IDAHO (INEEL)

Assessments Performed:

- The contractor reported 301 assessments, of which 220 were VSS related
- These totals included 128 Fire Protection Program assessments
- DOE reported 132 assessments; approximately half of these were part of the ID self-assessment program
- Hundreds of surveillances and inspections were reported by both DOE & contractor
- 36 Phase I assessments were completed
- Completed Phase II assessments of IFSF & New Waste Calciner

Significant Issues and Corrective Actions:

- Development and implementation of hazard control processes
- Work planning and control process improvements
- Selected Conduct of Operations issues
- General feedback and improvement issues
- Issues identified in FY2000 report were addressed

ES&H Assessment Program Improvements:

- Modification of Integrated Assessment Program – focus on alignment with INEEL mission & objectives, assessment quality improvement, and improved integration/coordination to eliminate redundancy.
- Institutionalization of a Core Function 5 Center of Excellence (COE) expected to yield better lessons learned sharing.
- Improved effectiveness evaluation and measures in the Independent Assessment Program.
- Change in focus of FEB to address ISM & Vital Safety Systems.

Office of River Protection (Tank Farm, WTP)**Assessments Performed:**

- Combined (DOE, BNI, & CHG) completed 246 assessments
- 104 safety systems and/or related programs assessments were addressed in above
- 36 Phase I assessments were completed, 3 Phase II assessments scheduled in 2002
- Hundreds of additional inspections, tests, and surveillances were reported that included 455 safety systems related equipment and operations

Significant Issues and Corrective Actions:

- EH Oversight Office identified ISMS issues at CHG, P450.5 issue at ORP
- ORP identified work execution issues at Tank Farm
- PAAA/NTS Enforcement addressed quality improvement issues
- ORP identified CHG Assessment Program & Safety Basis issues
- BNI self-identified a flow-down of QA Requirements issue that was NTS reportable
- CAPs were prepared as required and issues are resolved or in-process & on-track

ES&H Assessment Program Improvements:

- Major improvements in Oversight and Assessment Programs reported for both CHG and DOE (ORP)
- Corrective Action planning and process/content improvements reported (DOE & ORP)
- ISM Re-verification process planned for August 2002 completion

Oak Ridge (ETTP, Portsmouth, Paducah))**Assessments Performed:**

- Of a combined total of 61 assessments, 29 were safety system related
- OR and contractors reported hundreds of assessments related to inspection, test & surveillance activity
- OR and contractors reported numerous assessments related to non-EM projects.

Significant Issues and Corrective actions:

- Lack of ISM implementation cited by Board and EM management
- Deficiencies in Authorization Basis documentation related to systemic issues in nuclear safety management
- Inadequate levels of operational control was self-identified

- Corrective actions are completed and/or in-process and on-track

ES&H Assessment Program Improvements:

- Improved assessment scheduling and prioritization and added an integrated tracking system to maximize tracking/trending effectiveness.
- BJC has implemented a SIX SIGMA program to facilitate Operational Control
- Formal oversight coverage and documentation has been improved

Ohio (FEMP, MEMP, WVDP)

Assessments Performed:

- Of a combined total of 481 assessments at 3 sites, 41 were VSS related
- Most assessments addressed non-VSS because FEMP has 1 identified system and WVDP is exempt from the DNFSB oversight
- OHIO also reported a substantial number of additional inspection, test, and surveillance activity

Significant Issues and Corrective Actions:

- Some Radiation Protection concerns noted (FEMP & MEMP)
- Enhancements to Training & Qualification of personnel needed
- QA compliance issues self-identified in PAAA reporting (Enforcement action taken)
- No significant issues identified by WVDP

ES&H Assessment Program Improvements:

- BWXTO focused on training for employees performing line management self-assessments and has initiated a team-based approach, including increased use of technical resources.

Richland (PHMC, ERC)

Assessments Performed:

- Contractors (combined) >700, DOE/RL - 27, majority addressed VSS
- 54 Phase I Vital Safety Systems were addressed
- RL also reported a large number observations/assessment conducted

Significant Issues and Corrective Actions:

- Incomplete chemical management implementation issues
- USQ processes concerns
- Insufficient rigor and robustness of self-assessments
- Calibration issue related to Non-Destructive Assay (NDA) processes
- Corrective actions are completed and/or on-track, including prior year actions

ES&H Assessment Program improvements:

DOE

- RCRA assessments have been restructured/rescheduled based on negotiations with Washington Dept. of Ecology.

- Finalized a process for validating contractor compliance with DOE P 450.5 (ES&H Line Management Oversight).

Contractors

- FHI: Rigor and scope of Mgt. Assessment enhanced including development of PI's, better focus on assessment targets and areas needing improvement. Also, FEB focus on incorporating ISM in their review scope.
- BHI: Modified procedures to address requested RL guidance, restructured QA organization for improved efficiency & reporting, conducted assessment training for supervisors & staff, and initiated a SIX SIGMA process improvement program for identifying added assessment improvements.

Rocky Flats (RFETS)

Assessments Performed:

- Combined total of 47, including 27 VSS assessments
- RFFO reports conducting a single assessment of 49 Phase I safety systems
- Two Phase II assessments completed early in 2002 include fire protection and confinement ventilation in Bldg. 371
- RFFO did not include QA audits nor surveillance/inspection activity in their report

Significant Issues and Corrective Actions:

- DOE management letter to contractor directing that safety performance be improved
- Feedback and Improvement corrections to ISM process needed
- Request for independent review of Work Control/Planning processes
- Improvements to Investigation Process were needed
- Prior year corrective actions completed and/or on-track

ES&H Assessment Program Improvements:

- RFFO & K-H focusing on adapting assessment program to Vital Safety Systems
- RFFO & K-H have developed an integrated assessment program and schedule

Savannah River (WSRC)

Assessments Performed:

- Reported approximately 500 contractor assessments, 200 DOE internal and external assessments
- Majority of assessments addressed VSS
- Completed Phase I assessments of 229 VSS
- Piloted one Phase II assessment

Significant Issues and Corrective Actions:

- Conduct of Maintenance needed improvement
- Radiation protection issues identified
- Issue related to prompt closure of Corrective Actions
- Prior year corrective actions all on track for closure