**Department of Energy**
Washington, DC 20585

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DNF SAFETY BOARD

March 1, 2000

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

Dear Mr. Chairman:

Enclosed is a report prepared by the Department's Integrated Corrective Action Management Team (I-CAM) regarding the effectiveness of DOE's Corrective Action Tracking System (CATS). This report is a deliverable to you under Commitment 5.3.4 of the Department's Recommendation 98-1 Implementation Plan (IP). As discussed in the IP, the report reflects an assessment of the ownership, funding, maintenance, and effectiveness of the CATS, as well as a discussion of system improvements. The Department concludes that the CATS is effectively performing the status tracking functions for which it was designed.

The Department will continue to improve upon the CATS database, and believes that it has completed actions related to Commitment 5.3.4 in the Recommendation 98-1 Implementation Plan. The Department proposes closure of this commitment. If you have any questions concerning this information, please contact me at (202) 586-1418 or Joe Hassenfeldt at (202) 586-1643.

Sincerely,

Theodore A. Wyka
Director, Safety Management
Implementation Team

Enclosure

cc: Mark B. Whitaker, Jr., S-3.1

## REPORT ON THE

## DEPARTMENT OF ENERGY'S CORRECTIVE ACTION TRACKING SYSTEM

### February 29, 2000

### BACKGROUND

The Defense Nuclear Facilities Safety Board's (Board) Recommendation 98-1, concerns the effectiveness of the Department of Energy's processes for addressing and resolving safety issues identified by its internal, independent oversight organization. The Department committed in its 98-1 Implementation Plan (IP) to providing a report to the Board summarizing the Corrective Action Tracking System's (CATS) ownership, funding, maintenance, effectiveness, and any recommended changes, if necessary. (Commitment 5.3.4)

The CATS was developed and implemented by the Integrated Corrective Action Management (I-CAM) Team to ensure ownership and value to all affected Departmental organizations. The membership of the team includes representatives from Field Offices, Headquarters Line Offices, the Office of Environment, Safety and Health (EH), the Office of Field Management, the Office of the Chief Information Officer, and the Office of the Secretary. It is the conclusion of the team that the CATS meets the Department's needs and the intent of the commitments made to the Board. The Department, and the I-CAM, also recognize the need to continuously improve upon the CATS based on feedback from registered users and the line and staff organizations.

The baseline requirements for the CATS, as established in the 98-1 IP, included:

- Facilitate primary purposes of (1) tracking status of corrective actions, and (2) evaluating performance of responsible managers (with respect to corrective action accomplishment),
- 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 actions in addition to those responsive to Office of Oversight issues.

Additionally, the Department identified other expectations for the CATS, including:

- Line must "own" data on corrective actions and control write access for changes to this information.
- Headquarters managers desire status update reports at least every quarter, while Field Offices want the capability to obtain more real-time status reports, at least monthly.
- Capability to electronically up-link and down-link data with Field tracking systems.
- No requirement for double entry and double-tracking of status by the Office of Oversight (EH-2).

The CATS system was developed and deployed by the Office of Information Management (EH-72), under the direction of the I-CAM. The system was operational for the entry of Legacy Issues by the Office of Oversight on May 1, 1999, and for entry of Corrective Action Plan (CAP) data by responsible Line Managers on July 1, 1999. The CATS presents data regarding the timeliness of corrective actions based on due dates established in CAPs. This data is a tool that measures the responsiveness of line managers with regard to their CAPs. No other measures of personnel performance were intended in system development.

## OWNERSHIP, FUNDING AND MAINTENANCE

The I-CAM considered several scenarios for "ownership" of the Corrective Action Tracking System. The Line is responsible for development and implementation of CAPs and for relevant data entry into the CATS. The practical requirements for funding and maintaining the computer system dictate that it must be assigned to a single organization. The CATS will be funded and maintained by the Office of Environment, Safety, and Health. Specifically, by the Office of Information Management. CATS improvements will be evaluated in conjunction with the I-CAM initially, and ultimately with the 'process owner'. This process owner issue will be addressed in conjunction with the Department's institutionalization of Integrated Safety Management functions, and evaluated by the 98-1 Verification Team.

## EFFECTIVENESS

To assess the effectiveness of the CATS, an Evaluation Survey was sent electronically to all registered members of the CATS Users Group, and members of the I-CAM. In addition, a CATS user feedback session was held in conjunction with the Integrated Safety Management Conference held in Knoxville, TN, November 9 and 10, 1999. Attendees at the conference and the associated feedback session also had the opportunity to complete a CATS survey. Twenty-four percent of the user community responded. The survey included ballot questions that offered five choices: SA-Strongly Agree (5 points), A-Agree (4 points), N-Neutral (3 points), D-Disagree (2 points), SD-Strongly Disagree (1 point), and a series of questions requesting comments.

In general, the Survey found that the CATS meets the proposed functionality requirements. Specifically, the CATS provides the functionality to:

- Facilitate tracking status of corrective actions – Agree (4.08)
- Facilitate evaluating performance of responsible managers – Agree (3.67)  Note: The CATS provides a means to determine whether responsible managers are completing their assigned actions on schedule. No other performance evaluation of personnel was intended.
- Sort, view, and print data in a variety of formats – Agree (4.29)
- Sort, view, and print out data which can be integrated across multiple sites – Agree (3.77)
- Allow remote access and status update capability available to responsible Line managers – Strongly Agree (4.64)
- Expandability to accommodate additional sets of corrective actions in addition to those responsive to Office of Oversight issues.

The CATS was designed to be expandable to accommodate issues other than those raised during appraisals or evaluations by the Office of Oversight (EH-2). Therefore, the survey presented a list of 11 additional sources of safety issues and asked the respondents to rate the importance of entering those items in CATS. Survey results indicate that there is agreement that Type B Accident Investigations should be entered into CATS (4.14), and marginal agreement that Office of Independent Oversight and Performance Assurance (3.71) and Occupational Safety and

3

Health Association (OSHA) (3.50) data should be included. None of the other 8 sources were advocated for entry into CATS. The I-CAM is developing a process to smoothly add appropriate data sets to the corrective action process. Once this process is developed, recommendations can be made to the Deputy Secretary (the Chief Operating Officer) via the Department's Field Management Council on which data sets might be added.

While the Survey also reflected that CATS generally met the additional expectations stated in the IP, some concerns were raised. Specifically:

- **Line must "own" data on corrective actions and control write-access for changes to this information.** While respondents agreed (4.64) that CATS enables their respective organizations to enter data, there was only marginal agreement (3.77) that CATS fully enables their organizations to edit data. While Line organizations may easily edit the Descriptive Status Field and the Status of Actions or CAPS, edits to other data fields, which are 'locked-in' upon entry, are by exception only and must be coordinated according to an administrative process approved by the I-CAM. The I-CAM believes this is essential to ensuring data integrity, and does not recommend any change based on the Survey results.

- **Headquarters desires status updates at least quarterly, while Field Offices want capability to update status more real-time, at least monthly.** From a Line perspective, respondents agreed (4.00) that a monthly update capability is sufficient. CATS also allows updates to the Descriptive Status field and other editable fields at any time which, in the opinion of the I-CAM, meets the Field's needs.

- **Capability to electronically up-link and down-link data with tracking systems.** Respondents agree (4.40) that the electronic up-link capability is important, and it has been tested successfully with the Chicago Operations Office (CH) and will be implemented with other Field sites. However, to implement the corresponding down-link capability will require that each Site (which chooses to utilize it) work individually with the CATS technical staff to map the data fields to be electronically migrated between systems. This is necessary because

each Site has a different data structure that must be mapped to the corresponding CATS data fields for successful data exchange.

- **No imposed requirement for double entry and double tracking by the Field.** This is a "process" concern rather than a CATS capability, however, neither the I-CAM nor the CATS have imposed specific double-entry/tracking requirements. When the down-link function is implemented (it has been successfully utilized with CH), the up-link and down-link capabilities will ensure that no unintended redundancies exist.

The Survey's respondents only marginally agreed that CATS fully meets the needs of their organizations (3.71), and that it could facilitate performance evaluation (3.67), and their opinions of CATS ranged from those who see it as "an excellent start," "a valuable asset" that provides "an excellent Return on Investment" to those who believe it needs to be made "more intuitive" and "user friendly" before it will "find widespread acceptance within the Department of Energy." This mixed response has led the I-CAM to conclude that several modifications and upgrades to CATS should be pursued to make it more acceptable. Specific recommendations from the Survey respondents include:

- Provide ability to view data in a variety of formats, within the context of other significant safety findings (4.07)
- Provide ability to view independent oversight issues in context with Field/Line-identified self-assessment issues and corrective actions (ie. locally tracked), such as management system problems, risk significant issues, significant safety items requiring >$50K to correct, and commitments to non-Line organizations (3.67)
- Provide expanded ability to print data in a variety of formats (4.47)
- Provide ability to save a set of search criteria (3.93)
- Add a Data Dictionary and List of CATS Contacts to the Web Site (Comments)
- Make CATS "more intuitive" and "user friendly" (Comments)

## IMPROVEMENTS

The first four of the respondent-recommended modifications to CATS above, all relate to users' ability to search, view, and print data. The I-CAM agrees with the need to upgrade this functionality and has been working with the CATS Users Group, which consists of 93 registered users at sixty-eight DOE Office or Site locations, and the Office of Environment, Safety and Health, to accomplish it. As a results of these efforts, the data captured in the CATS system can currently be presented in eleven predefined formats, eleven search formats, which literally provide an infinite number of result sets based on user entered search criteria, and twelve tailored report formats. Thirty-three of the thirty-four formats provide drill-down capability, and all are fully printable. In addition, an on line Data Dictionary and list of CATS Contacts has been added to the CATS Web Site as suggested. The issue of improving "user friendliness" will require more rigorous definition of the problem and a cost-benefit analysis before the I-CAM will be able to determine specifically which upgrades will provide sufficient return on investment.


In summary, the I-CAM believes that the computer system developed in response to Board Recommendation 98-1 meets the Department's requirements as defined in the 98-1 Implementation Plan.


Steve Scott
I-CAM Co-Chair

Joe Hassenfeldt
I-CAM Co-Chair