



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

June 20, 2007

SECRETARY

COMMISSION VOTING RECORD

DECISION ITEM: SECY-07-0066

TITLE: ANNUAL REPORT TO THE COMMISSION ON LICENSEE  
PERFORMANCE IN THE MATERIALS AND WASTE  
PROGRAMS - FISCAL YEAR 2006

The Commission (with Chairman Klein and Commissioners Merrifield, Jaczko, and Lyons agreeing) approved the subject paper as recorded in the Staff Requirements Memorandum (SRM) of June 20, 2007. Commissioner McGaffigan approved in part and disapproved in part.

This Record contains a summary of voting on this matter together with the individual vote sheets, views and comments of the Commission.

A handwritten signature in cursive script that reads "A.L. Bates".

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Andrew L. Bates  
Acting Secretary of the Commission

Attachments:

1. Voting Summary
2. Commissioner Vote Sheets

cc: Chairman Klein  
Commissioner McGaffigan  
Commissioner Merrifield  
Commissioner Jaczko  
Commissioner Lyons  
OGC  
EDO  
PDR

VOTING SUMMARY - SECY-07-0066

RECORDED VOTES

	APRVD	DISAPRVD	ABSTAIN	NOT PARTICIP	COMMENTS	DATE
CHRM. KLEIN	X				X	5/30/07
COMR. McGAFFIGAN	X	X			X	4/18/07
COMR. MERRIFIELD	X				X	4/23/07
COMR. JACZKO	X					5/31/07
COMR. LYONS	X				X	4/24/07

COMMENT RESOLUTION

In their vote sheets, Chairman Klein and Commissioners Merrifield, Jaczko, and Lyons approved the subject paper. Commissioner McGaffigan approved in part and disapproved in part. Subsequently, the comments of the Commission were incorporated into the guidance to staff as reflected in the SRM issued on June 20, 2007.

**NOTATION VOTE**

**RESPONSE SHEET**

**TO:** Annette Vietti-Cook, Secretary  
**FROM:** CHAIRMAN KLEIN  
**SUBJECT:** SECY-07-0066 - ANNUAL REPORT TO THE  
COMMISSION ON LICENSEE PERFORMANCE IN THE  
MATERIALS AND WASTE PROGRAMS - FISCAL  
YEAR 2006

Approved xx Disapproved \_\_\_\_\_ Abstain \_\_\_\_\_

Not Participating \_\_\_\_\_

COMMENTS: Below \_\_\_\_\_ Attached xx None \_\_\_\_\_

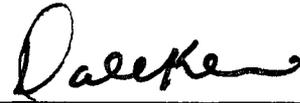
  
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5/30 /07  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No \_\_\_\_\_

**Chairman Klein's Comments on SECY-07-0066, Annual Report to the Commission on Licensee Performance in the Materials and Waste Programs—Fiscal Year 2006**

I join my colleagues in supporting Commissioner McGaffigan's common sense proposal that future Nuclear Materials Event Database (NMED) quarterly reports and annual licensee performance reports be changed to make the IAEA Code of Conduct the central focus on matters of lost, abandoned, and stolen material. Discussing these materials within the context of the Code's Categories 1 and 2 is consistent with Commission policy and is reflective of the actual risk they pose. Making the changes proposed by Commissioner McGaffigan will strengthen the NRC's materials and waste performance reporting and enhance our public communications.



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Dale E. Klein

5/30/2007

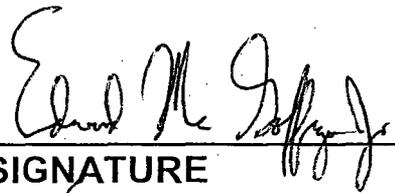
NOTATION VOTE

RESPONSE SHEET

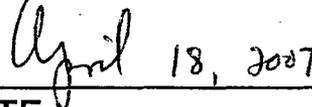
TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER MCGAFFIGAN  
SUBJECT: SECY-07-0066 - ANNUAL REPORT TO THE  
COMMISSION ON LICENSEE PERFORMANCE IN THE  
MATERIALS AND WASTE PROGRAMS - FISCAL  
YEAR 2006

Approved  Disapproved  Abstain  Not Participating

COMMENTS: Below  Attached  None



SIGNATURE



DATE

Entered on "STARS" Yes  No

## Commissioner McGaffigan's Comments on SECY-07-0066

Last year, in the Staff Requirements Memorandum for the 2006 Agency Action Review Meeting, the Commission told the staff to highlight in the quarterly Nuclear Material Events Database (NMED) report the NRC's strategic goal of "zero unrecovered losses or thefts of risk-significant radioactive sources" (i.e., Category 1 and 2 quantities of radionuclides of concern in the International Atomic Energy Agency's Code of Conduct on the Safety and Security of Radioactive Sources, or IAEA Code of Conduct). Indeed, this is done in small type on page ix of the Executive Summary in this year's report, so that staff requirement has been met. But, the staff's response, so far as it went, didn't address the underlying problem. The NMED data continue to be presented without appropriate context, which allows relatively unimportant matters to compete with or even overshadow real regulatory issues.

Beginning with the pie chart in the Executive Summary, the report gives the impression that the most significant materials regulatory issue facing the NRC is 950 events involving lost, abandoned, or stolen material over a 4 year period. This is apparently worth half the pie. On the same chart, a relatively unimportant slice is assigned to 51 radiation overexposures. Among 1,972 total events, these 51 important events get squashed. A quick look ahead to Figure 20 in the report reveals that 39% of the 950 events involved sources that contain less than 1000 times the values in Appendix C of 10 CFR Part 20. For the four most commonly used radionuclides of concern, this means less than 1 millicurie of cobalt-60, 10 millicuries of cesium-137, 1 millicurie of iridium-192, and 1 microcurie of americium-241 (one smoke detector!). These are all Category 5 sources in the IAEA Code of Conduct. None of these, least of all the americium-241 source, is close to enough to make an effective radiological dispersal device (RDD). What this chart fails to communicate is that even one radiation overexposure is much more risk significant than the loss of hundreds of tiny Category 5 radioactive sources. The 950 events could be put on more of an equal footing as the rest of the events by removing all events involving unrecovered risk significant IAEA Code of Conduct Category 1 and 2 sources. In this chart, the number 950 would collapse to 2 unrecovered short-lived iridium-192 sources, and only then we would begin to see something more risk-informed with regard to the remainder of the event data.

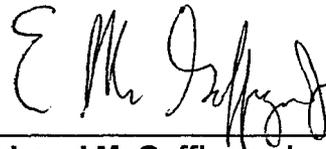
For some time now I have tried to get the staff to use the IAEA Code of Conduct as the central focus of our efforts on source security. Because we use in 10 CFR 20.2201 a threshold of 10 times the Appendix C values for reporting, the vast majority of what is put in NMED with regard to lost, abandoned, or stolen material involves radioactive sources of no utility for either a radiological exposure device or RDD. These reporting thresholds represent tiny Category 5 quantities of the radionuclides in common use. So, while this reporting requirement may encourage good practices, and may allow staff to continue to assess trends relating to worker safety, the disposal of sources, and other issues, it absolutely hinders understanding and communicating the effectiveness of current NRC security policy based on the IAEA Code of Conduct. Indeed, the way we report positively begs for misinterpretation.

Turning to page ix in the Executive Summary, the staff presents NMED reportable events that are tracked as Performance and Strategic Measures. While the staff is careful to point out at the bottom of the page that data for these measures may be "more or less current than the data presented in the body of this report," I think the confusion caused by this page outweighs any benefits of keeping it. For example, the number of radiation exposures greater than regulatory limits is shown as 23 of 30, which should be a subset of all the NMED radiation exposure events tallied in the body of the report. But the NMED tally on p. 10 is only 17 overexposures.

I understand that an explanation for the difference lies in the different dates that data are cut from the database for different purposes (e.g., performance measures review vs. NMED data report), but I think this is lost on the average reader. A review of performance and strategic measures data is important to the overall review of licensee performance, but if it doesn't track with the quarterly NMED data, then let's get it out of the NMED report, move it to another enclosure and explain the differences in both the body of the annual report to the Commission and that new separate enclosure.

Now I'll turn to the body of the report. I am particularly concerned with the way information is presented in Section 2.5. In this section, we state that of the 950 lost, abandoned and stolen material events in the past four years that I cited above, there were 240 malicious acts (Figure 19). Nearly half of these (119) were not recovered (Figure 21). Table 1 indicates 26 unrecovered lost, stolen or abandoned sources in just the last quarter of 2006. This table is the best part of this section because we can see that among the IAEA Code of Conduct radionuclides, 2 sources containing a total of 8 microcuries of americium-241 (eight smoke detectors worth of americium-241!), 8 sources containing 320 millicuries of americium-241-beryllium and 10 sources containing 271 millicuries of cesium-137 were not recovered. Other unrecovered materials involve tiny quantities, have short half-lives or, in the case of tritium, are of no use in an RDD. But what we need to add here, both in the text and in the way the charts are presented, is the message that, taken together, all fourth quarter FY 2007 unrecovered sources containing radionuclides of concern, if they had been accumulated by one person from across the nation (which is impossible), would be a Category 4 quantity under the IAEA Code and would not make an effective RDD.

I propose that future NMED quarterly reports and annual licensee performance reports be changed to make the IAEA Code of Conduct the central focus on matters of lost, abandoned, and stolen material. I believe this requires a substantive change to the report in the way the data is presented, and conforming changes to the NMED Executive Summary and Section (4) of the annual licensee performance report to the Commission. To avoid potential miscommunication, the Performance and Strategic Measures data should also be removed from the NMED quarterly report and summarized elsewhere with an explanation of any differences.



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Edward McGaffigan, Jr.

4/18/07

(Date)

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER MERRIFIELD  
SUBJECT: SECY-07-0066 - ANNUAL REPORT TO THE  
COMMISSION ON LICENSEE PERFORMANCE IN THE  
MATERIALS AND WASTE PROGRAMS - FISCAL  
YEAR 2006

Approved  Disapproved  Abstain

Not Participating

COMMENTS: Below  Attached  None

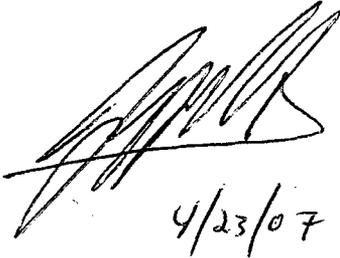
  
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4/22/07  
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DATE

Entered on "STARS" Yes  No

Comments from Commissioner Merrifield on SECY-07-0066:

I support Commissioner McGaffigan's vote on this paper. We need to clearly communicate relative risks in information we produce. In addition, the Nuclear Material Events Database (NMED) Quarterly Report is an important document. I understand that the Idaho National Laboratory produces the report under contract to the NRC, but NRC also contributes directly to the publication of the report. Therefore, the cover page should be modified to reflect that this is a report contracted by the NRC and it should also include the NRC logo from our branding initiative.



4/23/07

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER JACZKO  
SUBJECT: SECY-07-0066 - ANNUAL REPORT TO THE  
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MATERIALS AND WASTE PROGRAMS - FISCAL  
YEAR 2006

Approved  X  Disapproved       Abstain      

Not Participating      

COMMENTS: Below       Attached       None  X

  
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SIGNATURE

5/31/07  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  X  No

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER LYONS

SUBJECT: SECY-07-0066 - ANNUAL REPORT TO THE  
COMMISSION ON LICENSEE PERFORMANCE IN THE  
MATERIALS AND WASTE PROGRAMS - FISCAL  
YEAR 2006

Approved  Disapproved  Abstain

Not Participating

COMMENTS: Below  Attached  None

(Original signed on 4/24/2007.)

  
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5/1/07  
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DATE

Entered on "STARS" Yes  No

**Commissioner Lyons' Comments on SECY-07-0066**

I strongly agree with Commissioner McGaffigan that the NMED report invites misinterpretation. The reporting style and presentation should be revised to include a risk perspective as described in Commissioner McGaffigan's vote.

  
Peter B Lyons

5/1/07  
Date