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

SECRETARY

April 15, 2009

COMMISSION VOTING RECORD

DECISION ITEM: SECY-08-0184

TITLE: STRATEGY FOR THE SECURITY AND USE OF CESIUM-137 CHLORIDE SOURCES

The Commission (with Chairman Klein and Commissioners Lyons and Svinicki agreeing) approved the subject paper as recorded in the Staff Requirements Memorandum (SRM) of April 15, 2009. Commissioner Jaczko 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.

Annette L. Vietti-Cook
Secretary of the Commission

Attachments:
1. Voting Summary
2. Commissioner Vote Sheets

cc: Chairman Klein
Commissioner Jaczko
Commissioner Lyons
Commissioner Svinicki
OGC
EDO
PDR

VOTING SUMMARY - SECY-08-0184

RECORDED VOTES

	APRVD	DISAPRVD	ABSTAIN	NOT PARTICIP	COMMENTS	DATE
CHRM. KLEIN	X				X	3/13/09
COMR. JACZKO	X	X			X	1/5/09
COMR. LYONS	X				X	12/9/08
COMR. SVINICKI	X				X	3/18/09

COMMENT RESOLUTION

In their vote sheets, Chairman Klein and Commissioners Lyons and Svinicki approved the staff's recommendation and provided some additional comments. Commissioner Jaczko 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 April 15, 2009.

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: CHAIRMAN KLEIN

SUBJECT: SECY-08-0184 – STRATEGY FOR THE SECURITY AND USE OF CESIUM-137 CHLORIDE SOURCES

Approved _X_ Disapproved ___ Abstain _____

Not Participating _____

COMMENTS: Below ___ Attached _X_ None ___

SIGNATURE

3/13/2009
DATE

Entered on "STARS" Yes ✓ No ___

Chairman Klein's Comments on SECY-08-0184
Strategy for the Security and Use of Cesium-137 Chloride Sources

I commend the staff for their comprehensive assessment of the complexities associated with deciding how to address the security of cesium-137 chloride (CsCl) sources. The Commission's decision on whether to begin rulemaking to ban CsCl must weigh the potential for malevolent acts against the real adverse consequences of banning this substance before viable replacements are ready to be deployed. The staff notes that near term replacement of CsCl sources in existing blood, research, and calibration irradiators is not practicable and would be disproportionately detrimental to patient health, longstanding research, and emergency response capabilities. The staff further notes that, based on the results of inspections of licensee implementation of increased security requirements, reviews of the effectiveness of the security orders, and assessment of current threat information, the risk of successful theft and malicious use of the material has been significantly reduced.

The security of these sources will only improve over time with the continued implementation of the hardening program sponsored by the Domestic Nuclear Detection Office (DNDO) and the National Nuclear Security Administration for irradiators using CsCl sources. Indeed, the past director of DNDO noted that this hardening program "takes a potential threat off the table." Given that security of these sources is adequate and will continue to strengthen, the potential adverse consequences of moving toward a CsCl phase-out on the availability of quality medical care for the American people would simply be unacceptable. Thus, the staff's recommendation to continue to enhance the security of CsCl sources is both commonsense and in the best interests of our society.

I enthusiastically approve the staff's recommended Option 1 to improve the security of these sources and develop a Commission Policy Statement that would articulate the Commission's emphasis on the security of these sources. Additionally, I agree with Commissioner Lyons's specific comments regarding Option 1, except that the staff should focus its research and development initiatives regarding alternative chemical forms of cesium-137 on U.S. National Laboratories only. I believe that it is appropriate for the Federal government to sponsor and/or conduct this research to address this national security issue, rather than attempt to impose some sort of artificial economic incentive for private industry to implement alternative forms or replacement technologies that do not yet exist. I note that the CsCl Subgroup of the Radiation Source Protection and Security Task Force concluded that an immediate phase-out would not be feasible, but that a step-wise phase-out could be feasible if, among other things, viable alternative technologies become available. We should not expend any of our limited public resources planning for, or even contemplating, a step-wise phase-out until viable and cost effective alternatives have been developed and are ready for widespread deployment.

In closing, I want to express my sincere appreciation for the significant contributions of the NRC's partners in the Agreement States and other Federal agencies, as well as the Advisory Committee on the Medical Uses of Isotopes, toward securing radioactive materials. Our combined efforts have resulted in vast improvements in the safety and security of CsCl and other risk significant sources, and I am confident that the American public is sufficiently protected from the potential for malevolent use of domestically licensed radioactive materials.

Dale E. Klein 3/13/2009

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER JACZKO

SUBJECT: SECY-08-0184 – STRATEGY FOR THE SECURITY AND USE OF CESIUM-137 CHLORIDE SOURCES

Approved __X__ Disapproved __X__ Abstain _____

Not Participating _____

COMMENTS: Below ___ Attached _X_ None ___

SIGNATURE

1/ 5 /09
DATE

Entered on "STARS" Yes _X_ No ___

Commissioner Jaczko Comments on SECY-08-0184
Strategy for the Security and Use of Cesium-137 Chloride Sources

I do not agree with the staff's recommendation for Option 1 (enhance security and issue a Commission Policy Statement) and instead approve Option 3 (rulemaking to ban soluble/dispersible form of cesium chloride for all applications). In preparing this vote, I have carefully reviewed the staff paper, the report from the Advisory Committee on the Medical Uses of Isotopes, several independent assessments such as the report by the National Academy of Sciences and the draft report from the cesium chloride (CsCl) working group, and Commissioner Lyons' vote. I am convinced by these discussions that the current security concerns posed by CsCl can be sufficiently addressed only by conducting a rulemaking to phase out the use of CsCl.

There are two options the staff could have taken in addressing this issue: do nothing beyond the existing security initiatives or address the dispersibility and solubility problem of CsCl sources. The staff analyses all involve addressing the dispersibility and solubility problem of CsCl sources.

Unfortunately, the staff chose to address the problem by only recommending a policy statement. Such an effort would provide the impression of the agency taking action when it actually would accomplish little. A policy statement is simply not an appropriate regulatory tool in this case because it requires no action by any licensee. In briefings and other mechanisms, the Commission has already clearly articulated what its policy is – namely that alternative forms of CsCl are desirable. But under Option 1, there is no incentive *at all* for alternative forms of CsCl to be developed. The staff itself recognizes this fact in the paper, which states that their preferred option has the disadvantage that "the current form of CsCl would not be changed, [and there would be] no apparent economic incentive for private industry to develop alternative chemical forms of CsCl." Yet the staff would expect the Commission in a policy statement to articulate such a need: "The staff would develop a Commission Policy Statement that would...[a]rticulate why alternative forms would be desired."

Rather than continue to discuss the problem, the Commission should take the next step of initiating a rulemaking to solve it. The only significant disadvantage with this step could be that no alternative for CsCl would be found and sources would be phased out without a suitable replacement. This potential problem is easily remedied by including language in the rule that ensures that if no replacement is found, existing sources can continue to be used. With such a provision, all of the disadvantages of the rulemaking option would be eliminated. There is, however, no way to eliminate the significant disadvantages of the proposed staff option without a rulemaking.

At this time, the nation needs the Nuclear Regulatory Commission to demonstrate leadership in source security. This simply means conduct a rulemaking to phase out cesium chloride over a reasonable period of time. Without a rulemaking there will be no incentive for the Federal government or the private sector to develop a suitable replacement and no concept of what an acceptable replacement would involve. Significant work has been done by the staff to engage stakeholders. What is needed now is for the agency to start challenging stakeholders to address the known concerns. If no suitable replacement for CsCl can be found, a rulemaking will only accelerate the recognition of that fact, and it might also actually provide enough impetus to address the problem permanently.

Gregory B. Jaczko 1/6/09
Date

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER LYONS

SUBJECT: SECY-08-0184 – STRATEGY FOR THE SECURITY AND USE OF CESIUM-137 CHLORIDE SOURCES

Approved _X_ Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below ___ Attached _X_ None ___

Peter B. Lyons
SIGNATURE

12/ 9 /08
DATE

Entered on "STARS" Yes _X_ No ___

Commissioner Lyons' Comments on SECY-08-0184

I approve the staff's recommended option # 1 with the following comments.

- I do not support any rulemaking activities involving replacement of cesium-137 chloride sources until avenues and time scales for alternatives are understood.
- Staff should work with Federal agencies to define the criteria for a dispersible source of concern. The definition should include a clearly defined set of criteria regarding the dispersibility and other material properties as these relate to mitigating the consequences of a radiation dispersal device. These criteria should then be used to guide research efforts to develop an alternate form.
- Staff should work with both the U.S. National Laboratories and Mayak to conduct research and develop alternative chemical forms for cesium-137 chloride that do not present a radiation dispersal device hazard.
- Staff should share its research on alternative formulations with its international partners and explore new international standards for such sources.
- Staff should develop, with other federal partners, options for a strategy for end-of-life management of cesium-137 chloride sources and if necessary, advise Congress of needed legislative changes or options.
- I support staff's use of a Policy Statement to delineate the Commission's emphasis on security of cesium chloride sources, but would not support including the Commission's vision for future developments in the safety and security of cesium chloride source until a defined set of criteria for dispersibility is developed and alternative source options are defined.

Staff analysis of this very complex issue highlights the need to address significant domestic and international issues before any recommendation to replace cesium-137 chloride sources should be made. Forcing replacement of the sources now could have significant serious ramifications in medicine, research, and radiation safety. The additional measures, which NRC and Agreement States have directed licensees to implement, have improved the security of these materials. Staff should continue to work with NRC's federal partners to make a recommendation to the Commission whether the voluntary hardening program for certain blood and research irradiators should become a new security requirement.

My compliments to the staff for developing a thorough paper on a very difficult issue and to the Advisory Committee on the Medical Uses of Isotope's for its Report of 137 CsCl Irradiators which compares the uses of cesium-137 chloride in other technologies and concludes, in part, that the security measures that have been implemented have reduced the vulnerability of these sources and should be acceptable instead of removal or prohibition of these sources.

12/9/08

Peter B. Lyons Date

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER SVINICKI

SUBJECT: SECY-08-0184 – STRATEGY FOR THE SECURITY AND USE OF CESIUM-137 CHLORIDE SOURCES

Approved __XX__ Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below ___ Attached __XX__ None ___

SIGNATURE

03/18/09
DATE

Entered on "STARS" Yes ✓ No ___

Commissioner Svinicki's Comments on SECY-08-0184
Strategy for the Security and Use of Cesium-137 Chloride Sources

I approve staff's recommended Option 1, under which the staff would continue to work with Federal, state, and international partners to assess the risk environment and to continue to encourage further technological developments for alternative forms of cesium chloride. I join Chairman Klein and Commissioner Lyons in supporting staff's conclusion that near term replacement of cesium chloride sources in existing blood, research, and calibration irradiators is not practicable and would be disproportionately detrimental to the delivery of medical care, the continuity of longstanding research, and the provision of emergency response capabilities. In addition, the increased controls and additional facility and device hardening measures required by NRC and Agreement States, and implemented by licensees, have significantly improved the security of these sources. I also note the comments received from the Organization of Agreement States on this issue stating that "it is imperative to develop a viable alternative technology and a disposal option for these sources before considering the phase-out of them."

The Cesium Chloride Subgroup of the Radiation Source Protection and Security Task Force recommends a "comprehensive approach" to improving the security of these sources, which includes physical security upgrades, the development of a government-facilitated disposal pathway, short-term and long-term research and development of alternative technologies, and the development of a government-incentivized program for the replacement of existing sources with effective alternatives. Such a comprehensive approach, the subgroup concluded, is necessary to avoid the "negative consequences" of an immediate ban. I encourage the work of the NRC staff participating in the interagency efforts of the Task Force and urge them to report back to the Commission as progress is made towards this comprehensive approach.

Kristine L. Svinicki 03/18/09