

6/29/2010
75 FR 37483

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PUBLIC SUBMISSION

As of: September 10, 2010
Received: September 10, 2010
Status: Pending_Post
Tracking No. 80b4b9bb
Comments Due: December 17, 2010
Submission Type: Web

Docket: NRC-2010-0209

Request for Comment on the Draft Policy Statement on the Protection of Cesium-137 Chloride Sources and Notice of Public Meeting

Comment On: NRC-2010-0209-0001

Request for Comments on Draft Policy Statement on the Protection of Cesium-137 Chloride Sources and Notice of Public Meeting

Document: NRC-2010-0209-DRAFT-0001

Comment on FR Doc # 2010-15734

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Organization: Health Physics Society
Government Agency Type: Federal
Government Agency: NRC

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2010 SEP 10 PM 4: 05

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General Comment

See attached file(s)

Attachments

NRC-2010-0209-DRAFT-0001.1: Comment on FR Doc # 2010-15734

*SUNSI Review Complete
Template = ADM-013*

*E-REDS = ADM-03
Cell = J. JanKovich (JPJ2)
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HEALTH PHYSICS SOCIETY

"Specialists in Radiation Safety"

September 10, 2010

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Subject: Comments on NRC Docket ID NRC-2010-0209, Draft Policy Statement on the Protection of Cesium-137 Chloride Sources

[Submitted via Regulations.gov and mailed to Cindy Bladey]

As President of the Health Physics Society (HPS), I am pleased to provide comments on behalf of the HPS on the subject Nuclear Regulatory Commission (NRC) Docket regarding a draft policy statement on the protection of cesium-137 chloride (CsCl) sources (Policy Statement) as published in Federal Register Vol.75, No. 124, Tuesday, June 29, 2010, 37483.

The HPS fundamentally supports the NRC Policy Statement, including strong endorsement for the NRC's call for the imperative development "of a pathway for the long term storage and disposal of these sources whether or not there are alternatives developed" and for the need for threat assessments, which are not necessarily available to the HPS or general public, to provide input to the decision making as to when an appropriate amount of security and regulations has been accomplished.

However, we do have a few comments that we feel identify areas in which the Policy Statement and CsCl security can be strengthened and clarified.

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Comment (1): Category 3 CsCl sources should be included in the scope of sources covered by the NRC Policy Statement.

The NRC states that the Policy Statement “describes issues related to safety and security associated with [International Atomic Energy Agency] (IAEA) Category 1 and 2 CsCl sources.” The HPS position statement “Continued Federal and State Action is Needed for Better Control of Radioactive Sources [PS021-0]”, which is accessible at http://hps.org/documents/sourcecontrol_ps021-0.pdf, establishes the HPS position that all Category 3 sources and greater should be subject to enhanced security and control provisions. The position statement specifically addresses the enhanced security provisions applied through source licensing, tracking in the National Source Tracking System, and assured pathways for source disposal. However, the inclusion of Category 3 CsCl sources in the scope of the Policy Statement is consistent with the HPS position.

The basis for the HPS position that Category 3 serves as the “dividing line” for enhanced security measures is because Category 3 and above are “dangerous sources” as defined by the IAEA, that is, a source that, if not under control could “give rise to exposure sufficient to cause severe deterministic effects” to human health.

Comment (2): Based on Comment (1), the Policy Statement should expand the discussion of the types and uses of CsCl sources beyond the three types discussed to include Category 3 CsCl sources, including a discussion of their importance for continued use.

Bullet 6 of the *Statement of Policy* section identifies three specific classes of applications that benefit society, i.e. blood irradiation, bio-medical and industrial research, and calibration of instrumentation and dosimetry. Subsequent discussion in the *Background* section discusses the importance of each of these applications, including a discussion of the reason there is currently no alternative technologies for these applications, all of which are Category 1 or 2 sources. The HPS position that Category 3 sources should be included in the scope of the Policy Statement would expand these applications to include well logging and level gauge sources. The *Background* section should include the discussion of the uses of these sources including the opportunity for alternative technologies, including non-radioisotope alternatives, to replace CsCl for these applications.

Comment (3): The Policy Statement should address the NRC’s policy on research, development, and implementation of alternative technologies to Category 1, 2, and 3 CsCl sources, including non-radioisotope alternatives.

Bullet 5 of the *Statement of Policy* section addresses the development and use of alternative forms of cesium-137. However, no where in the Policy Statement is there a discussion of the use of non-radioisotope alternatives to the use of CsCl. The *Background* section does make the clarifying statement that “While it is outside the scope of NRC’s mission to conduct developmental research, the Commission encourages stakeholder research to develop alternative chemical forms for large activity Cs-137 sources.”

The HPS position statement “Continued Federal and State Action is Needed for Better Control of Radioactive Sources [PS021-0]”, which is accessible at http://hps.org/documents/sourcecontrol_ps021-0.pdf, establishes the HPS position that “The HPS

supports the study of alternative technologies, as provided for by the *Energy Policy Act of 2005*, to reduce the use of radioactive materials when hazards and disposition are an issue. . .” In addition, the interagency Radiation Source Protection and Security Task Force (Task Force) established by the *Energy Policy Act of 2005* and Chaired by the NRC has issued its second report to Congress, which is accessible at <http://www.nrc.gov/security/byproduct/task-force.html>. This report makes the recommendation “To promote the replacement of risk-significant radioactive sources, the Task Force recommends that the U.S. Government should enhance support of short-term and long-term research and development for alternative technologies to replace current technologies that use americium-241, cesium-137, cobalt-60, and iridium-192 in risk-significant quantities.”

The HPS considers it a major oversight for the NRC Policy Statement to only support the research and development of a radioisotope alternative to CsCl. Although conducting developmental research of non-radioisotope alternatives is outside the mission of the NRC, just as radioisotope alternatives are outside its mission, the NRC can make a statement of support for such an activity, particularly in light of the strong recommendation from the Task Force the NRC Chairs.

It could also be helpful for the discussion of this support for non-radioisotope alternative development to identify legislative and regulatory hurdles that impede the NRC’s ability to consider and incorporate alternative technology development and availability into its mission.

Comment (4): The Policy Statement should provide more discussion to clarify the NRC’s determination of sources that may pose a significant risk to “*society and the environment.*”

In the *Supplementary Information, II. Background* section of the Federal Register Notice, the NRC cites that the IAEA Code of Conduct (the Code) identifies “sources that may pose a significant risk to individuals, society, and the environment if improperly handled . . . [emphasis added]. Additionally, in the *NRC’s Role* section of the Policy Statement there is a statement that the Code applies to sources with significant risk to “society and the environment,” and a statement that the NRC and Agreement States have established additional requirements for enhanced security of quantities of radioactive material that could pose such a risk.

Although the Code makes the statement it is identifying sources that could pose a risk to society and the environment, there is no scientific basis for this statement in the Code. As stated in the *NRC’s Role* section, “the Code establishes five categories of radioactive sources based on their potential to cause severe deterministic health effects . . .” [emphasis added]. The Code does not establish categories based on their potential to cause significant risks to society and the environment.

Since the Code does not provide a basis, either scientific or qualitative, for determining sources that could result in a significant societal or environmental risk, the NRC should discuss its basis for determining what sources meet this criteria.

Comment (5): The Policy Statement should recognize the issuance of the Task Force’s second report to Congress.

The *NRC's Role* section of the Policy Statement discusses the Task Force stating that the NRC security requirements are consistent with the Task Force's first report in 2006. The Policy Statement should be updated to reference the now issued second report and the Policy Statement should be made to be consistent with the recommendations of that report, for example, including a discussion and support for development of non-radioisotope alternatives.

I hope these comments are useful for finalization of this important document. Please do not hesitate to contact me if you have any questions or require any further information.

Sincerely,

A handwritten signature in black ink, appearing to read "Edward F. Maher". The signature is fluid and cursive, with a long horizontal stroke at the end.

Edward F. Maher, ScD, CHP