January 13, 2010

MEMORANDUM TO: Chairman Jaczko
Commissioner Klein
Commissioner Svinicki

FROM: R. W. Borchardt ***/RA Martin J. Virgilio for/***
Executive Director for Operations

SUBJECT: CURRENT STRATEGY FOR END-OF-LIFE MANAGEMENT OF CESIUM-137 CHLORIDE SOURCES

The purpose of this memorandum is to provide the staff's response to a portion of the Commission's direction in the Staff Requirements Memorandum (SRM) SECY-08-0184 "Strategy for the Security and Use of Cesium-137 Chloride Sources," dated April 15, 2009. Specifically, the SRM directed the staff to develop, with other Federal partners, options for a strategy for end-of-life management of Cesium-137 Chloride (CsCl) sources and advise the Commission of potential legislative changes, if any, necessary to support such end-of-life management strategies.

At this time, the staff has no additional recommended changes to current end-of-life management strategy and no additional recommended legislative changes. The staff recommends that the Commission continue to pursue the initiatives currently underway to facilitate availability of commercial disposal pathways. The following highlights some of the most pertinent ongoing activities.

The staff is actively working internally and with Federal partners to improve the options for end-of-life management of Category 1 and 2 sources as defined by the International Atomic Energy Agency's Code of Conduct on the Safety and Security of Radioactive sources. The two basic disposition options are storage or disposal.

Regarding disposal, most of the Category 1 and 2 CsCl sources are Greater-Than-Class-C (GTCC) low-level waste (LLW), and there is currently no facility that can dispose of GTCC LLW. In accordance with the Low-Level Radioactive Waste Policy Amendments Act of 1985, the U.S. Department of Energy (DOE) is responsible for the disposal of commercial GTCC LLW at a facility licensed by the U.S. Nuclear Regulatory Commission (NRC). DOE is preparing an Environmental Impact Statement (EIS) to describe and evaluate several alternatives for GTCC disposal. DOE expects to issue a draft EIS in 2010 for public comment, and a final EIS will be published in 2011. The staff anticipates a significant role in the review of the EIS and subsequent preparation for review of a license application or applications that may emerge from the EIS process.

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With respect to storage, as described below, there are several activities underway that bear upon improved options for safe and secure storage of disused CsCl sources. The staff has not advised the Commission of particular legislative changes, because existing legislation appears to provide the necessary authority to accomplish these options.

Since February 2009, the staff has participated, along with other Federal and State partners and representatives of the private sector, in the Disused Source Focus Group (DSFG). The DSFG was created by the Nuclear Government Coordinating Council and Nuclear Sector Coordinating Council (NGCC/NSCC) through the U.S. Department of Homeland Security's Nuclear Critical Infrastructure Protection Advisory Council.

The DSFG was tasked to explore medium and long-range solutions to address the need for disposal or disposition of radioactive sources containing radioactive material in quantities of concern, including most CsCl sources. In November 2009, the DSFG completed a report for the NGCC/NSCC entitled "Sealed Source Disposal and National Security-Problem and Solution Set." That report contains 15 options that address disposal or disposition of Radioactive Sealed Sources, as well as an Appendix that specifically addresses CsCl sources. When approved by the NGCC/NSCC the report will be distributed to the NGCC and NSCC members. The DSFG met in December 2009, in order to further refine solution options and to develop a messaging strategy for NGCC/NSCC to communicate with appropriate stakeholders.

The staff also participated at several levels with Federal partners in the Radioactive Source Security Task Force that was created by the Energy Policy Act of 2005. This task force reported to the President and Congress in 2006 on many aspects of radioactive source security, including disposal of radioactive sources, and is preparing an updated report to the President and Congress due in August 2010. The Financial Assurance Working Group was formed in 2008 to address disposition and long-term storage issues. This group is formulating recommendations for consideration. Until additional disposal capacity is made available, the financial burden of disposal cannot be quantified. Instead, the group is focusing on strategies that will help ensure there is capability to address financial aspects of end-of-life management of LLW, including potentially modifying current financial assurance regulations.

In addition, some licensees are registering these sources with DOE's Offsite Source Recovery Program (OSRP) for recovery, which includes a prioritization methodology for rating sources for order of recovery. The current prioritization methodology places IAEA Category 1 and 2 CsCl sources within the top third of all excess sources. CsCl sources greater than 1 Ci are in the top two thirds of the recovery list. Unwanted sources awaiting recovery by OSRP are maintained by licensees under applicable control and security requirements.

In the unlikely case of an orphaned[1] CsCl source, NRC can request recovery of that source via a Memorandum of Understanding (MOU) between DOE and NRC. Agreement States can make

[1] An orphaned source is a sealed source contained in a small volume that requires removal to protect public health and safety, where an owner cannot be identified, and/or where continued security is not assured.

such requests through NRC. These requests receive expedited action. Although the MOU was due for renewal in 2004, DOE continues to accept requests made under the MOU, and DOE and the NRC staff are working on a renewal of the MOU.

~~The staff requests withholding this paper because it contains sensitive information related to intergovernmental and interagency activities that is not publicly available.~~

The staff will continue to keep the Commission informed of ongoing activities on reviewing strategy options and will advise the Commission of potential legislative changes necessary to support such strategies.

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