

July 15, 2016

COMJMB-16-0001
PLEASE RESPOND BY:
July 29, 2016

MEMORANDUM TO: Chairman Burns
Commissioner Svinicki

FROM: Commissioner Baran */RA/*

SUBJECT: PROPOSED STAFF RE-EVALUATION OF CATEGORY 3
SOURCE ACCOUNTABILITY

Background

On June 10, 2009, the NRC staff recommended publication of a draft final rule to include International Atomic Energy Agency (IAEA) Category 3 radioactive sources in the National Source Tracking System (NSTS).¹ The staff made four principle arguments for expanding the NSTS to include Category 3 sources: (1) the potential exists to aggregate Category 3 sources to a Category 2 level²; (2) the additional burden to track Category 3 sources is justified given the benefit in improved source accountability; (3) Category 3 sources are defined as dangerous by IAEA; and (4) the NSTS design can accommodate additional sources. After a 2-2 vote, the Commission was unable to reach a majority position on the draft final rule, which was not published.

I think it is time to revisit the question of whether and how to track Category 3 sources. The case for doing so is even stronger today than it was seven years ago.

In 2009, the NSTS was a recent innovation, and the staff was still struggling to address the technical difficulties posed by covering the Category 1 and 2 sources. In the June 10, 2009, policy paper, the NRC staff described the situation:

Many of the States insist that the existing NSTS is not effective, and 24 comment letters stated that the NSTS should not be expanded until the NRC resolves existing NSTS problems. The States described existing NSTS software problems, such as automatic termination of session, inability to print inventories, delays in entering transactions submitted to the NRC contractor, an inoperable radionuclide delay function, among others. Many licensees have opted to send their transaction reports to the NRC by fax, and the NRC currently has a data entry backlog.³

At that time, the NRC staff estimated that about 75% of Category 3 tracking submittals to the system would be sent by fax.⁴ This would have required a laborious and resource-intensive data entry effort to populate the system with the Category 3 information.

¹ SECY-09-0086 (June 10, 2009).

² The staff explained: "at the high end of Category 3, it would only take a few sources to aggregate to Category 2." *Id.* at 3.

³ SECY-09-0086 at 7.

⁴ Draft final rule, "Expansion of the National Source Tracking System" at 21.

Today, the NSTS is an established system that is functioning well. Early problems with authentication and system access by licensees and Agreement States have been resolved. The system is also far more efficient than it once was, with 99% of transactions processed electronically, either online or through computer-readable files. As the staff explained in 2009, “the NSTS was designed to accommodate Category 3 sources and licensee information, and this feature can be implemented at reasonable cost.”⁵ With much higher levels of online data entry today, the costs of including Category 3 sources should be even lower for NRC, Agreement States, and potentially licensees.

The just-released Government Accountability Office (GAO) report examining the effectiveness of NRC’s radioactive source tracking regime provides another important reason to re-evaluate how the agency treats Category 3 sources. Although the report acknowledges that NRC and Agreement States have taken several steps “to help ensure that licenses are granted only to legitimate organizations and that licensees can only obtain such materials in quantities allowed by their licenses,” GAO’s covert testing identified a regulatory gap.⁶ The failure of one Agreement State to conduct a proper pre-licensing site visit can be addressed through improved training and guidance. But the ability of GAO investigators to alter the paper license issued by the Agreement State in order to improperly obtain the Category 3 source from more than one vendor reveals a weakness in the underlying regulatory requirements. GAO’s fictitious company was able to get two vendors to agree to provide a Category 3 source even though the license only entitled the fake company to one Category 3 source. GAO was successful because “NRC does not specifically require that the validity of Category 3 licenses be verified by the seller with NRC or the Agreement States—creating risks that licenses could be counterfeited or that licensees could obtain radioactive materials in quantities greater than what is allowed by their licenses.”⁷ As a result, GAO states that “NRC and Agreement States do not have assurance that their systems would prevent bad actors from altering licenses or fraudulently reporting the details of their licenses to transferors, accumulating dangerous materials by aggregation to Category 2 or larger quantities on the basis of those fraudulent licenses, and thereby endangering public health and safety.”⁸

Based on its findings, GAO makes two main recommendations: (1) NRC should include Category 3 sources in the NSTS and add Agreement State Category 3 licenses to the Web-based licensing system “as quickly as reasonably possible” and (2) NRC should require transferors of Category 3 sources to confirm the validity of a purchaser’s license with NRC or the appropriate Agreement State before making the transfer.⁹

Proposed Staff Direction

In light of GAO’s findings and the years of operating experience with the NSTS, I propose that the NRC staff take a fresh look at the question of whether and how to track Category 3 sources. This re-evaluation can build on the efforts of the working groups established in response to the GAO investigation. I propose that, within six months of the Staff Requirements Memorandum

⁵ SECY-09-0086 at 4.

⁶ Government Accountability Office, “Nuclear Security, NRC Has Enhanced the Controls of Dangerous Radioactive Materials, but Vulnerabilities Remain” (GAO-16-330) (July 2016) at highlights page.

⁷ *Id.*

⁸ *Id.* at 20.

⁹ *Id.* at highlights page, 26-27.

resulting from this paper, the staff should submit a notation vote paper to the Commission that includes the following:

- 1) An evaluation of the pros and cons of different methods of requiring transferors of Category 3 sources to verify the validity of a transferee's license prior to the transfer;
- 2) An evaluation of the pros and cons of including Category 3 sources in the NSTS; and
- 3) Based on these evaluations, options for addressing the GAO recommendations.

In conducting these evaluations, the staff should assess the risks posed by the aggregation of Category 3 sources into Category 2 quantities and consider the current views of our Agreement States partners.

cc: EDO
SECY
OGC