

**CALIFORNIA ENERGY COMMISSION**

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March 10, 2017

United States Nuclear Regulatory Commission  
Docket ID NRC-2016-0276  
Office of Administration  
Attention: Cindy Bladey  
Mail Stop: OWFN-12-H08  
Washington, DC 20555-0001

RE: Category 3 Source Security and Accountability; Public Meetings and Request for Comment [Docket ID NRC-2016-0276]

Dear Nuclear Regulatory Commission Representatives:

I am the Chair of the California Energy Commission and the State's Liaison Officer to the United States Nuclear Regulatory Commission (NRC). As an appointee of California Governor Edmund G. Brown, Jr., I am the primary contact between California and the NRC. In my role as the Liaison Officer, I provide the NRC with information on matters pertinent to California including the state's radiological health, emergency preparedness, Energy Commission and California Public Utility Commission actions, and state nuclear safety matters. California's seismicity and large population centers make the effective monitoring of radioactive materials a matter of significant concern.

This letter responds to NRC's request for comments in the above-referenced matter.<sup>1</sup> I appreciate the opportunity to emphasize the importance of ensuring and enhancing Category 3 source accountability.<sup>2</sup> As the largest Agreement State, the security and accountability of Category 3 radioactive materials is of particular concern to California because:

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<sup>1</sup> U.S. Nuclear Regulatory Commission, "Category 3 Source Security and Accountability; Public Meetings and Request for Comment" [Docket ID NRC-2016-0276], January 9, 2017. Retrieved from [http://www.regulations.gov/#!documentDetail;D=DOE\\_FRDOC\\_0001-3000](http://www.regulations.gov/#!documentDetail;D=DOE_FRDOC_0001-3000).

<sup>2</sup> U.S. Nuclear Regulatory Commission, categories of radioactive sources, retrieved from <https://www.nrc.gov/reading-rm/basic-ref/glossary/category-of-radioactive-sources.html>. Categories for radioactive sources are defined by the IAEA's Code of Conduct. Category 1 sources (A/D > 1000), would be likely to cause permanent injury to a person who handled them or was otherwise in contact with them for more than a few minutes; Category 2 sources (A/D 10-1000) could cause permanent injury to a person who handled them or was otherwise in contact with them for a short time (minutes to hours); Category 3 sources (A/D 1-10) could cause permanent injury to a person who handled them or was otherwise in contact with them for some hours. A/D is defined by IAEA, where A is the activity of the source and D is the minimum dangerous activity.

- The malicious aggregation and misuse of high-level Category 3 quantity materials, exceeding the Category 2 threshold, could result in significant long term damage to California's environment and economy, impacting public health and safety on multiple levels.
- Antiquated regulations, which can be exploited to allow access to multiple Category 3 sources, are a target of interest for "bad actors" intent on deploying a radiological dispersal device or a radiological exposure device. This higher risk profile increases the burdens placed on California regulatory, enforcement and security agencies.

My comments relate to the following questions posed by the NRC in the Federal Register.

**General Questions Related to License Verification**

1. *Should the current methods for verification of licenses prior to transferring Category 3 quantities of radioactive material listed in 10 CFR 30.41(d)(1)-(5), 10 CFR 40.51(d)(1)-(5), and 10 CFR 70.42(d)(1)-(5) be changed such that only the methods prescribed in 10 CFR 37.71 are allowed?*

**Yes.** Licensees in possession of Category 3 quantities of radioactive material should follow the enhanced verification standards applicable to Category 2 quantities of radioactive material.

The U.S Government Accountability Office (GAO), report GAO-16-330, recommends that NRC should take actions to improve tracking and security of Category 3 quantities and verify the legitimacy of the licenses for them.<sup>3</sup> A change to the methods prescribed in 10 CFR 37.71 would improve the tracking and security of quantities of Category 3 radioactive material.<sup>3</sup>

Under 10 CFR 37.71 (d) Category 2 radioactive materials undergo an additional level of vetting that uses currently available technology. 10 CFR 37.71 (d) requires that "Any licensee transferring category 2 quantities of radioactive material to a licensee of the Commission or an Agreement State, prior to conducting such transfer, shall verify with the NRC's license verification system or the license issuing authority that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred. If the verification is conducted by contacting the license issuing authority, the transferor shall document the verification." Transfers within the same organization are exempt.

Vetting Category 3 materials in this way, using NRC's existing suite of digital data systems, would reduce the risk of malicious aggregation with minimal burden to all involved.

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<sup>3</sup> U.S Government Accountability Office Report to the Ranking Member Committee on Homeland Security, House of Representatives. *NUCLEAR SECURITY NRC Has Enhanced the Controls of Dangerous Radioactive Materials, but Vulnerabilities Remain.* [GAO-16-330](#), July 2016.



**General Questions Related to the NSTS**

1. *Should Category 3 sources be included in the NSTS? Please provide a rationale for your answer.*

**Yes.** Category 3 sources should be included in the National Source Tracking System (NSTS), License Verification System (LVS) and Web-Based Licensing (WBL) system. Advances in technology and experience demonstrate this can be accomplished at reasonable cost.

There is a considerable amount of agreement on this. In 2009 NRC staff stated, “NSTS was designed to accommodate Category 3 sources and licensee information, and this feature can be implemented at reasonable cost.”<sup>4</sup> The GAO-16-330 report advises NRC to, “...include category 3 sources in the National Source Tracking System and add agreement state category 3 licenses to the Web-based Licensing System as quickly as reasonably possible.”<sup>5</sup> In a letter to the NRC Chairman regarding the GAO report, U.S. Senator Dianne Feinstein inquired about key concerns and reiterated the importance of securing radioactive materials.<sup>6</sup> In response to Senator Feinstein’s letter, former NRC Chairman Burns indicated that an NRC working group is assessing the inclusion of Category 3 sources into the NRC digital data systems (NSTS, LVS, and WBL).<sup>7</sup>

The International Atomic Energy Agency (IAEA) safety standards recommend the inclusion of Category 3 sources into the same national database/register as Category 1 & 2. “In view of the fact that Category 3 sources have the potential to cause severe deterministic effects, the regulatory body may also consider including them in a national register together with the Category 1 and 2 sources.”<sup>8</sup>

NRC staff noted that the decision in 2009 not to include Category 3 sources in the NSTS was based on concerns that entering the data would be too costly and burdensome.<sup>9</sup> Advances in NRC digital data systems alleviate these concerns. The technology is now integrated at all levels. With seven years of experience operating the NSTS, integrating Category 3 sources can be accomplished much more economically, thanks to advanced data management and exchange practices.

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4 U.S. Nuclear Regulatory Commission, SECY-09-0086 FINAL RULE: EXPANSION OF THE NATIONAL SOURCE TRACKING SYSTEM (RIN 3150-A129). Page 4, June 2009.

5 Id GAO-16-330

6 U.S. Senator Dianne Feinstein letter dated August 22, 2016, expressed concern to U.S. Nuclear Regulatory Commission Chairman Burns regarding the findings in a July 2016 U.S. Government Accountability Office (GAO) report GAO-16-330.

7 U.S. Nuclear Regulatory Commission Chairman Burns response to U.S. Senator Dianne Feinstein inquires by letter(s) dated October 7, 2016, ML16253A345 and ML16253A379.

8 IAEA Safety Standards, *Categorization of Radioactive Sources*, No. RS-G-1.9, 2005. Page 10, section 3.8. Available at [http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1227\\_web.pdf](http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1227_web.pdf).

9 Commissioner Baran letter to Chairman Burns, COMJMB-16-0001 PROPOSED STAFF RE-EVALUATION OF CATEGORY 3 SOURCE ACCOUNTABILITY. ML16197A229. July 2016.

Including Category 3 sources in NRC digital data systems will accommodate transitioning to 10 CFR 37.71(d)'s enhanced verification and methods, greatly reducing the risks of malicious aggregation of large quantities of radioactive materials.

2. *If Category 3 sources are included in the NSTS, should the NRC consider imposing the same reporting requirements currently required for Category 1 and 2 sources (10 CFR 20.2207(f))?*

**Yes.** The requirements of 10 CFR 20.2207(f) are designed to mesh with 10 CFR 37.71 (d) and the NSTS. Together, they would provide an integrated system to verify, track, report and account for radioactive sources analogous to systems in widespread use for tracking purchases from online retailers.

4. *Would there be an increase in safety and/or security if the regulations were changed to include Category 3 sources in the NSTS? If so, how much of an increase would there be?*

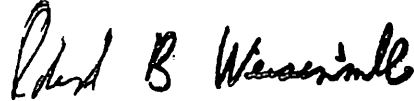
**Yes.** There should be increases in safety and/or security commensurate with those for category 1 and 2 sources.

GAO was able to breach the current system 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.”<sup>10</sup> The GAO report also observed that the current system lacks assurances or vetting that 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...”<sup>11</sup> Including Category 3 sources would address these security gaps. Quantifying its impact could be done by reference to the various metrics NRC has access to by virtue of implementing the same security measures for Category 1 and 2 sources.

I support the NRC's efforts to enhance Category 3 source accountability and appreciate the opportunity to comment on the assessment of the current regulations and processes governing source protection and accountability. I believe this assessment is essential in continuing to assure adequate protection of public health and safety. Adopting these recommendations would provide methods to verify the legitimacy of licenses and provide greater assurance that no entity could manipulate the system to acquire radioactive materials in aggregate greater than what they are authorized to possess. I recognize that other stakeholders will have differing recommendations and welcome the dialogue necessary for the development of a comprehensive regulatory basis to address radioactive source accountability and security.

Please send any future notices, correspondence, and documents related to these comments to Justin Cochran, Ph.D., Senior Nuclear Policy Advisor, California Energy Commission, MS-36, 1516 Ninth Street, Sacramento, CA, 95814-5512, or via email at [Justin.Cochran@energy.ca.gov](mailto:Justin.Cochran@energy.ca.gov).

Respectfully,

A handwritten signature in black ink, appearing to read "Robert B. Weisenmiller". The signature is fluid and cursive, with the first name "Robert" being the most prominent.

ROBERT B. WEISENMILLER  
Chair and State Liaison Officer to NRC

cc:

Dianne Feinstein, U.S. Senator, California  
Ken Alex, Director, Governor's Office of Planning and Research, California  
Karen Smith, State Public Health Officer and Director, California Department of Public Health  
Robert P. Oglesby, Executive Director, California Energy Commission  
Gonzalo Perez, Chief Radiological Health Branch, California Department of Public Health  
Justin Cochran, Senior Nuclear Policy Advisor, California Energy Commission