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**Duran-Hernandez, Doris**

**From:** Wu, Irene  
**Sent:** Friday, March 10, 2017 9:01 AM  
**To:** Duran-Hernandez, Doris  
**Subject:** FW: NRC Category 3 Comments  
**Attachments:** NRC Category 3 Comments Cover Ltr 030917.pdf; NRC Cat 3 comments DSHS TCEQ 2-23-17 crf 030617 1025h.pdf

**From:** Sullivan,Charlotte (DSHS) [mailto:Charlotte.Sullivan@dshs.state.tx.us]  
**Sent:** Thursday, March 09, 2017 3:27 PM  
**To:** Wu, Irene <Irene.Wu@nrc.gov>  
**Cc:** Flynn,Chuck (DSHS) <Chuck.Flynn@dshs.state.tx.us>  
**Subject:** [External\_Sender] NRC Category 3 Comments

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RULES ENGINE

Good Afternoon,

Please accept the attached comments in response to the NRC's Federal Register notice regarding Category 3 source security and accountability, which were developed on behalf of the State of Texas. They represent the joint responses from the Texas Department of State Health Services and the Texas Commission on Environmental Quality.

If you have any questions regarding these comments, please contact me.

Thank you,

Charlotte Sullivan, Ed.D.  
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*DSHS Vision: A Healthy Texas*  
*DSHS Mission: To Improve Health & Well-Being in Texas*

\*Please note\* My email address has changed to reflect @dshs.texas.gov domain. Please be sure to update your contact information with the new address.

**SUNSI Review Complete**  
**Template = ADM - 013**  
**E-RIDS= ADM-03**  
**Add= I. Wu (Iwyl)**



TEXAS  
Health and Human  
Services

Texas Department of State Health Services

John Hellerstedt, M.D.  
Commissioner

March 9, 2017

Irene Wu  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555-0001

Re: Docket ID NRC-2016-0276, Category 3 Source Security and  
Accountability

Please accept the attached comments in response to the NRC's Federal Register notice regarding Category 3 source security and accountability, which were developed on behalf of the State of Texas. They represent the joint responses from the Texas Department of State Health Services and the Texas Commission on Environmental Quality.

If you have any questions regarding these comments, please contact me.

A handwritten signature in black ink that reads "Charlotte Sullivan".

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## State of Texas Responses<sup>1</sup> to NRC Request for Agreement State Input on Category 3 Source Security and Accountability

Docket ID NRC-2016-0276

### 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?

**Response:** Yes, Category 3 sources should utilize the same verification requirements as Category 2 sources prescribed in 10 CFR 37.71.

2. Would there be an increase in safety and/or security if the regulations were changed to only allow license verification through the NRC's License Verification System (LVS) or the transferee's license issuing authority for transfers of Category 3 quantities of radioactive material? If so, how much of an increase would there be?

**Response:** Yes, safety and security would increase for Category 3 sealed sources. Using the NRC's License Verification System (LVS) would address many of the safety and security concerns raised by the United States Government Accountability Office (GAO) report. Specifically, the LVS would provide a means to ensure that the license used is current and unaltered. Using the LVS, which also communicates with the National Source Tracking System (NSTS) inventory system, would also verify that a licensee could not accumulate multiple Category 3 sources from various other licensees that would allow them to exceed their license limits and exceed the Category 2 limits.

The safety increase for requiring LVS usage for adding a Category 3 source would be about the same as requiring LVS usage for Category 2 source activities because two Category 3 sources could easily exceed a Category 2 quantity. Currently, many licensees are subject to the increased controls

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<sup>1</sup> Comments represent joint responses from the Texas Department of State Health Services and Texas Commission on Environmental Quality.

and the current 10 CFR 37 security requirements for the aggregation of Category 3 sources.

3. If the NRC changed the regulations to limit license verification only through the LVS or the transferee's license issuing authority for transfers of Category 3 quantities of radioactive material, should licensees transferring Category 3 quantities to manufacturers and distributors be excepted from the limitation?

**Response:** No. The LVS/NSTS is fundamentally a "cradle-to-grave" accounting system for these sources from the time of manufacture until disposal. However, it would be beneficial to exempt from the NSTS transfer and annual reconciliation requirements any sources whose activities have decayed below the Category 3 threshold.

4. Is there anything else we should consider when evaluating different methods of license verification prior to transferring Category 3 quantities of radioactive material?

**Response:** Yes. Any license verifications should be limited to Category 3 sealed sources.

### **General Questions Related to the NSTS**

1. Should Category 3 sources be included in the NSTS?

Please provide a rationale for your answer.

**Response:** Yes. Entering the sources into the NSTS works with the LVS. Using the LVS would address the GAO concerns about ensuring that the license used is current and unaltered. The NSTS inventory system would also verify that the licensee could not accumulate multiple sources from various other licensees that would allow them to exceed their license limits and exceed the Category 2 limits.

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))?

**Response:** Yes. The timely NSTS reporting would ensure that the licensee inventories are accurate.

3. Should the NRC consider alternatives to the current NSTS reporting requirements for Category 1 and 2 sources to increase the immediacy of information availability, such as requiring the source transfers to be reported prior to, or on the same day as, the source shipment date?

**Response:** Currently, 10 CFR 20.2207(f) requires the report to be submitted by the close of the next business day after the transaction. This should be adequate. Having different reporting times may cause confusion and be difficult to monitor.

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?

**Response:** The increase in safety for using the NSTS for a Category 3 source would be about the same as requiring NSTS usage for Category 2 source activities because two Category 3 sources could easily exceed a Category 2 quantity. Currently, many licensees are subject to the increased controls, and the current 10 CFR 37 security requirements for the aggregation of Category 3 sources.

5. Is there anything else we should consider as part of our evaluation of including Category 3 sources in the NSTS?

**Response:** Nothing at this time.

### **Specific Questions for Agreement States Related to License Verification**

1. Approximately how many licenses do you authorize for Category 1, 2, and 3 quantities of radioactive material?

**Response:** The Texas Department of State Health Services (DSHS) currently has approximately 248 Risk Significant Radioactive Material (RSRM) licensees, and 97 licensees with Category 3 sources who are not already under RSRM requirements. The Texas Commission on Environmental Quality (TCEQ) currently has two licensees that are authorized to possess Category 1, 2, and 3 quantities of material. One is a storage and processing facility and the other is both a storage and processing facility and Low-Level Radioactive Waste (LLRW) disposal site.

2. If license verification through the LVS or the transferee's license issuing authority is required for transfers involving Category 3 quantities of a radioactive material would you encourage the use of LVS among your licensees, or plan for the additional burden imposed by the manual license verification process?

**Response:** The state would encourage the use of LVS among licensees but would also plan for the additional burden imposed by the manual license verification process, as needed.

3. If license verification through the LVS or the transferee's license issuing authority is required for transfers involving Category 3 quantities of radioactive material, would you consider adopting the Web-Based Licensing system (WBL) to ensure that the most up-to-date licenses are available for license verification using the LVS, or voluntarily provide your Category 3 licenses (similar to what some Agreement States do now for Category 1 and 2 licenses) to be included in WBL, or would you do neither and prefer licensees to use the manual license verification process?

**Response:** The State of Texas would consider it, but adoption of WBL is unknown at this time. Although Texas does not use WBL, we do provide a copy of amended licenses to the LVS for Category 1 and 2 quantities and we would consider adding Category 3 sources to this process.

4. What would the impact in time and resources be on your program to handle the additional regulatory oversight needed for Category 3 licensees if license verification through the LVS or the transferee's license issuing authority was required for transfers involving Category 3 quantities of radioactive material?

**Response:** The impact on the time and resources for TCEQ would be minimal. The DSHS, however, is unable to determine the impact at this time. The extent of the impact is a function of the number of source transfers and shipments that will occur and DSHS cannot know that number in advance. Most of the Category three sources would be used in well logging, fixed gauges, or medical high-dose radiation (HDR) units. The well logging and fixed gauge sources have relatively long half-lives and are not frequently replaced. Shorter half-life Ir-192 sources used in medical HDR units are typically replaced every three to six months. Currently DSHS spends approximately one hour per week following up on overdue licensee transfer documentation for Category 1 and 2 sources.

### **Specific questions for Agreement States Related to the NSTS**

1. The NRC currently administers the annual inventory reconciliation process on behalf of the Agreement States. This process involves providing hard copy inventories to every licensee that possesses nationally tracked sources at the end of the year, processing corrections to inventories, and processing confirmations of completion of the reconciliation into the NSTS. The process involves a significant amount of staff time and resources from November to February. If the Agreement States were to adopt administration of the annual inventory reconciliation process and if Category 3 sources were included in the NSTS, what would the additional regulatory

burden be on the Agreement States to perform the annual inventory reconciliation for Category 1, 2, and 3 sources?

**Response:** At this time, there would be a minimal burden to the TCEQ and the impact to the DSHS is unknown. Presently, DSHS' involvement is to follow up on those that have not submitted their inventory reconciliations. The DSHS would likely provide hard copy documents only when specifically requested. Furthermore, the DSHS would likely send reminder correspondence with an option for the licensee to request a hard copy if they do not have access to NSTS.

### **Other Questions**

1. Should physical security requirements for Category 1 and 2 quantities of radioactive material be expanded to include Category 3 quantities?

**Response:** No. There is no need to expand the entire physical protection security requirements to Category 3 quantities or sources. Imposing these requirements could be burdensome for licensees only possessing Category 3 quantities whose facilities do not currently meet the physical security requirements for Category 1 and 2 quantities.

2. Some Category 3 sources are covered under a general license (10 CFR 31.5). Should the NRC consider establishing maximum quantities in general license devices, thereby reserving authorization to possess Category 1, 2, and 3 quantities of radioactive material to specific licensees?

**Response:** Yes, a specific license should be required for the possession and use of Category 3 activity in a device and above. Category 3 sources are those radionuclide source activities that equal or exceed up to ten times the IAEA "D" values as those that could result in harm. Page 17 of the International Atomic Energy Agency (IAEA) Publication 1387, IAEA Nuclear Security Series No. 11, "Security of Radioactive Sources" defines "D values" as follows:

*"In recognition of the fact that human health is of paramount importance, the categorization system is based primarily on the potential for radioactive sources to cause deterministic health effects. The D value is the radionuclide specific activity of a source which, if not under control, could cause severe deterministic effects for a range of scenarios that include both external exposure from an unshielded source and inadvertent internal exposure following dispersal (e.g. by fire or explosion) of the source."*