

RULES AND DIRECTIVES
BRANCH
LCN 10

NUCLEAR SERVICES

Scott J. Winters

2016 MAY 30 PM 2: 00

Looking Forward

VEGA Americas, Inc.
4141 Rosslyn Drive
Cincinnati, Ohio 45209
USA

1.800.FOR.LEVEL
Tel: 513.272.4222
Fax: 513.272.0133
s.winters@vega.com

VEGA

March 6, 2017

RECEIVED

82 FR 2399-2

1/9/2017

Cindy Bladey
Office of Administration
Mail Stop: OWFN-12-H08
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

56

Ref: Docket ID # NRC-2016-0276

This letter is intended to provide industry feedback to the NRC's category 3 Source Security and Accountability Working Group regarding the Government Accountability Office (GAO) recommendations from report 16-330, dated July 15, 2016 and the solicitation of industry comments issued by the Nuclear Regulatory Commission (NRC) under SRM for COMJMB-16-0001.

The following comments (italicized herein) are being submitted by Scott J. Winters, a Radiation Safety Specialist at VEGA Americas, Inc. (VEGA). Mr. Winters has thirty-(30) years of experience providing consultation, installation, repair and recovery services for hundreds of fixed gauge licensees. Since introducing radiation-based instrumentation in 1950, VEGA (formerly Ohmart Corp.), has continued to be the pioneer in level and density measurement technology having distributed over 25,000 nuclear gauges world-wide under International, Federal and State radioactive material licenses and registrations.

The GAO final report, entitled "Nuclear Security: NRC Has Enhanced the Controls of Dangerous Radioactive Materials, but Vulnerabilities Remain" offers three recommendations. Only one of the three recommendations is directly related to the actual findings of both the 2007 and 2015 GAO investigations, in which, the common denominator of risk was due to federal and state agencies failing to properly review license applicants.

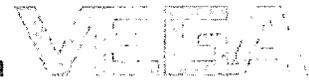
Overview of NMED Historical Data:

Before addressing the questions pertaining to the solicitation of comments listed in 7590-01-P, it is important to highlight the 2015 Nuclear Material Events Database (NMED) Annual Report published by Idaho National Laboratory (INL/LTD-16-37644). The report provides valuable data over the past decade regarding the number of reported events with respect to each security category.

SUNSI Review Complete
Template = ADM - 013
E-RIDS= ADM-03

Add= I. Wu (1WY1) G. Davis

(GRO1)



The following chart represents data that was extrapolated from Page 6, Table 2, entitled, "Number of Sources Lost/Abandoned/Stolen (LAS) and Sources Not Recovered (NR) – Excluding Irretrievable Well Logging Sources":

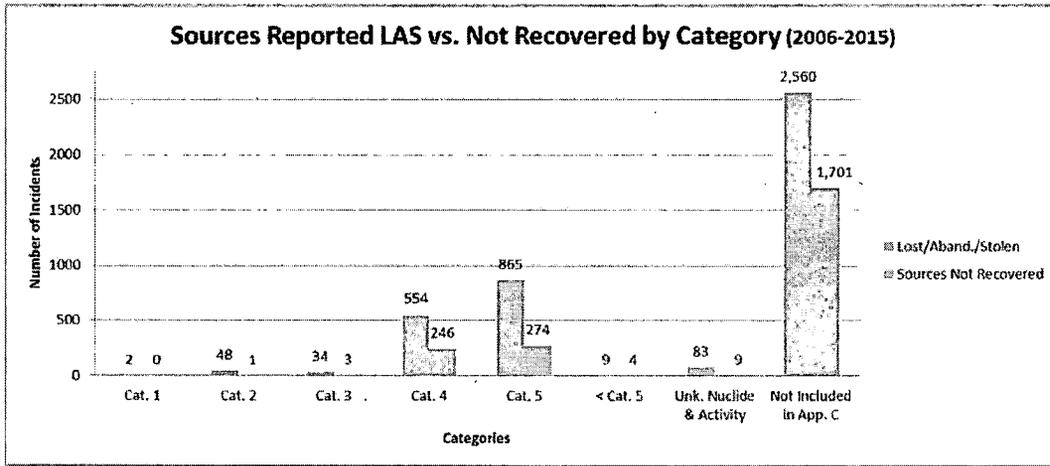


Chart-A

There were at least 4,155 reported lost, abandoned or stolen (LAS) sources between 2006 and 2015. The following spreadsheet illustrates the percentage of data categorically:

| <u>Category</u> | <u># of LAS</u> | <u>Percentage</u> |
|----------------------------|-----------------|-------------------|
| 1 | 2 | 0.05% |
| 2 | 48 | 1.16% |
| 3 | 34 | 0.82% |
| 4 | 554 | 13.33% |
| 5 | 865 | 20.82% |
| <5 | 9 | 0.22% |
| Unknown nuclide & activity | 83 | 2.0% |
| Not included in App. C | <u>2,560</u> | 61.61% |
| Total reported | 4,155 | |

There were 4,072 sources of known nuclide and activity, which accounted for 98% of the total LAS of 4,155 over the ten consecutive years reported. There was 41% more category 2 sources reported LAS compared to category 3 sources over the same decade. Grouping categories 1, 2 and 3 together only accounted for 2% of the total number of reported LAS sources. Ironically, category 3 represented only 1.3%, but categories 4, 5 and <5 accounted for 35%. The remaining 63% were nuclides that are not listed in Appendix C.

It is highly probable that there would not be a distinguishable reduction in the number of reported LAS sources as a result of increasing security of category 3 to that of category 1 and 2.

The following comments are offered from the perspective of a manufacturer who distributes fixed nuclear gauging devices within the United States, consultation and instruction to licensees thereof. Applicable comments correspond with the order that the questions were presented by the Working Group:

General Questions Related to License Verification:

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?*

Comment: VEGA has not detected any attempt by a purchaser to misrepresent, alter or fictitiously submit a specific license for purchase or distribution of a nuclear device. Implementing the online features of the LVS system for all devices, regardless of nuclide or quantity would most likely increase the integrity of the license validation process and confirm regulatory endorsements in real-time.

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 exempted from the limitation?*

Comment: Offering exemptions based on the transfer purpose or the activity of any given shipment will be subject to interpretation and execution that may not coincide with the receiving party's reporting criteria if based on aggregate quantities and/or type of re-distribution.

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

Comment: To be effective and consistent, this would need to address the loss of security controls associated with nuclear gauging devices distributed under a general license for domestic or international distribution.

General Questions Related to the NSTS:

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?*

Comment: NMED data over the last decade suggest that category 2 sources are currently at the same risk as category 3 sources for being reported lost, abandoned or stolen. This would suggest that security and safety measures would not be increased by virtue of merging category 3 sources under NSTS.

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

Comment: To be effective and consistent, this would need to address the loss of security controls associated with nuclear gauging devices distributed under a general license for domestic and international distribution.

Specific Questions for Licensees Related to License Verification:

1. It currently takes approximately one month to get credentialed to access the LVS. If you currently do not have online access to LVS, and NRC establishes new requirements for license verification involving category 3 quantities of radioactive material, would you be inclined to sign up for online access, or would you use alternative methods for license verification such as e-mailing the NRC Form 748 "Manual License Verification Report" to the LVS Help Desk or calling the license-issuing regulatory authority directly?

Comment: We would have to sign-up multiple employees to have online access to accommodate the volume of potential orders.

2. Approximately how many transfers involving category 3 quantities of radioactive material do you do monthly? What percentage involves transfers directly to/from a manufacturer?

Comment: Potentially one-hundred sources transferred to or from our facility each month.

3. Should license verification be required when transferring to an established manufacturer?

Comment: No. The data may not offer any additional value as manufacturers and distributors already keep and provide detailed records internally and to the appropriate agency having jurisdiction.

Other Questions:

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

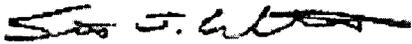
Comment: No. The attempt to implement the additional security requirements for existing category 3 sources used in fixed gauges has proven to be excessive and oftentimes misinterpreted by agencies and inspectors. Adding the same security requirements for category 3 (both generally licensed and specifically licensed gauges), would have an enormous impact that could never be fully implemented or enforced based on the applications and industries that would be affected. It is more likely that the attempt to conform to the additional requirements will actually increase the security risk because it will expand awareness by ancillary observers and social exchanges. Trying to create physical and electronic controls, plus additional vetting and training for employees, contractors and local emergency responders will influence product cost and taxpayers. Also, the inherent cost with compliance will affect the overall marketability of devices that are critical to many process operations.

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

Comment: Yes. The limiting of quantities associated with generally licensed items is arguably a much greater need and has been a significant security and safety risk that supersedes entertaining increased controls for category 3.

I hope that the comments provided will help to support the Work Group's efforts in evaluating security and accountability recommendations. As previously provided, VEGA's Cincinnati campus can be made available to host any future regulatory events in support of our mutual desires to promote radiation safety for all stakeholders.

Warmest Regards,

A handwritten signature in black ink, appearing to read "Scott J. Winters".

Scott J. Winters, Radiation Safety Specialist
VEGA Americas, Inc. – Nuclear Services

Cc: Irene Wu (irene.wu@nrc.gov), Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001