



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

November 2, 2011

Docket No. 03030808

License No. 29-13141-06

Susan Hallowell, Ph.D., Director  
Transportation Safety Laboratory  
US Department of Homeland Security  
Science and Technology Directorate  
Transportation Security Laboratory  
William J. Hughes Technical Center, Building 315  
Atlantic City International Airport  
Atlantic City, NJ 08405

SUBJECT: NRC INSPECTION REPORT NO. 03030808/2011001, US DEPARTMENT OF  
HOMELAND SECURITY, SCIENCE AND TECHNOLOGY DIRECTORATE,  
ATLANTIC CITY, NEW JERSEY AND NOTICE OF VIOLATION

Dear Dr. Hallowell:

On September 20 and October 18, 2011, Betsy Ullrich of this office conducted a safety inspection at the above address of activities authorized by the above listed NRC license. The inspection was an examination of your licensed activities as they relate to radiation safety and to compliance with the Commission's regulations and the license conditions. The inspection consisted of observations by the inspector, interviews with personnel, and a selective examination of representative records. The findings of the inspection were discussed with you, Curtis Bell and other members of your organization at the conclusion of the inspection.

Based on the results of this inspection and in accordance with the NRC Enforcement Policy, the NRC has determined that five Severity Level IV violations of NRC requirements occurred. The violations involved: 1) the failure to leak test sealed sources at the required frequency and to maintain records of leak tests; 2) the failure to perform the required physical inventory of all sealed sources at 6-month intervals; 3) the failure to review the implementation of the radiation protection program at least annually; 4) the failure to report transfers of generally-licensed devices, as required by 10 CFR 31.5(c)(8)(iii), to your specific license; and 5) the failure to provide training required by Department of Transportation regulations in 49 CFR 172 Subpart H to persons performing functions subject to the requirements of 49 CFR 171-177.

The violations are cited in the enclosed Notice of Violation (Notice) because the violations were identified by the NRC.

During our inspection exit meeting on October 18, 2011, you indicated that you have begun corrective actions where immediate correction can be taken, and are working on a plan to implement long-term corrective actions. In addition, you agreed that you would request an amendment of your license to: (1) name additional authorized users; and (2) list two trailers (the TECS Laboratory and the HME Laboratory) as permanent locations of use. During the inspection, it was learned that the only named authorized user on the license no longer works in the laboratories where licensed materials are used. Also, it was learned that the two trailers in

which licensed materials are used, originally expected to be temporary laboratories that would be under your license authorization for temporary job sites, have been in use many years and therefore are not temporary. Please submit the amendment request separately from your response to this Notice of Violation.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC document system (ADAMS), accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Current NRC regulations and guidance are included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select **Nuclear Materials; Med, Ind, & Academic Uses**; then **Regulations, Guidance and Communications**. The current Enforcement Policy is included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select **About NRC, Organizations & Functions; Office of Enforcement; Enforcement documents**; then **Enforcement Policy (Under 'Related Information')**. You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

Please contact Betsy Ullrich at (610) 337-5040 if you have any questions regarding this matter.

Sincerely,

***Original signed by James P. Dwyer***

James P. Dwyer, Chief  
Commercial and R&D Branch  
Division of Nuclear Materials Safety

Enclosure:  
Notice of Violation

cc:  
Curtis Bell, Ph.D., Radiation Safety Officer  
State of New Jersey

S. Hallowell, Ph.D

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Distribution:

D. J. Holody, RI

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DATE	11/2/2011		11/2/2011					

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## **NOTICE OF VIOLATION**

US Department of Homeland Security  
Science and Technology Directorate  
Transportation Security Laboratory  
Atlantic City, New Jersey

Docket No. 03030808  
License no. 29-13141-06

During an NRC inspection conducted on September 20 and October 18, 2011, five violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

- A. Condition 13.A of License No. 29-13141-06 requires that sealed sources possessed under the license be tested for leakage or contamination at intervals not to exceed 6 months or at the intervals specified in the certificate of registration issued by the NRC under 10 CFR 32.210 or equivalent regulations of an Agreement State. Condition 13.G of License No. 29-13141-06 requires, in part, that records of leak test results be maintained for 5 years.

10 CFR 31.5(c)(3) requires, in part, that any person who acquires, receives, possesses, uses or transfers byproduct material in a device pursuant to a general license shall assure that tests for leakage of radioactive material are performed. 10 CFR 31.5(c)(4) requires, in part, that any person who acquires, receives, possesses, uses or transfers byproduct material in a device pursuant to a general license shall maintain records showing the results of tests for leakage for 3 years or until the sealed source is transferred or disposed of.

Contrary to the above, during the period of January 2010 and September 2011, sealed sources were not tested for leakage or contamination at required intervals and leak test records were not maintained as required. Specifically: During the inspection the licensee possessed more than 80 sealed sources under the specific license, of which approximately 40 are in active use and the remainder are in storage. Leak test records for 18 of the active sealed sources were reviewed for the period of March 23, 2010 through March 16, 2011. Only 7 of the selected sealed sources were leak-tested at 6 month intervals and the licensee was not aware if other intervals were approved for the remaining sources. The licensee also possessed sealed sources in 10 electron capture devices (in 7 gas chromatographs) under the general license of 10 CFR 31.5 and the sources were not leak tested in 2010 or 2011. In addition, the licensee did not have leak test records from previous years; the licensee obtained leak test records from 2005 through 2011 from the service provider at the inspector's request.

This is a Severity Level IV violation (Supplement 6.7).

- B. Condition 15 of License No. 28-13141-06 requires, in part, that the licensee conduct a physical inventory every six months to account for all sources and/or devices received and possessed under the license, and that records of inventories be maintained for 5 years and include certain information.

Contrary to the above, as of September 20, 2011, the licensee did not conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license or maintain records as required. Specifically, physical

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inventories were not performed since the last inspection in August 2009 and records of physical inventories were not maintained for prior years.

This is a Severity Level IV violation (Supplement 6.3).

- C. 10 CFR 20.1101(c) requires that the licensee shall periodically (at least annually) review the radiation protection program content and implementation. 10 CFR 20.2102 requires, in part, that the licensee maintain records of the radiation protection program content including the provisions of the program until the license is terminated, and of audits and other reviews of program content and implementation for 3 years after the record is made.

Contrary to the above, as of September 20, 2011, the licensee did not review the radiation protection program implantation at least annually and did not maintain records of reviews of the program implementation for 3 years. Specifically, the licensee did not perform a review of the radiation program implementation for the year 2010 and there was not a record available of the review of the program implementation in 2009.

This is a Severity Level IV violation (Supplement 6.3).

- D. 10 CFR 31.5(c)(8)(iii) states, in part, that any person who acquires, receives, possesses, uses or transfers byproduct material in a device pursuant to a general license may transfer a device for possession and use under its own specific license providing, in part, that the label is revised, and the transfer is reported to the NRC.

Contrary to the above, as of September 20, 2011, the licensee routinely transferred to their specific license byproduct materials in devices distributed to them under a general license, but did not revise the labels as required or report the transfers to the NRC. Examples include: Smiths Detection devices, Serial Nos. 34079, 34083, 34476, 34479, 34846, 34849, 41530, 43354, and 50164.

This is a Severity Level IV violation (Supplement 6.9).

- E. 10 CFR 71.5(a) requires that a licensee who transports licensed material outside of the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, comply with the applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation (DOT) in 49 CFR Parts 107, 171-180, and 390-397.

49 CFR 172.702 requires that each hazmat employer shall ensure that each hazmat employee is trained and tested, and that no hazmat employee performs any function subject to the requirements of 49 CFR Parts 171-177 unless trained, in accordance with Subpart H of 49 CFR Part 172. The terms Hazmat Employer and Hazmat Employee are defined in 49 CFR 171.8.

Contrary to the above, during the period between August 5, 2009 and September 20, 2011, the licensee did not provide training for its hazmat employees as required by Subpart H to 49 CFR Part 172, and the licensee otherwise meets the definition of hazmat

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employer in 49 CFR 171.8. Specifically, licensee employees who were not trained as required by Subpart H packaged licensed materials and delivered licensed materials to a carrier for transport, on multiple occasions. Examples include: May 18, 2010 shipment of Serial No. 50164 to a university; December 22, 2010, return of Serial No. 43354 to a manufacturer for repair; January 14, 2011 shipment of Proto20 device to Tampa, Florida; April 27, 2011 shipment of Serial No. 43352 to manufacturer for repair.

This is a Severity Level violation IV (Supplement 6.8).

Pursuant to the provisions of 10 CFR 2.201, US Department of Homeland Security, Transportation Science and Technology Directorate, Transportation Security Laboratory is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with a copy to the Regional Administrator, Region I, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, any response which contests an enforcement action shall be submitted under oath or affirmation.

Your response will be placed in the NRC Public Document Room (PDR) and on the NRC Web site. To the extent possible, it should, therefore, not include any personal privacy, proprietary, or safeguards information so that it can be made publically available without redaction. However, if you find it necessary to include such information, you should clearly indicate the specific information that you desire not to be placed in the PDR, and provide the legal basis to support your request for withholding the information from the public.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated This 2nd day of November 2011