



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BLVD
ARLINGTON, TEXAS 76011-4511

September 11, 2012

EA-12-154
NMED: 120311

Dave DeYoung
Boeing Laser Technical Services
Boeing Directed Energy Systems
4411 The 25 Way NE, Suite 350
Albuquerque, New Mexico 87109

SUBJECT: NRC INSPECTION REPORT 9999-0004/2012-001 AND NOTICE OF VIOLATION

Dear Mr. DeYoung:

This letter refers to the in-office review and inspection conducted by Mr. Jason Razo of my staff from May 17 through August 6, 2012. The review commenced after Mr. Shockley informed the NRC Headquarters Operations Officer of an event involving the loss of static eliminator devices. During the review, the NRC examined reports submitted by the licensee dated May 21, 2012 (ML12153A200), and May 31, 2012 (ML12219A032), and interviewed personnel. The NRC conducted a final telephonic exit briefing with members of your staff on August 6, 2012, to discuss the results of the inspection.

The event involved the loss of control of two sets of static eliminators. Each set consisted of two devices, each device contained a nominal 10 millicurie sealed source of polonium-210. The devices were acquired and used under a general license issued by the NRC in accordance with 10 CFR 31.5.

Boeing Laser Technical Services (Boeing) received a set of two generally licensed static eliminator devices from the manufacturer on July 8, 2010, with their last verified physical inventory occurring in August 2010. Boeing received a second set of two devices on July 14, 2011, with their last verified physical inventory in March 2012. Each set of devices was used in a research setting within Boeing. The devices were successfully exchanged for a fresh set of devices on an annual basis from 2003-2009. The set of devices being replaced was immediately returned to the manufacturer when the new set would arrive. This process failed in 2011 due to personnel changes and again in 2012 due to the decommissioning of the laser which used the static eliminator devices.

The licensee discovered the devices were missing during an inventory check. Boeing verified with the manufacturer that none of the missing devices had been returned. A thorough physical search and subsequent records review failed to locate the devices. They were declared missing on May 16, 2012, and NRC was notified the next day in accordance with 10 CFR 20.2201(a)(1)(i).

Boeing initiated a Root Cause Corrective Analysis and developed its corrective actions. Those actions included, but were not limited to, a physical search of the premises and a records review as soon as the devices were determined to be missing. While no other devices are currently in Boeing's possession, Boeing committed to add any future devices to the U.S. Air Force (USAF) Bioenvironmental Engineering Office tracking protocol, under which Boeing operates as a contractor. In addition, Boeing has established a formal radiation safety program to encompass Title 10 of the Code of Federal Regulations and USAF requirements. Finally, Boeing enhanced and implemented its procedure titled *Ionizing Radiation Operational Instruction* and committed to train affected individuals in the procedure.

Based on the results of the inspection, the NRC has determined that a violation of NRC requirements occurred. The violation was evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The violation involves the failure to transfer generally licensed devices by one of the methods specified in 10 CFR 31.5(c)(8)(i). The violation is categorized at Severity Level IV because the four static eliminators contained only 10 milliCuries of polonium-210 each and, as such, were of low safety significance. In addition, the sources were located on a USAF base where there is generally an enhanced level of security and, as such, gaining access to material would be difficult.

The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in this letter and the Notice. The violation is being cited in the Notice because the licensee had prior opportunities to identify and track the devices, but failed to take an action that would have prevented the loss of the devices.

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to prevent recurrence, and the date when full compliance was achieved is already adequately addressed on the docket in your letters submitted on May 21, 2012 (ML12153A200), and May 31, 2012 (ML12219A032). Therefore, you are not required to respond to this letter unless the description herein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at

<http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy or proprietary information so that it can be made available to the Public without redaction.

Should you have any questions concerning this inspection, please contact Mr. Jason Razo at 817-200-1589 or me at 817-200-1130.

Sincerely,

/RA/ by ADGaines for

G. Michael Vasquez, Chief
Nuclear Materials Safety Branch A

Docket: 9999-0004
License: General License Pursuant to
10 CFR 31.5

Enclosure:
Notice of Violation

cc w/enclosure:
Hawaii Radiation Control Program Director
New Mexico Radiation Control Program Director

Internal distribution:

OEMail.Resource@nrc.gov;
Elmo.Collins@nrc.gov;
Art.Howell@nrc.gov;
Christi.Maier@nrc.gov;
Randy.Erickson@nrc.gov;
R4DNMS_MSB-A@nrc.gov;

Heather.Gepford@nrc.gov;
Leela.Sreenivas@nrc.gov;
Michele.Burgess@nrc.gov;
Bill.Maier@nrc.gov;

Nick.Hilton@nrc.gov;
Anton.Vegel@nrc.gov;
Vivian.Campbell@nrc.gov;
Rachel.Browder@nrc.gov;
Duane.White@nrc.gov

Hard copy:
 RIV Materials Docket File
 DNMS Secretarial Area

S:\DNMS\~ESCALATED ENFORCEMENT\ACTIVE CASES\Boeing\Boeing EA-12-154 IR 12-001.docx
 ML12255A431

ADAMS		<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> SUNSI Review Complete	Reviewer Initials: JMR	
<input checked="" type="checkbox"/> Publicly Available		<input type="checkbox"/> Non-publicly Available		<input type="checkbox"/> Sensitive	<input checked="" type="checkbox"/> Non-sensitive	
RIV:NMSB-A	C:NMSB-A	ACES	C:ACES	C:NMSB-A		
JMRazo;dlf	GMVasquez	MCMaier	HJGepford	GMVasquez		
<i>/RA/</i>	<i>JEWhitten for</i>	<i>/RA/ w/edits</i>	<i>/RA/</i>	<i>ADGaines for</i>		
8/ 9 /12	8/ 10 /12	9/ 4 /12	9/11/12	9/11/12		

OFFICIAL RECORD COPY

T=Telephone

E=E-mail

F=Fax

NOTICE OF VIOLATION

Boeing Directed Energy Systems
Haleakala, Hawaii

Docket: 9999-0004
General Licensee
EA-12-154

During an NRC inspection conducted from May 17 through August 6, 2012, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR 31.5(c)(8)(i) states, in part, that any person who acquires, receives, possesses, uses, or transfers byproduct material in a device pursuant to the general license in paragraph (a) of this section shall transfer or dispose of the device containing byproduct material only by export as provided by paragraph (c)(7) of this section, by transfer to another general licensee as authorized in paragraph (c)(9) of this section, or to a person authorized to receive the device by a specific license issued under Parts 30 and 32 of this chapter, or Part 30 of this chapter that authorizes waste collection, or equivalent regulations of an Agreement State, or as otherwise approved under paragraph (c)(8)(iii) of this section.

Contrary to the above, between August 2010 and May 2012, the general licensee failed to transfer or dispose of devices containing byproduct material only by export as provided by paragraph (c)(7) of 10 CFR 31.5, by transfer to another general licensee as authorized in paragraph (c)(9) of 10 CFR 31.5, or to a person authorized to receive the device by a specific license issued under Parts 30 and 32 of Title 10, or Part 30 of Title 10, that authorizes waste collection, or equivalent regulations of an Agreement State, or as otherwise approved under paragraph (c)(8)(iii) of 10 CFR 31.5. Specifically, four static eliminator devices containing polonium-210 are unaccounted for and are presumed lost.

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

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance will be achieved, is already adequately addressed on the docket in your letters received on May 21, 2012 (ML12153A200), and May 31, 2012 (ML12219A032). However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, EA-12-154, NRC Inspection Report 9999-0004/2012-001," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region IV, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at

Enclosure

<http://www.nrc.gov/reading-rm/adams.html>. Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction.

In accordance with 10 CFR 19.11, you may be required to post this Notice within 2 working days of receipt.

Dated this 11th day of September 2012