



Department of Energy

Washington, DC 20585

February 12, 2013

Dr. Charles F. McMillan
Laboratory Director
Los Alamos National Security, LLC
Mail Stop A-100, Drop Point 03140071S
Bikini Atoll Road, TA-3
Los Alamos, New Mexico 87545-1663

NEL-2013-02

Dear Dr. McMillan:

The Office of Health, Safety and Security's Office of Enforcement and Oversight conducted an evaluation of the deficiencies at the Los Alamos Neutron Science Center (LANSCE) described in the Los Alamos National Security, LLC (LANS) Noncompliance Tracking System (NTS) report NTS--LASO-LANS-LANL-2012-0018, *LANSCE Contamination Event*, dated September 10, 2012. Our evaluation included a review of the Federal accident investigation report, *Accident Investigation into Contamination at the Los Alamos Neutron Science Center on or about August 21, 2012*, dated September 2012; the associated corrective action plan; and discussions with site personnel.

The NTS report documents a series of deficiencies at LANSCE that resulted in the release of the radioactive isotope technetium-99 (Tc-99) to onsite facilities and offsite locations. The spread of contamination first began on August 20, 2012, after a worker opened a sample container bearing Tc-99 in a highly dispersible powder. LANS subsequently identified this contamination on August 25, and declared an Operational Emergency.

LANS identified beta contamination at the LANSCE Lujan Center and adjoining building 622. The highest contamination levels were found at the Lujan Center, inside experimental area room ER-1, with levels exceeding 240 million disintegrations per minute (dpm) per 100 cm² (i.e., the maximum reading for the measurement device used). Offsite, at least nine homes were found with beta contamination, at levels up to 64,000 dpm. Five employees were identified with skin contamination at levels up to 16,800 dpm, and 25 employees had contaminated personal clothing and items with levels up to 980,000 dpm. Because Tc-99 emits low energy beta radiation, there was no significant dose to workers or the public from this event.

The LANSCE contamination event revealed potential violations of 10 C.F.R. Part 835 requirements. As detailed in the accident investigation report, LANS failed to maintain

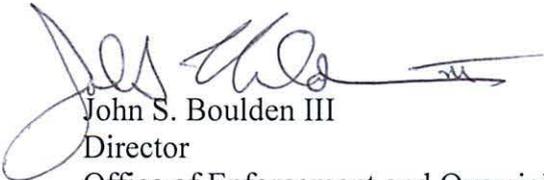


and verify the effectiveness of administrative and engineering controls to prevent the spread of beta contamination, and monitoring was insufficient to detect the contamination event in a timely manner. However, the Office of Enforcement and Oversight acknowledges that the radiological controls in place at the time of the event appear to be sufficient to prevent the inadvertent release of more significant radionuclides, such as alpha and gamma emitters.

After LANS identified the release of contamination, corrective actions were prompt and conservative, and the corrective action plan for this event was detailed and comprehensive. Because it was unlikely that more significant radionuclides could have been released, and in recognition of the comprehensive scope of LANS's corrective actions, the Office of Enforcement and Oversight has elected to exercise discretion and not pursue further enforcement activity at this time. In conjunction with the National Nuclear Security Administration, we will continue to monitor LANS's completion of the corrective actions.

No response to this letter is required. If you have any questions, please contact me at (301) 903-2178, or your staff may contact Mr. Steven Simonson, Deputy Director for Enforcement, Office of Enforcement and Oversight, at (301) 903-7707.

Sincerely,

A handwritten signature in black ink, appearing to read "John S. Boulden III", with a long horizontal flourish extending to the right.

John S. Boulden III

Director

Office of Enforcement and Oversight
Office of Health, Safety and Security

cc: Juan Griego, NA-00-LA
Marjorie Gavett, LANL
David Jonas, DNFSB