August 20, 1999

Mr. Steve Laflin
[ ]
International Isotopes Idaho Inc.
2325 West Broadway, Suite D
Idaho Falls, ID 83402

Subject: Enforcement Letter (NTS-ID--LITC-TRA-1999-0001)

Dear Mr. Laflin:

This letter refers to the Department of Energy's (DOE) evaluation of the facts and circumstances concerning the relocation of an irradiated [isotope] pellet from within a hot cell to an adjoining, outside, charging port service area. This incident occurred on January 6, 1999, at the Idaho National Engineering and Environmental Laboratory's Test Reactor Area Hot Cell Facility (TRA-632). Building TRA-632 is utilized by International Isotopes Idaho Inc. (I4) for the preparation of irradiated materials for distribution. During March 23-24, 1999, DOE conducted an investigation to determine what, if any, noncompliances with applicable nuclear safety regulations may have been associated with this incident. A copy of the investigation summary report is enclosed.

The January 1999 incident arose from planned modifications to the outside service area for hot cell 3. A maintenance work order, MWO BI054, had been prepared approximately six months earlier for the installation of metal tracks to better guide a transfer cask to the hot cell's charging port. During the track alignment process, the cask's movable platform was inserted through the hot cell's charging port into the cell and subsequently removed. It was during the platform's removal that an irradiated [isotope] pellet was unknowingly transferred out of the hot cell and into the service area; the pellet was returned to the cell soon after it was discovered. Subsequent dose reconstructions determined that several personnel fortuitously received minor exposures.

DOE's investigation found two aspects of I4's work processes that were considered nuclear safety noncompliances: The preparation of MWO BI054 included step-by-step instructions on how to check the alignment of the transfer cask tracks before the tracks were to be permanently fixed in place. Lockheed-Martin Idaho Technologies Company (LMITCO) procedures governing the development of a MWO requires that a work order include "…appropriate instructions." Notes 26 and 31 of MWO BI054 pertained to verifying the track's alignment by inserting the transfer cask's movable platform through the charging port and into hot cell 3. Though I4 fully intended to utilize its standard

procedure, TRA-TPR-DOP 9.2, to perform this maneuver for each verification, this procedure was never referenced by or included with MWO BI054, nor did Notes 26 or 31 contain language consistent with TRA-TPR-DOP 9.2's protocol for manipulating the cask's movable platform. Furthermore, a I4 representative signed MWO BI054's approval page thereby certifying that the work order was adequate and complete despite these deficiencies. Thus, this certification was also inconsistent with LMITCO's MWO development procedures.

The second noncompliance concerns I4's radioactive material accountability practices. Standard procedure TRA-TPR-DOP 9.6 is used by I4 to control irradiated [isotope] pellets within hot cell 3. This procedure has several steps for weighing pellet containers to verify that the pellets have been transferred. However, these weighings were conducted with a triple beam balance that was out of calibration and had a minimum error of approximately 200 milligrams. A single [isotope] pellet, though, weighs about 30 milligrams and, thus, is unmeasurable by the balance.

It was noteworthy that I4 hot cell staff were found to routinely conduct numerous cell surveillances for loose material. It was also noteworthy that I4, in response to the incident, developed a vacuum cleaner attachment specifically for removing any loose material from the charging port trough in hot cell 3, installed an area radiation monitor and warning light in the charging port's service area, and initiated an independent engineering review of its material handling and control processes to determine if any improvements can be made.

DOE has concluded that potential violations of 10 CFR 830, "Nuclear Safety Management," did occur in association with the irradiated [isotope] pellet incident. However, the safety significance of these potential violations did not appear to meet the threshold requiring a formal enforcement action. Therefore, I have decided to defer enforcement action at this time.

Please contact Mr. Steven Zobel of my staff at (301) 903-0100 should you want to discuss this matter further.

Sincerely,

R. Keith Christopher

R. Keith Christopher
Director
Office of Enforcement and Investigation

Enclosure:
Investigation Summary Report

cc: w/o enclosure
D. Michaels, EH-1
M. Zacchero, EH-1
S. Zobel, EH-10
S. Hurley, EH-10
D. Stadler, EH-2
O. Pearson, EH-3
J. Fitzgerald, EH-5
M. Magwood, NE-1
L. Miller, NE-40
B. Cook, DOE-ID
W. Bergholz, DOE-ID
S. Somers, DOE-ID
K. Whitham, DOE-ID
S. Forcey, LMITCO PAAA Coordinator
Docket Clerk, EH-10