

RADIOACTIVE MATERIALS INCIDENT REPORT

1. **Date/Time Notified:** 14 Aug 2019
2. **Person Making Notification:** Maj Dave Johnson
 - a. **Organization, Office Symbol and Installation:** 633 AMDS/SGPB, JB Langley-Eustis (JBLE)
 - b. **Telephone Nos.:** (DSN) 574-9542 (Commercial): 757-764-9542
 - c. **TELEFAX Nos.:** (DSN) (Commercial)

A. DESCRIPTION OF INCIDENT/ACCIDENT

1. **Date & Time of Occurrence or Discovery:** 11 Jul 2019
2. **Organization Possessing Source(s):** 2d Communications Squadron (2 CS)
3. **Specific Location(s):** Base Information Transfer Center (BITC)
4. **What Happened:** In July 2019, a member of Bioenvironmental Engineering (BE) contacted the Base Information Transfer Center (BITC) office to determine if annual radiation training had been accomplished for their IONSCAN unit, which is a General License device. The IONSCAN operator replied that the device had been sent to Defense Reutilization Management Office (DRMO) for disposal. Disposal was accomplished without notification to the Installation Radiation Safety Officer (IRSO) or BE. The AF Form 2005 showed the device was inspected/accepted by the JBLE Logistics Readiness Squadron (LRS) on 26 April 2019. The DD Form 2368 indicates the device was accepted at DRMO Norfolk on 13 May 2019. According to Defense Logistics Agency (DLA), the device was coded as waste/scrap. DLA expressed surprise that their radiation detection equipment did not detect the device when it came on to their installation. However, the fact it is a Ni-63 source it would likely not be seen by the portal monitor. Unfortunately, DLA does not individually track items with this code. To best of DLA's knowledge, the device was included in a bulk shipment to a scrap yard in Georgia for destruction.



IONSCAN 400B



IONSCAN MODEL

DRMO Form 4005.pdf 400B Form 1348.pdf

The JBLE LRS stated the IONSCAN was a local purchase, and therefore received a local stock number that prevented it from being flagged in LRS systems as equipment that contained radioactive material. An inventory manager (an off-base asset) provided guidance on how to dispose of the device. These instructions did not include the requirements for properly disposing of radioactive material (RAM).

The last inventory and leak test were accomplished in February 2019 (results received and letter written dated 10 May 2019 after the device was turned in to DRMO for disposal). The previous leak test results letter was written by BE on 1 Oct 2018. It advised the operator to contact BE if the device was going to be turned in for disposal.

The JBLE IRSO was contacted by Regency Technologies on 30 August 2019 to inform him that no items matching the name or description of the IONSCAN were identified for resale (reuse or recycling) in the materials received from DLA in the period of time in question. The Regency representative noted that this would mean the device would have been scrapped (destroyed). The JBLE IRSO forwarded the RICS on 12 Sep 2019. The IRSO's e-mail response from Regency Technologies is included below as an embedded attachment.



CS
GLDResults_1Oct2018



Follow Up from
Regency Tech to JBL

B. RADIOACTIVE MATERIALS INVOLVED

1. **USAF Master Materials License:** 42-23539-01AF **Docket:** 030-28641
2. **Applicable USAF RAM Permit:** N/A **Docket:** N/A
3. **Commodity (i.e., compasses, etc):** IONSCAN 400B
4. **Radioisotope(s) Involved:** Nickel-63 **Activity:** 15 mCi
5. **Sealed Source Model/Serial No.:** 30306
6. **Commercial Carrier:**
7. **Radiopharmaceutical Supplier:** N/A

Rev: 17Jan 94

C. DESCRIPTION OF CORRECTIVE ACTIONS

1. Actions Taken to Correct or Abate:

LRS personnel were retrained on the content of the 2014 SG NOTAM (Improper Transfer of Generally Licensed Devices Containing Radioactive Material), to include requirements for proper disposal of equipment that contains RAM. The standard procedure requires LRS to contact BE for an assessment of equipment/material that may contain radioactive material. This process was used in March for an ADM-300 radiation survey meter turn in, but was not used for the IONSCAN in April. However, LRS has restarted this process (BE received a request for clearance in early August).

2. Additional Actions Planned and Estimated Time to Complete:

N/A

3. Recommendations/Administrative Guidance Given or Follow-up Actions Required:

BE provided guidance and clarification for the disposal of equipment that contains radioactive material. The Security Forces Squadron is currently working with BE and LRS to dispose of several hand held equipment devices that contain RAM. BE advised LRS that this equipment cannot be processed through DRMO (per AF and DoD instructions), and summarized the correct process (coordinate through AFRRAD, BE, and TMO).

D. CONTAMINATION INVOLVED

1. Monitoring Results/Radiation Levels (mR/hr, cpm):

Monitoring was not possible for this incident.

2. Surfaces and Dimensional Area Contaminated:

N/A for DoD facilities, since the device was intact. Contamination may be possible at the scrap yard where the device was sent. However, based on a review of a previous incident report, it is unlikely that an industrial shredder would be able to pulverize the source to the point that it would generate contamination.

3. Concentrations Released (Known or Estimated):

Based on the decay calculation, the worst-case estimate of activity is 14.3 mCi. Based on a review of a previous incident report, it is unlikely that an industrial shredder would be able to pulverize the source to the point that it would generate an airborne concentration.

4. Instruments and Method Used for Survey/Estimate:

The device was shipped intact, and no surveys were conducted.

E. PERSONS INVOLVED/EXPOSED

NAME	GRADE	SSAN	TELEPHONE NO
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1. Military:

2. Civilians:

3. Estimated Levels/Concentrations to which Exposed: RAMMIS indicates the device was first inventoried in Aug 2012. Initial activity at that time is assumed to be 15 mCi. A decay calculation shows the activity to be approximately 14.3 mCi. Normal use and exposure to workers in unrestricted areas would be below the annual limit on intake (ALI; 9 mCi (ingestion), 2 mCi (inhalation)). Ingestion of the whole source or inhalation of material generated by the destruction of the source would be the worst-case exposures, but both scenarios are unlikely. This

assessment is based on a review of a previous incident report that indicated it is unlikely that an industrial shredder would be able to pulverize the source to the point that it would generate an airborne concentration.



RAMMIS GLD
Inventory_6Aug2012

F. BASE PERSONNEL RESPONDING

1. Command Element:

2. BEE/HP: Lt Joshua Benda

4. Medical:

3. RSO: Maj Dave Johnson

5. DP:

G. NOTIFICATIONS

1. Air Force: 31 Jul 2019 (initial, by email)

3. State: N/A

2. Federal:

4. Local: N/A

5. Press Aware/On Scene/Press Releases Made: N/A

6. Reportable to NRC: Yes, telephonic notification to NRC Ops Center on 19 August 2019; received Incident Number 54227