



**DEPARTMENT OF THE AIR FORCE**  
**HEADQUARTERS UNITED STATES AIR FORCE**  
**WASHINGTON DC**

7 June 2016

**MEMORANDUM FOR** Administrator, NRC Region IV  
ATTN: Mr. Dapas

**FROM:** AFMSA/SG3PB

**SUBJECT:** Report, Damage of Radioactive Material – Two SNIPER Pods, Event No. 51946

1. IAW 10 CFR 20.2201(b) (2) (ii), we are providing a written report for the damage of radioactive material. The loss of material was reported on 20 May 2016 telephonically to NRC Operations Center, Event No. 51946 and via E-mail to NRC, Region IV (Ms. Simmons). The following information addresses the reporting requirements:
  - a. Description of the licensed material: The subject devices contained Am-241, two sources, each at 6 micro curie.
  - b. Description of circumstances for damage/loss: On 19 May 2016 at 0830, Bioenvironmental Engineering (BE) was notified of a B-52 aircraft carrying a SNIPER Pod crashed on the flight line of Andersen AFB. A site survey determined that the SNIPER Pod with Serial # 10389, was still intact, but damaged.
  - c. Statement of disposition: The SNIPER Pod was surveyed for radiation, but all readings were at or below background levels. The crash site is cordoned off and patrolled by Security Forces, but no other actions have been taken to secure or abate the hazard. The pod is currently still partially under the B-52 wing and the Safety Investigation Board has not completed their investigation.
  - d. Exposures to individuals: Based on radiological monitoring of similar sources/devices, the estimated level of radiation exposure would be negligible. The NUREG/CR-1156 (Nov 1979) performed analyses of Am-241 foil sources contained in Ionization Chamber Smoke Detectors (ICSD) at three micro curies each. The report stated "Analysis shows that the manufacture, distribution, normal use, and disposal of 14 million Am-241 ICSD's each containing three micro curies of Am-241 will result in a collective total body dose of 1100 person- rem. Disposal is by either sanitary landfill or incineration." Further, the report stated, "Analysis of potential accidents with Am-241 ICSD's showed the dose commitments received by maximally exposed individuals to be significantly within the safety criteria standards required by the Nuclear Regulatory Commission." A comparative review would indicate that exposure from 12 micro curies Am-241 plated sources would not likely exceed public dose standards.
  - e. Actions taken: Once the Safety Investigation Board has completed their investigation and removal of the aircraft has begun, the SNIPER Pod will be moved from the site to a secure location. We will then take additional swipe samples to better determine if it is leaking. It will then be packaged and transferred for repair or disposal IAW all applicable regulations. The POD is belonging to Minot AFB ND under the Permit # ND-00693-00/02 and the inventory would be updated accordingly.

- f. Procedures/measures to rectify future loss: Safety Investigation Board report will be implemented to avoid such future aircraft accidents.
2. If you have any questions, please contact me at 703-681-6871 or E-Mail at [ramachandra.k.bhat.civ@mail.mil](mailto:ramachandra.k.bhat.civ@mail.mil).

**BHAT.RAMACHAN  
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DN: c=US, o=U.S. Government, ou=DoD,  
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Date: 2016.06.07 09:03:41 -04'00'

**Ramachandra K. Bhat, Ph.D., CHP  
Senior Health Physicist  
USAF Radioisotope Committee Secretariat  
AF Medical Support Agency  
Office of the Surgeon General**

**cc:**

**NRC Region IV (Ms. Simmons)  
NRC Operations Center (Mr. Norwood)  
PACAF 36 MEDICAL OPERATIONS (Capt Lathbury)  
PACAF 36 MEDICAL OPERATIONS (SSgt Lowe)  
HQ PACAF/SGPB (Col Caravello)  
Minot AFB (Maj Judy)**

## Evans, Robert

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**From:** Bhat, Ramachandra K CIV USAF AFMSA (US) <ramachandra.k.bhat.civ@mail.mil>  
**Sent:** Wednesday, May 10, 2017 6:33 AM  
**To:** Evans, Robert  
**Cc:** Cagle, Anthony J Lt Col USAF AFMSA (US); Nemmers, Scott A Lt Col USAF AFMSA (US); Lopez, Phillip M Capt USAF AFMSA (US); Murren, Bruce A CTR (US); Webb, Rupert CIV USAF (US); Rodriguez, Rogelio (Roy) Capt USAF 86 MDG (US); Bhat, Ramachandra K CIV USAF AFMSA (US)  
**Subject:** [External\_Sender] FW: Andersen AFB - unrecovered sources - were they recovered?  
**Attachments:** image001.gif; Report Damage of Radioactive Material - EN 51946.pdf

Bob,

I am replying to your 3 May 2017 email which is given below.

The Safety Investigation Board has completed the investigation and the B-52 has been released for disposition.

The Sniper POD source is still on Guam at a secured place. The Installation RSO (IRSO), Capt Rodriguez, is currently working to get it shipped to Mr. Webb at Robins AFB GA. I have requested Capt Rodriguez to inform us when the Sniper POD reaches Robin AFB. The Sniper POD now is an exempt item.

V/R,

ROY RODRIGUEZ, Capt, USAF, BSC  
Chief, Bioenvironmental Engineering Ops  
366-7166

## NRC Event Notification Report for May 31, 2016

Non-Agreement State	Event Number: 51946
Rep Org: UNITED STATES AIR FORCE Licensee: UNITED STATES AIR FORCE Region: 4 City: ANDERSEN AFB State: GU County: License #: 42-23539-01AF Agreement: N Docket: NRC Notified By: RAMACHANDRA BHAT HQ OPS Officer: DONALD NORWOOD	Notification Date: 05/20/2016 Notification Time: 15:25 [ET] Event Date: 05/18/2016 Event Time: 08:30 [GST] Last Update Date: 05/20/2016
Emergency Class: NON EMERGENCY 10 CFR Section: 20.2201(a)(1)(i) - LOST/STOLEN LNM>1000X	Person (Organization): GEOFFREY MILLER (R4DO) NMSS_EVENTS_NOTIFICA (EMAI)

This material event contains a "Less than Cat 3 " level of radioactive material.

### Event Text

#### LOST AM-241 SOURCE

"A B-52 bomber crashed shortly after take-off at Andersen AF base in Guam at 0830 local time (2230 GMT, Wednesday, 18 May 2016). The B-52 had a Sniper Pod which contained 12 microcuries of Am-241. So far the safety team could not locate the Sniper Pod at the incident spot.

"The value for Am-241 listed in Appendix C to [10 CFR] Part 20 is 0.001 microcuries. Each Sniper Pod carries 12 microcuries of Am-241. Hence, we [USAF] reported the incident to the NRC Operations Center in accordance with 10 CFR 20.2201. We will provide you [NRC with a written] incident report within 30 days."

THIS MATERIAL EVENT CONTAINS A "LESS THAN CAT 3" LEVEL OF RADIOACTIVE MATERIAL

Sources that are "Less than IAEA Category 3 sources," are either sources that are very unlikely to cause permanent injury to individuals or contain a very small amount of radioactive material that would not cause any permanent injury. Some of these sources, such as moisture density gauges or thickness gauges that are Category 4, the amount of unshielded radioactive material, if not safely managed or securely protected, could possibly - although it is unlikely - temporarily injure someone who handled it or were otherwise in contact with it, or who were close to it for a period of many weeks. For additional information go to [http://www-pub.iaea.org/MTCD/publications/PDF/Pub1227\\_web.pdf](http://www-pub.iaea.org/MTCD/publications/PDF/Pub1227_web.pdf)

## Single Event Report

**NMED Item Number: 160216****Narrative:****Last Updated:** 05/31/2016

The Department of the Air Force reported the loss of a 444 kBq (12 µCi) Am-241 source. A B-52 bomber crashed shortly after take-off at Andersen Air Force Base in Guam on 5/18/2016. The B-52 contained a sniper pod that contained the source. The safety team has not located the sniper pod at the incident site. INL has requested additional information for this event.

Event Date: 05/18/2016 Date Reported to Agreement State:  
Discovery Date: 05/18/2016 Date Reported to NRC: 05/20/2016

**Licensee/Reporting Party Information:**

Regulated By: NRC Reciprocity: NONE  
License Number: 42-23539-01AF Name: DEPARTMENT OF THE AIR FORCE  
NRC Docket Number: 03028641 City: BOLLING AFB  
NRC Program Code: 03614 State: DISTRICT OF COLUMBIA  
NRC Region: 4

**Site of Event:**

Site Name: ANDERSEN AFB Territory: GUAM

**Additional Involved Party:**

License Number: NA Name: NA  
NRC Docket Number: NA City: NA  
NRC Program Code: NA State: NA  
NRC Region: NA

**Other Information:**

NRC Reportable Event:	Y	Abnormal Occurrence:	N
Agreement State Reportable Event:	N	Investigation:	N
Atomic Energy Act Material:	Y	Record Complete:	R
Consultant Hired:	N	Event Closed by Region/State:	N

**Event Type:**

LAS - LOST/ABANDONED/STOLEN

**Event Cause:**

LAS

Cause: EXTERNAL / VEHICLE ACCIDENT OR DEVICE STRUCK BY VEHICLE

**Event IAEA Aggregate Category:**

LAS

IAEA Aggregate Category: 5

**Corrective Actions Information:**

Event Type: Number: Action:

LAS 1 NOT REPORTED

**Source/Radioactive Material Information:**

LAS

Source Number: 1

Source/Material: SEALED SOURCE OTHER Radionuclide: AM-241

Manufacturer: NR Activity (Ci): 0.000012

Model Number: NR IAEA Category: 5

Serial Number: NR

**Device/Associated Equipment Information:**

LAS

Device Number: 1

Device/Equipment: AIRCRAFT PART, NAV-TARGETING Model Number: NA

Manufacturer: NA Serial Number: NA

**Reporting Requirement Information:**Event  
Type: Requirement:

LAS 20.2201(a)(1)(i) - Lost, stolen, or missing licensed material in a quantity greater than or equal to 1,000 times the Appendix C quantities.

**Keywords:**

Event Type: Keyword:

LAS MATERIAL LOST AND NOT FOUND

**Reference Documents:**

Reference Document Number: Entry Date: Retraction Date: Type of Report:

EN51946 05/31/2016 EVENT NOTIFICATION