

# RI - DNMS Licensee Event Report Disposition

Licensee:	US Coast Guard		
Event Description:	Loss of Material		
License No:	009900001	Docket No:	
Event Date:	04/17/17	Report Date:	04/17/17
		MLER-RI:	2017-005
		HQ Ops Event #:	52684

1. REPORTING REQUIREMENT

<input type="checkbox"/> 10 CFR 20.1906 Package Contamination <input checked="" type="checkbox"/> 10 CFR 20.2201 Theft or Loss <input type="checkbox"/> 10 CFR 20.2203 30 Day Report <input type="checkbox"/> Other	<input type="checkbox"/> 10 CFR 30.50 Report <input type="checkbox"/> 10 CFR 35.3045 Medical Event <input type="checkbox"/> License Condition <div style="border: 1px solid black; height: 20px; width: 100%;"></div>
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2. ✓ REGION I RESPONSE

<input type="checkbox"/> Immediate Site Inspection <input checked="" type="checkbox"/> Special Inspection <input type="checkbox"/> Telephone Inquiry <input type="checkbox"/> Preliminary Notification/Report <input checked="" type="checkbox"/> Information Entered in RI Log <input type="checkbox"/> Report Referred To:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Inspector/Date</td> <td></td> </tr> <tr> <td>Inspector/Date</td> <td style="text-align: center;">Todd Jackson 9999001/2015001</td> </tr> <tr> <td>Inspector/Date</td> <td></td> </tr> </table> <input type="checkbox"/> Daily Report <input type="checkbox"/> Review at Next Inspection	Inspector/Date		Inspector/Date	Todd Jackson 9999001/2015001	Inspector/Date	
Inspector/Date							
Inspector/Date	Todd Jackson 9999001/2015001						
Inspector/Date							

3. ✓ REPORT EVALUATION

<input checked="" type="checkbox"/> Description of Event <input checked="" type="checkbox"/> Levels of RAM Involved <input checked="" type="checkbox"/> Cause of Event	<input checked="" type="checkbox"/> Corrective Actions <input checked="" type="checkbox"/> Calculations Adequate <input type="checkbox"/> Additional Information Requested from Licensee
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4. ✓ MANAGEMENT DIRECTIVE 8.3 EVALUATION

<input type="checkbox"/> Release w/Exposure > Limits <input type="checkbox"/> Repeated Inadequate Control <input type="checkbox"/> Exposure 5x Limits <input type="checkbox"/> Potential Fatality If any of the above are involved: <input type="checkbox"/> Considered Need for IIT	<input type="checkbox"/> Deliberate Misuse w/Exposure > Limits <input type="checkbox"/> Pkging Failure > 10 rads/hr or Contamination > 1000x Limits <input type="checkbox"/> Large# Indivs w/Exp > Limits or Medical Deterministic Effects <input type="checkbox"/> Unique Circumstances or Safeguards Concerns <input type="checkbox"/> Considered Need for AIT
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Decision/Made By/Date: \_\_\_\_\_

5. ✓ MANAGEMENT DIRECTIVE 8.10 EVALUATION (additional evaluation for medical events only)

<input type="checkbox"/> Timeliness - Inspection Meets Requirements (5 days for overdose / 10 days for underdose) <input type="checkbox"/> Medical Consultant Used-Name of Consultant/Date of Report: _____ <input type="checkbox"/> Medical Consultant Determined Event Directly Contributed to Fatality <input type="checkbox"/> Device Failure with Possible Adverse Generic Implications <input type="checkbox"/> HQ or Contractor Support Required to Evaluate Consequences
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6. SPECIAL INSTRUCTIONS OR COMMENTS

<input type="checkbox"/> Non-Public, MD 3.4 non-public _____	Inspector Signature: <u><i>Todd Jackson</i></u>	Date: <u>6/13/17</u>
<input checked="" type="checkbox"/> Public-SUNSI REVIEW COMPLETE	Branch Chief Initials: <u><i>BRM</i></u>	Date: <u>6/14/17</u>

U.S. Department of  
Homeland Security

United States  
Coast Guard



Commandant  
United States Coast Guard

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Washington, DC 20593-7714  
Staff Symbol: CG-4  
Phone: (202) 475-5555

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## MEMORANDUM

From: *ACG 5/16/17*  
A. Curry, Jr.  
COMDT (CG-4)

Reply to: A. G. Schanno, LCDR  
Attn of: (202) 475-5582

To: Regional Administrator  
U. S. Nuclear Regulatory Commission, Region 1

Subj: U. S. COAST GUARD LOSS OF LICENSED MATERIAL REPORTABLE UNDER  
TITLE 10, CODE OF FEDERAL REGULATIONS, PART 20.2201

1. The loss of licensed material, reportable under Title 10, Code of Federal Regulations (CFR), Section 20.2201 occurred with radioactive material that had been installed on Coast Guard aircraft as part of an in-flight emergency indicating system. An internal Coast Guard investigation revealed that six aircraft of the 122 retired did not have the radioactive material removed and accounted for prior to divestiture.
2. On 17 April, 2017, a telephone report for the loss of licensed material (Report Number 52684) was provided to the Nuclear Regulatory Commission (NRC) Operations Center pursuant to 10 CFR Section 20.2201(a). The enclosed written report provides the information required by 10 CFR Section 20.2201(b).

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Enclosure: Information Concerning Loss of Radioactive Material

## Information Concerning Loss of Radioactive Material

1. Background: The lost radioactive material consisted of 20 in flight blade inspection system (IBIS) pressure indicators; 15 installed on five HH-52 aircraft (three each) and five on the only HH-3F aircraft (for a total of six aircraft affected). All IBIS pressure indicators (P/N:12200-1) each contained one, 100-microcurie, Strontium-90 source.
2. Details: The lost IBIS indicators were installed on Coast Guard HH-52 and HH-3F helicopters at the time of their retirement, between 1989 and 1994. The indicators on these six aircraft were not removed, which was contrary to established Coast Guard demilitarization processes. The Coast Guard thus lost accountability of these IBIS indicators during divestiture and property transfer; most were donated to museums. In August 2014, Mr. Todd Jackson, CHP, Senior Health Physicist, Division of Nuclear Materials Safety, USNRC Region 1, informed the Coast Guard of one HH-52 helicopter, located at the New England Air Museum in Windsor Locks, Connecticut, which still had IBIS canisters installed. This prompted an extensive internal Coast Guard investigation to locate or account for all retired HH-52 and HH-3F aircraft and determine IBIS equipment installation status. The investigation revealed that 5 additional aircraft out of the original 122 had been improperly processed and still had IBIS canisters installed.
3. Aircraft not in use (five total): During the course of the investigation the Coast Guard contracted with radiological experts to remove the IBIS canisters from four HH-52 aircraft and one HH-3F aircraft. Testing of the immediate areas around each canister was completed in accordance with 10 CFR 31.5; all test results proved there was no contamination. All removed IBIS indicators have been shipped to General Nucleonics Inc., the original equipment manufacturer, for destruction.
4. Aircraft in use (one total): A civil operator, ARIS Helicopters Inc. out of Van Nuys, CA, is still flying one of the HH-52 aircraft found with IBIS installed. Discussions with the owner indicate that the IBIS equipment is in good working order and maintenance personnel know how to work on the system and are familiar with the radiological hazards. The Coast Guard is working with the State of California Department of Health and General Nucleonics Inc to document possession and general license transfer from the Coast Guard to ARIS Helicopters Inc.

Non-Agreement State	Event Number: 52684
Rep Org: US COAST GUARD Licensee: US COAST GUARD Region: 1 City: WASHINGTON State: DC County: License #: GL Agreement: N Docket: NRC Notified By: RANDAL HARTNEGTT HQ OPS Officer: DONG HWA PARK	Notification Date: 04/17/2017 Notification Time: 13:00 [ET] Event Date: 04/17/2017 Event Time: [EDT] Last Update Date: 04/17/2017
Emergency Class: NON EMERGENCY 10 CFR Section: 20.2201(a)(1)(i) - LOST/STOLEN LNM>1000X	Person (Organization): FRANK ARNER (R1DO) NMSS_EVENTS_NOTIFIC (EMAI)

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

#### Event Text

##### UNACCOUNTED STRONTIUM-90 SOURCES

The U.S. Coast Guard did not properly dispose of Inflight Blade Inspection Systems (IBIS) containing 100 microCurie, Sr-90 sources during the retirement of 72 HH-52 aircrafts from 1987 to 1989 and 50 HH-3 aircrafts from 1990 to 1994. The HH-52 contain 3 canisters and HH-3 contain 5 canisters, each canister contain a 100 microCurie, Sr-90 source. Most canisters were retrieved and returned to the manufacture, General Nucleonics, Inc.

The licensee has notified R1 (Jackson).

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](http://www-pub.iaea.org/MTCD/publications/PDF/Pub1227_web)