

## Physics Department Minor Incidents Log

<b>Incident No.</b>	2011-01	<b>Date of Report:</b> 3/24/2011
<b>Reportable/Classification:</b>	Not ORPS recordable per event categorizer	<b>Date of Incident:</b> 3/22/2011
<b>Status:</b>	Final Report	
<b>Groups Involved:</b>	Department ESSH	
<b>Lead Author:</b>	R. Gill	

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### **Description:**

While verifying the Physics Department sealed radioactive source inventory, the Radiation Control Technician (RCT) was unable to locate a  $^{241}\text{Am}$  source. The yellow radioactive material tag with the source's bar code was located, but no source was attached to the tag. The source was a  $9.9 \mu\text{Ci } ^{241}\text{Am}$  source with no manufacturer's label, or other identifying markings on a 5-mm diameter metal container. After searching the source storage area did not locate the source, the RCT notified the Department's Source Custodian. Both persons then reviewed records for the source, and continued to search the room where the source was last stored and the room where the source was last known to be used. When this expanded search also failed to find the source, the Event Categorizer was notified. The loss was determined to be not reportable to ORPS or SCBNL since the source was less than 50% of the DOE accountable activity. The Department Chair was then notified of the situation.

The source was used for several years in a lab that was decommissioned. In February, 2010 it was removed from that room and stored in the Physics Department source storage room, as noted in the source logbook. In October, 2010 the source was located during the Department's annual source inventory. There were no entries showing that the source was logged out after February, 2010.

The morning after the source was reported to be lost, the RCT moved some file cabinets and found the source on the floor beside the cabinets. The source was still inside the controlled area designated for the storage of radioactive materials. After consultation with the Department Chair, it was decided to report the incident following the Physics Department incident procedure, and to file a Radiological Awareness Report (RAR).

**Root Cause:** Personnel Error, Inattention to Details.

During inventorying, moving or otherwise handling the source, both the yellow radioactive material tag and the source became separated from the holder and container. If personnel handling the source had been more observant, they may have recognized that the tag and source were no longer together and have located the source immediately.

**Contributing Causes:** Physical Conditions.

When last used, the source was attached to a rod to enable it to be positioned close to a detector. The source was affixed using adhesive tape. This arrangement did not provide a secure bond, allowing the source to easily become detached. In addition, the small size and mass of the source contributed to the temporary loss of the source. When the source fell to the floor, it was too small to be easily noticed or to be heard when it struck the floor. The size and lack of identifying markings also made it easy to misplace the source, or easy to fail to recognize that it was a source.

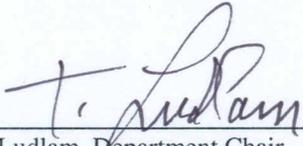
### **Corrective Actions:**

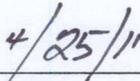
This source has been placed in a separate vial that is marked with the source bar code number and attached to the radioactive material tag. Other sources were reviewed to determine if the same problem could occur with other sources. No other sources in the department inventory were lacking identifying markings or not secured to a mounting assembly, and all tags are attached to the corresponding source.

### **Lessons Learned:**

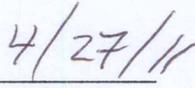
When performing inventory checks, it is necessary to always confirm that the source is actually present and in a reliable container. Unmarked sources are especially important to be placed in an identifiable storage container when not in use. Such a container should be chosen to make it clear that the source is actually in place by visual inspection.

The above incident has been investigated and no further action is required. Corrective Actions will be entered into the Physics Department's Assessment Tracking System and tracked to completion.

  
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T. Ludlam, Department Chair

  
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Date

  
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B. Johnson, ESSH Committee Chair

  
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Date