



National Aeronautics and
Space Administration



SA-01-03

Langley Research Center Safety Alert

Date: January 27, 2003

TO: All Langley Employees

FROM: 429/Head, Safety and Facility Assurance Office, OSMA

SUBJECT: Control and Accountability of Ionizing Radiation Sources

Several weeks ago a piece of mildly radioactive nickel-thorium alloy was discovered in the office of a recently retired employee. In addition, there have been recent instances of x-ray devices being purchased without first being approved by the LaRC Radiation Safety Officer (RSO). While these events did not pose a health threat, they may indicate a possible problem with the control and accountability of radiation sources.

It is LaRC policy that all radioactive items be controlled in accordance with the Center's license from the Nuclear Regulatory Commission. This requires all radioactive items to be kept locked up in appropriately posted/labeled locations when not in use. Also, an inventory of radioactive materials must be maintained by LaRC, which is performed by the LaRC RSO.

It is important to note that some scientific instruments may contain small radioactive sources for purposes such as static elimination or sources of ionization or excitation. While these sources may only contain small amounts of radioactivity, it is important to ensure that the LaRC RSO is informed of their presence on the Center. The LaRC RSO will in turn ensure that any licensing requirements are met.

Articles that may include radioactive materials or may themselves be radioactive include:

- Gas chromatographs,
- Aerosol analyzers,
- Static eliminators,
- Liquid scintillation counters,
- Ion mobility spectrometers,
- X-ray fluorescence analyzers,
- Lead paint scanners, and
- Nickel-thorium and magnesium-thorium alloys in bulk form

(This Safety Alert to be posted on Facility Bulletin Boards for a Minimum of 30 days.)

Items specifically exempt from these requirements are smoke detectors and manufactured thorium alloy aircraft components.

Any device or material that emits radiation requires approval using a Langley Form (LF) 44A, "Radiation Hazard Form" prior to its purchase. Employees are asked to review any radioactive sources they have and ensure the material/device was approved via a LF 44A. If the use of any material/device was not approved using a LF 44A, a LF 44A shall be submitted for approval as soon as possible.

For more details on the requirements of the LaRC Ionizing Radiation Safety program please refer to LAPG 1710.5, Ionizing Radiation, or contact the LaRC RSO, Kim Merritt, at 864-3210 or k.merritt@larc.nasa.gov.



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