



01-12632-02

DEPARTMENT OF THE ARMY
U.S. ARMY AEROMEDICAL RESEARCH LABORATORY
FORT RUCKER, ALABAMA 36362-0577

REPLY TO
ATTENTION OF:

MCMR-UAC

6 February 1997

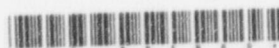
MEMORANDUM FOR U.S. Nuclear Regulatory Commission, Division of Nuclear Materials
Safety, ATTN: Jay L. Henson, 101 Marietta Street, N.W., Suite
2900, Atlanta, GA 30323-0199

SUBJECT: Summary of Internal Radiation Compliance Audit, 29 October 1996

1. In order to evaluate the status of the Radiation Protection Program (RPP) at the U.S. Army Aeromedical Research Laboratory (USAARL), its Radiation Control/Biosafety Committee (RCBC) arranged for an independent radiation compliance audit to be performed by Mr. Al Townsend, Environmental Protection Specialist, Directorate of Public Works, Fort Rucker, Alabama.
2. The 29 October 1996 audit did not reveal any evidence of current or past safety hazards from use or storage of radioisotopes at USAARL. However, some procedural and administrative deficiencies were noted.
3. The following is a summary of the deficiencies in the radiation compliance audit and the corrective actions taken to date:
 - Ambiguity regarding duties of the Alternate Radiation Protection Officer (ARPO).
 - *Reflecting the importance that USAARL places on complying with NRC regulations and policies, a higher ranking ARPO was assigned effective 5 November 1996. The RPO briefed the new ARPO regarding all aspects of the USAARL Radiation Protection Program and was delegated specific surveillance, training, and administrative tasks.*
 - No records between 1993-1995 for biannual sealed source leak test results.
 - *Leak tests were performed and submitted in September 1996. The negative results were reviewed by the RPO, initialed, and filed appropriately by the ARPO.*
 - No indication of RPO review of quarterly exposure results since 1993.
 - *The RPO conducted a review of all dosimetry results from January 1990 to April 1996. All results were initialed as having been reviewed. Results were tabulated and revealed only five positive dosimetry badge readings, none exceeding 17 mREM. There have been no positive readings since 1993. Signature forms will be used to document that personnel are informed of positive results and yearly exposure summaries.*

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- NRC was not notified of the change from monthly to quarterly submissions of dosimetry badges.
 - *A 21 November 1996 letter to the NRC requested permission for quarterly exchange of dosimetry badges.*
- No documented quarterly RCBC meetings since 1993.
 - *The RCBC chairman reinvigorated the RCC and has reinstituted formal quarterly RCBC meetings. A lengthy RCBC meeting on 19 December 1996 was attended by all members.*
- No written documentation for approval/disapproval of radiation sources.
 - *The USAARL form to request acquisition of radiation sources has been reviewed with personnel authorized to request such items. The RCBC reviewed new requests at its last meeting. Associated forms will henceforth be maintained and properly filed by the RCBC and ARPO.*
- No written documentation approving the training and experience of individual users. No records between 1993-1995 for biannual radiation safety training for laboratory, custodial, logistical, and supervisory personnel.
 - *A radiation safety video tape was purchased. The ARPO, under guidance from the RPO, developed lists of USAARL personnel that require biannual radiation safety training. Signature forms to document training have also been developed. Logistical and laboratory personnel were trained in December 1996. The remainder were trained during January 1997.*
- No written documentation showing the formulation and review of the Radiation Protection Program.
 - *USAARL Policy 70-4, Radiation Safety, was reviewed and updated as of December 1996.*
- No documentation of monthly radiac meter surveys.
 - *Radiac meter survey results are on file, however, results from 1993 to October 1996 were marked as probably unreliable. The problem causing this was identified and corrected. Monthly surveys are now being conducted by the ARPO or RPO, properly recorded, results reviewed by the RPO, and quarterly summaries presented to the RCBC.*

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- Records documenting receipt, use, storage, and shipment of radioactive sources were inadequate.
 - *Laboratory and logistic personnel were trained in December 1996 regarding use of appropriate USAARL RPP procedures and forms to comply with ALARA requirements. The ARPO will keep all related forms and documentation using a structured (Marks) filing system.*
- Current inventories of all radioactive materials were not available.
 - *A updated inventory of radiation sources in USAARL was conducted on 18 December 1996.*
- Failure to meet ALARA requirements.
 - *The corrective actions listed above will lead to compliance with ALARA program requirements.*

4. We appreciate Mr. Townsend's independent audit of the USAARL RPP. As the corrective measures listed above indicate, despite staff shortages at USAARL, we are committed to implementing a comprehensive and active RPP in accordance with NRC guidelines.



DENNIS F. SHANAHAN
Colonel, MC, SFS
Commanding