



DEPARTMENT OF THE ARMY
HEADQUARTERS, US ARMY COMMUNICATIONS-ELECTRONICS COMMAND
AND FORT MONMOUTH
FORT MONMOUTH, NEW JERSEY 07703-5000
March 29, 1988

REPLY TO
ATTENTION OF

CECOM Safety Office

29-01022-14

Mr. William T. Russell
Regional Administrator
Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Dear Mr. Russell:

This refers to a March 23, 1988 telephone conversation between Mr. Steven A. Horne, Chief, Safety Office, U.S. Army Communications-Electronics Command (CECOM), and Dr. John Glenn, your organization, subject: Notice of Noncompliance.

As discussed during referenced conversation, this command is providing notification of noncompliance in accordance with Title 10, Code of Federal Regulations, Part 21.21, with regards to NRC License 29-01022-14 issued to this command. At the present time, we are unable to meet the calibration provisions for alpha survey instrumentation as set forth in our NRC license application dated May 7, 1986. The following information concerning the nature of the noncompliance is provided:

a. The AN/PDR-56F Alpha Radiac Set is currently the Army's principal alpha survey instrument available to users at Army facilities worldwide for Active (Health and Safety) purposes. Procedures for calibration of the AN/PDR-56F, as set forth in paragraph 8, Supplement F of our application states in part that "...Active meters must be calibrated at two points on each scale ...and survey meter tolerance of each calibration point must be within ± 10 percent of the standards calculated values." Calibration of the AN/PDR-56F is performed by using the AN/UDM-7C Radiac Calibrator Set which contains plutonium-239 and is supposed to be traceable to the National Bureau of Standards (NBS).

b. The U.S. Army Test, Measurement and Diagnostic Equipment Support Group (USATSG), whose mission includes coordination of the calibration of all Army equipment, submitted AN/UDM-7C Radiac Calibrators to the NBS for the purpose of establishing traceability to NBS standards. NBS subsequently reported to the

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USATSG that under only the most optimum conditions can the AN/UDM-7C activity be determined to be within an uncertainty of ± 16 percent. Under normal field use conditions, the uncertainty would be at least ± 30 percent, and at no time will the uncertainty be ± 10 percent or less as required for traceability. On March 22, 1988, this command received notification from USATSG of the above information.

In order to resolve this matter, the following solutions are being considered:

a. Procurement of "large-area" alpha calibration sources. These sources, developed by the NBS, have traceability to the NBS with uncertainties below ± 10 percent, and are available commercially from the Amersham Corporation. Using this approach will require an amendment to NRC License 29-01022-14 to allow for acquisition, use, storage, transportation and disposal of sufficient quantities of these sources to support the Army's worldwide mission.

b. Modification of the AN/UDM-6 Radiac Calibrator Set for use with the AN/PDR-56F. The AN/UDM-6, which also utilizes plutonium-239 sources, is traceable to the NBS with uncertainties of less than ± 10 percent. The modification would involve placement of the four plutonium sources used in the AN/UDM-6 into new jig assemblies large enough to accommodate the probe face of the AN/PDR-56F. Prototype modified jig assemblies have been manufactured in limited quantities at the Los Alamos National Laboratory. Using this approach will require an amendment to NRC License 29-01022-14 to show the modification of the AN/UDM-6.

c. Procurement of alternative Alpha Radiac Sets to replace the AN/PDR-56F. The AN/PDR-60, previously utilized by the Army, can be properly calibrated utilizing the AN/UDM-6 Radiac Calibrator Set. Sufficient quantities of these or similar commercially available alpha survey instruments to meet the Army's worldwide mission would have to be procured.

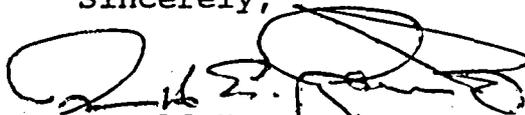
Until a final solution to the problem can be determined and fully implemented, Army activities needing to determine levels of alpha contamination on facilities or equipment will be directed to submit wipe test samples to one of several Army laboratories located worldwide for analysis using sophisticated gas proportional counting systems.

The AN/PDR-56F Alpha Radiac Set is also utilized by other Army licensees for Active (Health and Safety) purposes. Headquarters, U.S. Army Materiel Command, the Department of the Army licensing authority, will advise the field to notify the appropriate NRC Regional Offices regarding their affected licenses and actions they have taken concerning this matter.

Due to the time required to properly analyze each of the possible methods of corrective action, and to procure the necessary material and/or NRC license amendments once a method has been selected, this command proposes to provide the NRC with progress reports every 90 days until this problem has been resolved.

Point of contact for CECOM is Mr. Steven Horne, (201) 544-4427.

Sincerely,



Ronald E. Gornto
Colonel, GS
Chief of Staff

Copies Furnished:

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