



DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY COMMUNICATIONS AND ELECTRONICS
MATERIEL READINESS COMMAND AND FORT MONMOUTH
FORT MONMOUTH, NEW JERSEY 07703

REPLY TO
ATTENTION OF:

DRSEL-SF-H

12 NOV 1980

US Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Sir:

1. Reference is made to our letters, DRSEL-SF-H, dated 21 February 1980, 11 April 1980, 15 April 1980 and 25 June 1980 and to telephone conversation between Mr. S. A. Horne, this command, and Dr. Laurence F. Friedman, your organization, on 30 October 1980, subject: Bloating/Bulging Sealed Source Problem. These actions were initiated by this command as a compliance action under US Nuclear Regulatory Commission (NRC) Byproduct Material License Number 29-01022-08 authorizing the possession and use of the AN/UDM-2 Radiac Calibrator Set by the Department of the Army and under Title 10, Code of Federal Regulations (10 CFR), Part 21 of NRC regulations.
2. ~~As indicated during referenced telephone conversation, this command is in receipt of two each Oak Ridge National Laboratory (ORNL) Reports dated August 1980 and 1 October 1980, subject: Examination of Strontium-90 Source Capsules from US Army Calibration Devices (Incl 1 and 2), which stated that (1) the sealed sources actually thought to be leaking were, in fact, not leaking radioactive material, and (2) radioassay analyses of one each 25 millicurie sealed source and one each 20 microcurie sealed source indicated that the contractor of the radiac calibrator, EON Corporation, Brooklyn, New York, provided the Army with sealed sources greater than that authorized under referenced license as well as that required by the specifications in ECOM Drawing Numbers SM-B-509048 and SM-B-509057, i.e., the 25 millicurie source contained 43.1 millicuries as of 17 September 1980 and the 20 microcurie source contained 123 microcuries as of 29 September 1980. Invoices provided EON Corporation by one of its subcontractors, Gulf Nuclear, Inc., Houston, Texas, formerly Nuclear Environmental Engineering, Inc., indicate sources to contain 25.0 millicuries and/or 20.0 microcuries of ⁹⁰Strontium, contrary to the ORNL analysis.~~
3. The Radiac Group of the Combat Surveillance and Target Acquisition (CSTA) Laboratory, US Army Electronics Research and Development Command (ERADCOM), the developers of the AN/UDM-2 Radiac Calibrator Set, in conjunction with this headquarters is attempting to resolve this discrepancy. CSTA/ERADCOM has requested

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the services of the National Bureau of Standards (NBS), US Department of Commerce under Project Order 80-19507 to develop a calibration procedure utilizing an extrapolation chamber to determine the activity of the sources incorporated into the AN/UDM-2 Radiac Calibrator Set. Further, destructive testing of all sealed sources incorporated in the AN/UDM-2 provided to the NBS will be performed in order to corroborate the results of the ORNL analysis.

4. This command is requesting, through the Army chain-of-command, that a meeting be arranged between representatives of Headquarters NRC and Army elements in order to discuss the scope of the above problem with respect to referenced license. It is anticipated that the outcome of this meeting will require an amendment to this command's license.

FOR THE COMMANDER:

Bernard M. Savaiko

BERNARD M. SAVAIKO
Chief, Safety Office

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Cdr, DRCSF-P, w/o Incl

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