DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND
5001 EISENHOWER AVE., ALEXANDRIA, VA. 22333

DRCSF-P

26 April 1978

Director
Nuclear Material Safety and Safeguards
ATTN: Radioisotopes Licensing Branch
US Nuclear Regulatory Commission
Washington DC 20555

Gentlemen:

Forwarded is US Army Communications and Electronics Materiel Readiness Command (formerly US Army Electronics Command) application for renewal and revision of Special Nuclear Material License Number SNM-1327.

Please acknowledge receipt of correspondence on inclosed NRC-46 Reply Card.

Sincerely,

DARWIN N. TARAS
Chief, Health Physics
Safety Office

2 Incl
as

CF:
HQDA (DASG-HCH-E) WASH DC 20310 w/incl 1 (dupe)
Dir, DARCOM FSA, Charlestown IN 47111 w/incl

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

DRSEL-SF-H

24 APR 1978

SUBJECT: Renewal and Complete Revision of US Nuclear Regulatory Commission (NRC) Special Nuclear Material License Number SNM-1327

Commander
US Army Materiel Development
and Readiness Command
ATTN: DRCSF-P
5001 Eisenhower Avenue
Alexandria, Virginia 22333

1. The Department of the Army, US Army Communications and Electronics Materiel Readiness Command (CERCOM), ATTN: DRSEL-SF, Fort Monmouth, New Jersey, is hereby making application for renewal and complete revision to subject license to receive title to, own, acquire, deliver, receive, possess, use and transfer special nuclear material in accordance with paragraph 70.21 of Title 10, Chapter 1, Code of Federal Regulations, Part 70.

2. The special nuclear material, ^{239}Plutonium, is used in the Model CS-1 clip check sources manufactured by the Eberline Instrument Corporation (EIC), Santa Fe, New Mexico. Each check source contains less than 10 nanocuries of ^{239}Plutonium. The maximum quantity that will be possessed, at anyone time will be less than one (1) gram of ^{239}Plutonium.

3. Request this license be renewed for an additional period of five (5) years.

4. Management of the radiation protection program for these check sources are the responsibility of Mr. Bernard M. Savaiko, License Manager, Mr. Steven A. Horne, Radiation Protection Officer (RPO), and Mr. Barry J. Silber, Alternate RPO. Supplement A contains the qualifications of those individuals. Supplement B contains the radiation protection program for the control of this radioactive commodity.

5. The EIC Model CS-1 check sources are used to check the functional operation of the AN/PDR-60 standard Army alpha detection instrument which is the same instrument as the commercially available EIC Model PAC-1SAGA

Portable Alpha Scintillation Counter. These sources are possessed worldwide by Department of Defense installations and activities under the control of Department of the Army military and/or civilian personnel. Bulk storage of these sources are at either Lexington-Blue Grass Army Depot Activity (LBAD), Lexington, Kentucky, or Sacramento Army Depot (SAAD), Sacramento, California. The check sources are assembled onto the end of the alpha scintillation probe (EIC Model AC-3/Probe, Radiac DT-243/PDR-60) housing and is placed into the operating mode by rotating the active surface directly in front of the probe face. The AN/PDR-60 standard Army alpha detection instrument will be the only alpha instrument provided with the EIC Model CS-1 check source. Supplement C contains the method, frequency and standards used to calibrate this instrument.

6. The EIC Model CS-1 check source is rectangular and contains a centered recessed circular area in which aqueous ^{239}Plutonium Nitrate is deposited. The solution is dried and fired at elevated temperatures. After cooling, the check sources are checked for adherence by applying masking tape directly onto the active area. The masking tape is removed and the adhesive side is analyzed for removable contamination. As specified by EIC, adherence criteria requires that no more than 0.1 percent of active material be removed. A decal identifying the radionuclide, quantity and date of manufacture is placed on the surface opposite the recessed area.

7. Technical Manual (TM) 11-6665-221-15, Operator, Organizational, Direct Support, General Support and Depot Maintenance Manual Including Repair Parts List For Radiac Set AN/PDR-60 (Eberline Instrument Corporation Portable Alpha Counter Model PAC-1SAGA), is provided the users of the AN/PDR-60 radiac instrument. Included in this TM is a radiological safety notice on the inside front cover. Supplement D contains the applicable section from the radiological safety notice relating to the check sources supplied with the AN/PDR-60 radiac instrument. Verification of quality at the time of purchase is assured by testing as provided in Supplement E. Supplement F contains disposition instructions for damaged and deformed check sources as provided in the TM.

8. Storage of sources at user installations/activities are provided in the metal carrying cases housing the AN/PDR-60 radiac instruments. Bulk storage of sources at Army depots are accomplished in two forms:

a. bulk storage of the sources in specially established warehousing facilities, and

DRSEL-SF-H
SUBJECT: Renewal and Complete Revision of US Nuclear Regulatory Commission (NRC) Special Nuclear Material License Number SNM-1327.

b. bulk storage of the radiac instruments and sources within metal carrying cases.

FOR THE COMMANDER:

6 Incl(9 cys)
as

for: ROBERT H. MARCRUM
Colonel, GS
Chief of Staff

NOTE

Inclosures 1, 2 and 3 are concurrences from the major field commands who are responsible for the use of the Eberline Instrument Corporation Model CS-1 clip check sources. Inclosures 4 and 5 are the concurrences from the CONUS Army Depots.

ATORI-OP-SW (11 Apr 78) 1st Ind
SUBJECT: Renewal and Complete Revision of US Nuclear Regulatory Commission Special Nuclear Material License Number SNM-1327

HQ TRADOC, Ft Monroe, VA 23651 17 APR 1978

TO: Commander, US Army Communications and Electronics Materiel Readiness Command, ATTN: DRSEL-SF-H, Fort Monmouth, NJ 07703

Subject license application has been reviewed. Concur as written.

FOR THE COMMANDER:

ARTHUR L. YORK
CPT, AGC
Asst AG

1 Incl
nc

AFLG-RES (11 Apr 78) 1st Ind
SUBJECT: Renewal and Complete Revision of US Nuclear Regulatory Commission Special Nuclear Material License Number SNM-1327

HQ, FORSCOM, Ft McPherson, GA 30330 18 APR 1978

TO: Commander, US Army Communications and Electronics Materiel Readiness Command, ATTN: DRSEL-SF-H, Fort Monmouth, New Jersey 07703

Concur in draft copy of subject license application for the fielding of the Eberline Instrument Corporation Model CS-1 clip check sources.

FOR THE COMMANDER:

wd all incl

RICHARD L. GARDNER
CPT, AGC
Assistant Adjutant General

PRIORITY

PT 00393 109/2158Z PAGE 01

DRSEL :GS:MI:MM:PC:PT:CP:SS:MA:PA:IO:LG:PL:MS:LE:IG:SA:IL:SIEW: SF
ACTN/OPI: : : : : : : : : : : : : : : : : :
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ZNR UUUUU
P 191930Z APR 78 ZEX
FM NGB WASHDC //NGB-ARL-M//
TO RUED8IA/CDR CERCOM FT MOMMOUTH NJ //DRSEL-SF-H//
INFO RUKLDAR/CDR DARCOM ALEX VA //DRCSA-NG//
BT
UNCLAS
SUBJECT: APPLICATIONS AND RENEWALS FOR US NUCLEAR REGULATORY MATERIALS LICENSE
A. LETTER DRSEL-SF-H, SUBJECT: INITIAL LICENSE REQUEST, 11 APRIL 78.
B. LETTER DRSEL-SF-H, SUBJECT: RENEWAL AND COMPLETE REVISION OF US NUCLEAR REGULATORY COMMISSION MATERIALS LICENSE NO. SUB-1150, 11 APRIL 78.
C. LETTER DRSEL-SF-H, SUBJECT: RENEWAL AND COMPLETE REVISION OF US NUCLEAR REGULTORY COMMISSION SPECIAL NUCLEAR MATERIAL LICENSE NO. SNM-1327, 11 APRIL 78.
1. REF A IS A NEW LICENSE REQUEST ORIGINALLY LICENSED UNDER 29-01022-8 AMENDMENT 1 FOR THE FIELDING OF THE AN/PDR-39( ) RADIAC SET. REF B IS A COMPLETE REVISION OF NRC LICENSE NO. SUB-1150 FOR THE FIELDING OF THORIUM CHECK SOURCES FOR THE AN/PDR 54, AN/PDR-56F AND AN/PDR-60 RADIAC SETS. REF C IS A COMPLETE REVISION OF NRC LICENSE

PAGE 2 RUEAUSA0898 UNCLAS
NO. SNM-1327.
2. THE ABOVE REFERENCED REQUESTS FOR NCR LICENSES HAVE BEEN REVIEWED AND THIS MESSAGE SIGNIFIES CONCURRENCE.
BT
#0898

NNNN

DEPARTMENT OF THE ARMY
HEADQUARTERS, LEXINGTON-BLUE GRASS ARMY DEPOT
LEXINGTON, KENTUCKY 40507

SDSRR-LQCP 12 April 1978

SUBJECT: Special Nuclear Material License SNM 1327 for CS-1 Check Source

Commander
USA Communication & Electronic Material Readiness Command
ATTN: DRSEL-SF-H
Fort Monmouth, New Jersey 07703

1. This refers to your application for renewal and revision of Special Nuclear Material License SNM 1327.

2. We have reviewed the responsibilities of this activity as outlined in the application for renewal and revision of SNM 1327 and we concur.

Douglas L Hanna
for PHILIP G. JACKSON
C, Quality Assurance Division

ROUTINE

PT 00039 109/0123Z PAGE 01

DRSEL :GS:HI:MM:PC:PT:CP:SS:MA:PA:IO:LG:PL:MS:LE:IG:SA:IL:SIEW: SF
ACTN/OPI: XX
CPY FURN: : : : : : : : : : : : : : : : : : : :
DRDCO :GS:TCS:COM:SEI:ATC:MSCS:GARS:ATSS:SCA:
ACTN/OPI: : : : : : : : : :
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OTHER :DELSD:EW:ET:CS:SO:FF:RBS:PH:TT:NC:AA:MAP:CSA: B
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RTTUZYUW RUWMFWA5514 1090045-UUUU--RUEDBIA.
ZNR UUUUU
R 182230Z APR 78
FM CDR SAAD SACRAMENTO CA //SDSSA-GMD-1//
TO CDR CERCOM FT MONMOUTH NJ //DRSEL-SF-H//
BT
UNCLAS
SUBJECT: CERCOM NRC LICENSE REQUEST
A. YOUR LETTER DRSEL-SF-H SUBJ RENEWAL AND COMPLETE REVISION OF US NUCLEAR REGULATORY COMMISSION SPECIAL NUC MATERIAL LICENSE NUMBER SNM-1327, DTD 10 APR 78 (U)
B. YOUR LETTER DRSEL-SF-H SUBJ INITIAL LICENSE REQUEST DTD 11 APR 78 (U)
C. YOUR LETTER DRSEL-SF-H SUBJ RENEWAL & COMPLETE REVISION OF US NUC REGULATORY COM MATERIALS LICENSE # SUB-1150, DTD 12 APR 78 (U)
THE REFERENCED LICENSE APPLICATIONS WERE REVIEWED BY THE RPO OF THIS DEPOT AND MATTERS PERTAINING TO SACRAMENTO ARMY DEPOT ARE CONCURRED.
BT
#5514

NNNN

ROUTINE

SUPPLEMENT A

1. Reference: Paragraph 4 of letter/application

2. Inclosures 1, 2 and 3 are the qualifications of the Radiation Protection Officer, the alternate Radiation Protection Officer and the License Manager.

STEVEN A. HORNE, Health Physicist, US Army Communications and Electronics Materiel Readiness Command (CERCOM), Fort Monmouth, New Jersey

1. Educational Background:

Old Dominion University Norfolk, Virginia	3 Years	1964 - Associated in Applied Science
The Catholic University of America Washington, DC	2 Years	1975 - BSE Nuclear Science and Engineering
The Catholic University of America Washington, DC	-	1975 - Graduate Work in Nuclear Science and Engineering

2. Formal Training and Experience in Radiation Protection Methods, Measurements and Effects:

	Duration of Training	On The Job	Formal Course
a. Fifty-six semester hours pertaining to radiation, including college physics, Environmental Aspects of Nuclear Power Plant Management, Environmental Radioactivity, Nucleonic Fundamentals, Nuclear Properties and Interactions, Nuclear Physics, Nuclear Radiation Detection, Nuclear Reactor Physics, Radiation Biology, Radioisotope Techniques and Radiological Physics - Old Dominion University and The Catholic University of America.	1961-1975	No	Yes
b. Radiation Detection Effects and Devices Utilizing various type of high energy accelerators - Virginia Associated Research Center Newport News, Virginia, and NASA Langley Research Center, Langley, Virginia.	1 Year	Yes	No
c. Radiation safety, detection instrumentation and isotopic handling equipment - Flow Corp, Fort Belvoir, Virginia.	2 Months	Yes	No

Incl 1

	Duration of Training	On The Job	Formal Course
d. Radiological Safety Course pertaining to Nuclear Moisture/ Density Instrumentation - Seaman Nuclear Corporation, Milwaukee, Wisconsin.	24 Hours	No	Yes
e. Occupational Radiation Protection Course 212 - Public Health Services, Las Vegas, Nevada	80 Hours	No	Yes
f. Fundamentals of Non-Ionizing Radiation Protection Course 264 - Public Health Service, Rockville, Maryland.	40 Hours	No	Yes
g. Laser Safety Course - University of Cincinnati, Ohio	40 Hours	No	Yes
h. Radionuclide Analysis by Gamma Spectrocopy Course 208 - Public Health Service, Winchester, Massachusetts.	80 Hours	No	Yes
i. Radiation Guides and Dose Assessment Course 272 - Environmental Protection Agency, Las Vegas, Nevada.	80 Hours	No	Yes

3. Experience with Radioisotopes:

Isotope	Maximum Activities in Curies	Duration of Experience	Type of Experience
^{241}Am	1	3 Years	For all radionuclides listed, experience consisted of laboratory analysis, wipe tests, experiments and evaluations utilizing these sources.
^{252}Cf	.27	3 Years	
^{57}Co	0.1	4 Years	
^{60}Co	1200	8 Years	
^{137}Cs	1	8 Years	
^{3}H	20	8 Years	
^{192}Ir	100	8 Years	
^{147}Pm	1	8 Years	
$^{226}RaBe$	1	5 Years	
$^{239}PuBe$	1	1 Year	
^{90}Sr	0.1	2 Years	

4. Experience with other Radiation Producing Machines:

Radiation Machine	Duration of Experience	Type of Experience
a. NASA Langley Research Center, and Virginia Associated Research Center's, Space Radiation Effects Laboratory consisting of a 2 MeV Van de Graaff accelerator, 3 MeV Dynamitron accelerator, 10 MeV Linear Electron Accelerator, a 600 MeV Proton Synchrocyrlotron Accelerator and a 14 MeV Neutron Generator.	1.5 Year	Radiation damage Shielding Experiments and Related Health Physics Studies.
b. 250 KeV General Electric Corporation X-ray machine	8 Years	Health Physics and laboratory experiments.
c. Various energy dispersive and wave length X-ray fluorence spectrometry with X-ray generators up to 50 KeV.	8 Years	Health Physics and laboratory experiments.

5. Experience with radiation:

1964-1965 - Virginia Associated Research Center, NASA, Langley Research Center, Virginia as health physics technologist.

1965-1966 - E.R. Squibb, New Brunswick, New Jersey as radiochemist isotope technologist

1966-1968 - Flow Corporation, Nuclear Division, Fort Belvoir, Virginia as radiation engineer.

1968-1976 - US Army Mobility Equipment Research and Development Command, Fort Belvoir, Virginia as health physicist.

1976-1978 - US Army Electronics Command, Fort Monmouth, New Jersey as health physicist.

1978 to present- CERCOM, Fort Monmouth, New Jersey as health physicist.

BARRY J. SILBER, Health Physicist, US Army Communications and Electronics Materiel Readiness Command (CERCOM), Fort Monmouth, New Jersey.

a. Education:

(1) A.A. - Brooklyn College of the City University of New York, Brooklyn, New York - 1965.

(2) B.S. - Brooklyn College of the City University of New York, Brooklyn, New York - 1969. Major: Chemistry.

b. Professional Experience:

(1) October 1966 - May 1967:
Allen Pharmacal Corporation, 175 Pearl Street, Brooklyn, New York.
Laboratory Technician - Analytical Chemistry Laboratory.
Laboratory analyses of pharmaceuticals at various stages of manufacture to insure compliance with Food and Drug Administration Regulations as well as United States Pharmacopeia and National Formulary Monographs.

(2) June 1967 - March 1970:
EON Corporation, 175 Pearl Street, Brooklyn, New York.
Chemist - Responsible for all health physics activities, including radiation surveys, air sampling and wipe tests, leak testing of sealed sources, decontamination of facilities and equipment, disposal of radioactive wastes, calibration of radiation survey and measurement instrumentation, record-keeping, etc., to insure compliance with US Nuclear Regulatory Commission (NRC) and New York State Regulations; liaison between regulatory agencies and corporate management; authorized radiation worker (user) of multiple types of radioactive materials used in the manufacture of radiation sources for commercial, military and highly specialized (custom-made) use; responsible for all chemistry activities including metallurgical applications on products at various stages of manufacture to meet quality control specifications.

(3) March 1970 - June 1977:
State of New York Department of Labor, Division of Safety and Health, 2 World Trade Center, New York, New York.
Senior Radiophysicist - Radiological Health Unit.
Responsible for the review of applications, including the evaluation of facilities, equipment, personnel and products containing radioactive materials, and in the preparation of State licenses authorizing the possession and use of radioactive materials by persons in industry and related activities in this State; assist in the administration of the licensing program; consult with and assist industrial management personnel and others in establishing radiation protection programs; conduct inspections, special prelicensing investigations, radiation surveys and tests at the sites of licensees and registrants using radiation sources to enforce state regulations and to insure that radiation workers and the general public are fully protected; assemble environmental research data, analyze and interpret this data, assist in the publication of scientific reports, and training of new staff members.

(4) June 1977 - January 1978:
US Army Electronics Command (ECOM), Fort Monmouth, New Jersey.
Health Physicist - Responsible for health physics functions in the establishment and implementation of the ECOM Safety Program aimed at establishing life cycle controls of ECOM commodities utilizing radioactive material and ionizing radiation producing devices; responsible for the evaluation of radiological protection programs and radiation facilities to determine their adequacy and to insure compliance with DA Authorizations and NRC Licenses; perform studies and evaluations necessary to minimize the health risks to personnel; prepare and review applications for DA Authorizations and NRC Licenses; establish and maintain radiation protection records and files.

(5) January 1978 - Present:
CERCOM, Fort Monmouth, New Jersey.
Duties are the same as in Item b(4) above. Name change from ECOM to CERCOM.

c. Formal Training in Radiation Protection Methods, Measurements and Effects:

	Duration of Training	On-The-Job	Formal Course
(1) X-Ray Technology for Radiological Health Personnel-Memorial Hospital for Cancer and Allied Diseases, 444 East 68th Street, New York, New York - 11 January - 14 January 1971.	3 Days	No	Yes
(2) Orientation Course in Regulatory Practices and Procedures - NRC, Bethesda, Maryland - 1 March - 19 March 1971.	3 Weeks	No	Yes
(3) Health Physics and Radiation Protection - Special Training Division, Oak Ridge Associated Universities, Oak Ridge, Tennessee - 12 February 1973 to 20 April 1973. Sponsored by the NRC for Agreement State regulatory personnel.	10 Weeks	No	Yes
(4) Radiological Safety Course - US Army Ordnance and Chemical Center and School, Aberdeen Proving Ground, Maryland - 25 October - 15 November 1977.	3 Weeks	No	Yes

c. Experience with Radiation.

Isotope	Maximum Amount	Duration of Experience	Type of Use
(1) ^{14}C	60 mCi	3 years	For items 1 through 10- manufacture of sealed sources, health physics surveys and wipe tests.
(2) ^{32}P	10 mCi	3 years	
(3) ^{36}Cl	10 mCi	3 years	

Isotope		Maximum Amount	Duration of Experience	Type of Use
(4)	^{63}Ni	10 mCi	3 years	
(5)	$^{90}Sr/^{90}Y$	50 mCi	3 years	For items 11 and 14- calibration of radiation instrumentation, health physics surveys and wipe tests.
(6)	^{99}Tc	100 mCi	3 years	
(7)	$^{106}Ru/^{106}Rh$	50 mCi	3 years	
(8)	$^{144}Ce/^{144}Pr$	500 mCi	3 years	
(9)	^{147}Pm	500 mCi	3 years	For items 12 and 13-health physics surveys and wipe tests.
(10)	^{204}Tl	50 mCi	3 years	
(11)	^{60}Co	10 mCi	3 years	
(12)	^{60}Co	200 Ci	3 years	
(13)	^{137}Cs	250 Ci	3 years	
(14)	^{226}Ra	20 mCi	3 years	

BERNARD M. SAVAIKO, Chief, Safety Office, US Army Communications and Electronics Materiel Readiness Command (CERCOM), Fort Monmouth, New Jersey.

a. Education: 1957 - B.S. Industrial Engineering, Columbia University, New York, New York.

b. Professional Experience:

(1) 5 years - Safety Officer - US Air Force.

(2) 4 years - Industrial Safety - U.S. Steel Corporation.

(3) 16 years- Industrial Safety and Chief, Safety Office - USACERCOM (formerly US Army Electronics Command) Fort Monmouth, New Jersey, including 3 years experience as a Radiation Protection Officer w ith responsibilities for the control of various commodities containing radioactive materials.

Mr. Savaiko is designated as the manager of this Nuclear Regulatory Commission License.

SUPPLEMENT B

1. Reference: Paragraph 4 of letter/application.

2. The Army program for control of radioactive items of supply is prescribed specifically in two regulations. AR 700-64, Radioactive Commodities in the DOD Supply System, is an interservice regulation which prescribes responsibilities for control of radioactive items and components which are introduced in the supply system. AR 700-52, Licensing and Control of Sources of Ionizing Radiation, establishes requirements for obtaining NRC Licenses for radioactive materials and authorizations to possess radioactive material not controlled by NRC. Major Army commands are implementing these Department of the Army (DA) regulations.

3. The authority contained in the NRC license issued to CERCOM permits Army installations and activities to acquire and use the EIC Model CS-1 check sources without obtaining their own license. This is based upon commitments made by CERCOM that all Army elements will comply with conditions contained in this license and with pertinent Army regulations. The NRC requires control of all operations involving radioactive items to insure the safety of personnel and property. Army activities possessing licensed radioactive sources and the agencies controlling them are subject to inspection by the NRC in addition to inspection by Army elements.

4. The mission of CERCOM includes the management and performance of all materiel life cycle functions and services and acts as DA licensee for Army-wide distribution of these items. The following is a description of functions of the various CERCOM elements providing a coordinated effort:

a. The functions for the manager of the NRC License are assigned to the Chief, Safety Office of the Command Staff of this headquarters. The responsibilities of the manager are to:

(1) Coordinate, obtain, administer, review, amend and maintain necessary licenses for radioactive commodities managed by this command.

(2) Provide information and guidance to all commanders, with respect to limitations, constraints, conditions or procedures which affect the responsibilities of those commanders for the radioactive commodity.

(3) Monitor the various elements of the life cycle program of the radioactive commodities to assure compliance with conditions of the applicable license.

(4) Assure that licensed material is not transferred to unauthorized persons or organizations.

b. The health physicists serve as the CERCOM staff contact for radiological control and licensing matters to the Army Materiel Development and Readiness Command, other major commands and Department of the Army elements, other services and federal agencies; provide advice and assistance to other CERCOM elements involved in the fielding of radioactive items, the National Inventory Control Point (NICP) (an element of CERCOM), depots and other Army elements; prepare applications for NRC Licenses for Army-wide distribution of assigned items; prepare radiological safety instructions for incorporation in technical literature and other published guidance pertaining to the items; coordinate with the NICP to assure that requisitioning elements are authorized to and technically capable of receiving the item and that procurements do not exceed the quantity or use limitations imposed by the various licenses; perform pre-award and post award health physics surveys of contractors; provide health physics advice to be included in instructions for disposal of radioactive waste, and serve as staff officers for notification, investigation, and preparation of reports required in the event of an accident or incident in which this command's radioactive items may be involved.

c. The CERCOM NICP located at Fort Monmouth, New Jersey has adopted special procedures for individually controlled radioactive items that are in addition to standard Army Supply practices used for all type classified items. The control point maintains records of procurements, receipts, storage locations, shipments, using locations, authorizes, issues, and assures adequate supply. It reviews requisitions submitted and when approved, issues material release orders to the designated depot for shipment of the material to the requisitioner. Requisitions are submitted through various command control channels. The control point bases its approval on previously established authorization of the requisitioner to receive the item from the supply standpoint such as an approved Table of Allowances. Upon approval of the requisition, the control point issues a material release order to the depot storing the item. The depot ships the item directly to the requisitioner, notifies the control point and furnishes other shipping data which is forwarded also through supply property office channels.

d. Reports of excess items are submitted through various command channels to the NICP for review for serviceability, turn-in or disposal as radioactive waste. Requests for disposition instructions of radioactive waste are submitted through radiological command channels to the NICP.

e. The major Army commands have established regulatory requirements for control of the radioactive items. Each major command has established at the headquarters level a radioactive material control point and appointed a command radiological control officer to administer control of radioactive items within the command. That officer reviews and concurs in the qualifications of local radiation protection officers within the command, maintains records of radioactive items by location and assures inspections/audits of accountable installations/activities to assure that

items are properly handled in accordance with Army and NRC regulations, and to assure the submission of inventory and leak test reports and accident/incident reports. The local radiation protection officer is responsible for administering the local radiation protection program. Local programs provide for designated controlled areas, dosimetry, instrumentation, operating procedures to supplement published manuals for the items, receipts, transfers, storage and records. Requisitions originated by using elements are processed through the local radiation protection officer to the major command radiation control officer. The requisition is reviewed from the radiation protection standpoint and logistics authority for possession. If approved, the requisition is forwarded to the NICP. Upon receipt of notification from the NICP of the transaction the information is forwarded to the local radiation protection officer who assumes radiation protection responsibility for the item. Requests for transfers of items between installations/activities are reviewed by the command radiological control officer and if approved reported to the NICP. Transfers outside the major commands are reviewed and approved by the NICP. Reports of excess items are submitted through radiological control channels for review for serviceability, turn-in or disposal as radioactive waste. Requests for disposition instructions of radioactive waste are submitted through radiological command channels to Commander, ~~USACERCOM~~, ARRCOM ATTN: ~~DRSEL-SF-H, Fort Monmouth, New Jersey 07703~~. RAD WASTE IAW AR 755-15 & Rock Island Arsenal ILL

f. LBAD and SAAD will provide bulk storage, quality surveillance and issue of the EIC Model CS-1 check source when approved by the NICP. Where radioactive materials are involved, both LBAD and SAAD have established special warehousing facilities, handling procedures and have established formal radiation protection programs administered by qualified physicists (RPO). Messrs Joseph M. King and Frederick T. Toyama, respectively, have been designated to serve in this capacity for LBAD and SAAD, respectively. Radioactive items are inspected when received, at intervals during storage and immediately before shipment. The inspections are conducted according to established surveillance procedures as determined by CERCOM for each item. The quality surveillance program for the EIC Model CS-1 check source will be performed by either the depot RPO, his alternates or the CERCOM health physicists and will involve the annual leak testing of a random sampling of at least one percent of depot assets and/or a minimum of five each of the EIC Model CS-1 check sources, whichever is greater. The depots will provide the results to Commander, USACERCOM, ATTN: DRSEL-SF-H, Fort Monmouth, New Jersey 07703. LBAD and SAAD will provide the NICP with notification of individually controlled item receipts, inspections and shipments. The qualifications of the LBAD and SAAD RPOs, their alternates and radiation protection programs are described in the supporting documentation to their NRC Byproduct Material License Numbers 16-05033-01 (LBAD) and 04-04279-01(SAAD).

g. The program for control of the EIC Model CS-1 check source, as with other radioactive items is, to the extent practical, the same logistics procedures applied to other Army supplies. Regulatory guidance has been established by DA and implemented by the various commands governing the management process, life-cycle management of material,

logistics management and support, procurement, maintenance, storage, transportation, including packaging and disposal. For radioactive items the procedures are augmented by specific regulatory controls pertaining to the possession and use of radioactive materials, control of personnel radiation exposure, safe storage, handling, maintenance, transportation and disposal of the items. For the EIC Model CS-1 check source, more stringent controls have been established as distribution of these devices are limited to authorized activities. These controls include identifying and insuring that the EIC Model CS-1 check source is coded in the Commodity Command Standard System Automated Data Processing Program as radioactive in accordance with Appendix A of AR 708-1, Cataloging and Supply Management Data. This commodity is coded with a Special Control Item Code of 8 meaning Radioactive Item. Requisitions are processed initially by computers and then are manually processed by the NICP item manager to verify that the requisitioners are authorized to receive the radioactive item. To insure that the above requirements are being implemented, the CERCOM Health Physicists maintain close coordination with the item manager.

h. Users of the EIC Model CS-1 check source do not require specific radiation protection training other than their familizarization with TM 11-6665-221-15. However, individuals using these instruments are ordinarily, as a minimum, members of a unit Nuclear, Biological, Chemical (NBC) team. Membership in a unit NBC team carries a requirement of 16 hours of NBC training, including the use of the radiac instrument as well as some training in radiation protection and radioactivity measurement. The use of these instruments is supervised by the unit NBC officer or NBC noncommissioned officer having at least 80 hours of NBC training, including training in radiation protection and radioactivity measurement.

i. Users of the EIC Model CS-1 check source are provided with specific instructions on the safe handling, use, storage and disposal of radioactive material as described in TM 11-6665-221-15. This information satisfies the radiation protection instructions to users as required by Title 10, Chapter 1, Code of Federal Regulations, Parts 19 and 20. Commander, USACERCOM, ATTN: DRSEL-SF-H, Fort Monmouth, New Jersey 07703 will make available to the users the appropriate NRC regulations, the NRC license, license conditions, documents incorporated into the license by reference, and amendments thereto, and any notice of violation involving radiological working conditions for examination. The following statement, or equivalent, will also be provided to the users along with Form NRC-3, Notice to Employees:

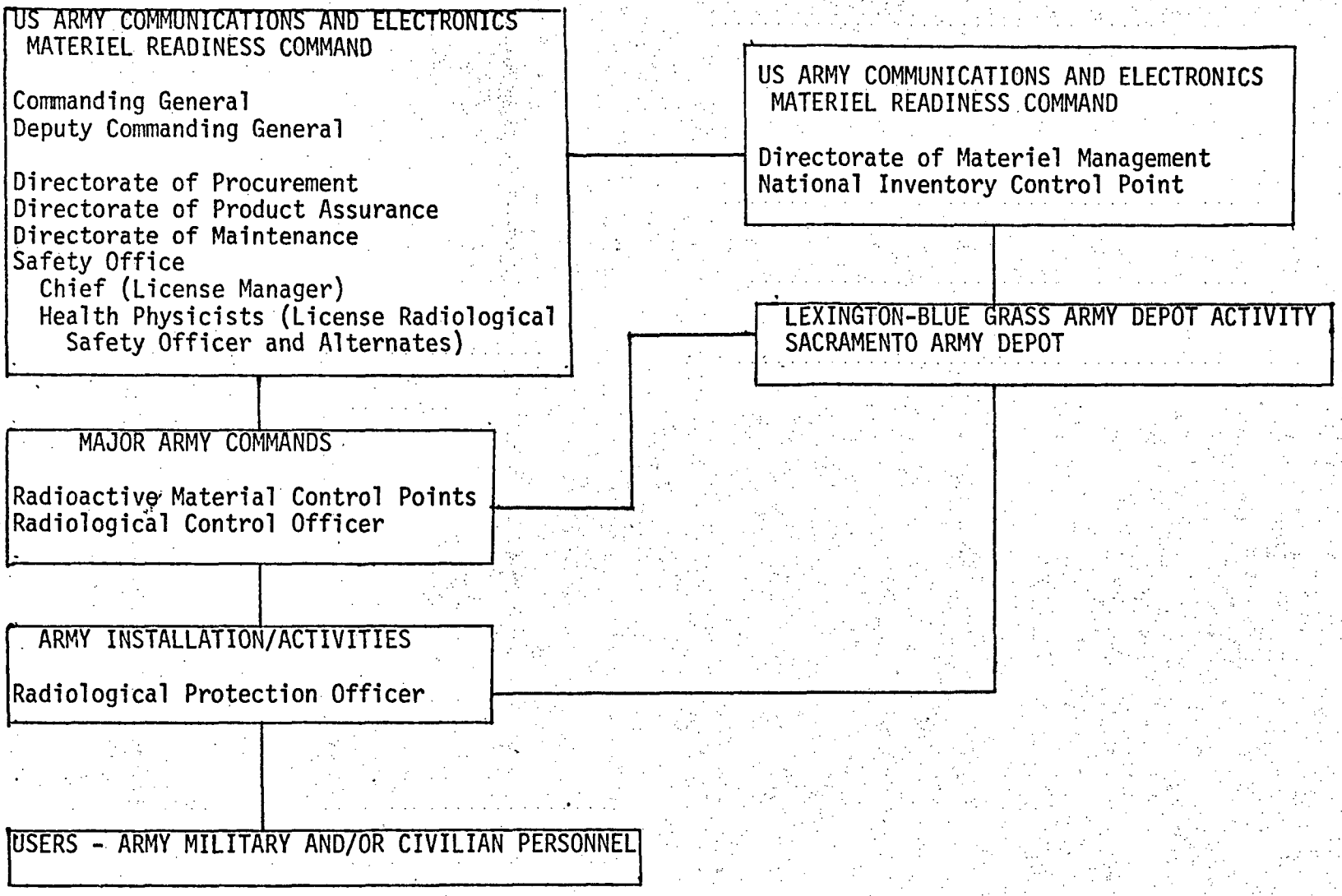
> Users of the Eberline Instrument Corporation Model CS-1 check sources used to check the functional operation of the AN/PDR-60 Radiac Set are provided with specific instructions on the safe handling, use, storage and disposal of radioactive material as described in Technical Manual 11-6665-221-15, Operator, Organizational, Direct Support, General Support and Depot Maintenance Manual Including Repair Parts Lists For Radiac Set AN/PDR-60 (Eberline Instrument Corporation Portable Alpha Counter Model

PAC-ISAGA). This information satisfies the radiation protection instructions to users as required by Title 10, Chapter 1, Code of Federal Regulations, Parts 19 and 20. Form NRC-3, Notice to Employees, is also being provided with this letter and users are required to post this notice as required by the regulations. In addition, users may request further information relating to the NRC license, license conditions, documents incorporated into the license by reference, and amendments thereto, from Commander, USACERCOM, ATTN: DRSEL-SF-H, Fort Monmouth, New Jersey 07703. The Command Safety Office may be contacted by telephone on AUTOVON 992-3493 for this purpose.

NOTE

Inclosed is an abbreviated organizational chart as required by paragraph 3-2.g.(3) of AR 700-64, Radioactive Commodities in the DOD Supply Systems.

RADIOLOGICAL SAFETY CONTROLS - FUNCTIONAL CHART*



* This chart does not delineate a chain-of-command organizational structure. It does represent technical safety and control measures to be used for test samples.

SUPPLEMENT C

1. Reference: Paragraph 5 of letter/application.

2. The AN/PDR-60 standard Army alpha detection instrument for field use and for health and safety purposes are calibrated with the AN/UDM-6 and AN/UDM-7b Radiac Calibrator Sets in accordance with the frequency specified in Technical Bulletin 43-180, Calibration Requirements for the Maintenance of Army Materiel, and procedures prescribed in TM 11-6665-221-15. Presently the calibration frequency specified is once every 90 days for health and safety purposes and once every 240 days for field use. The AN/UDM-6 and AN/UDM-7b Radiac Calibrator Sets utilize ^{239}Plutonium and are traceable to the National Bureau of Standards. The AN/UDM-6 and AN/UDM-7b Radiac Calibrator Sets are presently possessed under NRC Special Nuclear Material License Number SNM-1745 issued to the Department of the Army, US Army Armament Materiel Readiness Command, Rock Island, Illinois.

SUPPLEMENT D

1. Reference: Paragraph 7 of letter/application.

2. The following extract from the inside front cover of TM 11-6665-221-15 reflects upon check sources containing radioactive material:

> "Check Source CS-1 contains 0.01 microcuries of plutonium (Pu239), and Check Source CS-12 contains 0.01 microcuries of Thorium (Th 230). Do not allow any of this material come in contact with the skin. Damage to body tissue can occur if the material enters the body through cuts in the skin or by accidental swallowing."

SUPPLEMENT E

1. Reference: Paragraph 7 of letter/application.

2. All Model CS-1 check sources are checked for adherence by the method described in paragraph 6 of the letter/application by EIC. In addition, LBAD and SAAD will provide quality surveillance of depot assets as described in Supplement B.

3. The random samples of assets taken from depot stock will undergo the following tests:

a. adherence of the radioactive material,

b. visual inspection,

c. assuring proper fit onto the DT-243/PDR-60 Probe Assembly.

4. All randomly selected assets must pass the above tests before the quantity is accepted.

SUPPLEMENT F

1. Reference: Paragraph 7 of letter/application.

2. The following is extracted from page 21 of TM 11-6665-221-15 relating to the disposition of damaged check sources:

F. Disposition of Damaged Check Source

1. Do not use a check source if it is damaged or deformed.

(a) Deformation of a check source may cause some flaking of the radioactive material (Thorium 230 or Plutonium 239). Such flaking will reduce the radioactivity of the check source and make it useless for calibration purposes. In addition, this flaking will increase the possibility of the user picking up particles of radioactive material that may be transferred to the mouth when smoking or eating.

(b) Fire can damage a check source. The different rates of expansion of the radioactive material and the check source holder may cause flaking when the check source is exposed to high temperature.

2. Turn in a damaged or deformed check source through the Radiological Control Officer to an Army Radioactive Material Disposal Facility for disposal as radioactive waste in accordance with AR 755-15. Upon turn-in of a check source, mail an Equipment Improvement recommendation in compliance with TM 38-750, stating reason for turn-in, to Commander, US Army Communications and Electronics Materiel Readiness Command, ATTN: DRSEL-SF, Fort Monmouth, New Jersey 07703.

3. Check sources surplus to the needs of users will be reported as surplus to the appropriate radioactive material control point and will be retained by the user until disposition instructions are received. Radiological Control Officers at radioactive material control points will determine whether surplus check sources can be economically reutilized or handled as radioactive waste, and issue disposal instructions accordingly.