

ARMY REGULATION

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LOGISTICS

LICENSING AND CONTROL OF SOURCES OF IONIZING RADIATION

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1. Purpose. This regulation—

a. Prescribes procedures for obtaining U.S. Atomic Energy Commission license and license amendments for radioactive materials as hereafter defined.

b. Prescribes procedures for obtaining Department of Army authorization for radioactive materials not licensed by the U.S. Atomic Energy Commission.

c. Provides guidance for Department of Army agencies in controlling the use of radiation sources.

d. Prescribes procedures for obtaining Department of Army approvals for transfer of radioactive materials from Army to non-Army agencies.

e. Prescribes procedures for obtaining Department of Army permit for the use or storage of radioactive material by Federal and non-Federal agencies (including civilian contractors) on an Army military installation.

2. Scope. This regulation—

a. Applies to all Department of the Army agencies (except Civil Defense elements and Corps of

Engineer Civil Works Programs) procuring, storing, possessing, producing, shipping, transferring, exporting, distributing, using, and disposing of radiation sources.

b. Applies to any activity performing work with radiation sources on land subject to Department of Army military jurisdiction.

c. Does not apply to the procurement or use of radioactive material in nuclear weapons, fuel for nuclear reactors, or installed equipment and material made radioactive in nuclear reactors established in accordance with provisions of section 91, Atomic Energy Act of 1954, as amended, including byproduct material arising from the normal operation and testing of such nuclear reactors.

d. Does not negate or supersede any Atomic Energy Commission requirement pertaining to control and safeguarding of radioactive materials.

3. Explanation of terms. For the purpose of this regulation, the following terms apply:

a. Accelerator. A device for imparting kinetic energy to charged particles, such as electrons, protons, deuterons and helium ions. Common types of accelerators are the cyclotron, synchrotron, syn-

*This regulation supersedes AR 700-52, 4 February 1966 and DA Letter AGAM-P(M) (24 Jan 68) LOG PE-15B, 30 Jan 68, subject: Use of Radium in the Department of the Army.

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chroocyclotron, betatron, linear accelerator and Van-de-Graff electrostatic generators.

b. Accelerator produced radionuclides. Material made radioactive incident to accelerator operation.

c. Agreement State. Any State in the United States with which the Atomic Energy Commission has entered into an effective agreement under subsection 274(b) of the Atomic Energy Act of 1954, as amended.

d. Byproduct materials. Any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material.

e. Human use. The intentional internal or external administration of radioactive material (byproduct material or otherwise), or the radiation therefrom, to human beings.

f. Ionizing radiation. Electromagnetic or particulate radiation capable of producing ions, directly or indirectly in its passage through matter. For purposes of this regulation alpha and beta particles, gamma rays, X-rays, and neutrons are examples of ionizing radiation. This type of radiation does not include sound or radio waves, visible, infrared, or ultraviolet light or lasers.

g. Ionizing radiation control committee. A group of qualified personnel, officially appointed by a commander to establish local policy and provide guidance to the radiation protection program.

h. Ionizing radiation producing devices. Electronic devices which are capable of generating ionizing radiation such as X-ray machines, linear accelerators, cyclotrons, radio frequency generators which use klystrons, magnetrons, or other tubes which produce X-rays, and electron microscopes.

i. Licensed material. Source, special nuclear or byproduct material received, stored, possessed, used or transferred under a general or specific license issued by the U.S. Atomic Energy Commission or by an agreement state.

j. Lifetime control. Covers the entire period that a licensed or authorized radioactive material is in the possession of a Department of the Army installation or activity regardless of location. This is terminated only upon authorized disposal or transfer outside of Department of Army jurisdiction. Control means that those individuals responsible for the use of radioactive materials know how

much of the material is on hand (in terms of activity at some definite time, e.g., 5 millicuries cobalt 60, 1955), know where it is located, and are following prescribed safety, health, storage, and disposal standards. Lifetime control covers those items which have individual accountability as well as those items which are expendable.

k. Naturally occurring radioactive materials. Radioactive isotopes such as radium and radon which are found in nature but are not classified as source materials.

l. Rad. For the purposes of this regulation rad, rem, roentgen, and rep are equivalent units of measurement of radiation effect.

m. Radioactive items of issue. Refers to any item which is intended for use at more than one installation or activity and which contains radioactive material. The majority of items of issue are assigned Federal stock numbers.

n. Radioactive materials. Naturally occurring radioactive isotopes such as radium and radon as well as byproduct, source, and special nuclear material or contaminated materials capable of emitting corpuscular or electromagnetic radiations. Included are radioisotopes permanently incorporated into adopted or experimental items of equipment.

o. Radiation sources. Materials or devices which generate or are capable of generating ionizing radiation, including (1) naturally occurring radioactive material, (2) byproduct materials, (3) source materials, (4) special nuclear materials, (5) fission products, (6) materials containing induced or deposited radioactivity, (7) radiographic and fluoroscopic equipment, (8) particle generators and accelerators, and (9) electronic equipment which utilizes klystrons, magnetrons, or other electron tubes which produce X-rays.

p. Radiological protection officer. An individual designated by the commander or activity to provide consultation and advice on the degree of hazards associated with ionizing radiation and the effectiveness of measures to control these hazards. The individual must be technically qualified by virtue of education, training and/or professional experience to assure a capability commensurate with the assignment. The scope and variety of operations may require that the radiological protection officer be a health physicist with training and experience in the identification, evaluation,

and prevention of radiological hazards associated with the various sources of ionizing radiation.

q. Sealed source. Any radioactive material that is enclosed in, and is to be used in, a container in a manner intended to prevent leakage or escape of the radioactive material or any of its daughter products.

r. Source material. Uranium or thorium or any combination thereof, in any physical form, or ores which contain by weight one-twentieth of one percent (0.05 percent) or more of uranium, thorium or any combination thereof. Source material does not include special nuclear material.

s. Special nuclear material. Plutonium, uranium enriched in isotope 233 or in the isotope 235, and any other material which the U.S. Atomic Energy Commission determines to be special nuclear material, or any material artificially enriched by any of the foregoing; however, such material does not include source material.

4. Responsibilities. *a.* The Deputy Chief of Staff for Logistics is responsible for:

(1) Staff supervision for the licensing and control of sources of ionizing radiation, excluding that for human use.

(2) Army approval of all applications for Atomic Energy Commission specific licenses for radioactive material.

(3) Approval, as described in this regulation, for the possession and use of radioactive materials not under specific license control of the Atomic Energy Commission, which are accelerator produced radioactive materials, naturally occurring radioisotopes, weapon irradiated materials and radioactive sources licensed by an agreement state.

(4) Approval for the possession and use of radioactive materials by Army activities outside the United States, its territories and possessions.

(5) Staff coordination over logistical and supply implications which pertain to storage, accountability, classification, and transfer of items of issue incorporating radioactive materials and having Army-wide distribution.

(6) Approval of the storage and use of radioactive material by Federal and non-Federal agencies including civilian contractors on land subject to Department of the Army military jurisdiction.

(7) Army approval of all requests for transfer of radioactive materials except radioactive waste disposal shipments.

(8) Review of new items of issue or modifications of existing items of issue to determine whether radioactive materials are being used properly.

(9) Providing technical advice and guidance for the safe movement of radioactive material. See AR 55-55.

b. The Surgeon General is responsible for—

(1) Staff supervision of the radioisotope license program for human use. See AR 40-37.

(2) Periodic radiological hygiene surveys at least once every three years at each Army military installation or activity which has a U.S. Atomic Energy Commission license or Department of Army authorization. Investigations of radiation incidents and excessive exposures may also be conducted upon the request of the major Army commanders and/or any time there is evidence that a health hazard related to radioactive materials may be prevalent.

(3) Providing comments and recommendations to the Deputy Chief of Staff for Logistics, from a health and safety viewpoint, on applications for U.S. Atomic Energy Commission licenses, Department of Army authorizations for use of radioactive materials and Department of Army permits.

(4) Technical review of non-medical material to determine possible existence of health hazards.

c. Major field commanders are responsible for—

(1) Preparation of administrative procedures consistent with this regulation.

(2) Insuring that all commanders under their jurisdiction who handle radioactive materials and other sources of ionizing radiation utilize adequate means to do so safely.

(3) Insuring that an annual inspection is conducted to determine compliance with conditions of the Atomic Energy Commission licenses and Department of Army authorizations and Department of Army permits.

(4) Use of radioactive material in items of issue is kept to absolute minimum. Radium shall not be procured and used in items of issue in an unsealed form i.e., any device which permits the escape of radium detectable as radon or daughter products, or in any devices as self-luminous marking material. Specifications now permitting the

use of radium for other than sealed sources will be revised to reflect this requirement.

d. Commanding General U.S. Army Materiel Command, in addition to requirements in *c* above, will insure that—

(1) Items of issue containing radioactive material which are under his commodity management are licensed or otherwise controlled as described in this regulation.

(2) Maximum safety requirements are designed into the materiel and equipment.

(3) Adequate controls over hazards are established to protect personnel, equipment, and property.

e. Commanders of an installation or activity are responsible for—

(1) Conducting a technical and administrative review of each application and planned use of the radioactive material to assure the completeness and adequacy of the application in accordance with current requirements of the Atomic Energy Commission, Title 10, Code of Federal Regulations, Part 2, Rules of Practice; Part 20, Standards for Protection Against Radiation; Part 30, Rules of General Applicability to Licensing of Byproduct Material; Part 31, General Licenses for Certain Quantities, etc.; Part 32, Specific Licenses to Manufacture, Distribute, etc.; Part 33, Specific Licenses of Broad Scope; Part 34, Licenses for Radiography and Radiation Safety, etc.; Part 35, Human Uses of Byproduct Material; Part 36, Export and Import of Radioactive Material; Part 40, Licensing of Source Material; Part 70, Special Nuclear Material; Part 71, Packaging of Radioactive Material for Transport, and pertinent Army Regulations.

(2) Enforcing measures prescribed by the Atomic Energy Commission and the Department of Army for the safe use, handling, storage, marking and disposal of radioactive materials. The provisions of each license or authorization must be scrupulously followed since violations constitute unreasonable risk to the health and safety of the public and personnel of the installation or activity and could lead to possible revocation of the license issued by the Atomic Energy Commission.

(3) Advising all civilian contractors and government agencies contemplating work with ionizing radiation sources within areas under their command of the requirements of this regulation,

and requiring them to have a Department of Army permit (para 7), and also, if necessary, an Atomic Energy Commission or agreement-state license. A reference to this regulation will be included in the contract, lease or other appropriate document prepared for work with ionizing radiation.

(4) Maintaining a registry of ionizing radiation producing devices operated at installations or activities under their command. The following information for each such device will be maintained:

a. Location (installation, building, etc.)

b. Manufacturer and model number of device.

c. Type of device (accelerator, X-ray, etc.)

d. Portable or stationary.

e. Authorized use (R & D, medical, etc.)

f. If isotopes are being produced list the isotopes, annual production and disposition.

(5) Designating a principal and alternate radiological protection officer (*g* below).

(6) Appointing an Ionizing Radiation Control Committee in accordance with AR 40-14 (unless specifically exempt).

f. *Ionizing Radiation Control Committee.* The Ionizing Radiation Control Committee will consist of the commander or his designated representative, the radiological protection officer, a medical officer if the facility has a medical facility, safety director/officer and other personnel as deemed necessary, who are knowledgeable in the safe use of radiation being used or procured. The committee will act as an advisory body to the commander in fulfilling his responsibilities listed in *e*(1), *e*(2), *e*(3) and *e*(4) above. This includes establishing a formal set of rules and procedures (radiation protection program) for procurement and safe use of radiation sources commensurate with those being proposed for use reviewing proposals to use radiation sources and radiation producing devices; and making recommendations concerning protective measures to be taken.

g. *Radiological protection officer or his alternate.* The specific duties of the radiological protection officer or his alternate will include but not be limited to the following:

(1) Providing guidance on establishing working conditions and operating procedures that comply with current standards and with pertinent regulations and directives.

(2) Instructing new personnel in safe working practices, emergency procedures and harmful

effects of radiation overexposure. In addition, personnel will be instructed in the provisions of Title 10, Part 20.206 (Instruction of Personnel).

(3) Reviewing operational procedures and advising the commander of any unsafe practices.

(4) Assuring that personnel monitoring devices are used when required and that required records are kept of the results of such monitoring.

(5) Maintaining a current inventory of radioactive materials and devices emitting ionizing radiation in accordance with paragraph 17.

(6) Conducting a physical inventory of radioactive materials at least every six months.

(7) Performing radiation surveys at least monthly and investigations to insure compliance with pertinent Federal Regulations, State and local regulations which are more restrictive than the federal regulation will be applied except when the commander finds that the state or local regulations are excessively restrictive and interfering with mission accomplishment. Excessively restrictive state or local regulations having potential impact on operations will be promptly reported through channels to the Deputy Chief of Staff for Logistics, Attn: PEMA Execution Division, Department of Army, Washington, D.C. 20310.

h. Licensees. Licensees are responsible for—

(1) Full compliance with the applicable provisions of Title 10, Code of Federal Regulations and applicable Army regulations.

(2) Insuring that licensed or authorized material under their control is not transferred to unauthorized persons or organizations.

5. U.S. Atomic Energy Commission specific license. *a.* U.S. Atomic Energy Commission specific licenses are required to produce, transfer, receive, own, possess, use, or dispose of byproduct, source and special nuclear material within the United States, its territories and possessions, in excess of the quantities authorized under the general license provisions of Title 10, Code of Federal Regulations, Parts 30, 31, 40 and 70.

b. Applications from Army or non-Army agencies for U.S. Atomic Energy Commission license to use or store byproduct, source or special nuclear material on an Army military installation require Department of Army approval prior to granting of a license by the Atomic Energy Commission. To obtain the required permit, five signed and dated copies of the non-Army application together

with copies of any referenced document therein must be forwarded by the Army military installation commander through channels to the Deputy Chief of Staff for Logistics, Attn: PEMA Execution Division, Washington, D.C. 20310 for review and transmittal to the Atomic Energy Commission. The Deputy Chief of Staff for Logistics will advise the Atomic Energy Commission, the installation commander and the non-Army applicant of the Department of Army decision.

c. Byproduct and special nuclear materials activated in an Army reactor are subject to licensing by the Atomic Energy Commission upon transfer beyond the immediate control of the reactor staff.

d. Application procedures for U.S. Atomic Energy Commission license are discussed in paragraphs 9 and 10.

6. Department of Army radioactive materials authorizations. *a.* Department of Army radioactive material authorizations* are required by Army elements to produce, transfer, receive, own, possess or use—

(1) Radioactive materials having radioactivity of one microcurie or greater and not subject to U.S. Atomic Energy Commission specific license control.

(2) Byproduct, source and special nuclear material possessed, used, stored or disposed of outside the United States, its territories and possessions. Overseas commanders except those in Hawaii, Alaska, Virgin Islands, Puerto Rico and Canal Zone will obtain a Department of Army radioactive material authorization by submitting through channels to the Deputy Chief of Staff for Logistics the same information required for an Atomic Energy Commission license.

(3) Items irradiated during weapons test with a dose rate in excess of 0.4 millirads per hour at any distance from the item.

b. Commodity managers must obtain Department of Army authorization for items of issue containing radioactive material. The Department of Army authorization issued to the commodity man-

*A Department of Army element already possessing an appropriate Atomic Energy Commission license does not need to obtain a Department of Army authorization for those radionuclides and uses authorized in that Atomic Energy Commission license. An Atomic Energy Commission license obtained in accordance with this regulation is considered equivalent to a Department of Army authorization.

ager will cover the users and storage facilities. Department of Army authorization is required whenever any amount of any type of radioactive material is intentionally added to an item of issue, except electron tubes containing less than one microcurie per tube.

c. The procurement and use of radium will only be authorized when there is no practical substitute.

7. Department of Army written permits. Department of the Army permits are required for—

a. Use, storage, possession and disposal of radiation sources by Federal and non-Federal agencies (including civilian contractors) on an Army military installation. Concurrence of the installation commander is required as a pre-requisite for Department of Army permit.

(1) Where an Atomic Energy Commission license already permits use or storage of sources at various locations including unspecified Army installations, the non-Army agency will obtain a Headquarters, Department of Army permit by furnishing the installation commander with completed copies of DA Form 3337 (Application for Department of the Army Radioactive Material Authorization or Permit). The Army installation commander will forward sufficient copies of the completed DA Form 3337 through channels to provide three copies to the Deputy Chief of Staff for Logistics, Attn: PEMA Execution Division, Washington, D.C. 20310. A Department of Army permit will be furnished directly to the non-Army applicant. This does not apply to material covered by an Atomic Energy Commission license that is being transferred to a contractor or other individual who also possess an Atomic Energy Commission license for that material but is not under Army control.

(2) Local commanders have authority to approve temporary (less than 15 calendar days) use or storage of sealed radioactive sources by users possessing an appropriate Atomic Energy Commission or agreement-state license. A copy of the user's request and local approval will be sent through command channels to the Deputy Chief of Staff for Logistics, Attn: PEMA Execution Division, Washington, D.C. 20310.

b. Transfer or export of radioactive materials beyond control of Army, except where recipient has an appropriate Atomic Energy Commission license.

8. Controls. *a.* Radioactive material will be secured against unauthorized use.

b. Where radioactive materials are received, procured, stored, possessed, shipped, transferred, exported, distributed and used or disposed of outside the United States, its territories and possession, procedural controls established by the Atomic Energy Commission and Department of Army for items incorporating radioactive materials will be observed subject to the requirement of the host country. Where a conflict of regulations exist the most restrictive regulation shall be followed. The foregoing shall not preclude tactical deployment of units with mission essential equipment in times of emergency even though this equipment may contain controlled byproduct or naturally occurring radioactive materials.

c. Any items containing a radioactive material will be controlled to the extent that lifetime control of the radioactive material will be maintained.

9. Application for Atomic Energy Commission specific license. *a. General.*

(1) Requirements for specific licenses are set forth in paragraph 5.

(2) Specific licenses are issued to an installation or activity commander who has met the requirements of Title 10, Code of Federal Regulations, Part 2, Rules of Practice; Part 20, Standards for Protection Against Radiation; Part 30, Rules of General Applicability to Licensing of Byproduct Material; Part 31, General Licenses for Certain Quantities, etc.; Part 32, Specific Licenses to Manufacture, Distribute, etc.; Part 33, Specific Licenses of Broad Scope; Part 34, Licenses for Radiography and Radiation Safety, etc.; Part 35, Human Uses of Byproduct Material; Part 36, Export and Import of Radioactive Materials; Part 40, Licensing of Source Material; Part 70, Special Nuclear Material; Part 71, Packaging of Radioactive Materials for Transport; and pertinent Army regulations.

(3) Where actions before the Atomic Energy Commission concerning licenses require adjudicatory proceedings for settlement, the matter should be referred to The Judge Advocate General, Attn: Chief, Regulatory Law Division, Department of Army, Washington, D.C. 20310 in the manner set out in AR 27-40.

(4) Emergency processing of applications is not deemed desirable or necessary and normally

will be limited to unexpected operational requirement.

b. Byproduct material license. Application for a specific license for byproduct material will be made on appropriate Atomic Energy Commission Form 313 (Application for Byproduct Material). Application for license for use of sealed sources in radiography will be submitted on Atomic Energy Commission Form 313R. Five signed and dated copies of the application are required by the Deputy Chief of Staff for Logistics.

c. Source material license. Application for a specific license for source material will be submitted on Atomic Energy Commission Form 2 (Application for Source Material) to the Deputy Chief of Staff for Logistics in six signed and dated copies.

d. Special nuclear material license. Applications for a special nuclear material license will be submitted by letter in accordance with the requirements of the Atomic Energy Commission contained in Title 10, Code of Federal Regulations, Part 70. Nine signed and dated copies of the application are required by the Deputy Chief of Staff for Logistics.

e. Application forms. Application forms may be obtained upon direct request to the Director, Division of Materials Licensing, U.S. Atomic Energy Commission, Washington, D.C. 20545. Atomic Energy Commission regulations may be procured from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

f. Routing of applications. Applications for byproduct material (except for human use), source material, and special nuclear material will be submitted through command channels to the Deputy Chief of Staff for Logistics, Attn: PEMA Execution Division, Department of Army, Washington, D.C. 20310. Application should arrive at the Deputy Chief of Staff for Logistics at least 60 days prior to the time of expected use. The item cannot be procured until the license is issued. Emergency processing is not deemed desirable or necessary and normally will be limited to unexpected operational requirements. Commanders should consolidate licenses whenever practical. Application for byproduct material (human use) will be submitted through command channels to The Surgeon General in accordance with AR 40 37. Applications from medical units, for other than human use, will

be forwarded through command channels to The Surgeon General for review and transmittal to the Deputy Chief of Staff for Logistics, Attn: PEMA Execution Division, Department of Army, Washington, D.C. 20310. Approved licenses will be forwarded to the applicant through command channels.

g. License amendments. Applications for amendment to an existing license will be submitted in the same manner as the original application. If this requirement is not met, it is possible that a valid license covering the amendment will not be issued until after the desired date.

h. License renewals. Application for renewal of an existing license will be processed in the same manner as the original application. If the renewal application is made in accordance with this paragraph, then the program or activity is considered covered by the prior license even though the renewal is not acted upon prior to the expiration date. The applicant will be advised when application for renewal has been forwarded to the Atomic Energy Commission. If no application for renewal is made 60 days prior to the expiration date, then all operations involving the radioactive isotope must be suspended at the expiration date as no valid license exists. Should it appear that a request for renewal cannot be submitted in time for processing, the Deputy Chief of Staff for Logistics, Attn: PEMA Execution Division, Department of the Army, Washington, D.C. 20310 shall be contacted by telephone or telegraph with a request that a storage license be requested from the Atomic Energy Commission.

i. Placing purchase orders. For a licensee to obtain byproduct materials or service irradiations from a facility of the Atomic Energy Commission, it is necessary to submit Atomic Energy Commission Form 375 (U.S. Atomic Energy Commission Isotope Order Blank) to the facility from which the material or service is requested. This form is not used when purchasing from a commercial supplier.

10. Direct communication with Atomic Energy Commission. Direct communication with the Atomic Energy Commission may be authorized by major commanders in cases of inquiry initiated by the Atomic Energy Commission which concern license matters. Three information copies of all correspondence or other communications, includ-

ing records of significant telephone conversations, between the applicant and the U.S. Atomic Energy Commission will be forwarded to the Deputy Chief of Staff for Logistics, Attn: PEMA Execution Division, Department of Army, Washington, D.C. 20310.

11. Application for Department of Army radioactive materials authorization. a. Application for Department of Army radioactive material authorization will be forwarded on DA Form 3337 in triplicate through command channels to the Deputy Chief of Staff for Logistics, Attn: PEMA Execution Division, Department of Army, Washington, D.C. 20310, prior to procurement and use. Requests for authorization for this class of isotopes for human use will be forwarded through channels to The Surgeon General, Attn: MEDPS-P, Department of Army, Washington, D.C. 20315. Applications for medical units, for other than human use, will be forwarded through command channels to The Surgeon General for review and transmittal to the Deputy Chief of Staff for Logistics, Attn: PEMA Execution Division, Department of Army, Washington, D.C. 20310.

b. Oversea commanders will forward applications for a Department of Army authorization to use radioactive material outside the United States, its territories and possessions in triplicate to the Deputy Chief of Staff for Logistics, Attn: PEMA Execution Division, Department of Army, Washington, D.C. 20310. Request will be prepared on DA Form 3337. Department of Army radioactive material authorizations are not required for items of issue for which the responsible commodity command has already been issued a license or authorization for use and possession overseas.

c. Department of Army authorizations are granted for a three year period. Renewals or amendments of an authorization will be requested in the same manner as the original application. Request for renewal should be submitted through command channels in triplicate to reach the Deputy Chief of Staff for Logistics, Attn: PEMA Execution Division, Department of Army, Washington, D.C. 20310 no later than 30 days prior to expiration date. A request for amendment can be submitted at any time up to 30 days prior to the expiration date of the authorization. Request for amendment or renewal will be submitted on DA Form 3337.

12. Items of issue. (Also see AR 700-64.) a. Plans and specifications for incorporating radioactive material into items of issue will be submitted to the Deputy Chief of Staff for Logistics, Attn: PEMA Execution Division, Department of Army, Washington, D.C. 20310, for review of possible health hazards and logistical implications before the item is type classified. Plans and specification for modification of existing items of issue to include radioactive material or to modify the physical or chemical form will also be submitted for review of possible logistical implications before modification is effected. The Deputy Chief of Staff for Logistics will forward these plans and specifications to The Surgeon General for comments and recommendations related to potential health hazards. Electron tubes containing less than one microcurie of radioactivity are excluded from this requirement. Plans and specifications will be accompanied by the following data:

(1) Analysis and/or tests conducted to insure that the item meets military requirements and is safe (research, development, engineer, and service test information should be included). Use factors and environment will be considered in the analysis.

(2) A copy of the contractors' or government's general and/or specific Atomic Energy Commission license where appropriate. The contractor or government agency will also include all test data submitted to the Atomic Energy Commission to obtain the license.

(3) Chemical or physical form of radiation contained in finished item.

(4) Procedural controls for receipt, transportation, storage, use, transfer, maintenance, surveillance and disposal to be published in literature available to the user if the activity is greater than one microcurie. This includes items in Schedule A, Parts 30.70 and 31.100, Code of Federal Regulations, if the activity is one microcurie or greater.

(5) Marking and packaging data as required by MIL-M-19590, MIL-STD-129, MIL-E-IE, DOT Regulations and AR 755-15.

(6) Procedures to assure items will meet quality requirements established in specifications.

(7) Responsibility of radiological protection officer for overall program and local radiological protection officer and user.

(8) Training and experience requirements of users.

b. The Technical Data Package in both content and intent is consistent with applicable Atomic Energy Commission license or agreement-state license or Department of Army authorization.

c. Procurement package will require that Government inspectors are adequately trained radiologically and are qualified to perform the inspection functions in a competent manner.

d. The Technical Data Package and the executed contract will contain provisions that the contractor will furnish inspectors adequately trained to enable them to exercise their inspection functions in a competent manner.

e. Minimum risk is involved in the acceptance and use of the item.

f. Hazards associated with each system, assembly, sub-assembly are identified and corrected in an expeditious manner thereby reducing costly retrofit actions.

13. Transfer of radioactive material and export.

a. Transfer of byproduct, source or special nuclear material will not be made except in accordance with Title 10, Code of Federal Regulations, Section 30.3, Activities Requiring License; Section 30.34, Terms and Conditions of License; Section 40.51, Transfer of Source Material; Section 40.61, Records; Section 70.42, Transfer of Special Nuclear Material; Section 70.54, Material Transfer Reports.

b. Applications for transfer to agencies not authorized by a above or export to non-Army agencies of an activity of one microcurie or greater, except items of issue and radioactive waste disposal shipments, will be made through channels previously described to the Deputy Chief of Staff for Logistics, Attn: PEMA Execution Division, Department of Army, Washington, D.C. 20310.

c. Byproduct materials from a Department of Army reactor, for use within the United States, its territories and possessions, shall not be transferred until proof of the recipient's license is received in writing. The byproduct materials include -

(1) Liquid and gases with activity concentrations in excess of levels listed in Atomic Energy Commission Title 10, Code of Federal Regulations, Part 30, Section 30.70 Schedule A.

(2) Solids in which the maximum specific activity exceeds 0.002 microcuries per gram and

which contain a total activity of one microcurie or greater per item. Whenever the irradiation of an item results in a mixture of gamma emitting isotopes, a dose rate of less than 0.4 millirads per hour at any distance from the item will be considered as below the 0.002 microcurie/gram level for purposes of this regulation.

14. Disposal. Commanders are responsible for disposition of radioactive material in accordance with provisions of AR 755-15.

15. Technical advice. a. Technical advice concerning the health hazards relative to safe handling and storage of equipment containing radioactive materials can be obtained from The Surgeon General, Attn: MEDPS-P, and will be furnished upon request through command channels, or direct in cases of emergency requiring expeditious action by The Surgeon General. Technical advice to aid individual users or commanders regarding the elimination of possible health hazards and/or the incorporation of health protective measures within the design and construction of facilities, in which radioactive materials are to be used will also be furnished upon request.

b. Technical advice and guidance for the safe movement and transportation of nuclear and radioactive materials is a staff responsibility of the Deputy Chief of Staff for Logistics, Attn: Director of Transportation, Department of Army, Washington, D.C. 20310. Radioactive materials will be transported in accordance with AR 55-55 and regulations of Federal, State, and local governments where applicable.

16. Surveys. Upon request of the commander of the installation or activity concerned, The Surgeon General will provide personnel to perform on-site surveys and provide recommendations necessary to meet the requirements of this regulation as well as those of the Atomic Energy Commission. While the Environmental Hygiene Agency performs periodic surveys, it is incumbent upon the local commander to conduct sufficient on-site radiological surveys at least monthly, except for static storage areas, to assure safety and compliance with applicable procedures and directives. Request for assistance will be forwarded through command channels.

17. Inventory of radiation sources. *a.* The commanders of each installation or activity (except in combat areas) possessing radioactive materials with total level of radioactivity in excess of 10 microcuries, will designate an individual, preferably the radiation protection officer to physically inventory the radioactive sources on hand at least every six months, and to record the results of such inventory. Inventory records will document the specific item of equipment or radioisotope, applicable serial number, the location of the item, level of radioactivity, applicable Atomic Energy Commission license or Department of Army authorization numbers, receipts, transfers, local disposals, date of inventory and name of person making the inventory. Radioactive components already installed in vehicles or similar large items of equipment and individual radioactive components while being stored as spare parts are exempt from this inventory.

b. In addition the commanders of the Army National Inventory Control Points, commodity and spare parts storage locations, and maintenance and

repair locations will maintain inventory records in accordance with AR 700-64.

c. The inventory will be the subject of periodic command inspections.

18. Radiation protection. *a.* AR 40-14 and the AR 385-series prescribe standards, responsibilities, and procedures for recording and minimizing ionizing radiation exposure.

b. Unless specifically exempted by a Department of Army authorization or an Atomic Energy Commission license all sealed sources will be leak tested at least once every 6 months. A source wipe test label will be used on the source assembly or on the source container to readily indicate wipe test dates. A tag or other appropriate means may be affixed according to local conditions. The following information will be incorporated on the label:

<i>Source-Wipe Test Data</i>	
Type	Activity
Date	Serial No.
Model	Due date
By	By
(Orgn)	(Signature)

The proponent agency of this regulation is the Office of the Deputy Chief of Staff for Logistics. Users are invited to send comments and suggested improvements to Deputy Chief of Staff for Logistics, ATTN: LOG/PE-ISB, Department of the Army, Washington, D.C. 20310.

By Order of the Secretary of the Army:

Official:
KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

HAROLD K. JOHNSON,
General, United States Army,
Chief of Staff.

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