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	Safety RADIOLOGICAL SAFETY	
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DEPARTMENT OF THE ARMY  
US Army Corps of Engineers  
Washington, D.C. 20314

ER 385-1-80

CESO

Regulation  
No. 385-1-80

30 May 1997

Safety  
IONIZING RADIATION PROTECTION

This is a complete revision of ER 385-1-80. Engineer Manual(EM) 385-1-80, Radiation Protection Manual, further prescribes and details the requirements contained in this ER.

1. Purpose. This regulation assigns safety and health responsibilities to:

a. Safely and effectively use radioactive materials and radiation generating devices.

b. Ensure compliance with all applicable Federal, Department of Army (DA), USACE, state and local regulations (that is, "applicable regulations") concerning the safe use of radiation, radioactive materials or radiation generating devices. Guidance concerning the safe use of non-ionizing radiation sources (such as lasers and radio frequency radiation) can be found in EM 385-1-80 (USACE Radiation Protection Manual).

c. Obtain, renew, amend and terminate Nuclear Regulatory Commission (NRC) licenses and Army Radiation Authorizations (ARAs) for possession and use of radioactive materials and radiation generating devices not requiring licenses from the NRC.

d. Transfer or dispose of radioactive materials and wastes.

e. Oversee contractors using radioactive materials or radiation generating devices that require NRC or agreement state licensing or registration, installation permits or ARAs for possession or use of radioactive materials or radiation generating devices.

f. Oversee contractors performing remediation of sites contaminated with radioactive material or radioactive waste.

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This regulation supersedes ER 385-1-80, 7 May 1982

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2. Applicability. This regulation applies to all USACE Commands; Divisions, Districts, Laboratories, and Field Operating Activities (FOAs); which procure, use, possess, transport, transfer or dispose of radioactive materials or radiation generating devices, or oversee remediation of radioactive materials or radioactive waste. **The USACE Safety and Health Requirements Manual, EM 385-1-1, contains contractor requirements concerning radiation safety issues.**

3. References. References are listed in Appendix A.

4. Definitions. Definitions are listed in Appendix B.

5. Responsibilities.

a. The Chief, Safety and Occupational Health Office (CESO), Headquarters, USACE, (HQUSACE) is responsible for program management and oversight for licensing, accountability, possession, use, storage, transfer and disposal of all radioactive material and radiation generating devices within USACE. This responsibility shall be discharged by:

(1) Appointing and maintaining on staff a qualified Radiation Protection Staff Officer (RPSO);

(2) Assuring USACE Command implementation of Department of Army (DA) and USACE radiation protection policy.

b. On behalf of USACE, the Radiation Protection Staff Officer (RPSO) is responsible for:

(1) Serving as a primary focal point for coordination with other Federal Agencies, Department of Defense and DA officials concerning radiation safety issues and providing radiation safety consultation in coordination with the HTRW Center of Expertise (CX) to USACE Commands.

(2) Providing coordination, administration and technical review of all USACE applications, renewals, amendments and terminations of all NRC licenses and ARAs for the possession, use, transportation, transfer or disposal of non-NRC licensed radioactive material and radiation generating devices, and maintaining liaison with the US Nuclear Regulatory Commission.

(3) Providing recordkeeping for all paperwork and correspondence regarding applications, renewals, amendments and terminations of authorization for the possession, use, transportation, transfer or disposal of NRC licensed and non-NRC authorized radioactive material and radiation generating devices.

(4) Providing (may be through a designee) Radiation Protection Audits to all locations possessing an NRC license or an Army Radiation Authorization (ARA) for radioactive material or radiation generating devices, at least on a triennial basis.

c. The Commander or Director of any USACE Command, which procures, uses, possesses, transports, transfers, disposes of NRC general or specifically licensed, or ARA listed radioactive materials or radiation generating devices, or oversees contractors working with radioactive materials or radiation generating devices, is responsible for:

(1) Appointing, funding and maintaining a qualified Radiation Protection Officer (RPO) (may be designated as a Radiation Safety Officer (RSO) in other documents) upon recommendation from the RPSO, and supporting decisions of the RPO.

(2) Establishing written policies and a formal radiation protection program ensuring compliance with this and all applicable regulations, license or permit conditions.

(3) Maintaining adequate resources to assure the safety of personnel, property and the environment, and to cope with emergencies.

(4) Ensuring that all personnel who may be exposed to ionizing radiation receive appropriate radiation protection training. The adequacy of the training shall be determined by the RPO with concurrence of the RPSO.

(5) Establishing, funding, maintaining, and supporting a Radiation Protection Committee (RPC) if warranted by a specific NRC license or ARA condition.

(6) Obtaining all required USACE licenses, authorizations and permits (NRC and Army) prior to procurement, use, transfer, or disposal of radioactive materials or radiation generating devices.

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(7) Ensuring annual audits are conducted to determine compliance with all Federal, DA, USACE, state and local license or ARA conditions.

(8) Establishing procedures to assure that the local Safety and Occupational Health Office is advised prior to any change in the use of radioactive materials or radiation generating devices and that the RPO evaluates the procedures and hazards prior to utilization of radioactive materials or radiation generating devices.

d. The Chief, Safety and Occupational Health Office (SOHO) of any USACE Command, which procures, uses, possesses, transports, transfers, disposes of radioactive materials or radiation generating devices, or oversees contractors working with radioactive materials or radiation generating devices, including non-ionizing radiation sources, is responsible for:

(1) Assuring the radiation protection component of the Command's Safety and Occupational Health Program complies with all applicable regulations.

(2) Providing coordination, administration and technical review and approval of all USACE applications, renewals, amendments and terminations of NRC licenses and ARA's, including possession, use, transportation, transfer and disposal.

(3) Assuring that USACE personnel including Authorized Users and Authorized User's Assistants and are adequately instructed in the safe use of radiation and their duties and responsibilities under this regulation.

(4) Reviewing equipment, materials, facilities, operations and procedures and advising the Commander of any unsafe practices, defects or non-compliance with applicable regulations.

(5) Providing, upon request from contractors, the proper procedures for obtaining service permits or authorizations for use of radioactive materials or radiation generating devices on DOD installations.

e. The USACE Radiation Protection Officer (RPO) for each USACE Command is responsible for:

(1) Preparing and submitting to the RPSO, through USACE channels (see paragraph 7) within assigned time frames, all applications, amendments or submittals necessary for compliance with all applicable regulations concerning radioactive materials or radiation generating devices.

(2) Ensuring that all exposures of workers and the general public to ionizing radiation are kept as low as is reasonably achievable (ALARA), with technical and socioeconomic factors being taken into account. This shall be accomplished by ensuring compliance with all applicable regulations concerning radioactive materials or radiation generating devices by all users of radioactive materials or radiation generating equipment.

(3) Providing competent technical guidance for all users of radioactive material or radiation generating devices.

(4) With the concurrence of the RPSO, determining the appropriate training for all personnel who may be exposed to ionizing radiation.

(5) Ensuring that all personnel who may be exposed to ionizing radiation, including occupationally exposed personnel (radiation workers) and frequenters (individuals who are likely to receive an exposure of 100 millirem per year, such as janitorial staff) to areas where radiation is present, receive the appropriate training.

(6) Maintaining all documents, correspondence, reports, and records that this regulation and other applicable Federal and Army regulations, licenses, and authorizations may require.

(7) Disseminating all guidance and providing services as described in this regulation.

(8) Auditing activities involving radioactive materials or radiation generating devices within their USACE Command on an annual basis.

(9) Providing timely reports to the Commander or Director of his or her USACE Command, of the current status of activities involving radioactive material or radiation generating devices.

(10) Providing external and internal dosimetry to USACE personnel as needed, and as described in paragraph 11 of this ER.

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f. All USACE personnel, who procure, use, possess, transport, transfer or dispose of radioactive materials or radiation generating devices, or oversee contractors working with radioactive materials or radiation generating devices, are responsible for:

(1) Having knowledge of and complying with all applicable regulations concerning radioactive materials or radiation generating devices with which they work. This will be accomplished through training designated by the RPO.

(2) Performing their duties involving radioactive materials and radiation generating devices in a safe manner, in compliance with all applicable regulations, and in such a way as to promote maintaining doses ALARA.

(3) Ensuring that others performing work with radioactive materials or radiation generating devices, under their supervision, do so in a safe manner and in compliance with all applicable regulations, and in such a way as to promote maintaining doses ALARA.

(4) Informing the RPO, in a timely manner, of all procurement, possession, use, transfer, disposal, loss, theft, or other reportable occurrence involving radioactive materials or radiation generating equipment.

#### 6. Authorized Users, Authorized Users' Assistants and Qualifications.

a. Authorized Users (AUs) are individuals allowed to work unsupervised with radioactive materials or radiation generating devices. AUs will receive training commensurate with the hazard presented by their work. The RPO in conjunction with the RPSO will determine the content and extent of the training (details concerning training requirements are contained in EM-385-1-80).

b. Authorized Users' Assistants (AUAs) are individuals allowed to work with radioactive materials or radiation generating devices under the direct supervision (that is, within the physical presence) of an AU. AUAs will receive training commensurate with the hazard presented by their work. The RPO, in conjunction with the RPSO, will determine the content and extent of the training (details concerning training requirements are contained in EM 385-1-80).

7. Information Flow through Applicable USACE Channels.

a. All NRC license or ARA applications, approvals, amendments, submittals, terminations, etc., must be routed through all Safety and Occupational Health Office channels (that is, "through channels"), prior to being received for action by the HQUSACE RPSO. For example: a request to obtain an NRC license amendment would flow from the local RPO, through the local SOHO, through the Division SOHO to the HQUSACE RPSO for action. Actions would be forwarded from the HQUSACE RPSO in reverse order.

b. Failure to follow the information flow process is a violation of the USACE delegation requirements specified by the DA. Technical consultations between NRC Offices and license holders at USACE Commands may take place, though notification of the RPSO of such communications is recommended.

8. Notices, Instructions and Reports to Workers.

a. The RPO will file in his or her office, current copies of the following:

(1) 10 CFR 19 Notices Instructions and Reports to Workers: Instructions and Investigations;

(2) 10 CFR 20 Standards for Protection Against Radiation;

(3) 10 CFR 30 Rules of General Applicability to Domestic Licensing of Byproduct Material;

(4) 10 CFR 31 General Domestic Licenses for Byproduct Material;

(5) ER 385-1-80 Ionizing Radiation Protection;

(6) EM 385-1-80 Radiation Protection Manual and EM 385-1-1, Safety and Health Requirements Manual;

(7) A copy of all NRC licenses and Army Radiation Authorizations (ARAs) with all attachments, all amendments to licenses or ARAs, and all associated correspondence;

(8) A copy of the commands' radiation protection program;



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(9) All Standing Operating Procedures (SOPs) applicable to working with radiation within their Command.

(10) Copies of any notice of violation of license or ARA requirements.

(11) Copies of DA regulations, AR 385-11, AR 40-5, AR 40-14.

b. The RPO will post the following documents, in enough conspicuous locations to ensure that all personnel working with radiation can observe them:

(1) a notice that all documents listed in Paragraph 8.a. above, are located in the RPO's office, and may be examined during working hours by all personnel working with radiation.

(2) a copy of NRC Form 3, Notice to Employees (Appendix C) dated no earlier than 1/96.

#### 9. Dose Limits.

a. To ensure compliance with all regulatory agencies, USACE has established a three tiered approach to worker dose limits. Each user of radioactive material or radiation generating devices shall limit occupational doses to individuals to the following limits:

(1) Tier 1 limits. USACE personnel shall never exceed an annual dose which is the more limiting of:

(a) 5 rems (5000 millirem (mrem))(0.05 sieverts (Sv)) total effective dose equivalent (TEDE), or

(b) The sum of the deep dose equivalent and the committed dose equivalent (CDE) to any individual organ or tissue of 50 rems (50000 mrem)(0.5 Sv), or

(c) 15 rems (15000 mrem)(0.15 Sv) to the lens of the eye, or

(d) 50 rems (50000 mrem)(0.5 Sv) shallow dose equivalent to the skin, or any extremity.

(e) The TEDE to the fetus of a declared pregnant worker will be kept below 0.5 rem (500 mrem)(0.005 Sv) during the entire gestation period. Should the fetus have received greater than 0.5

rem, when the worker declares her pregnancy the fetus will be limited to an additional exposure of no more than 0.05 rem during the remaining gestation period.

(2) Tier 2 USACE annual dose limits. Without the written approval of the Radiation Protection Staff Officer (RPSO) the annual occupational dose shall not exceed the more limiting of:

(a) 0.5 rems (500 mrem)(0.005 Sv) TEDE, or

(b) The sum of the deep dose equivalent and the committed dose equivalent to any individual organ or tissue of 5 rems (5000 mrem)(0.05 Sv), or

(c) 1.5 rems (1500 mrem)(0.015 Sv) to the lens of the eye, or

(d) 5 rems (5000 mrem)(0.05 Sv) shallow dose equivalent to the skin, or any extremity.

(e) The TEDE to the fetus of a declared pregnant worker will be kept below 0.5 rem (500 mrem)(0.005 Sv) during the entire gestation period. Should the fetus have received greater than 0.5 rem, when the worker declares her pregnancy the fetus will be limited to an additional exposure of no more than 0.05 rem during the remaining gestation period.

(3) Tier 3 project specific dose goals. To keep doses ALARA, the RPO shall set administrative action levels specific to each individual project, below the USACE annual dose limits. The ALARA action levels shall be realistic and attainable. ALARA action levels can be set at any level, but need to take the particulars of each project into account. Example action levels for a small project involving little radioactive material could be:

Dose shall not exceed the limiting of:

(a) 0.1 rems (0.001 Sv) TEDE, or

(b) The sum of the deep dose equivalent and the committed dose equivalent (CDE) to any individual organ or tissue of 0.5 rems (0.005 Sv), or

(c) 0.15 rems (0.0015 Sv) to the lens of the eye, or

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(d) 0.5 rems (0.005 Sv) shallow dose equivalent to the skin, or any extremity.

Table 9-1  
Dose Limits

Body Part	NRC Annual Limits	USACE Annual Limits	Example Annual ALARA Limits
Whole Body	5 rem	0.5 rem	0.1 rem
Individual Organ	50 rem	5.0 rem	0.5 rem
Lens of Eye	15 rem	1.5 rem	0.15 rem
Skin	50 rem	5.0 rem	0.5 rem

b. Planned special exposures (see definitions, Appendix B) shall not be used without the written consent of the RPSO.

c. Persons under the age of 18 shall not be allowed occupational exposure to radiation on USACE sites.

d. Activities with radiation shall be conducted so that USACE personnel who are not working with radiation and members of the public can not receive a TEDE exceeding 100 mrem per year.

e. The dose in any unrestricted area will not exceed 2 mrem in any one hour.

#### 10. Surveys and Monitoring.

a. The RPO will ensure that adequate surveys and monitoring are performed to ensure compliance with the above dose limits in an accurate and timely manner, and are properly recorded and filed.

b. The RPO will ensure that all instruments and equipment used for quantitative radiation measurements are calibrated at least annually or as directed by regulations, license or ARA conditions, or manufacturer's recommendations.

c. The RPO will monitor all areas where there is a potential for external radiation. Where the potential for exposure that would cause a dose equal to the Tier 2 USACE Dose limits exists and for all personnel entering high or very high radiation areas, the RPO will provide external dosimetry for all personnel entering the area.

d. The RPO will monitor all areas where there is a potential for internal contamination. Where the potential for intake of radionuclides causing a dose equal to the Tier 2 USACE Dose limits exists, the RPO will provide internal dosimetry (bioassay) services for all personnel entering the area.

#### 11. Personnel Dosimetry.

a. The RPO will provide external and/or internal dosimetry (bioassay) to all USACE personnel who may exceed a Tier 2 radiation dose, and all personnel who enter a high or very high radiation area.

b. The RPO will determine assignment of personnel dosimetry to other personnel. Any determination not to issue dosimetry to any individual who requests dosimetry will be discussed with the RPSO and the individual and documented.

c. All personnel issued dosimetry will provide the RPO with a completed DD Form 1952 (Dosimeter Application and Record of Occupational Radiation Exposure) (example attached at Appendix C) and records, or points of contact, to determine the individual's previous dose history. The dose history will be recorded on the individual's exposure record, and reported to the US Army Ionizing Radiation Dosimetry Center (USAIRDC).

d. External dosimetry will be provided to USACE personnel by the RPO, using dosimeters provided by USAIRDC. USAIRDC will also provide dosimetry reading and reporting services. USAIRDC maintains accreditation under the National Voluntary Laboratory Accreditation Program (NVLAP).

e. Exposure of personnel to ionizing radiation shall be reported and recorded. Exposures shall be recorded using the computer printout generated by USAIRDC or NRC Form 5 (a copy for reference of the USAIRDC computer generated version of NRC Form 5 is provided at Appendix C). Exposures measured using other than USAIRDC dosimetry shall be reported to USAIRDC.

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f. Dosimetry results and dose history will be reported and explained by the RPO to all individuals:

- (1) annually;
- (2) upon termination from the dosimetry program; and,
- (3) within 30 days of the request of any individual presently or previously monitored under the dosimetry program.

g. Employee exposure records will be maintained in accordance with the requirements in 10 CFR 19 and 20, 29 CFR 1910.1020 and 5 CFR Part 339.

h. At the request of an employee who participated in a USACE dosimetry program, or that employee's designee, a report of the employee's dose history shall be furnished by the RPO through the Human Resources Management Office to the employee or his/her designee within 30 days of the request (in accordance with paragraph 11g above).

i. The RPO will review all exposure records at least once in each three-month period to ensure that exposures are being kept ALARA.

12. Control of Exposure from External Sources in Restricted Areas. Authorized Users and the RPO will ensure that all entrances to High and Very High Radiation Areas are locked when access is not required, and that individuals document all required entries.

13. Storage and Control.

a. Radioactive materials will be secured by the user to prevent unauthorized access or removal when not in use.

b. Radioactive materials not in secure storage will be under the constant surveillance and control of the authorized user.

c. The RPO shall physically inventory all radioactive materials and radiation generating devices within his or her Command every six months. The physical inventory will be performed more frequently if required by regulations, license or ARA conditions. The inventory will be documented and retained by the RPO.

d. The RPO shall ensure that all radioactive sources are leak tested every six months, unless specifically exempted from testing, or if the testing frequency listed in NRC regulations, the NRC license or ARA conditions is different. Leak test results will be recorded on ENG Form 3309-R (Record of Radioactive Material (a copy is provided at Appendix C)) and filed with the appropriate license or ARA documentation at the Command.

e. If leak test results exceed 0.005 microcurie the source will be removed from service and the RPO notified as soon as possible. The RPO will properly prepare the source for shipping and return the source to the manufacturer or dispose of the source according to regulations, and if necessary notify the NRC in accordance with 10 CFR 21.

#### 14. Precautionary Procedures.

a. The RPO will assure that all radiation areas, high radiation areas, and very high radiation areas are posted with the appropriate radiation area sign.

b. The RPO will ensure that all radioactive materials or their containers, and all equipment containing a radioactive source bear a radioactive materials label and all rooms or areas where radioactive materials are used or stored are posted with the appropriate radioactive materials sign.

c. The RPO will ensure that each package received containing radioactive materials is surveyed for radiation levels, that each labeled package, other than special form sources, and all damaged or degraded packages are wipe tested for external contamination. This will be performed within 3 hours of receipt of the package if the package is received during normal business hours, and within the first 3 business hours of the next business day if received after normal business hours.

d. Should external radiation exceed 10 mrem at 1 meter from the package or if contamination levels exceed 200 dpm per 100 cm<sup>2</sup>, the RPO will immediately notify the RPSO, the final delivery carrier and their NRC regional office, if applicable.

#### 15. Transfer of USACE Radioactive Material and Radiation Generating Devices.

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a. The RPSO must approve any transfer of any radioactive material.

b. The request for authorization to transfer radioactive materials will be submitted through channels to the RPSO on ENG Form 4790-R (Request for Authorization to Transfer Radioactive Materials, Appendix C).

c. Proper shipping documents will be prepared according to Department of Transportation (DOT) regulations found in Title 49 CFR.

d. For all NRC licensed materials, a Certificate of Disposition of Materials will be prepared in accordance with paragraph 17c of this regulation.

16. Transportation of Radioactive Materials. All radioactive materials will be transported in accordance with Title 49 CFR. Additionally, NRC licensed radioactive materials will be transported in accordance with 10 CFR 71.

17. Waste Disposal.

a. All radioactive waste disposal shall be coordinated through the HTRW-CX. All DOD environmentally remediated low level radioactive waste (LLRW) disposal will be coordinated with the HTRW-CX and the DOD executing agent for low-level radioactive waste disposal (U.S. Army Industrial Operations Command (USAIOC), AMSIO-DMW, Rock Island, IL 61299-6000). Department of Defense (DOD) LLRW disposal not associated with environmental remediation actions shall be performed by the DOD LLRW executing agent.

b. All releases of radioactive effluents will be in accordance with 10 CFR 20, and will be approved by the State and local regulatory agencies. A record of all effluent releases containing the date, radio nuclide, activity and chemical form will be maintained.

c. An NRC Certificate of Disposition of Materials, NRC Form 314, (a copy is attached at Appendix C) will be prepared for all NRC licensed materials prior to disposal or transfer. The certificate will be forwarded through channels, to the RPSO who will review and forward it to the NRC.

18. Records.

a. The RPO will maintain records of the provisions and implementation of their Command's radiation protection program and all audits and reviews of the program for the time required by any NRC regulation or license condition, ARA or as listed in AR 25-400-2, Modern Army Recordkeeping System.

b. The RPO will maintain records of the monitoring and surveys required in paragraph 10 above, all instrument calibration records, all internal and external personnel dosimetry records, all waste disposal, all effluent release records, and all decommissioning records in accordance with applicable Federal and DA regulations. Employee exposure records, and decommissioning records will be maintained in accordance with 10 CFR 20 and 29 CFR 1910.1020. The RPO will maintain these records for the time required by any NRC regulation or license condition, ARA or as listed in AR 25-400-2. Employee training records will be maintained in accordance with Human Resources Management Office policies.

19. Reports.

a. The RPO will immediately report the loss or theft of NRC licensed radioactive materials to the NRC within the time frames listed in 10 CFR 20. The RPO will notify the RPSO as soon as possible of any notification of the NRC of loss or theft of materials.

b. The RPO will notify the RPSO of any exposure exceeding Tier 2 USACE Dose Limits and any release of radioactive materials that could potentially cause a dose to an individual to exceed the Tier 2 USACE Dose Limits, or an event that could lead to a member of the public receiving a significant portion of the 100 mR/yr dose limit. If appropriate, the RPO will notify the NRC of overexposures and releases as defined by NRC in a timely manner as per 10 CFR 20. The RPO will notify the RPSO as soon as possible of any notification of the NRC of overexposure or releases.

20. Nuclear Regulatory Commission Licenses.

a. All NRC license application, amendment, and termination requests, all enclosures, and correspondence will be forwarded, in triplicate through channels, to the RPSO 90 days prior to the



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date the action is needed. The RPSO will review and forward these documents to the NRC.

b. The NRC license will specify the time period for which the license is valid, and the license conditions will specify any special procedures applicable to the possession and use of the radioactive materials.

c. Radioactive materials will not be procured until the required NRC licenses have been received.

## 21. Army Radiation Authorizations.

a. All radioactive materials that are not licensed by NRC, and all radiation generating devices for possession or use by USACE personnel must be covered by an Army Radiation Authorization (ARA) issued by USACE. An ARA is required for all such sources except—

(1) Byproduct, source, or special material which the NRC has declared to be license-exempt (10 CFR 30, sections 30.14 through 30.20; 10 CFR 40, sections 40.13 and 40.14; and 10 CFR 70, section 70.14) or generally licensed material (10 CFR 31; 10 CFR 40, sections 40.20 through 40.28; and 10 CFR 70, section 70.19).

(2) Less than 0.1 microcurie ( $\mu\text{Ci}$ ) [3.7 kilobecquerels (kBq)] of radium.

(3) Less than 1  $\mu\text{Ci}$  (37 kBq) of any naturally occurring or accelerator produced radioactive material (NARM) other than radium.

(4) For electron tubes containing less than 10  $\mu\text{Ci}$  (370 kBq) of any NARM radioisotope.

(5) For machine-produced ionizing radiation sources not capable of producing a high radiation area or very high radiation area. (For example, medical and dental diagnostic x-ray systems do not require an ARA.)

(6) For Army nuclear reactors and Army reactor-produced radioactive material (RAM) that remains at the reactor site. The Army Reactor Office issues Army reactor permits for these sources per AR 50-7, The Army Reactor Program.

b. All Army Radiation Authorization (ARA) applications, amendments, and termination requests, and correspondence will be forwarded, through channels, to the RPSO. The RPSO will review these documents, and when they are in compliance, issue on behalf of the Commanding General, USACE, the ARA and any required conditions.

c. Application for an ARA, amendment to an ARA, or termination for an ARA including all enclosures, will be submitted through channels using DA Form 3337 (Appendix C), to the RPSO not later than 30 days prior to the date the action is needed.

d. ARA conditions will specify the time period for which the ARA is valid, and any special procedures applicable to the possession and use of the radioactive materials or radiation generating devices.

e. Many states require registration of radiation generating devices. The RPO will determine the need to register all radiation generating devices within their Command with state authorities, and, if required, follow the procedures of the registering agency as necessary.

f. Radioactive materials and radiation generating devices will not be procured until the required ARAs have been received.

22. Army Radiation Permits. USACE contractors wishing to use, store, or possess radioactive materials or radiation generating devices on any DA installation, project or facility must obtain an Army Radiation Permit (ARP). For purposes of this paragraph, "ionizing radiation source" means any source that, if held or owned by an Army agency, would require a specific NRC license or ARA.

a. The non-Army applicant will apply by letter with supporting documentation (paragraph 22.b, below) through the appropriate tenant Commander (if applicable) to the installation Commander.

b. The ARP application will specify start and stop dates for the ARP and describe for what uses the applicant needs the ARP. The installation Commander will approve the application only if the applicant provides evidence to show that one of the following is true.

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(1) The applicant possesses a valid NRC license or Department of Energy (DOE) radiological work permit that allows the applicant to use the source as specified in the ARP application.

(2) The applicant possesses a valid agreement State license that allows the applicant to use RAM as specified in the ARP application, and the applicant has filed NRC Form-241, Report of Proposed Activities in Non-Agreement States, with the NRC in accordance with 10 CFR 150.20. An ARP issued under these circumstances will be valid for no more than 180 days in any calendar year.

(3) For NARM and machine-produced ionizing radiation sources, the applicant has an appropriate State authorization that allows the applicant to use the source as specified in the ARP application or has in place a radiation protection program that complies with Army regulations.

(4) For overseas installations, the applicant has an appropriate host-nation authorization as necessary that allows the applicant to use the source as specified in the ARP application and has in place a radiation protection program that complies with Army regulations.

c. All ARPs will require applicants to remove all permitted sources from Army property by the end of the permitted time.

d. Disposal of radioactive material by non-Army agencies on Army property is prohibited. However, the installation Commander may authorize radioactive releases to the atmosphere or to the sanitary sewerage system that are in compliance with all applicable Federal, DOD, and Army regulations.

### 23. Air Force and Navy Radiation Permits.

a. USACE personnel and USACE contractors wishing to use radioactive materials or radiation generating devices on any Air Force installation must obtain permission from the installation. On Air Force property, contact the installation Environmental Health Section for instructions.

b. USACE personnel and USACE contractors wishing to use radioactive materials or radiation generating devices on any Navy installation must obtain permission from the installation. On

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Navy property, contact the installation Safety Office for instructions.

24. EM 385-1-80 Radiation Protection Manual provides more in-depth guidance and explanation of methods to meet the requirements of this regulation, and to provide a greater level of radiation protection (ionizing and non-ionizing) to USACE personnel, the public and the environment.

FOR THE COMMANDER:

3 Appendices  
APP A - References  
APP B - Definitions  
APP C - Forms Required



OTIS WILLIAMS  
Colonel, Corps of Engineers  
Chief of Staff

Appendix A

References

- 10 Code of Federal Regulations (CFR) Energy: revised 21 May 1992.
- 29 CFR 1910 Labor
- 49 CFR 171-179: Transportation
- Public Law 96-573 National Low Level Radioactive Waste Policy Act of 1980 42 U. S. C. 2021-2121D
- AR 25-400-2 Modern Army Recordkeeping System
- AR 40-14 Occupational Ionizing Radiation Personnel Dosimetry
- AR 40-5 Preventive Medicine
- AR 50-7 The Army Reactor Program
- AR 385-11 Radiation Protection
- ER 385-1-92 Safety and Occupational Health Document Requirements for Hazardous Waste Site Remedial Actions
- EM 385-1-1 Safety and Health Requirements Manual
- EM 385-1-80 Radiation Protection Manual

## Appendix B

### Definitions

**ABSORBED DOSE** - The amount of energy imparted to matter by ionizing radiation per unit mass of irradiated material. The unit of absorbed dose is the rad (or prefixed forms of the unit such as millirad); which is 100 ergs/gram. The SI unit for the rad is the gray. 1 gray = 100 rads.

**ACTIVITY** - The number of nuclear disintegrations occurring in a given quantity of material per unit time. (See Curie)

**ANNUAL LIMIT OF INTAKE (ALI)** - Means the derived limit for the amount of radioactive material taken into the body of an adult worker by inhalation or ingestion a year.

**BACKGROUND RADIATION** - Ionizing radiation arising from radioactive material other than the one directly under consideration. Background radiation due to cosmic rays and natural radioactivity is always present. There may also be background radiation due to the presence of radioactive substances in other parts of the building, in the building material itself, etc. Background radiation includes radiation from fallout, radioactive effluents from other sources, and medical radiation.

**COMMITTED DOSE EQUIVALENT (CDE)** - ( $H_{T,50}$ ) Means the dose equivalent to organs or tissues of reference (T) that will be received from an intake of radioactive material by an individual during the 50 year period following the intake.

**CONTAMINATION, RADIOACTIVE** - Deposition of radioactive material in any place where it is not desired, and particularly in any place where the presence may be harmful.

**CRITICAL ORGAN** - That organ or tissue, the irradiation of which will result in the greatest hazard to the health of the individual or his or her descendants.

**CURIE** - The quantity of any radioactive material in which the number of disintegrations is  $3.700 \times 10^{10}$  per second. Abbreviated Ci.

Millicurie - One-thousandth of a curie ( $3.7 \times 10^7$  disintegrations per second). Abbreviated mCi.

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Microcurie - One-millionth of a curie ( $3.7 \times 10^4$  disintegrations per second). Abbreviated  $\mu\text{Ci}$ .

Picocurie - One-millionth of a microcurie ( $3.7 \times 10^{-2}$  disintegrations per second or 2.22 disintegrations per minute). Abbreviated  $\text{pCi}$ .

**DECLARED PREGNANT WORKER** - Means a women who has voluntarily informed her employer, in writing, of her pregnancy and the estimated date of conception.

**DEEP DOSE EQUIVALENT (DDE)** - ( $H_d$ ) Which applies to external whole-body exposure, is the dose equivalent at a tissue depth of 1 cm ( $1000 \text{ mg/cm}^2$ ).

**DERIVED AIR CONCENTRATIONS (DAC)** - Means the concentration of a given radio nuclide in air which, if breathed by the reference man for a working year of 2,000 hours under conditions of light work (inhalation rate  $1.2 \text{ m}^3/\text{hr}$ ), results in an intake of one ALI.

**DOSE** - A general term denoting the quantity of radiation or energy absorbed in a specified mass. For special purposes, it must be appropriately qualified (e.g., absorbed dose).

**DOSE, ABSORBED** - The energy imparted to matter by ionizing radiation per unit mass of irradiated material at the place of interest. The unit of absorbed dose is the rad; which is 100 ergs/gram.

**DOSE, EQUIVALENT** - A quantity used in radiation protection expressing all radiation on a common scale for calculating the effective absorbed dose. The unit of dose equivalent is the rem, which is numerically equal to the absorbed dose in rads multiplied by certain modifying factors such as the quality factor, the distribution factor, etc.

**EFFECTIVE DOSE EQUIVALENT (EDE)** - ( $H_E$ ) Is the sum of the products of the dose equivalent to organ or tissue ( $H_T$ ) and the weighting factors ( $W_T$ ) applicable to each of the body organs or tissues that are irradiated.

**EXPOSURE** - A measure of the ionization produced in air by x or gamma radiation. It is the sum of the electrical charges on all ions of one sign produced in air when all electrons liberated by photons in volume element of air are completely stopped in air, divided by the mass of air in the volume element. The special unit of exposure is the roentgen.

**EXTREMITY** - Means hand, elbow, arm below the elbow, foot, knee, or leg below the knee.

**EXTERNAL DOSIMETRY** - The use of Thermoluminescent Dosimeters, Film Badges or other exposure measuring devices to determine the radiation dose a person receives from sources outside the body.

**EYE DOSE EQUIVALENT (LDE)** - Applies to the external exposure of the lens of the eye and is taken as the dose equivalent at a tissue depth of 0.3 centimeter (300 mg/cm<sup>2</sup>).

**HIGH RADIATION AREA** - Means an area accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.1 rem (1 mSv) in 1 hour at 30 centimeters from the radiation source or from any surface that the radiation penetrates.

**INTERNAL DOSIMETRY** - Also called Bioassay The use of instruments to measure radiation coming from inside the body or the analysis of urine, or fecal samples to determine the radiation dose a person receives from radiation sources inside the body.

**IONIZING RADIATION** - Any electromagnetic or particulate radiation capable of producing ions, directly or indirectly, in its passage through matter.

**MONITORING** - Periodic or continuous determination of the amount of ionizing radiation or radioactive contamination present in an occupied region as a safety measure for purposes of health protection, for example; Area Monitoring: Routine monitoring of the level of radiation or of radioactive contamination of any particular area, building, room or equipment; or Personnel Monitoring: Monitoring any part of an individual, his or her breath, excretions, or any part of his or her clothing (See Radiological Survey).



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**OCCUPATIONAL DOSE** - The radiation dose a person receives as a result of activities related to their employment, but excluding doses resulting from background and medical radiation.

**PLANNED SPECIAL EXPOSURE (PSE)** - Means an infrequent exposure to radiation, separate from and in addition to the annual NRC (Tier 1) dose limit.

**RADIATION** - (1) The emission and propagation of energy through space or through a material medium in the form of waves; for instance, the emission and propagation of electromagnetic waves, or of sound and elastic waves. (2) The energy propagated through a material medium as waves; for example, energy in the form of electromagnetic waves or of elastic waves. The term "radiation" or "radiant energy," when unqualified, usually refers to electromagnetic radiation. Such radiation commonly is classified according to frequency as Hertzian, infrared, visible (light), ultraviolet, x-ray, and gamma ray. (3) By extension, corpuscular emissions, such as alpha and beta radiation, or rays of mixed or unknown type, as cosmic radiation.

**RADIATION AREA** - Means an area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.005 rem (0.05 mSv) in 1 hour at 30 centimeters.

**RADIATION GENERATING DEVICE** - Any device which generates ionizing radiation. Examples include x-ray machines, x-ray diffraction units, and neutron generators. Radiation from reactors, accelerators, gas chromatographs and x-ray fluorescence devices come from radioactive materials generated or enclosed in the items.

**RADIATION PROTECTION COMMITTEE** - A committee, required by some NRC licenses to review and approve activities involving radiation within their command. The committee consists of the Commander or his or her deputy (who chairs the committee), the Chief, Safety and Occupational Health Office, the RPO (acting as recorder), the senior medical officer of the Command, and representative Authorized Users.

**RADIATION SURVEY** - Evaluation of the radiation hazards incident to the production, use or existence of radioactive materials or other sources of radiation under a specific set of conditions. Such evaluation customarily includes a physical survey of the disposition of materials and equipment, measurements or estimates of the levels of radiation that may be involved, and a sufficient knowledge of processes using or affecting these materials to predict hazards resulting from expected or possible changes in materials or equipment.

**RADIO NUCLIDE OR RADIOACTIVE MATERIAL** - A nuclide with an unstable ratio of neutrons to protons placing the nucleus in a state of stress. In an attempts to reorganize to a more stable state, it may undergo various types of rearrangement that involve the release of radiation.

**REM** - The special unit of dose equivalent. The dose equivalent in rems is numerically equal to the absorbed dose in rads multiplied by the quality factor, distribution factor, and any other necessary modifying factors.

**ROENTGEN (R)** - The quantity of x or gamma radiation such that the associated corpuscular emission per 0.001293 grams of dry air produces, in air, ions carrying one electrostatic unit of quantity of electricity of either sign. The roentgen is the special unit of exposure. **MILLIROENTGEN (mR)** - A submultiple of the roentgen equal to one one-thousandth (1/1000th) of a roentgen.

**SHALLOW DOSE EQUIVALENT (SDE)** - ( $H_s$ ) Which applies to the external exposure of the skin or an extremity, is taken as the dose equivalent at a tissue depth of 0.007 centimeters ( $7 \text{ mg/cm}^2$ ) averaged over an area of 1 square centimeter. Shallow Dose Equivalent, Whole Body (WB) means for purposes of external exposure, head, trunk (including male gonads), arms above the elbow or legs above the knee. Shallow Dose Equivalent, Maximum Extremity (ME) means for purposes of external exposure, arms below the elbow or legs below the knee.

**SIEVERT** - The SI unit of dose equivalent, 1 sievert (Sv) equals 100 rem.

**SIGNS** - Radiation signs contain a magenta or black trefoil (radiation symbol) on a yellow background and contain the

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wording: "Caution Radiation Area", "Caution High Radiation Area", "Grave Danger Very High Radiation Area", or "Caution Radioactive Materials" as appropriate.

**TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE)** - Means the sum of the Deep Dose Equivalent (for external exposures) and the Committed Effective Dose Equivalent (for internal exposures).

**THERMOLUMINESCENT DOSIMETER** - A dosimeter made of certain crystalline material which is capable of both storing a fraction of absorbed ionizing radiation and releasing this energy in the form of visible photons when heated. The amount of light released can be used as a measure of radiation exposure to these crystals.

**VERY HIGH RADIATION AREA** - Means an area, accessible to individuals, in which radiation levels could result in an individual receiving an absorbed dose in excess of 500 rads (5 grays) in 1 hour at a meter from a radiation source or from any surface that the radiation penetrates.

**WEIGHTING FACTORS ( $W_T$ )** - For an organ or tissue (T) is the proportion or the risk of stochastic effect resulting from irradiation of that organ or tissue of the total risk of stochastic effect when the whole body is irradiated uniformly.

Appendix C  
Required Forms

DD Form 1952

DA Form 3337

ENG Form 3309-R

ENG Form 4790-R

NRC Form 3 (For Reference only, not to full scale as required  
(17" by 11"))

USAIRDC Computer Generated version of NRC Form 5

NRC Form 241

NRC Form 313

NRC Form 314

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DOSIMETER APPLICATION AND RECORD OF OCCUPATIONAL RADIATION EXPOSURE						
<i>Print legibly or type all information requested. See Privacy Act Statement on reverse.</i>						
1. FULL NAME (Last, First, Middle)		2. DATE OF BIRTH (YYMMDD)		3. SOCIAL SECURITY NO.		
4. DUTY SECTION (Dept., Ward, Unit, etc.)		5. JOB TITLE		6. DUTY PHONE		
7. PAY GRADE CIVILIAN <input type="checkbox"/> MILITARY <input type="checkbox"/>		8. HAVE YOU WORN A DOSIMETER ISSUED BY THIS COMMAND IN THE PAST <input type="checkbox"/> YES <input type="checkbox"/> NO		9. DATE OF RADIATION PHYSICAL (YYMMDD)		
10. DUTY STATUS <input type="checkbox"/> PERMANENT <input type="checkbox"/> TRANSIENT 6 WEEKS OR LESS		11. IF TRANSIENT SHOW MAILING ADDRESS (street address, city, state, zip code) OF LOCATION OF HEALTH RECORDS				
EXPOSURE INFORMATION (ITEMS 11 THROUGH 20 FOR HEALTH PHYSICS USE ONLY)						
11. CLASSIFICATION OF EXPOSURE <input type="checkbox"/> EXTERNAL <input type="checkbox"/> NEUTRON <input type="checkbox"/> INTERNAL						
12. BADGES REQUIRED <input type="checkbox"/> WRIST <input type="checkbox"/> WHOLE-BODY <input type="checkbox"/> NEUTRON			13. TLD REQUIRED <input type="checkbox"/> WRIST <input type="checkbox"/> WHOLE-BODY <input type="checkbox"/> FINGER			
14. BIOASSAYS REQUIRED						
WHOLE-BODY COUNT <input type="checkbox"/> YES <input type="checkbox"/> NO		THYROID UPTAKE <input type="checkbox"/> YES <input type="checkbox"/> NO		URINALYSIS <input type="checkbox"/> $\alpha$ <input type="checkbox"/> $\beta$ <input type="checkbox"/> $\beta$ - $\gamma$		
FREQUENCY <input type="checkbox"/> MONTHLY <input type="checkbox"/> QUARTERLY <input type="checkbox"/> ANNUALLY						
GIVE DATES FOR ITEMS 15 THROUGH 20 (YYMMDD)						
15. DOSIMETER(S) ISSUED		16. DD FORM(S) 1141 INITIATED		17. DOSIMETER(S) DISCONTINUED		
18. LAST DOSIMETER(S) RETURNED		19. LOCATOR CARD TO HEALTH RECORD		20. DD FORM(S) 1141 TO MEDICAL RECORDS		
OCCUPATIONAL EXPOSURE HISTORY						
NOTE: This section only applies to the individual who has worked with radiation-producing devices or radioisotopes in a permanent status. List only those employers for whom you worked with radiation.						
NAME OF EMPLOYER	ADDRESS <small>(street address, city, state, zip code)</small>	FROM		TO		Do not write in this space
		YR	MO	YR	MO	
TOTAL EXPOSURE DATA						
REMARKS						

DD FORM 81 NOV 1952

EDITION OF 1 SEP 74 IS OBSOLETE AND REPLACES DD FORM 1952, (see reverse) PRIVACY ACT STATEMENT, SEP 75, WHICH IS OBSOLETE.

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## DETACH INSTRUCTIONS SHEET BEFORE SUBMITTING APPLICATION

## INSTRUCTIONS FOR PREPARING DA FORM 3337

## GENERAL INSTRUCTIONS

An applicant for a DA Radiation Authorization or Permit should complete DA Form 3337 in detail. The completed form will be submitted through channels to Chief, Safety Office, DARCOM, ATTN: DRCSF-P, 5001 Eisenhower Avenue, Alexandria, VA 22333. Four signed and dated copies of the application are required.

Complete items 1 through 20c of DA Form 3337 if this is an initial application or a renewal application. Information for items 8 through 15 contained in previous applications filed with the Chief, Safety Office, DARCOM

may be included by reference provided references are clear and specific. Use supplemental sheets when necessary to provide complete information. Items 19 through 20c must be completed on all applications.

Ensure that applications are completed and detailed. Submitting an incomplete application will result in a delay in issuing the DA authorization or permit.

After the application is approved, the applicant will receive a DA authorization or permit according to the general requirements of AR 385-11.

## SPECIFIC INSTRUCTIONS

Check appropriate box to indicate whether application is for a DA "Authorization" or "Permit."

ITEMS 1 AND 2 – The "Applicant" is the organization or person legally responsible for possession and use of the radiation source(s) listed in the application.

ITEM 3 - Indicate the address where the radiation source(s) will be used or stored if different from that listed in item 2. A Post Office box is *not* acceptable.

ITEM 4 – The "Department" is the department or similar subdivision that has field responsibility for the radiation source(s).

ITEM 5- Show whether numbers denote an NRC license or DA authorization or permit.

ITEM 6- The "Individual User" is the person who will be responsible for the use and safe handling of radiation source(s).

ITEM 7 – Include name of Army or Contractor RPO.

ITEM 8 – List by name each radioactive material needed, such as Ra- 226, etc. List electronic radiation devices by type and parameters, such as industrial x-ray, 150 KVP, 20 MA.

ITEM 9 - List chemical and/or physical form for each radioactive byproduct material. List the quantity in millicuries of each material the applicant needs to have authorized for use. If more than one chemical or physical form of a particular radioisotope is needed, a separate possession limit will be stated for each form. For example, an applicant needing two chemical forms of Radium-226 must list both forms and the possession limit for both.

## EXAMPLE :

Ra-226	Ra Sulphate (Sealed Source)	10 millicuries
Ra-226	Radium Chloride in Solution	1 millicurie

If the radioactive material is to be obtained as a sealed source(s), specify the amount of activity in each sealed source, the manufacturer's name, and the model number.

## EXAMPLE :

Ra-226	2 sealed sources, 25 mc each 50 millicuries (US Radium Corp., Model 3-124)
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ITEM 10- State the use of each radioactive material and chemical form specified in items 8 and 9.

ITEMS 11 AND 12 – These items must be completed for each individual named in items 6 and 7. If more than one individual is listed in items 6 and 7, clearly key the name of each individual to his or her experience. Work experience or on-the-job training should be commensurate with proposed use.

ITEMS 13 THROUGH 16- Self-explanatory.

ITEM 17- Include procedures for property decontamination and restoration.

ITEM 18- Self-explanatory.

ITEMS 19 THROUGH 20c – Application must be signed by responsible Official, e.g., Commander or Corporate President.

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APPLICATION FOR DEPARTMENT OF THE ARMY RADIATION AUTHORIZATION OR PERMIT					<input type="checkbox"/> AUTHORIZATION	
For use of this form, see AR 385-11; the proponent agency is DARCOM.					<input type="checkbox"/> PERMIT	
READ ATTACHED INSTRUCTIONS BEFORE COMPLETING THIS FORM						
1. NAME OF APPLICANT			2. ADDRESS (Include ZIP Code)			
3. ARMY INSTALLATION AND EXACT LOCATION(S) WHERE RADIOACTIVE MATERIAL WILL BE STORED OR USED						
4. DEPARTMENT TO USE RADIOACTIVE MATERIAL			5. DA AUTHORIZATION/PERMIT NUMBERS, NRC AND/OR AGREEMENT STATE LICENSE NUMBERS CURRENTLY HELD			
6. INDIVIDUAL USER(S) (Name and title of individual(s) who will use or directly supervise use of byproduct material. Give training and experience in items 11 and 12.)				7. RADIATION PROTECTION OFFICER (RPO) (Name of person designated as RPO if other than individual user. Attach resume of training and experience as in items 11 and 12.)		
8. RADIATION DEVICES (List voltage and amperage.)			9. CHEMICAL AND/OR PHYSICAL FORM AND MAXIMUM AMOUNT OF RADIOACTIVE MATERIAL (List chemical and/or physical form and maximum amount (in millicuries) of each radioactive material that you will possess at any one time.) (If sealed source(s), also state name of manufacturer, model number, number of sources, and maximum activity per source.)			
10. STATE PURPOSE FOR WHICH RADIOACTIVE MATERIAL OR SOURCES WILL BE USED (Include the make and model number of the storage container and/or device in which the source(s) will be stored and/or used.)						
11. TRAINING (Indicate training of each individual named in item 6.) (Use supplemental sheets if necessary.)						
TYPE OF TRAINING	WHEN AND WHERE TRAINED <i>(Give name of person or school providing training.)</i>	DURATION OF TRAINING	ON THE JOB		FORMAL COURSE	
			YES	NO	YES	NO
a. Principles and practices of radiation protection.						
b. Radioactivity measurement standardization and monitoring techniques and instruments.						
c. Mathematics and calculations basic to the use and measurement of radioactivity.						
d. Biological effects of radiation.						
12. EXPERIENCE WITH RADIATION (Indicate actual use of radioisotopes or equivalent experience.)						
ISOTOPE	MAXIMUM AMOUNT	WHEN AND WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE		

13. RADIATION DETECTION INSTRUMENTS (FOR USE BY RADIATION PROTECTION PERSONNEL) <i>(Use supplemental sheets if necessary.)</i>					
TYPE OF INSTRUMENTS <i>(Make and model number of each)</i>	NUMBER AVAILABLE	RADIATION DETECTED	SENSITIVITY RANGE (mr/hr)	WINDOW THICKNESS (mg/cm <sup>2</sup> )	USE <i>(Monitor - Survey - Measure)</i>
14. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE					
15. FILM BADGES, DOSIMETERS, AND BIO-ASSAY PROCEDURES USED <i>(For film badges, specify method of calibrating and processing, or name of supplier.)</i>					
16. DESCRIBE PROJECT, EXPERIMENT, ETC. <i>(Include major facilities and equipment to be used.)</i>					
17. RADIATION PROTECTION PROGRAM <i>(Applicable to use at the installation(s) named in item 3)</i>					
18. WASTE DISPOSAL <i>(NOTE: No radioactive material may be ultimately disposed of at Army installations except as provided in para 5-15, AR 385-11.)</i>					
19. STATEMENT					
THE APPLICANT OR ANY OFFICIAL FILING THIS APPLICATION ON BEHALF OF THE APPLICANT NAMED IN ITEM 1 STATES THAT ALL INFORMATION CONTAINED HERE, AND IN ATTACHED SUPPLEMENTS, IS CORRECT.					
20a. DATE	20b. TYPED NAME AND TITLE		20c. SIGNATURE		









# NOTICE TO EMPLOYEES

STANDARDS FOR PROTECTION AGAINST RADIATION (PART 20); NOTICES, INSTRUCTIONS AND REPORTS TO WORKERS; INSPECTIONS (PART 19); EMPLOYEE PROTECTION

### WHAT IS THE NUCLEAR REGULATORY COMMISSION?

The Nuclear Regulatory Commission is an independent Federal regulatory agency responsible for licensing and inspecting nuclear power plants and other commercial uses of radioactive materials.

### WHAT DOES THE NRC DO?

The NRC's primary responsibility is to ensure that workers and the public are protected from unnecessary or excessive exposure to radiation and that nuclear facilities, including power plants, are constructed to high quality standards and operated in a safe manner. The NRC does this by establishing requirements in Title 10 of the Code of Federal Regulations (10 CFR) and in licenses issued to nuclear users.

### WHAT RESPONSIBILITY DOES MY EMPLOYER HAVE?

Any company that conducts activities licensed by the NRC must comply with the NRC's requirements. If a company violates NRC requirements, it can be fined or have its license modified, suspended or revoked.

Your employer must tell you which NRC radiation requirements apply to your work and must post NRC Notices of Violation involving radiological working conditions.

### WHAT IS MY RESPONSIBILITY?

For your own protection and the protection of your co-workers, you should know how NRC requirements relate to your work and should obey them. If you observe violations of the requirements or have a safety concern, you should report them.

### WHAT IF I CAUSE A VIOLATION?

If you engaged in deliberate misconduct that may cause a violation of the NRC requirements, or would have caused a violation if it had not been detected, or deliberately provided inaccurate or incomplete information to either the NRC or to your employer, you may be subject to enforcement action. If you report such a violation, the NRC will consider the circumstances surrounding your reporting in determining the appropriate enforcement action, if any.

### HOW DO I REPORT VIOLATIONS AND SAFETY CONCERNS?

If you believe that violations of NRC rules or the terms of the license have occurred, or if you have a safety concern, you should report them immediately to your supervisor. You may report violations or safety concerns directly to the NRC. However, the NRC encourages you to raise

your concerns with the licensee since it is the licensee who has the primary responsibility for, and is most able to ensure, safe operation of nuclear facilities. If you choose to report your concern directly to the NRC, you may report this to an NRC inspector or call or write to the NRC Regional Office serving your area. If you send your concern in writing, it will assist the NRC in protecting your identity if you clearly state in the beginning of your letter that you have a safety concern or that you are submitting an allegation. The NRC's toll free SAFETY HOTLINE for reporting safety concerns is listed below. Its addresses for the NRC Regional Offices and the toll free telephone numbers are also listed below.

### WHAT IF I WORK WITH RADIOACTIVE MATERIAL OR IN THE VICINITY OF A RADIOACTIVE SOURCE?

If you work with radioactive materials or near a radiation source, the amount of radiation exposure that you are permitted to receive may be limited by NRC regulations. The limits on your exposure are contained in sections 20.1201, 20.1207, and 20.1206 of Title 10 of the Code of Federal Regulations (10 CFR 20) depending on the part of the regulations to which your employer is subject. While these are the maximum allowable limits, your employer should also keep your radiation exposure as far below these limits as "reasonably achievable."

### MAY I GET A RECORD OF MY RADIATION EXPOSURE?

Yes. Your employer is required to advise you of your dose annually if you are exposed to radiation for which monitoring was required by NRC. In addition, you may request a written report of your exposure when you leave your job.

### HOW ARE VIOLATIONS OF NRC REQUIREMENTS IDENTIFIED?

NRC conducts regular inspections at licensed facilities to assure compliance with NRC requirements. In addition, your employer and site contractors conduct their own inspections to assure compliance. As inspectors are protected by Federal law, interference with them may result in criminal prosecution for a Federal offense.

### MAY I TALK WITH AN NRC INSPECTOR?

Yes. NRC inspectors want to talk to you if you are worried about radiation safety or have other safety concerns about licensed activities, such as the quality of construction or operations at your facility. Your employer may not prevent you from talking with an inspector. The NRC will make all reasonable efforts to protect you openly where appropriate and possible.

### MAY I REQUEST AN INSPECTION?

Yes. If you believe that your employer has not corrected violations involving radiological working conditions, you may request an inspection.

Your request should be addressed to the nearest NRC Regional Office and must describe the alleged violation in detail. It must be signed by you or your representative.

### HOW DO I CONTACT THE NRC?

Talk to an NRC inspector on-site or call or write to the nearest NRC Regional Office in your geographical area (see map below). If you call the NRC's toll free SAFETY HOTLINE during normal business hours, your call will automatically be directed to the NRC Regional Office for your geographical area. If you call after normal business hours, your call will be directed to the NRC's Headquarters Operations Center, which is manned 24 hours a day.

### CAN I BE FIRED FOR RAISING A SAFETY CONCERN?

Federal law prohibits an employer from firing or otherwise discriminating against you for bringing safety concerns to the attention of your employer or the NRC. You may not be fired or discriminated against because you:

- ask the NRC to enforce its rules against your employer;
- refuse to engage in activities which violate NRC requirements;
- provide information or are about to provide information to the NRC or your employer about violations of requirements or safety concerns;
- are about to ask for, or testify, help, or take part in an NRC, Congressional, or any Federal or State proceeding.

### WHAT FORMS OF DISCRIMINATION ARE PROHIBITED?

It is unlawful for an employer to fire you or discriminate against you with respect to pay, benefits, or working conditions because you help the NRC or raise a safety issue or otherwise discourage you from engaging in protected activities. Violations of Section 211 of the Energy Reorganization Act (ERA) of 1974 (42 U.S.C. 5851) include the harassment and intimidation by employers of (i) employees who bring safety concerns directly to their employers or to the NRC, (ii) employees who have refused to engage in an unlawful practice, provided that the employee has identified the illegality to the employer, (iii) employees who have testified or are about to testify before Congress or in any Federal or State proceeding regarding any provision for proposed provisions of the ERA or the Atomic Energy Act (AEA) of 1954, (iv) employees who have commenced or caused to be commenced a proceeding for the administration or enforcement of any requirement imposed under the ERA or AEA or who have, or are about to, testify, assist, or participate in such a proceeding.

### HOW DO I FILE A DISCRIMINATION COMPLAINT?

If you believe that you have been discriminated against for bringing violations or safety concerns to the NRC or your employer, you may file a

complaint with the U.S. Department of Labor (DOL) pursuant to Section 211 of the ERA. Your complaint must describe the firing or discrimination and must be filed within 180 days of the occurrence. Filing an allegation, complaint, or request for action with the NRC does not extend the requirement to file a complaint with the DOL within 180 days. You must file the complaint with the DOL. The NRC cannot file the complaint for you.

### Send complaints to:

Office of the Administrator  
Wage and Hour Division, Room S3502  
Employment Standards Administration  
U.S. Department of Labor  
Constitution Avenue, NW  
Washington, DC 20210

or any local office of the DOL, Wage and Hour Division. Check your telephone directory under U.S. Government listings.

### WHAT CAN THE DEPARTMENT OF LABOR DO?

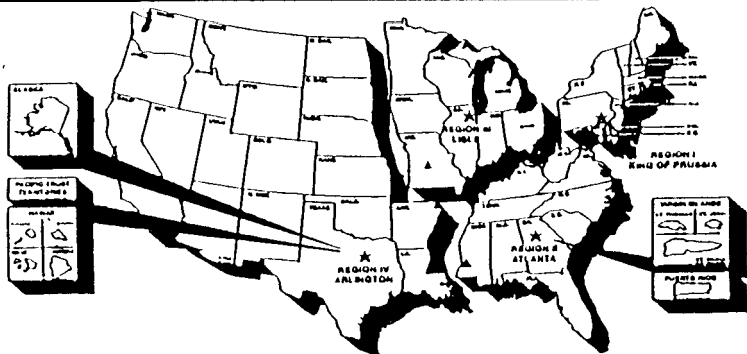
If your complaint involves a violation of Section 211 of the ERA by your employer, it is the DOL, NOT THE NRC, that provides the process for obtaining a personal remedy. The DOL will notify your employer that a complaint has been filed and will investigate your complaint.

If the DOL finds that your employer has unlawfully discriminated against you, it may order that you be reinstated, receive back pay, or be compensated for any injury suffered as a result of the discrimination.

### WHAT WILL THE NRC DO?

The NRC will evaluate each allegation of harassment, intimidation, or discrimination. Following this evaluation, an investigator from the NRC's Office of Investigations may interview you and review available documentation. Based on the evaluation and, if applicable, the interview, the NRC will assign a priority and a decision will be made whether to pursue the matter further through an investigation. The assigned priority is based on the specifics of the case and its significance relative to other ongoing investigations. The NRC may not pursue an investigation to the point that a conclusion can be made whether the harassment, intimidation, or discrimination actually occurred. Even if NRC decides not to pursue an investigation, if you have filed a complaint with DOL, the NRC will monitor the results of the DOL investigation.

If the NRC or DOL finds that unlawful discrimination has occurred, the NRC may issue a Notice of Violation to your employer, impose a fine, or suspend, modify, or revoke your employer's NRC license.



## UNITED STATES NUCLEAR REGULATORY COMMISSION REGIONAL OFFICE LOCATIONS

A representative of the Nuclear Regulatory Commission can be contacted by employees who wish to register complaints or concerns about radiological working conditions or other matters regarding compliance with Commission rules and regulations at the following addresses and telephone numbers.

### REGIONAL OFFICES

REGION	ADDRESS	TELEPHONE
I	U.S. Nuclear Regulatory Commission, Region I 475 Atlantic Road King of Prussia, PA 19406 1415	(800) 432-1156
II	U.S. Nuclear Regulatory Commission, Region II 101 Marietta Street, N.W., Suite 2900 Atlanta, GA 30323 0192	(800) 577-8510
III	U.S. Nuclear Regulatory Commission, Region III 801 Warrenville Road Little Rock, IL 60532 4351	(800) 522-3025
IV	U.S. Nuclear Regulatory Commission, Region IV 811 Ryan Plaza Drive, Suite 400 Arlington, TX 76011 8064	(800) 952-9677
WALNUT CREEK FIELD OFFICE	U.S. Nuclear Regulatory Commission 1450 Main Lane Walnut Creek, CA 94596 3368	(800) 882-4672

To report safety concerns or violations of NRC requirements by your employer,

telephone:  
**NRC SAFETY HOTLINE**  
1-800-695-7403

To report incidents involving fraud, waste, or abuse by an NRC employee or NRC contractor,

telephone:  
**OFFICE OF THE INSPECTOR GENERAL**  
HOTLINE  
1-800-233-3497

Callaway Plant Site in Missouri and Grand Gulf Plant Site in Mississippi are under the purview of Region IV.

NRC FORM 5  
(6-92)  
10 CFR 20

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3 50-0008  
EXPIRES:

OCCUPATIONAL EXPOSURE RECORD  
FOR A MONITORING PERIOD

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: MINUTES. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714) U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO PAPERWORK REDUCTION PROJECT (5150-0006), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

DOS ACCOUNT CODE - PJ

1. NAME (LAST, FIRST, MIDDLE INITIAL) | 2. IDENTIFICATION NUMBER  
| 100104228

6. MONITORING PERIOD | 7. L | 8. LICENSE NUMBER(S)  
01/22/95-02/28/96 | 7. L AM |

NON-LICENSED SOURCE OF RADIATION  
DOS ACCOUNT CODE - PJ

(IN AKES)

10A. RADIOISOTOPE | 10B. CLASS | 10C. MODE | 10D. INTAKE IN MICROCURIES

DOSES (IN REM)	9A. RECORD ESTIMATE	9B. ROUTINE PSE
DEEP DOSE EQUIVALENT TO THE EYE	(DDE)	11. 000.000
LENS OF THE EYE	(LOE)	12. 000.000
SHALLOW DOSE EQUIVALENT, WHOLE BODY	(SDE, WB)	13. 000.000
SHALLOW DOSE EQUIVALENT, MAX EXTREMITY	(SDE, ME)	14. 000.000
COMMITTED EFFECTIVE DOSE EQUIVALENT	(CEDE)	15. 000.000
MAXIMALLY EXPOSED ORGAN	(CDE)	16. 000.000
TOTAL EFFECTIVE DOSE EQUIVALENT (BLOCKS 11+15)	(TEDE)	17. 000.000
TOTAL ORGAN DOSE EQUIVALENT, MAX ORGAN (BLOCKS 11+16)	(TODE)	18. 000.000

9 COMMENTS

20. SIGNATURE -- L. CENSEE | 21. DATE PREPARED

ER 385-1-80  
30 May 97

30 May 97

<b>NRC FORM 241</b> (8-98) 10 CFR 150  <b>U. S. NUCLEAR REGULATORY COMMISSION</b>  <b>REPORT OF PROPOSED ACTIVITIES                  IN NON-AGREEMENT STATES</b> (Please read the instructions on the cover sheet before completing this form.)		APPROVED BY OMB: NC 3150-0013 Estimated burden per response to comply with this mandatory information collection request 16 minutes. This notification is required so that NRC may schedule inspection of the activities to ensure that they are conducted in accordance with requirements for protection of the public health and safety. Forward comments regarding burden estimate to the Information and Records Management Branch (T-8 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0013), Office of Management and Budget, Washington, DC 20503. NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.  <b>EXPIRES: 6/30/99</b>	
1. NAME OF LICENSEE (Person or firm proposing to conduct the activities described below)		2. TYPE OF REPORT INITIAL REVISION CLARIFICATION	3. CONTROL NUMBER (Leave Blank - Number to be assigned by NRC)
4. ADDRESS OF LICENSEE (Mailing address or other location where licensee may be located)		5. LICENSEE CONTACT:	
6. TELEPHONE NUMBER (Include Area Code)		7. FACSIMILE NUMBER (Include Area Code)	
8. ACTIVITIES TO BE CONDUCTED IN NON-AGREEMENT STATES UNDER THE GENERAL LICENSE GIVEN IN 10 CFR 150.20			
WELL LOGGING	LEAK TESTING AND/OR CALIBRATIONS	TELETHERAPY/RADIATOR SERVICE	
PORTABLE GAUGES	OTHER (Specify)		
RADIOGRAPHY →	TRANSPORTATION QA PROGRAM APPROVAL NO. & REV NO	REGISTERED AS USER OF PACKAGINGS (CERTIFICATES OF COMPLIANCE NOS.)	
9. CLIENT NAME, ADDRESS, CITY/COUNTY, STATE, ZIP CODE		10. WORK LOCATION ADDRESS (Street and Number or other location. Give as complete an address or directions as possible.)	
11. CLIENT TELEPHONE NUMBER (Include Area Code)	12. WORK LOCATION TECHNICIAN AUTHORIZED TO PERFORM WORK		13. WORK LOCATION TELEPHONE NUMBER (Include Area Code)
14. DATES SCHEDULED FROM TO		15. NUMBER OF WORK DAYS	16. LOCATION REFERENCE NUMBER LEAVE BLANK FOR INITIAL NRC FORM 241 REQUESTS NUMBER TO BE ASSIGNED BY NRC
LIST ADDITIONAL WORK SITES ON SEPARATE SHEET TO INCLUDE ALL INFORMATION CONTAINED IN ITEMS 9-16 ABOVE.			
17. LIST RADIOACTIVE MATERIAL WHICH WILL BE POSSESSED, USED, INSTALLED, SERVICED, OR TESTED IN NON-AGREEMENT STATES. (Include description of type and quantity of radioactive material, sealed sources, or devices to be used.)			
18. AGREEMENT STATE SPECIFIC LICENSE WHICH AUTHORIZES THE UNDERSIGNED TO CONDUCT ACTIVITIES WHICH ARE THE SAME, EXCEPT FOR LOCATION OF USE, AS SPECIFIED IN ITEM 8. ABOVE. (Four copies of the specific license must accompany the initial NRC Form 241.)			
LICENSE NUMBER	STATE	EXPIRATION DATE	TOTAL USAGE DAYS TO DATE
19. CERTIFICATION (MUST BE COMPLETED BY APPLICANT)			
I, THE UNDERSIGNED, HEREBY CERTIFY THAT: <ol style="list-style-type: none"> <li>a. All information in this report is true and complete.</li> <li>b. I have read and understand the provision of the general license 10 CFR 150.20 reprinted on the cover sheet of this form set; and I understand that I am required to comply with these provisions as to all byproduct, source, or special nuclear material which I possess and use in non-Agreement States or offshore waters under the general license for which this report is filed with the U.S. Nuclear Regulatory Commission.</li> <li>c. I understand that activities, including storage, conducted in non-Agreement States under general license 10 CFR 150.20 are limited to a total of 180 days in calendar year.</li> <li>d. I understand that I may be inspected by NRC at the above listed work site locations and at the Licensee home office address for activities performed in non-Agreement States or offshore waters. I am also aware that I will be responsible for any fees associated with such inspections.</li> <li>e. I understand that conduct of any activities not described above, including conduct of activities on dates or locations different from those described above or without NRC authorization, may subject me to enforcement action, including civil or criminal penalties.</li> </ol>			
CERTIFYING OFFICER - RSO or Management Representative (Typed/Printed Name and Title)		SIGNATURE	DATE
WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.			
FOR NRC USE ONLY	AUTHORIZING OFFICIAL (Typed/Printed Name and Title)	SIGNATURE	DATE

<p><b>NRC FORM 313</b> 7-96 10 CFR 30, 32, 33 34, 35, 36, 39 and 40</p>	<p><b>U. S. NUCLEAR REGULATORY COMMISSION</b></p>	<p>APPROVED BY OMB: NO. 3150-0120</p>	<p>EXPIRES: 7/31/95</p>
<p><b>APPLICATION FOR MATERIAL LICENSE</b></p>		<p>Estimated burden per response to comply with this information collection request: 7 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Forward comments regarding burden estimate to the Information and Records Management Branch (T-8 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0120), Office of Management and Budget, Washington, DC 20503. NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.</p>	

**INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.**

<p><b>APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:</b></p> <p>DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS U.S. NUCLEAR REGULATORY COMMISSION WASHINGTON, DC 20555-0001</p> <p><b>ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:</b></p> <p><b>IF YOU ARE LOCATED IN:</b></p> <p>CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:</p> <p>LICENSING ASSISTANT SECTION NUCLEAR MATERIALS SAFETY BRANCH U.S. NUCLEAR REGULATORY COMMISSION, REGION I 475 ALLENDALE ROAD KING OF PRUSSIA, PA 19406-1415</p> <p>ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:</p> <p>NUCLEAR MATERIALS LICENSING SECTION U.S. NUCLEAR REGULATORY COMMISSION, REGION II 101 MARIETTA STREET, NW, SUITE 2900 ATLANTA, GA 30323-0199</p>	<p><b>IF YOU ARE LOCATED IN:</b></p> <p>ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:</p> <p>MATERIALS LICENSING SECTION U.S. NUCLEAR REGULATORY COMMISSION, REGION III 801 WARRENVILLE RD. LISLE, IL 60532-4351</p> <p>ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:</p> <p>NUCLEAR MATERIALS LICENSING SECTION U.S. NUCLEAR REGULATORY COMMISSION, REGION IV 811 RYAN PLAZA DRIVE, SUITE 400 ARLINGTON, TX 76011-8064</p>
<p>PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.</p>	

<p>1. THIS IS AN APPLICATION FOR (Check appropriate item)</p> <p><input type="checkbox"/> A. NEW LICENSE</p> <p><input type="checkbox"/> B. AMENDMENT TO LICENSE NUMBER _____</p> <p><input type="checkbox"/> C. RENEWAL OF LICENSE NUMBER _____</p>	<p>2. NAME AND MAILING ADDRESS OF APPLICANT (Include Zip code)</p>
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<p>3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED</p>	<p>4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION</p> <p>TELEPHONE NUMBER</p>
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SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

<p>5. RADIOACTIVE MATERIAL</p> <p>a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.</p>	<p>6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.</p>		
<p>7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.</p>	<p>8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.</p>		
<p>9. FACILITIES AND EQUIPMENT.</p>	<p>10. RADIATION SAFETY PROGRAM.</p>		
<p>11. WASTE MANAGEMENT.</p>	<p>12. LICENSEE FEES (See 10 CFR 170 and Section 170.31)</p> <table style="width:100%; border: none;"> <tr> <td style="border: none;">FEE CATEGORY</td> <td style="border: none;">AMOUNT ENCLOSED \$</td> </tr> </table>	FEE CATEGORY	AMOUNT ENCLOSED \$
FEE CATEGORY	AMOUNT ENCLOSED \$		

13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39 AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 (2 STAT. 749) MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE	SIGNATURE	DATE
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FOR NRC USE ONLY					
TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		
APPROVED BY				DATE	

IRC FORM 314 6-95) 0 CFR 30.36(c)(1)(iv) 0 CFR 40.42(c)(1)(iv) 0 CFR 70.38(c)(1)(iv)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB: NO. 3150-0028	EXPIRES: 06/30/98
<h3 style="margin: 0;">CERTIFICATE OF DISPOSITION OF MATERIALS</h3> <p style="margin: 0; font-size: small;">INSTRUCTIONS: ALL ITEMS MUST BE COMPLETED - PRINT OR TYPE SEND THE COMPLETED CERTIFICATE TO THE NRC OFFICE SPECIFIED ON THE REVERSE</p>		ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 30 MINUTES. THIS SUBMITTAL IS USED BY NRC AS PART OF THE BASIS FOR ITS DETERMINATION THAT THE FACILITY HAS BEEN CLEARED OF RADIOACTIVE MATERIAL BEFORE THE FACILITY IS RELEASED FOR UNRESTRICTED USE. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0028), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503. AN AGENCY MAY NOT CONDUCT OR SPONSOR, AND A PERSON IS NOT REQUIRED TO RESPOND TO, A COLLECTION OF INFORMATION UNLESS IT DISPLAYS A CURRENTLY VALID OMB CONTROL NUMBER.	
LICENSEE NAME AND ADDRESS		LICENSE NUMBER	LICENSE EXPIRATION DATE
<b>A. MATERIALS DATA</b> <i>(Check one and complete as necessary)</i>			
THE LICENSEE OR ANY INDIVIDUAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE LICENSEE CERTIFIES THAT: <i>(Check and/or complete the appropriate item(s) below.)</i>			
<input type="checkbox"/> 1. NO MATERIALS HAVE EVER BEEN PROCURED OR POSSESSED BY THE LICENSEE UNDER THIS LICENSE.			
OR			
<input type="checkbox"/> 2. ALL ACTIVITIES AUTHORIZED BY THE LICENSE HAVE CEASED AND ALL MATERIALS PROCURED AND/OR POSSESSED BY THE LICENSE NUMBER CITED ABOVE HAVE BEEN DISPOSED OF IN THE FOLLOWING MANNER. <i>(If additional space is needed, use the reverse side or provide attachments.)</i>			
Describe specific material transfer actions and, if there were radioactive wastes generated in terminating this license, the disposal actions including the disposition of low-level radioactive waste, mixed waste, Greater-than-Class-C waste, and sealed sources, if applicable.			
For transfers, specify the date of the transfer, the name of the license recipient, and the recipient's NRC license number or Agreement State name and license number.			
If materials were disposed of directly by the licensee rather than transferred to another licensee, licensed disposal site or waste contractor, describe the specific disposal procedures <i>(e.g., decay in storage)</i>			
<b>B. OTHER DATA</b>			
<input type="checkbox"/> 1. OUR LICENSE HAS NOT YET EXPIRED; PLEASE TERMINATE IT.			
2. A RADIATION SURVEY WAS CONDUCTED BY THE LICENSEE TO CONFIRM THE ABSENCE OF LICENSED RADIOACTIVE MATERIALS AND TO DETERMINE WHETHER ANY CONTAMINATION REMAINS ON THE PREMISES COVERED BY THE LICENSE. <i>(Check one)</i>			
<input type="checkbox"/> NO <i>(Attach explanation)</i>			
<input type="checkbox"/> YES, THE RESULTS <i>(Check one)</i>			
<input type="checkbox"/> ARE ATTACHED, or			
<input type="checkbox"/> WERE FORWARDED TO NRC ON <i>(Date)</i>			
3. THE PERSON TO BE CONTACTED REGARDING THE INFORMATION PROVIDED ON THIS FORM	NAME	TELEPHONE NUMBER <i>(Include Area Code)</i>	
4. MAIL ALL FUTURE CORRESPONDENCE REGARDING THIS LICENSE TO			
<b>CERTIFYING OFFICIAL</b>			
I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT			
PRINTED NAME AND TITLE	SIGNATURE	DATE	
WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTIONS.			

30 May 97

<p><b>FILE CERTIFICATES AS FOLLOWS:</b></p> <p><b>IF YOU ARE A DISTRIBUTOR OF EXEMPT PRODUCTS, SEND TO:</b></p> <p>DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS U.S. NUCLEAR REGULATORY COMMISSION WASHINGTON, DC 20555-0001</p> <p><b>ALL OTHERS, IF YOU ARE LOCATED IN:</b></p> <p>CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:</p> <p>LICENSING ASSISTANCE SECTION NUCLEAR MATERIALS SAFETY BRANCH U.S. NUCLEAR REGULATORY COMMISSION, REGION I 475 ALLENDALE ROAD KING OF PRUSSIA, PA 19406-1415</p> <p>ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:</p> <p>NUCLEAR MATERIALS SAFETY SECTION U.S. NUCLEAR REGULATORY COMMISSION, REGION II 101 MARIETTA STREET NW, SUITE 2900 ATLANTA, GA 30323-0199</p>	<p><b>IF YOU ARE LOCATED IN:</b></p> <p>ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:</p> <p>MATERIALS LICENSING SECTION U.S. NUCLEAR REGULATORY COMMISSION, REGION III 801 WARRENVILLE ROAD LISLE, IL 60532-4351</p> <p>ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:</p> <p>MATERIAL RADIATION PROTECTION SECTION U.S. NUCLEAR REGULATORY COMMISSION, REGION IV 611 RYAN PLAZA DRIVE, SUITE 400 ARLINGTON, TX 76011-8064</p>
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