



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
WALTER REED ARMY MEDICAL CENTER
WALTER REED HEALTH CARE SYSTEM
WASHINGTON, DC 20307-5001
19 July 2002

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Preventive Medicine Service

030-01317
030-06895

Nuclear Regulatory Commission, Region I
Medical Licensing Division
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

Dear Sir or Madam:

Walter Reed Army Medical Center uses radioactive material authorized by U.S. Nuclear Regulatory Commission (NRC) Byproduct Material License number 08-01738-02 with an expiration date of June 30, 2004 and Irradiator License number 08-1738-03 with an expiration date of November 30, 2011.

We request to change the Radiation Safety Officer (RSO) on both of the above licenses to Lieutenant Colonel John R. Mercier with an effective date of 15 August 2002. LTC Mercier's CV and NRC Form 313 are enclosed. LTC Mercier previously served for 4 years as the RSO on a Type A Broad Scope License (#53-C0458-04) at Tripler Army Medical Center.

For any additional information, please contact the undersigned at (202) 356-0058.

Sincerely,

William B. Johnson
William B. Johnson, Ph.D.
Radiation Safety Officer

Copy Furnish:

Director, Proponency Office for Preventive Medicine - San Antonio,
ATTN: MCPO-SA (COL Daxon), 2050 Worth Road, Ft. Sam Houston, TX
78234-6000

Information in this record was deleted
in accordance with the Freedom of Information
Act, exemptions 6
FOIA- 2006-0238

NMSS/RONI MATERIALS-002

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2006-0238

NRC FORM 313A
(8-1999)

U.S. NUCLEAR REGULATORY COMMISSION

TRAINING AND EXPERIENCE

Note: Descriptions of training and experience must contain sufficient detail to match the training and experience criteria in the application regulations.

1. Name of Individual, Proposed Authorization (e.g. Radiation Safety Officer), and Applicable Training Requirements (e.g., 10CFR 35.50)

LTC JOHN R. MERCIER, PH.D., PE, DABR

2. For Physicians, State or Territory Where Licensed

3. CERTIFICATION

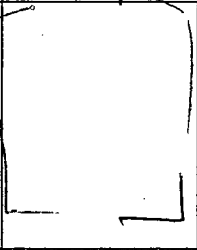
| Specialty Board | Category | Month and Year Certified |
|-------------------------------|---|--------------------------|
| American Board of Radiology | Diagnostic Radiological and Medical Nuclear Physics | June, 1995 |
| Professional Engineer (Texas) | Nuclear Engineering License | March, 1995 |

4. DIDACTIC TRAINING

| Description of Training | Location | Clock Hours | Dates of Training |
|--|--------------------------------------|-------------|-------------------|
| Radiation Physics and Instrumentation | University of Texas at Austin | 300 | Sep 81 – Dec 84 |
| | Cornell University, NY | 300 | Aug 89 – May 91 |
| | Univ. of Texas Health Science Center | 550 | Aug 96 – Aug 99 |
| Radiation Protection | University of Texas at Austin | 50 | Sep 81 – Dec 84 |
| | Cornell University, NY | 100 | Aug 89 – May 91 |
| | Univ. of Texas Health Science Center | 150 | Aug 96 – Aug 99 |
| Mathematics Pertaining to the Use and Measurement of Radioactivity | University of Texas at Austin | 200 | Sep 81 – Dec 84 |
| | Cornell University, NY | 150 | Aug 89 – May 91 |
| | Univ. of Texas Health Science Center | 100 | Aug 96 – Aug 99 |
| Radiation Biology | University of Texas at Austin | 50 | Sep 81 – Dec 84 |
| | Cornell University, NY | 150 | Aug 89 – May 91 |
| | Univ. of Texas Health Science Center | 150 | Aug 96 – Aug 99 |
| Chemistry of Byproduct Material for Medical Use | Univ. of Texas Health Science Center | 100 | Aug 96 – Aug 99 |
| Radiation Dosimetry | University of Texas at Austin | 50 | Sep 81 – Dec 84 |
| | Cornell University, NY | 150 | Aug 89 – May 91 |
| | Univ. of Texas Health Science Center | 150 | Aug 96 – Aug 99 |

| 5. PRACTICAL EXPERIENCE WITH RADITION (Actual use of radionuclides or equivalent experience) | | | | |
|--|---------------------------------------|--|--|--|
| Description of Experience | Name of Supervising Individual | Location and Corresponding Material License Number | Dates and Clock Hours of Experience | Related Radiation Safety Exam Score |
| <p>Nuclear Medical Science Officer, U.S. Army Environmental Hygiene Agency. Radiation protection, dosimetry and calibration duties for:</p> <p>Any byproduct material with atomic no.'s 1 - 84, any form, not to exceed 800 mCi each or 10 Ci total.</p> <p>Any byproduct material with atomic no.'s 1 - 100, any form, not to exceed 15 uCi each or 500 uCi total.</p> <p>J.L Shepard Cs-137 sealed 130 mCi calibration source.</p> <p>Various plutonium and uranium sources.</p> | LTC Eugene Potter, CHP | Aberdeen Proving Ground, MD USNRC Licenses: #19-09880-01, #SMB-707and #SNM-860 | Jan 85 - Dec 85 (900 hours) | N/A |
| <p>Radiation Safety Officer, Darnall Army Community Hospital. Radiation protection, dosimetry radioactive waste management, health physics program management and calibration duties for:</p> <p>Any byproduct material with atomic no.'s 1 - 83 for use as radiopharmaceuticals in diagnosis and therapy.</p> <p>Various calibration sources.</p> | MAJ Jerome Karwacki, M.D. | Fort Hood, TX USNRC License #42-19113-01 | Jan 86 - Dec 88 (6000 hours) | N/A |
| <p>Graduate Student, Cornell University. Senior reactor operator for TRIGA reactor, with 10^{14} neutron flux in core and 10^{12} neutron flux at beam ports. Gamma cell operator with 10 MCi Co-60 irradiation source.</p> | Dr. K. Bingham Cady, Sc.D. | Ithaca, NY USNRC License #SOP-10973 | Aug 89 - May 91 (1000 hours) | N/A |
| <p>Project Engineer, Defense Nuclear Agency Plutonium Mining Project. Spectroscopy, calibration and respiratory protection duties for a unique environmental restoration project.</p> <p>Various plutonium and americium samples and sources.</p> | Dr. Ed Bramlitt, Ph.D. | Johnston Island, Pacific Ocean | Jun 91 - Jun 92 (1000 hours) | N/A |
| <p>Radiation Safety Officer (Broad Scope), Tripler Army Medical Center. Radiation protection, dosimetry radioactive waste management, health physics program management and calibration duties for:</p> <p>Any byproduct material with atomic no.'s 1 - 83 for use as radiopharmaceuticals in diagnosis and therapy.</p> <p>J.L Shepard Cs-137 sealed 2200 Ci irradiation source.</p> <p>Various calibration sources.</p> | COL Tom Cashman, M.D. | Honolulu, HI USNRC License #53-00458-04 | Jun 92 - Jun 96 (8000 hours) | N/A |
| <p>Doctoral Candidate, University of Texas Health Science Center. Various research and calibration sources.</p> | Dr. Dave Kopp, Ph.D. | | Aug 96 - Aug 99 (100 hours) | N/A |
| <p>Nuclear Scientist, U.S. Army Nuclear and Chemical Agency. Scientific editor and contributing author to a North Atlantic Treaty Organization allied engineering publication on sampling and identification of radiological agents.</p> | Dr. Chuck Davidson, Ph.D. | | Aug 99 - May 02 (500 hours) | N/A |

6. FORMAL TRAINING

| Degree, Area of Study | Name of Program and Location with Corresponding Materials License Number | Dates | Name of Organization that Approved the Program (e.g., Accreditation Council for Graduate Medical Education) and the Applicable Regulation (e.g., 10 CFR 35.294) |
|---|---|--|---|
| B.E.S., Nuclear Engineering M.Eng., Nuclear Engineering Ph.D., Radiological Physics | University of Texas at Austin Cornell University, NY Univ. of Texas Health Science Center | Ex 6  | ABET Accredited ABET Accredited CAMPEP Accredited |

LIEUTENANT COLONEL JOHN R. MERCIER, Ph.D., PE, DABR
Nuclear Medical Science Officer
U.S. Army Nuclear and Chemical Agency

wk: (703) 806-7860 cell: ()
mercier@usanca-smtp.army.mil

Handwritten initials/signature

FORMAL EDUCATION

Doctor of Philosophy (Radiological Physics), The University of Texas Health Science Center,
San Antonio, Texas, *Ex 6*
Master of Engineering (Nuclear), Cornell University, Ithaca, New York, *Ex 6*
Bachelor of Engineering Science (Nuclear), The University of Texas, Austin, Texas,

PROFESSIONAL CREDENTIALS

Diplomate, American Board of Radiology, Dual Certified in Diagnostic Radiological Physics and
Medical Nuclear Physics, ABR Physicist # P1779, 1995
Licensed Medical Physicist, Texas, # MP0402, 1995
Licensed Professional Nuclear Engineer, Texas PE Registration # 80363, 1995
Licensed Nuclear Plant Senior Reactor Operator, TRIGA Reactor, NRC License #SOP-10973, 1990
Certified Hazard Control Manager, International Board of Hazard Control Management,
Master Certification # 2490, 1993 *Ex 6*

CURRENT AFFILIATIONS AND PROFESSIONAL MEMBERSHIPS

Sigma Xi – The Scientific Research Society
Tau Beta Pi – The National Engineering Honor Society
American Nuclear Society
Health Physics Society
* Past-President for Hawaii Chapter
American Association of Physicists in Medicine
* Member of Task Group 10 on computed radiography digital imaging
North Atlantic Treaty Organization (NATO):
U.S. Delegate to NATO Land Group 7 on Joint NBC Defense
U.S. Delegate to NATO Land Group 7 Expert Subgroup on Sampling and
Identification of Biological, Chemical and Radiological Agents
U.S. Delegate to NATO Land Group 7, Expert Working Group on Low-Level
Radiation
U.S. Delegate to NATO Standardization Agency's NBC Working Group
U.S. Delegate to NATO Standardization Agency's Medical NBC Working Party
U.S. Delegate to NATO Research and Technology Board's Task Group on
Radiation Treatments and Countermeasures
The Technical Cooperation Program (TTCP) of the American, British, Canadian, and
Australian (ABCA) Alliance:
Member, Action Group 48 on Radiation Hazards
Department of Defense:
Chair, DoD Weapons of Mass Destruction Human Response Panel
Member, Nuclear Warfare Casualty Panel of Experts, Joint Readiness
Clinical Advisory Board
Department of the Army:
Alternate Army Reactor Officer
Member, Nuclear Employment Augmentation Team

PUBLICATIONS

Anno, G., R. Bloom, **J. R. Mercier**, R. W. Young, *Dose Response Functions for Acute Radiation Lethality*, submitted to Health Physics, 2002.

Lankipalli, B. R., W. D. McDavid, S. B. Dove, E. Wieckowska, R. G. Waggener, and **J. R. Mercier**, *Comparison of Five Methods for the Derivation of Spectra for a Constant Potential Dental X-Ray Unit*, *Dentomaxillofacial Radiology*, 30, 2001, p. 264-269.

Mercier, J. R., *Commander's Guide on Low-Level Radiation (LLR) Exposure in Military Operations*, Edition 2, Draft Standardization Agreement 2473, North Atlantic Treaty Organization, 2002.

Mercier, J. R., *Commander's Guide on Nuclear Radiation Exposure of Groups During War*, Edition 6, NATO Standardization Agreement 2083, North Atlantic Treaty Organization, 2001.

Mercier, J. R., D. T. Kopp, W. D. McDavid, S. B. Dove, J. L. Lancaster, and D. M. Tucker, *Modification and Benchmarking of MCNP for Low-Energy Tungsten Spectra*, *Medical Physics*, 27(12), 2000, p. 2680-2687.

Mercier, J. R., D. T. Kopp, W. D. McDavid, S. B. Dove, J. L. Lancaster, and D. M. Tucker, *Measurement and Validation of Benchmark-Quality Thick-Target Tungsten X-Ray Spectra below 150 kVp*, *Radiation Research*, 154, 2000, p. 564-581.

Mercier, J. R., D. T. Kopp, W. D. McDavid, S. B. Dove, J. L. Lancaster, and D. M. Tucker, *Using Measured 30-150 kVp Polychromatic Tungsten X-Ray Spectra to Determine Ion Chamber Calibration Factors*, *Health Physics*, 79(4), 2000, p. 402-406.

Mercier, J. R. (Ed.), *NATO Handbook for Sampling and Identification of Radiological Agents, Volume 1 (Operational)*, Allied Engineering Publication 49, North Atlantic Treaty Organization, 2000.

Mercier, J. R., *Medical Aspects of Nuclear Weapons and Radiation Effects*, Chapter 3 of the FY 01/02 Army Specific Military Requirements for Nuclear and Radiation Effects Information, published by the U.S. Army Deputy Chief of Staff for Operations and Plans (DCSOPS), August 2000.

Mercier, J. R., *Measurement and Monte Carlo Prediction of Diagnostic Tungsten X-Ray Spectra*, Ph.D. Dissertation, Graduate School of Biomedical Sciences, The University of Texas Health Science Center, San Antonio, TX, 1999. Available from UMI Dissertation Services, Ann Arbor, MI, 1999, UMI No. 9938769.

Seibert, J. A. (Chair), T. Bogucki, T. Ciona, J. Dugan, W. Huda, A. Karellas, **J. Mercier**, E. Samai, J. Sheppard, B. Stewart, O. Suleiman, D. Tucker, R. Uzenoff, J. Weiser, and C. Willis, *Acceptance Testing and Quality Control of Photostimulable Storage Phosphor Imaging Systems, Report of Task Group #10*, American Association of Physicists in Medicine, 1998.

Willis, C. E., **J. Mercier**, M. Patel, *Modification of Conventional Quality Assurance Procedures to Accommodate Computed Radiography*, Proceedings of the 13th Conference of Computer Applications in Radiology, Society for Computer Applications in Radiology, Denver, CO, 1996.

Mercier, J. R., and Bramlitt, E. T., *A Soil Cleanup on Johnston Atoll*, Proceedings of the First Symposium on Soil Cleanup in the Pacific Islands, American Society of Civil Engineers, Honolulu, HI, 1993.

Moroney, J. D., Johnson, N. R., Moroney, K. S., **Mercier, J. R.**, *An Improved Method for Removing Transuranics from Coral Soil at Johnston Atoll*, Proceedings of the 1992 Federal Environmental Restoration Conference, Hazardous Materials Control Resources Institute, Vienna, VA, 1992.

ABSTRACTS AND POSTERS

Liu, H. L., Y. Pu, T. Andrews, **J. Mercier**, P. T. Fox, and J.-H. Gao, Cerebral Blood Flow Measurement Using Adaptive Threshold for Singular Value Decomposition Technique on Dynamic Contrast Agent MR Perfusion Imaging, 7th Meeting of the International Society for Magnetic Resonance in Medicine, Philadelphia, PA, 1999.

Mercier, J. R., D. T. Kopp, D. M. Tucker, C. E. Willis and J. L. Lancaster, X-Ray Spectra Resolution Requirements for Characterization of Image Receptors, 84th Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, IL, 1998.

Mercier, J. and D. Kopp, Preliminary Evaluation of the Monte Carlo Code MCNP4b for Diagnostic X-Ray Spectra, 40th Annual Meeting of the American Association of Physicists in Medicine, Medical Physics, 1998, 25(7): p.A105.

Willis, C. E., **J. R. Mercier**, M. G. Patel, Unresolved Issues in Computed Radiography, 38th Annual Meeting of the American Association of Physicists in Medicine, Medical Physics, 1996, 23(6): p.1076.

PROFESSIONAL AND LEADERSHIP EXPERIENCE

Nuclear Scientist 8/99 - present
U.S. Army Nuclear and Chemical Agency, Springfield, VA

Primary consulting subject matter expert (SME) to Army Staff and other DoD/NATO/U.S. Government agencies on the medical effects of nuclear weapons and radiation. Sets policy on friendly troop safety risk criteria and enemy personnel casualty criteria for nuclear weapons effects. Develops casualty estimation models for nuclear, biological and chemical (NBC) weapons. Serves on numerous DoD and NATO SME panels for NBC research, operational doctrine and equipment development. Develops Army R&D requirements for radiobiology, biomedical technology and NBC operations. Serves as Alternate Army Reactor Officer for the Army Reactor Office that maintains oversight of WSMR and APG fast burst reactors. Serves on the Nuclear Employment Augmentation Team in support of CINC's.

Doctoral Student 8/96 - 8/99
The University of Texas Health Science Center, San Antonio, TX

Research focused on diagnostic imaging, the use of Monte Carlo codes to simulate x-ray beam formation and transport, measurement of x-ray spectra, computed radiography and other digital imaging systems. Teaching duties and course work broadly covered the medical radiological physics profession.

Chief, Health Physics 6/92 - 6/96
Tripler Army Medical Center, Honolulu, HI 96859-5000

Executive agent and Radiation Safety Officer for a broad-scope USNRC radioactive material license (#53-00458-04). Directed comprehensive health physics services for a major teaching and research hospital. Developed or approved nuclear medicine, diagnostic radiology and radiation therapy QC protocols. Performed gamma camera acceptance testing. Evaluated and approved all Pacific region radiological facility designs. Conducted health and medical physics audits. Routinely provided formal and informal radiation safety training and imaging science lectures to nuclear medicine and radiology technologists. Routinely counseled physicians, patients, and hospital staff on radiation effects. Occasionally lectured radiology residents in imaging physics.

Project Engineer, Johnston Atoll Plutonium Mining Project 5/91 - 6/92
Defense Nuclear Agency, Kirtland AFB, NM 87115-5000

Spearheaded the Defense Nuclear Agency's \$15 million Plutonium Mining Project. Led world's first successful remediation of plutonium contaminated soil. Designed several multichannel analyzer radioassay systems using sodium iodide and high-pure germanium spectroscopy detectors. Developed and enforced various radiation safety, bioassay, and respiratory protection programs.

Graduate Student 8/89 - 5/91
Cornell University, Ithaca, NY

Research focused on characterizing radiation damage to electronic components using the Cornell gamma irradiation facility. Gained experience as a federally licensed nuclear plant senior reactor operator (License # SOP-10973) that required mastery of all research facilities and radiological monitoring equipment within the reactor building. Developed experimental research protocols for the TRIGA reactor and assisted in training a reactor operator. Course work broadly covered the nuclear engineering profession.

Radiation Protection Officer 12/85 - 12/88
Darnall Army Community Hospital, Ft Hood, TX 76544-5063

Executive agent and Radiation Safety Officer for USNRC limited-scope radioactive material license (#42-19113-01). Hospital consultant for health physics, diagnostic radiology physics, & medical nuclear physics. Developed radiation protection, radiology QA/QC, & nuclear medicine QA/QC programs. Performed health & medical physics audits, calibrations, x-ray system & shielding surveys. Troubleshooted image quality problems. Trained all radiation workers.

Nuclear Medical Science Officer 1/85 - 12/85
US Army Environmental Hygiene Agency, APG, MD 21010-5422

Consulted Army and DoD installations for adequate radiation protection, radiology QA/QC, and nuclear medicine QA/QC programs. Wrote safety and QC procedures and evaluated x-ray system performance. Conducted radiological shielding evaluations and health hazard assessments of equipment and facilities.

Commander, Detachment 1, A Company 12/82 - 12/84
249th Supply and Transport Battalion, 49th Armored Division,
Texas Army National Guard, Killeen, TX

Exercised command. Led with honor and respect.

Platoon Leader, HHQ Company 8/81 - 11/82
249th Supply and Transport Battalion, 49th Armored Division,
Texas Army National Guard, Austin, TX

Developed leadership skills.