

ACCEPTANCE REVIEW MEMO (ARM)

Licensee: National Aeronautics and Space Admin **License No.:** 04-07845-04

Docket No.: 030-020435 **Mail Control No.:** 471183

Type of Action: *Amendment* **Date of Requested Action:** 11-14-06

Reviewer Assigned: **ARM reviewer(s):** Torres

Response	Deficiencies Noted During Acceptance Review
	<p>[] Open ended possession limits. Limit possession. Submit inventory.</p> <p>[] Submit copies of most recent leak test results.</p> <p>[] Add - RAM IC license condition. Add IC paragraph in cover letter. <i>→ Licensee under IC order.</i></p> <p>[] Split license from cover letter. Add SUNSI marking to license.</p> <p>[] Ask the licensee if they have any type-amount of EPAct Material.</p>

RTC

Reviewer's Initials: _____ **Date:** _____

<input type="checkbox"/> Yes <input type="checkbox"/> No	Unrestricted release Group 2 or >: Transfer memo to FCDB within 10 days.
<input type="checkbox"/> Yes <input type="checkbox"/> No	Decommissioning notification should be completed within 30 days.
<input type="checkbox"/> Yes <input type="checkbox"/> No	Termination request < 90 days from date of expiration
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Expedite (medical emergency, <u>no RSO</u> , location of use/storage not on license, RAM in possession not on license, other)
<input type="checkbox"/> Yes <input type="checkbox"/> No	TAR needed to complete action.

Branch Chief's and/or Sr. HP's Initials: *RTC* **Date:** *11/22/06*

SUNSI Screening according to RIS 2005-31	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Non-Publicly Available, Sensitive if <u>any</u> item below is checked
General guidance:	
_____	RAM = or > than Category 3 (Table 1, RIS 2005-31), use Unity Rule
_____	Exact location of RAM (whether = or > than Category 3 or not)
_____	Design of structure and/or equipment (site specific)
_____	Information on nearby facilities
_____	Detailed design drawings and/or performance information
_____	Emergency planning and/or fire protection systems
Specific guidance for medical, industrial and academic (above Category 3):	
_____	RAM quantities and inventory
_____	Manufacturer's name and model number of sealed sources & devices
_____	Site drawings with exact location of RAM, description of facility
_____	RAM security program information (locks, alarms, etc.)
_____	Emergency Plan specifics (routes to/from RAM, response to security events)
_____	Vulnerability/security assessment/accident-safety analysis/risk assess
_____	Mailing lists related to security response
Branch Chief's and/or Sr. HP's Initials: <i>RTC</i> Date: <i>11/22/06</i>	

National Aeronautics and
Space Administration
Ames Research Center
Moffett Field, CA 94035-1000

RECEIVED

NOV 15 2006

DNMS



Re: N218-1

November 14, 2006

James L. Montgomery
Nuclear Materials Licensing Branch
Nuclear Regulatory Commission, Region IV
811 Ryan Plaza Drive, Suite 400
Arlington, Texas 76011-4005

ARC

Re: Amendment of License Number 04-07845-04

Dear Mr. Montgomery,

The National Aeronautics Space Administration (NASA) Ames Research Center (ARC) respectfully requests an amendment to the subject license, to amend condition 11.B, specifying the Radiation Safety Officer for the license. Mr. William Vermeere has resigned and is no longer employed at ARC. The NASA Ames Radiation Safety Committee requests that condition 11.B. be amended to read:

11. B. The Radiation Safety Officer for this license is Patrick Muldoon.

Mr. Muldoon has approximately 25 years of experience in health physics and maintains certification by the American Academy of Health Physics. A summary of Mr. Muldoon's experience and qualifications is enclosed.

If you have any questions concerning this request, please contact me at (650) 604-1603 or Mr. Stamergh Phillips at (650) 604-3530.

Sincerely,

A handwritten signature in black ink, appearing to read "RP".

Ralph Periglia, MD

encl

cc w/o encl.

S. Oliges, Q, N218-1

S. Phillips, Q11, N218-1

Patrick Sean Muldoon, CHP
Senior Health Physicist

Education

B.Sc., Technology (Nuclear Science/Health Physics Specialty), Regents College, 1993
Pursuing MBA, University of Phoenix, (Graduation October 2005)

Experience Summary

I am a senior health physicist with over 25 years of experience in the nuclear power and health physics fields. I am currently the Alternate Radiation Safety Officer for Stanford University responsible for all medical uses of radiation. Prior to that, I was an Environmental Health and Safety Manager at NASA-Ames Research Center. I was also serving as the Radiation Officer for NASA-Ames Research Center and the 24/7 Hazardous Materials Team at the Center. I have excelled in several specialties of health physics including: nuclear reactor theory and operations in the nuclear Navy aboard a nuclear-powered fast attack submarine; high-level contamination and radiation repair operations as an overhaul and refueling radiological controls supervisor at a US Navy Shipyard; medical health physics as an Assistant Radiation Safety Officer, Radiation Safety Officer, and Environmental Health and Safety Manager at the Veterans Affairs Medical Center in San Francisco and Stanford University; and laboratory radiation safety in the research environment both as Radiation Safety Officer for the research laboratories at the Veterans Affairs Medical Center and as the Radiation Safety Officer for NASA Ames Research Center.

I have been identified as a leader and exemplary professional. I quickly moved to leadership positions at Mare Island Naval Shipyard, the VA Medical Center in San Francisco, and at NASA Ames Research Center. My innovative approaches and personal drive have added quality to every project I tackled. For example, at the VA Medical Center I developed an audit tracking and documenting system that significantly reduced the number of laboratory violations by identifying key areas of concern and quantifying the deficiencies. I also acted on my own initiative and created an intranet-based radiation safety training program at the NASA Ames Research Center. This system significantly reduced the amount of time personnel needed to be away from their workstations while enhancing their learning environment. I have also enriched my management and business skills by taking a management specific year-long course as well as courses to fulfill my MBA. I am a well rounded technical and business leader.

Professional Expertise

- Radiation Safety Officer
- Laser Safety Officer
- Medical Health Physics
- Emergency Radiological and HAZMAT Response
- Radiation Safety Training – classroom and computer-based training development
- Radiological Supervision and Evaluation of Nuclear Systems Maintenance and Overhaul

- Technical and Professional Health Physics and Environmental Health and Safety Program and Project Management

Credentials

Professional Experience – 25 years

Comprehensive Practice of Health Physics; Certified Health Physicist (CHP)

Registered Radiological Protection Technologist (RRPT)

U.S. Naval Reactors, Naval Shipyard Article 108

Professional Affiliations

Health Physics Society

American Academy of Health Physics

Northern California Chapter of the Health Physics Society

National Registry of Radiation Protection Technologists

Bay Area Laser Safety Officer

Project Management Institute

Work History

Stanford University, Sr. Health Physicist/Alternate RSO, May 2006 to Present

Senior Health Physicist responsible for all aspects of the medical health physics programs at Stanford University Medical Center and the VA Medical Center, Palo Alto, CA. These duties included medical health physics support for:

- 2 active nuclear medicine services
- A GE PETrace Cyclotron and pharmacy/radiochemistry facility
- Biomedical and animal radiation research laboratories
- Health physics training for radiology residents preparing for board exams
- Radiology service support for shielding and machine evaluation
- Auditing, report writing, and consultation services for all departments
- Supervised two health physicists

Integrated Science Solutions, Inc., Health and Safety Manager, March 2005 to May 2006
Health Physics, Health and Safety Project and Marketing Manager. Currently pursuing five health and safety government contracts for ISSi.

Integrated Science Solutions, Inc., Health and Safety Manager, December 2001 to March 2005

Project Manager, Industrial Hygiene, Health Physics, and OSHA Voluntary Protection Program. Due to superior performance, assigned this position to improve a failing IH program. Within 6 months the program went from failing grades to excellent performance. Also continued with duties below.

SAIC/Integrated Science Solutions, Inc., Radiation Safety Officer, 1999 to December 2001

Radiation Safety Officer for the NASA Ames Research Center's NRC broad scope byproduct material license. Responsible for all aspects of radioisotope and radiation use at the Center. Restructured the Center's radiation safety training program to make it more accessible and efficient for researchers. This included development of computer and intranet based training and enriching the radiation safety refresher training program to provide short and informative monthly training to replace the existing structured annual training course. Also redesigned the laboratory survey and audit program to bring it up to professional standards and to allow for better tracking of laboratory violations and deficiencies. Additionally, served as the Center's Laser and Non-Ionizing Radiation Safety Officer. Well-respected by the researchers and Non-Ionizing Radiation Safety Committee members for professionalism and team member approach to implementing the program safety rules, regulations and requirements. The intranet web-based training program developed for the laser safety program is one of the finest in the industry. For the emergency response team, developed response procedures and policies for dealing with radiological casualties ranging in severity from small-scale radiological spills to large fires or explosions resulting in the release of radioactive material. Also provided hands-on practical radiation instrument use training for the response team members. Trained as an Operational First Responder (FRO) for Nuclear, Biological, and Chemical Terrorism response, as a Hazardous Materials Industrial Technician, and as an Incident Commander. Served on the hazardous materials response team and was the co-manager of the team. Can fill any position on a team up to and including Incident Commander. Radiological casualty expert for the Center.

VA Medical Center San Francisco, Environmental Health and Safety Manager / Radiation Safety Officer, 1998 to 1999

Managed the Medical Center's Environmental Health and Safety Office consisting of 6 professional and 2 clerical staff. Reported to upper management on all aspects of safety at the Medical Center. Responsible for compliance of the research and clinical programs as allowed by medical broad scope materials license issued by the Nuclear Regulatory Commission (NRC). Responsible for x-ray safety and laser safety at the Medical Center. The Medical Center had 55 principal investigators performing research under 75 active radiation protocols in 35 separate laboratories. There were 300 personnel authorized to use radioactive material at the Medical Center and 400 personnel who received a monthly film badge for performance of their duties. In addition, the Medical Center received approximately 600 shipments of radioactive material per year exclusive of nuclear medicine radio-pharmaceuticals.

VA Medical Center, San Francisco, Assistant Radiation Safety Officer, 1993 to 1998

Laboratory auditor for compliance with local and NRC regulations. Calibration of all radiation detection instrumentation at the Medical Center. Waste management of all radioactive material being stored while awaiting shipment for incineration or disposal or permitted to decay-in-storage. Trained authorized users on radiation protection and aided the dosimetry management and tracking program. Performed environmental monitoring of effluents (air and sewage) and radiation and radioactive contamination due to radioactive material. Designed the survey forms and procedures for 40 research laboratories and reviewed all radiation and contamination surveys conducted in these

laboratories. Technical writer for the Radiation Safety Manual, the Medical Center's urine bioassay program (including justification of limits), training guides and manuals, a new survey form (including various computerized formats), and an extensive list of memoranda clarifying Radiation Safety Policies and Procedures. Managed the radioactive material bioassay program for the Medical Center.

Mare Island Naval Shipyard, Vallejo, CA, Refueling and Overhaul Radiological Controls Supervisor, 1985 to 1993

Supervised 8 to 10 physical science technicians responsible for ensuring compliance to health physics rules and regulations during refueling of nuclear reactors. Reviewed and helped to write the health physics controls for safe refueling and defueling of naval reactors. Responsible for compliance with ALARA principles and ensuring safe contamination controls on the job site. Was a management representative for the Radiological Controls Office coordinating the defueling team and actively participating in the decision-making process for the defueling and refueling of nuclear submarine reactors.

Supervised 10 to 12 radiological control technicians for the overhaul of radioactive support systems. Responsible for the health physics aspects of work performed on all nuclear systems exclusive of refueling. This included managing proper controls during an ion exchanger resin discharge, the radioactive waste program at the shipyard's radioactive work facility, highly contaminated reactor primary system valve cut-out and maintenance, various reactor and support system hydrostatic tests, routine and job type radiation and contamination surveys, waste processing, and radioactive tank maintenance and entry. Performed planning and briefing of radioactive work to insure full compliance with ALARA principles and DOD rules and regulations. Reviewed surveys for trends and compliance and procedures for proper radiological controls. Trained the technicians who worked on the team.

As a member of the Shipyard Emergency Radiation Accident Response team, responsibilities were: Scene control, emergency scene evaluation, communication liaison between the scene and the Head of the Radiological Controls Office, boundary control and evaluation, decontamination of contaminated personnel, and environmental sampling and evaluation

Naval Nuclear Power Program (USS Puffer (SSN 652), Pearl Harbor, HI), Electrician's Mate First Class, 1977 to 1983

Maintained and repaired the ship's electrical systems, generators, and motors. Qualified all watch stations up to and including senior watch station. These included: Shutdown Reactor Operator, Electrical Operator, Throttleman, Auxiliary Electrician, Shutdown Electrical Operator, and Shutdown Roving Watch. Supervised up to seven Electrical Division personnel as a senior Petty Officer. Received a letter of Commendation from the Submarine Squadron Commander for taking the lead during a shipboard casualty and work performed thereafter to keep the motors running and the ship on its mission. Also received the Expeditionary Medal with two stars, the Good Conduct medal, two Navy

Unit Commendations, two Battle Efficiency ribbons and a Sea Service Deployment ribbon with one star. Received an Honorable Discharge at the end of enlistment.

Publications and Presentations

“Radiation Safety for Radioiodine Therapies”, NRRPT News, National Registry Radiological Protection Technologists, Summer 1997 Edition and Subsequently Reprinted in a Special Anniversary Edition.

Honors and Awards

Contractor Certificate of Appreciation (December 2001) – for work performed as a member of the PAI/ISSi Emergency Response Team

Contractor Certificate of Excellence (October 1999) - for work performed as a member of the SAIC Emergency Response Team

Specialized Training

Radiopharmaceutical Internal Dose Assessment Course 2006

Medical Health Physics Summer School, HPS 2006

U.S. Navy Nuclear Power School

U.S. Naval Shipyard Radiological Controls Technician

U.S. Naval Shipyard Radiological Controls Supervisor

Laser Safety Officer

40-Hour Hazardous Waste Operations and Emergency Response and Incident

Commander – 40 CFR 1910

40-Hour Hazardous Materials Industry Technician and Incident Commander – California

Code of Regulations, Title 8 Chapter 4 Section 5192(q)]

American Red Cross CPR

First Responder Operations Nuclear, Biological, Chemical Terrorism, California

Specialized Training Institute

Additional Management Training

Bullet Proof Manager (Crestcom Corporation one-year course)

University of Phoenix MBA:

Managerial Communication

Marketing Management

Human Relations and Organizational Behavior

Statistics and Research Methods for Managerial Decisions

Legal Environment of Business

Operations Management

Economics for Managerial Decision Making

Accounting for Managerial Decision Making
Finance for Managerial Decision Making
Information Management in Business
E-Business Principles and Practices
Advanced Problems in Statistics and Research Methods
Advanced Problems in Finance
Project Management in the Business Environment
Strategy Formulation and Implementation
Cases in Decision Making

(FOR LFMS USE)
INFORMATION FROM LTS

Program Code: 03610
Status Code: 0
Fee Category: 3L 3E
Exp. Date: 20121031
Fee Comments:
Decom Fin Assur Req'd: Y

BETWEEN:
License Fee Management Branch, ARM
and
Regional Licensing Sections

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED NATIONAL AERONAUTICS & SPACE ADM.
Applicant/Licensee: 20061115
Received Date: 3020435
Docket No.: 471183
Control No.: 04-07845-04
License No.:
Action Type: Notifications

2. FEE ATTACHED
Amount:
Check No.:

3. COMMENTS
Signed Colleen A. Hunsicker
Date 11-20-04

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered /)

1. Fee Category and Amount: _____
2. Correct Fee Paid. Application may be processed for:
Amendment _____
Renewal _____
License _____
3. OTHER _____

Signed _____
Date _____