

**NRC FORM 313**  
(3-2009)  
10 CFR 30, 32, 33,  
34, 35, 36, 39, and 40

**U.S. NUCLEAR REGULATORY COMMISSION**

**APPROVED BY OMB: NO. 3150-0120**

**EXPIRES: 3/31/2012**

RECEIVED  
AUG 09 2010  
DNMS

**APPLICATION FOR MATERIALS LICENSE**

Estimated burden per response to comply with this mandatory collection request: 4.3 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. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

**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.**

**APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:**

OFFICE OF FEDERAL & STATE MATERIALS AND ENVIRONMENTAL MANAGEMENT PROGRAMS  
DIVISION OF MATERIALS SAFETY AND STATE AGREEMENTS  
U.S. NUCLEAR REGULATORY COMMISSION  
WASHINGTON, DC 20555-0001

**ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:**

**IF YOU ARE LOCATED IN:**

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM  
DIVISION OF NUCLEAR MATERIALS SAFETY  
U.S. NUCLEAR REGULATORY COMMISSION, REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PA 19406-1415

**IF YOU ARE LOCATED IN:**

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING BRANCH  
U.S. NUCLEAR REGULATORY COMMISSION, REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING BRANCH  
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV  
612 E. LAMAR BOULEVARD, SUITE 400  
ARLINGTON, TX 76011-4125

**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.**

1. THIS IS AN APPLICATION FOR (Check appropriate item)

A. NEW LICENSE

B. AMENDMENT TO LICENSE NUMBER 30-02405-10

C. RENEWAL OF LICENSE NUMBER \_\_\_\_\_

2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)

**Commander**  
**U.S. ARMY WHITE SANDS MISSILE RANGE**  
**ATTN: TEDT-WS-SV**  
**WHITE SANDS MISSILE RANGE, NM 88002-5158**

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

**SVAD**  
**Building 21225**  
**Building 21230**  
**White Sands Missile Range, NM 88002-5158**

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

**Douglas McDonald**

TELEPHONE NUMBER

**(575) 678-1168**

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.

5. RADIOACTIVE MATERIAL  
a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSE FEES (See 10 CFR 170 and Section 170.31)

FEE CATEGORY	AMOUNT ENCLOSED \$
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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 62 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

**John H. O'Kuma, Director SVAD**

SIGNATURE



DATE

**07/29/2010**

**FOR NRC USE ONLY**

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		
APPROVED BY				DATE	
					573334



**DEPARTMENT OF THE ARMY**  
**WHITE SANDS TEST CENTER**  
**U.S. ARMY WHITE SANDS MISSILE RANGE**  
**100 Headquarters Avenue**  
**WHITE SANDS MISSILE RANGE, NEW MEXICO 88002-5000**

REPLY TO  
ATTENTION OF

TEDT-WSV

28 Jul 10

MEMORANDUM FOR U.S. Nuclear Regulatory Commission, Region IV, ATTN: License Assistant, 612 East Lamar Boulevard, Arlington, TX 76011-4125

SUBJECT: Request for Amendment to Panoramic Irradiator License No. 30-02405-10

1. Reference page 2 Panoramic Irradiator License No. 30-02405-10 CONDITIONS Item 11.B, Radiation Safety Officer.
2. The Survivability, Vulnerability & Assessment Directorate (SVAD) requests the approval of Ms. Elise A Barrera as the Radiation Safety Officer for the Panoramic Irradiator License No. 30-02405-10.
3. Mr. McDonald has been the authorized Radiation Safety Officer for the license since August 5, 2009.
4. Upon approval, Ms. Barrera will replace Mr. McDonald as the primary radiation safety person for the Panoramic Irradiator License No. 30-02405-10.
5. The point of contact is Mr. Douglas McDonald, 575-678-1168.

Encl

A handwritten signature in black ink that reads "John H. O'Kuma".

JOHN H. O'KUMA  
Director, Survivability, Vulnerability and  
Assessment Directorate

APPENDIX A

U.S. NUCLEAR REGULATORY COMMISSION			
<b>TRAINING AND EXPERIENCE BROAD SCOPE RADIATION SAFETY OFFICER</b>			
1. NAME OF PROPOSED RSO:  Elise Barrera		2. EDUCATION: Degree and Major B.S. Biology	
<b>3. CERTIFICATION</b>			
SPECIALITY BOARD	CATEGORY	MONTH AND YEAR CERTIFIED	
<b>4. TRAINING RECEIVED IN BASIC RADIOISOTOPE HANDLING TECHNIQUES</b>			
FIELD OF TRAINING	LOCATION AND DATE OF TRAINING	CLOCK HOURS IN LECTURE/ LABORATORY	CLOCK HOURS OF SUPERVISED ON-THE-JOB EXPERIENCE
A. RADIATION PHYSICS AND INSTRUMENTATION	<ol style="list-style-type: none"> <li>1. 40 Hr Gamma Spectroscopy Training, Oak Ridge Associated Universities, 2009</li> <li>2. WSMR, 2008-present</li> <li>3. Health Physicist/Environmental Health and Safety Specialist, Amgen Inc (biopharmaceutical company), 2006-2008</li> <li>4. Hazardous Materials Technician Refresher Training, 2007, 2008</li> <li>5. Radiation Safety Officer Training with DOT and NRC Certification; Radiation Safety Academy, Gaithersburg MD, 2007 NAVSEA Transportation of Radioactive Material, 2009</li> <li>6. NEWEX Radioactive Waste Certification and Classification, 2006</li> <li>7. Hazardous Waste Operations and Emergency Response Training 2006</li> <li>8. US Navy Reserve; CHEMRADTECHPAC 220, CBR Officer, 1992-1993</li> <li>9. US Navy, Radiation Health Officer/ CBR Officer, 1989-1992</li> <li>10. CBR School US Navy, Treasure Island, CA 1989</li> <li>11. Nuclear Underwater Medical Institute, 1989</li> </ol>	>200 hrs	>2000 hrs
B. RADIATION PROTECTION	1,2,3,4,5,6, 7,8,9,10, 11	>200 hrs	>2000 hrs

C. MATHEMATICS PERTAINING TO THE USE AND MEASUREMENTS OF RADIOACTIVITY	1,2,3,5, 6 ,8,9,10, 11,	>200 hrs	>2000 hrs
D. RADIATION BIOLOGY	1,2,3,5, 7,8,9,10,11	>200 hrs	>2000 hrs
E. RADIOPHARMACEUTICAL CHEMISTRY	3	30 hrs	150 hrs

### 5. EXPERIENCE WITH RADIOISOTOPES

ISOTOPE	Ci USED AT ONE TIME	LOCATION	CLOCK HOURS	TYPE OF USE
C-14, H-3, S-35, Ca-45, Cr-51, Co-57, Am-241, P-33, P-32, I-125 I-131, Fe-59, Ni-63, Se-75, Y-90, Tc-99m, In-111, Po-210	10.0 Ci maximum (unbound iodine 125) generally worked with milli or micro curie amounts)	3	2000 hrs	Industrial/Medical/Research
Co-60, Cs-137, U-235, U-238, Fission Products, activation Products	67 kCi	2	1000 hrs	Test and Research
Ra-226, C-14, Ni-63, H-3, Sr-90				
Am-241				
Co-60, Cs-137, U-235, U-238, Fission Products and Activation Products				

## 6. EXPERIENCE SUPERVISING USE OF RADIOISOTOPES

ISOTOPE	MAXIMUM ACTIVITY	LOCATION	CLOCK HOURS	TYPE OF USE
C-14, H-3, S-35, Ca-45,	5 Ci RAM	3.	>2000 hrs	Industrial/Medical/Research
Cr-51, Co-57, Am-241, P-33, P-32, I-125 1-131, Fe-59, Ni-63, Se-75, Y-90, Tc-99m, In-111, Po-210	1030 Ci-Co-57 Panoramic Irradiator  67 kCi	2.	1000 hrs	Test and Research
Co-60, Cs-137, U-235, U-238, Fission Products, activation Products				
Ra-226, C-14, Ni-63, H-3, Sr-90				
Am-241				
Co-60, Cs-137, U-235, U-238, Fission Products and Activation Products				

## 7. PRACTICAL EXPERIENCE

ACTIVITY	LOCATION	EXPLANATION
Implemented the US Navy Radiation Health Program onboard a Destroyer Tender, Naval Hospital, Medical Clinic, and CBR warfare unit.	8, 9	Stationed onboard the USS Samuel Gompers AD-37, at Naval Hospital Oakland, and at CHEMRADECHPAC 220. Temporarily attached to Naval Clinic Treasure Island to revamp their Radiation Health program.
Established an external radiation health audit assist program and conducted radiation health audits on other Navy vessels and clinics in the Pacific Fleet	8,9	Ships, Hospitals, Clinics, Naval Technical Training Centers
Maintained a Contamination Control Program <ul style="list-style-type: none"> <li>❖ Ambient Radiation Surveys</li> <li>❖ Contamination</li> <li>❖ Air Sampling Program</li> <li>❖ Sealed Source Leak Testing</li> <li>❖ Sample Analysis</li> </ul>	2,3,8,9	

<p>Conducted radiation training, medical training, EH&amp;S training, laboratory inspection training and specialized CBR training for facility personnel:</p> <ul style="list-style-type: none"> <li>❖ Authorized Users and Lab Workers</li> <li>❖ Animal Caretakers</li> <li>❖ Nursing Staff</li> <li>❖ Incinerator Operators</li> <li>❖ Ancillary Staff</li> <li>❖ Security</li> <li>❖ Waste Processors/Handlers</li> </ul>	<p>2, 3, 8, 9</p>	<p>Provided radiation worker training to shipboard Radiological Control and Medical Department personnel; provided general radiation training to all shipboard personnel, conducted specialized radiation health training for doctors, nurses, and newly reported hospital personnel; provided CBR training to divers and CHEMRADTECHPAC personnel; Administered hospital wide training programs, Coordinated and conducted radiation training, laboratory inspection training and EH&amp;S training at Biopharmaceutical Research and Development Facility, Managed and Provided Radiation training for all SVAD, medical, and emergency personnel at WSMR</p>
<p>Planned, coordinated, and participated in training evolutions and drills Maintained a facility emergency plan for responding to release of radioactive material</p>	<p>2,3,8,9</p>	<p>USS Samuel Gompers AD-37, Sea Trials, WESTPAC, REFTRA, War Games, Navsea, CHEMRADTECHPAC, Amgen, SVAD/WSMR, Involved in the implementation of the Emergency response plan for FBR and other facilities in the Directorate.</p>
<p>Decontaminated nuclear personnel</p>	<p>2,3,8,9</p>	<p>USS Samuel Gompers AD-37, REFTRA, WESTPAC, CHEMRADTECHPAC, Amgen, SVAD/WSMR</p>
<p>Wrote RADIATION SAFETY MANUALS and standard operating procedures, reviewed procedures and documentation, trained personnel, submitted reports and established effective Radiation Health programs</p>	<p>2,3,8,9</p>	<p>USS Samuel Gompers, AD-37, CHEMRADTECHPAC, NTTC TI, NMTC TI, Amgen Inc, SVAD/WSMR</p>
<p>Co-authored two articles published in the <u>Navy Reservist</u> on diving and salvage operations in radiologically contaminated environments.</p>	<p>8</p>	<p>CHEMRADTECHPAC</p>
<p>Managed and sustained Biopharmaceutical Research and Development Radiation</p>	<p>3</p>	<p>Managed and Maintained state of compliance of the following programs: X-Ray producing Machines; personnel dosimetry; radioactive waste; material inventory and accountability (receipt, use, decay, transfer, and disposal); contamination surveys; bioassay program; shipping and receiving; leak testing; sealed source inventory; training; dose assessment; records management programs.</p>
<p>Performed safety evaluations of facilities and equipment of proposed uses.</p>	<p>2,3</p>	<p>Ranked jobs/tasks for hazard level, wrote risk assessments, conducted root cause analyses Amgen site wide, WSMR/SVAD. Worked as Fast Burst Reactor, Gamma Range, and Relativistic Electron Beam Accelerator Facilities Safety Monitor during operations</p>
<p>Performed shielding evaluations including determination of type and amount needed.</p>	<p>2,3</p>	<p>Amgen Neuroscience labs, Immunology labs, Medical Science Department, Hematology Labs, Cancer Oncology Labs, WSMR/SVAD Gamma Range, FBR, HPM, EMRE</p>

Selected instrumentation associated with the measurement of radiation <ul style="list-style-type: none"> <li>❖ Survey Instruments (GM, Ion Chamber, Scintillation Counting Equipment)</li> <li>❖ Special Equipment (Dose Calibrator, Direct Reading Dosimeter, Air Sampler)</li> </ul>	2,3	Amgen Lab Animal Research Facility, Medical Science Department, Industrial Hygiene Lab, WSMR/SVAD Gamma Range, Relativistic Electron Beam Accelerator, FBR, HPM, EMRE.
Coordinated Material Inventory and Accountability Program <ul style="list-style-type: none"> <li>❖ Monitored Receipt, Use, Decay, Transfer, and Disposal</li> </ul>	2,3,9	
Wrote Approved Army Radiation Authorization for PI-538	2	
Prepared Radioactive Packages for Transportation	2,3	
Radioactive Waste Disposal Program <ul style="list-style-type: none"> <li>❖ Effluent Monitoring</li> <li>❖ Collection</li> <li>❖ Treatment</li> <li>❖ Packaging</li> <li>❖ Disposal</li> </ul>	2,3	Effluent Monitoring Packaging Disposal
Facility Safety Health Physics Monitor for Fast Burst Reactor, Gamma Range Facility, Relativistic Electron Beam Accelerator, El Dorado	2	
Evaluated qualifications of Authorized Users and Individuals working under the supervision of Authorized Users for Proposed Uses	2,3	
Conducted a Laboratory Audit Program for Research and Development Labs	2,3	
Maintained Personnel Monitoring Program for determining External Exposure	2,3,8,9	
Calculated Internal and External radiation Doses.	2,3,8,9	
High School Science Teacher	Cornerstone Christian High School 1999-2006	Taught Introduction to Physical Science, Biology, Anatomy/Physiology, Chemistry, Physics, Health, Algebra 1 and Algebra 2
Middle School Science Teacher	Carden Intermediate School 1996-1999	Taught Middle School Science and Math
Certified Environmental Health and Safety Management Specialist	National Association of Safety Professionals	10/2008
Certified Safety Auditor	National Association of Safety Professionals	10/2008

## 8. PROFESSIONAL ORGANIZATIONS

Health Physics Society  
National Association of Safety Professionals  
Southern California Chapter of Health Physics Society

## 9. AWARDS, SCIENTIFIC PRESENTATIONS AND PUBLICATIONS

WSMR On the Spot Award for Radiation Training Program 2009; Amgen Bravo Award for training 2008; Amgen Bravo Award for HAZMAT team response 2007; University of California San Diego Outstanding High School Teacher Recognition Award 2004-2005; Parke H Davis, 7<sup>th</sup> Edition Who's Who Among America's Teachers, 2004; University of California San Diego Outstanding High School Teacher Recognition Award 2002-2003; Parke H Davis, 5<sup>th</sup> Edition Who's Who Among America's Teachers, 2002; US Navy Early Promotion from Lieutenant Junior Grade to Lieutenant; US Navy DOD Humanitarian Service Medal; US Navy Department of the Navy Meritorious Unit Commendation; US Navy Sea Service Deployment Ribbon; US Navy National Defense Service Medal.

## 10. SIGNATURE AND CERTIFICATION

I certify that, to the best of my knowledge and belief, all of my statement is true, correct, complete, and made in good faith.

SIGNATURE

*Chase A. Korman*

DATE SIGNED (Month, day,  
year)

7/28/10

8-18-2010

DATE

This is to acknowledge the receipt of your letter/application dated 7-29-2010, and to inform you that the initial processing, which includes an administrative review, has been performed.

There were no administrative omissions. Your application will be assigned to a technical reviewer. Please note that the technical review may identify other omissions or require additional information.

Please provide to this office within 30 days of your receipt of this card:

---

The action you requested is normally processed within 90 days.

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 573334.  
When calling to inquire about this action, please refer to this mail control number.  
You may call me at 817-860-8103.

Sincerely,



Licensing Assistant

BETWEEN:

Accounts Receivable/Payable  
and  
Regional Licensing Branches

[ FOR ARPB USE ]  
INFORMATION FROM LTS

Program Code: 03521  
Status Code: Pending Amendment  
Fee Category: 2B 3G 3P  
Exp. Date:  
Fee Comments:  
Decom Fin Assur Req: Y

## License Fee Worksheet - License Fee Transmittal

### A. REGION

#### 1. APPLICATION ATTACHED

Applicant/Licensee: ARMY, DEPARTMENT OF THE  
Received Date: 08/16/2010  
Docket Number: 3009345  
Mail Control Number: 573334  
License Number: 30-02405-10  
Action Type: Amendment

#### 2. FEE ATTACHED

Amount: \_\_\_\_\_

Check No.: \_\_\_\_\_

#### 3. COMMENTS

Signed: Coleen Murahan

Date: 8-16-2010

### 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: \_\_\_\_\_

Directorate (Bldg 21225)  
e Range, NM



NUCLEAR MATERIALS LICENSING BRANCH  
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV  
612 E. LAMAR BOULEVARD, SUITE 400  
ARLINGTON, TX 76011-4125

Resource Protection Office  
TEDT-WSV-P Survivability  
Vulnerability Assessment Directorate (Bldg 21225)  
(SVAD) White Sands Missile Range, NM  
88002-5158



NUCLEAR MATERIALS LICENSING BRANCH  
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV  
612 E. LAMAR BOULEVARD, SUITE 400  
ARLINGTON, TX 76011-4125