



DEPARTMENT OF THE ARMY  
US ARMY MEDICAL RESEARCH INSTITUTE OF CHEMICAL DEFENSE  
3100 RICKETTS POINT ROAD  
ABERDEEN PROVING GROUND, MD 21010-5400

May 24, 2011

Office of the Commander

MS 16

L-4

Ms. Elizabeth Ullrich  
Senior Health Physicist  
Commercial and R&D Branch  
Division of Nuclear Materials Safety  
U.S. Nuclear Regulatory Commission  
Region I  
475 Allendale Road  
King of Prussia, PA 19405-1415

Mail Control No. 574513  
License No.: 19-00294-24  
Docket No(s): 03031110

Dear Ms. Ullrich:

This letter is in response to your letter dated, April 29, 2011, requesting more information to support our request for license amendment/renewal. The information you requested is enclosed and is keyed to the question numbers in your letter.

My point of contact for this information is Mr. Benjamin F. Casole, III, Radiation Safety Officer and he may be reached at (410) 436-1780 or e-mail at Benjamin.f.casole@us.army.mil.

Peter J. Schultheiss  
Colonel, US Army  
Commanding

Enclosures

RECEIVED

RECEIVED

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NMSS/RGN1 MATERIALS-002

Additional Information as Requested by the USNRC (keyed to the questions in the USNRC's letter):

1. No response is needed for this item.
2. Laboratories are classified by type, toxicity, and isotope through the use of a radioactive materials permit that is approved by the Chairman of the Radiation Safety Committee. Laboratories receive permits for the use of chemical or biological materials as well, and the permitting program is governed by USAMRICD Memorandum 385-6. Each laboratory which uses or stores radioactive material is posted with a radioactive material permit that describes the type and possession limit of the isotope, the Principal Investigator who is responsible for the room, is endorsed by the branch and division chiefs of the investigator, and concurred on by the RSO prior to the Chair's approval. The permit also describes the conditions under which the radioactive material may be used and/or stored. Radioactive material work is performed in a working, filtered, flow and smoke capture-certified chemical fume hood or biological safety cabinet behind a 20 cm line with the floor of the hood lined with plastic-backed paper. Fume hoods are generally well away from the laboratory entrances where there could be an issue with unrestricted areas. The amount and types of radiolabeled compounds used also keep the potential for hazards in unrestricted areas very low. A diagram of a typical laboratory configuration is enclosed as requested. There are no special application facilities at the USAMRICD as described in your letter. Radioactive material is procured in solution as part of a radiolabeled compound, and is in a non-volatile form, so radioactive material does not pose an airborne hazard.
3. The RSO conducts or causes the conduct of an annual program audit that satisfies the requirement of the license. Additionally, on a triennial basis, the NRC does a license inspection as well as the US Army's Public Health Command. On an annual basis, the RSO for our higher headquarters, the US Army Medical Research and Materiel Command at Fort Detrick, MD does a program compliance review as part of the Organizational Inspection Program. Each month, every laboratory permitted for the use and/or storage of radioactive material that uses radioactive material that month receives a comprehensive radiation safety survey to ensure compliance with both NRC and Army standards. The diagram supplied for No. 2, above, is one of the completed survey forms. The on-site health physicist performs these inspections and the monthly survey packet is approved by the RSO.
4. The radioactive material permit in the block reserved for conditions describes any special equipment necessary for radiation monitoring. The RSO controls all of the instruments, so when a laboratory is in need of such equipment, it is issued by the RSO to the laboratory. All instrumentation is maintained by the Medical Maintenance Section of the Logistics Office and is calibrated in accordance with Army standards. In addition, the health physics staff is made available to provide immediate survey support to the laboratory staff to conduct surveys when the work with radioactive material is concluded. This is done for two reasons: (1) to allow the research staff to conduct their

laboratory research work and (2) to ensure that any health physics work is properly conducted by someone on the RSO's staff.

5. The USAMRICD will survey our facility and maintain contamination levels and perform bioassays of occupationally exposed workers in accordance with the survey frequencies and contamination levels published in Appendix S of NUREG-1556, Volume 11, "Program Specific Guidance About Licenses of Broad Scope."

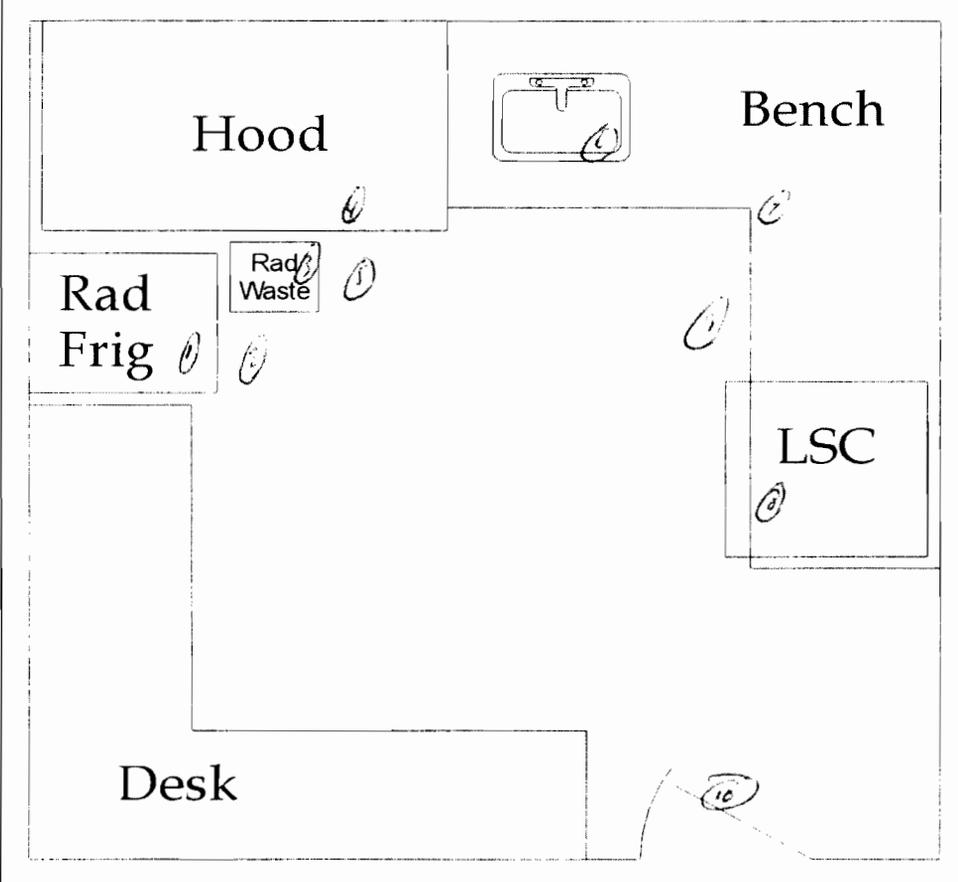
6. The cost estimate for the DFP submitted in 2006 has not changed. In March 2010, the RSO evaluated the cost estimate to meet the triennial requirement and determined the cost to remain the same given three factors. The RSO was advised by the Region I office to make this assessment and if no changes were necessary, to create a memorandum stating the reasoning for the decommissioning file. This memorandum was created and placed in both the decommissioning file and the NRC license file. The DFP is on track to be reassessed not later than March 16, 2013, to meet the next triennial requirement. The memorandum is enclosed.

7. The USAMRICD Memorandum 385-2 was submitted as a reference for specific procedures. The document is administrative in nature, particularly paragraphs 1-4, 6-11, 13-16, and 19-21. The others have requirements promulgated by either the NRC or Army standards, which would have to be modified if the regulations change.

8. The USAMRICD would like to avail ourselves of the NRC's flexibility to make program changes and procedural changes specifically identified in documents limited to the following areas: training; audit program; radiation monitoring instruments; material receipt and accountability; safe use of radionuclides and emergency procedures; and radiation surveys. We will apply for and receive an amendment to the license before implementing any such changes. The changes will be reviewed and approved by the Radiation Safety Committee in accordance with the established procedures prior to implementation. The revised program will be in accordance with regulatory requirements; it will not change the license conditions; and it will not reduce the effectiveness of the Radiation Safety Program. The staff will be trained in the revised procedures prior to implementation and the audit program will evaluate the effectiveness of the change and its implementation.

Radiation Safety Survey	<h2 style="margin:0;">MRICD</h2> <p style="margin:0;">3100 Ricketts Point Rd. Aberdeen Proving Ground, MD 21010-5400</p>	Performed By: <h3 style="margin:0;">RSO Inc</h3> <p style="margin:0;">PO Box 1450 Laurel, MD 20725-1450</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%;">Building</td> <td style="width:33%;">Room</td> <td style="width:33%;">Lab Type</td> </tr> <tr> <td style="text-align: center;">E3100</td> <td style="text-align: center;">34</td> <td style="text-align: center;">HP Rm</td> </tr> </table>	Building	Room	Lab Type	E3100	34	HP Rm
Building	Room	Lab Type						
E3100	34	HP Rm						

Authorized Investigator	Name Harry Schwartzer	Phone No 5 1116 or 51780	Date 1/31/11
Surveyor	Name Harry Schwartzer	Phone No 5 1116	Wipe No. 11-20



Isotopes And Wipe Results							
	3-H	14-C	35-S	32-P	33-P	125-I	Other
X						X	125-I
X						X	Other
X							Other
X							Other
X							Other
Wipe	3H	14C	35S	32P	33P	125I	Other
1	2100 dpm						
2							
3							
4							
5							
6							
7							
8							
9							
10							

**Compliance Items**

<input checked="" type="checkbox"/> 1. Signs And Labels -Room	<input checked="" type="checkbox"/> 9. Hood Air Flow In Calibration	<input type="checkbox"/> 17. Inventory Disposal Records
<input checked="" type="checkbox"/> 2. -Source Container	<input checked="" type="checkbox"/> 10. Adequate Personal External Monitoring	<input checked="" type="checkbox"/> 18. Survey Records Current
<input checked="" type="checkbox"/> 3. -Refrigerator Freezer	<input checked="" type="checkbox"/> 11. Radioactive Waste Management	<input type="checkbox"/> 19. Personnel Trained
<input checked="" type="checkbox"/> 4. -LSC Vials	<input checked="" type="checkbox"/> 12. Adequate Radionuclide Storage	<input checked="" type="checkbox"/> 20. Prohibition On Mouth Pipetting
<input checked="" type="checkbox"/> 5. -Waste Containers	<input checked="" type="checkbox"/> 13. Routine Use Of -Gloves	<input checked="" type="checkbox"/> 21. Corridor Storage Meets Requirements
<input checked="" type="checkbox"/> 6. -Other Equipment	<input checked="" type="checkbox"/> 14. -Lab Coats	<input checked="" type="checkbox"/> 22. Radiation Levels < 2.5 mR/hr
<input checked="" type="checkbox"/> 7. Absorbent Paper (Rad Areas Only)	<input checked="" type="checkbox"/> 15. -Shielding When Appropriate	<input checked="" type="checkbox"/> 23. Removable Contamination < 100 dpm
<input checked="" type="checkbox"/> 8. Adequate Flow Hood	<input checked="" type="checkbox"/> 16. Prohibition Eating, Drinking, Smoking	<input type="checkbox"/> 24. Other Specify In Remarks

Survey Instrument Data	Yes Calibration Current	Yes Instrument Daily Source Checked
Meter 1	Meter 2	Meter 3

Remarks: This is the health physics laboratory  
 Background established outside of entrance  
 Meter used *13 SN: 161425* Background measurement found *40 dpm* Meter Check souced   
*date: 01 Sep 2011*  
 Highest reading *6400*  
*\* Hood flow rate below specs, not used*

MEMORANDUM FOR DECOMMISSIONING FILE  
FOR THE USNRC LICENSE FILE

SUBJECT: Decommissioning/Financial Assurance Update for 2010

1. The decommissioning plan/financial assurance certificate dated November 22, 2006 does not require an increase in funds for the following reasons:
  - a. The number of laboratories permitted for radioactive material use and/or storage has gone down in the last three years. Those laboratories where the permits have been terminated were surveyed and the surveys are kept in a separate decommissioning survey book.
  - b. The amount of radioactive material in storage in permitted rooms has been greatly reduced in the last year by the removal of the radiolabeled chemical agents from the active inventory and placed into the radioactive waste storage facility for disposal.
  - c. The internal limit of 100 dpm for the clean-up of contamination levels is still being used and the use of plastic-backed paper and/or spill trays in work areas is still in effect.
2. This update will be reassessed NLT 16 MARCH 2013.



BENJAMIN F. CASOLE, III  
Chief, Safety, Surety, Security,  
and Intelligence Office/  
Radiation Safety Officer