



August 1, 2011

U.S. Nuclear Regulatory Commission  
Materials Licensing Section  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4352

Dear Sir or Madam:

Southern Indiana Radiological Associates would like to amend its Byproduct Materials License, Number 13-24646-02, to add Per Amundson, M.D. as an Authorized User of materials licensed under 10 C.F.R. 35.100, 35.200, and 35.300. Dr. Amundson is currently listed as an Authorized User on U.S. Air Force radioactive materials license IL-04762-02/04AFP, a copy of which is enclosed.

If there are any questions concerning this license amendment, please contact our nuclear medicine consultant, Mr. Patrick J. Byrne, DABR, CHP, DABSNM, at 877-317-5811.

Sincerely,

Mark A. Bisesi, M.D.  
Radiation Safety Officer

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**RADIOACTIVE MATERIAL PERMIT**  
**USAF RADIOISOTOPE COMMITTEE**

Pursuant to the authority stated in AFI 40-201, Managing Radioactive Materials in the USAF, and in reliance on statements made by the applicant, permission is hereby granted to receive, possess, transfer and store radioactive materials listed below, and to use this material for the use and at the places listed below. This document is not a valid permit unless it is endorsed by a representative of the USAF Radioisotope Committee.

1. ORGANIZATION  375 MDG/SG 310 W LOSEY ST SCOTT AFB IL 62225-5252	2. PERMIT NO. IL-04762-02/04AFP	3. AMENDMENT NO. 4
	4. EXPIRATION DATE 31-Aug-2008	
	5. DOCKET NO. 030-01458	
6. PERMIT RSO: BARROWS, MICHAEL C.		7. ALTERNATE PERMIT RSO:

8. RADIOACTIVE MATERIAL (Element and Mass Numbers)	9. CHEMICAL/PHYSICAL FORM (NSN or Model Number) (* denotes sealed sources)	10. MAXIMUM QUANTITY AUTHORIZED
A. Any byproduct material permitted by 10 CFR 35.100	A. Any	A. As needed
B. Any byproduct material permitted by 10 CFR 35.200, except Xenon-133	B. Any	B. As needed
C. Any byproduct material permitted by 10 CFR 35.300	C. Any	C. 3.0 curies; not to exceed 1 curie of I-131
D. Any accelerator produced diagnostic radiopharmaceutical, except Xenon-127	D. Any IND or FDA approved radiopharmaceutical	D. As needed
E. Any accelerator produced diagnostic calibration standard	E. Any	E. As needed; not to exceed 30 millicuries per source
F. Gadolinium-153	* F. SS&DR No. CA-0406-S-0165-S (Isotope Products Laboratories Model 3409)	F. Not to exceed 120 millicuries

**AUTHORIZED USE**

- A. Medical use for uptake, dilution, and excretion studies permitted by 10 CFR 35.100
- B. Medical use for imaging and localization studies permitted by 10 CFR 35.200
- C. Medical use for which a written directive is required and per 10 CFR 35.300
- D. Medical use
- E. Calibration
- F. Calibration of Prism 2000 and Prism 3000 gamma cameras

**12. AUTHORIZED USERS**

NAME	AUTHORIZED USE
Michael Barrows, M.D.	Items 11 A, B, C, D, E, F
Per Amundson, M.D.	Items 11 A, B, C, D, E, F
Anand K. Singh, M.D.	Items 11 A, B, C (35.932 only), D, E, F

**CONDITIONS**

- 13. The authority for this permit is US Nuclear Regulatory Commission (NRC) Master Material License No. 42-23539-01AF issued to the USAF Radioisotope Committee and AFI 40-201, Managing Radioactive Materials in the USAF.
- 14. The permittee shall comply with the provisions of Title 10, Chapter 1, Code of Federal Regulations, Part 19, "Notices, Instructions and Reports to Workers: Inspection and Investigations," Part 20, "Standards for Protection Against Radiation," and Part 35, "Medical Use of Byproduct Material," except that all reports required by those parts must be made to the USAF Radioisotope Committee Secretariat. In addition, the permittee shall comply with all applicable Air Force Regulations, and all instructions and directives of the USAF Radioisotope Committee necessary to insure compliance.
- 15. Permitted material shall be used or stored only at the permittee's facilities: building #1530, rooms D3, D10, and D21 located at Scott AFB IL.
- 16. Individuals designated in writing as authorized users, as defined in 10 CFR 35.2 may be reviewed and approved by the permittee's current authorized users and permit RSO. Documentation must be submitted to the USAF Radioisotope Committee Secretariat within 30 days per 10 CFR 35.14. Individuals that meet the appropriate training and experience criteria established in 10 CFR 35. Subparts B, D, and E, must be approved by the USAF Radioisotope Committee Secretariat before the individual may be designated as an authorized user and radiation safety officer.

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17. In addition to the possession limits in Item #10, the permittee shall further restrict the possession of permitted material at a single location to quantities below the limits specified in 10 CFR 30.72 which require consideration of the need for an emergency plan for responding to a release of permitted material.
18. A. In addition to the possession limits in Item #10, the permittee shall further restrict the possession of sealed sources of permitted byproduct to quantities below 10E10 times the quantity specified in 10 CFR 30 Appendix B for establishing decommissioning financial assurance. If two or more radionuclides are possessed, the possession limit is determined as follows: for each radionuclide, determine the ratio of the quantity possessed to 10E10 times the applicable quantity specified in 10 CFR 30, Appendix B, for that radionuclide. The sum of the ratios for all radio nuclides possessed under the license shall not exceed unity.
- B. Notwithstanding the authorizations in Items #8, #9, and #10 of this permit, the permittee will further limit the unsealed radioactive materials possessed under this permit to those isotopes with half lives less than 120 days.
19. The permittee shall notify AFMOA/SG3PR within 30 days of the termination of a "Notice of Claimed Investigational Exemption for a New Drug (IND)" for any material authorized by this permit.
20. The permittee shall not acquire permitted material in a sealed source or device unless the source or device has been registered with the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or equivalent regulations of an Agreement State.
21. Specific calibration, transmission, and reference sources covered under 10 CFR 35.65 do not need to be listed in Item #8.
22. Sealed sources containing permitted material shall not be opened or removed from devices by the permittee.
- A. (1) Each sealed source acquired from another person and containing permitted material, other than Hydrogen-3, with a half-life greater than 30 days and in any form other than gas shall be tested for contamination and/or leakage before use. In the absence of a certificate from a transferor indicating that a test has been made within 6 months before the transfer, a sealed source received from another person shall not be put into use until tested.
- (2) Notwithstanding the periodic leak test required by this condition, any permitted sealed source is exempt from such leak tests when the source contains 100 microcuries or less of beta and/or gamma emitting material or 10 microcuries or less of alpha emitting material.
- (3) Except for alpha sources, the periodic leak test required by this condition does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakage prior to any use or transfer to another person unless they have been leak tested within 6 months before the date of use or transfer. No sealed source shall be stored for a period of more than 10 years without being tested for leakage and/or concentration.
- B. Each sealed source containing permitted material, other than Hydrogen-3, with a half-life greater than 30 days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed 6 months except that each source designed for the purpose of emitting alpha particles shall be tested at intervals not to exceed 3 months.
- C. Test sample(s) shall be collected by the permittee and forwarded to the Air Force Institute for Operational Health (AFIOH/SDR, 2350 Gillingham Dr, Brooks-City Base TX 78235-5103) or to any individual authorized by USNRC or Agreement State license or USAF or USN permit to evaluate leak tests for others.
- D. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device for which the sealed source is permanently or semipermanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the NRC, the USAF Radioisotope Committee Secretariat, or the Medical Directorate of the Air Force Inspection Agency.
- E. If the test required by Subsection A. or B. of this condition reveals the presence of 0.005 microcurie or more of removable contamination, the permittee shall immediately withdraw the sealed source from use and shall decontaminate it and either repair or

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dispose of it in accordance with NRC regulations and Air Force directives. A report shall be filed within 5 days of the test with the USAF Radioisotope Committee Secretariat (AFMOA/SG3PR, 110 Luke Ave Room 405, Bolling AFB DC 20032-7050) describing the equipment involved, the test results, and the corrective action taken.

24. The permittee shall conduct a physical inventory every 6 months to account for all sealed sources received and possessed under this permit. The records of the inventories shall be maintained for 3 years from the date of the inventory by the NRC, the USAF Radioisotope Committee Secretariat, or the Medical Directorate of the Air Force Inspection Agency, and shall include: a) inventory date, b) model and serial number of device or source, c) radionuclide and activity, d) device or source location, and e) signature of the permit RSO certifying the inventory accuracy.

25. The permittee may hold any radioactive material authorized by this permit with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal without regard to its radioactivity, provided:

A. Before disposal, the waste shall be surveyed at the container surface with the appropriate survey instrument set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be obliterated or removed.

B. A record of each such disposal permitted under this permit condition shall be retained for three years. The record must include the date of disposal, the date on which the byproduct material was placed in storage, the radionuclides disposed, the survey instrument used, the background dose rate, the dose rate measured at the surface of each waste container, and the name of the individual who performed the disposal.

The permittee may transport permitted material in accordance with the provisions of 10 CFR 71, "Packaging of Radioactive Material for Transport" and 49 CFR 170 through 189, "Transportation" subject to any host nation restrictions under Status of Forces Agreements.

27. Transfer of permitted material may only be to a USAF or USN Radioactive Material Permittee or to an NRC or Agreement State License holding a valid authorization to receive the sources. The permitted materials must be disposed of in accordance with AFI 40-201.

28. The permittee shall ensure that a qualified Air Force or civilian medical physicist conducts a medical physics assistant visit at intervals not to exceed 24 months. A copy of the assistance visit report will be forwarded to the USAF Radioisotope Committee Secretariat within 30 days of report publication.

29. Protocols for uses of radioactive materials will be approved in writing by the permit RSO and authorized users, and shall be submitted to the USAF Radioisotope Committee within 45 days (AFMOA/SG3PR, 110 Luke Ave Room 405, Bolling AFB DC 20032-7050).

30. Except as specifically provided otherwise by this permit, the possession and use of radioactive material described in Item #8 of the permit shall be in accordance with statements, representation, and procedures contained in the following documents:

DOCUMENT REFERENCE	SUBJECT	DATE
375 MDSS/SG (Memo w/ Atch)	Permit Renewal Application	25-Jul-2003
375 MDSS/SGSSN (Memo w/o Atch)	Remove Authorized User from Permit	19-Apr-2004
375 MDSS/SGSSN (Memo w/ Atch)	Purchase of Cobalt 57 flood sources	07-May-2004
375 MDSS/SGSSN (Memo w/ Atch)	Amendment Request-Remove NES 8450 & 8490, Update Authorized Users	21-Sep-2004
375 MDSS/SGSSN (Memo w/ Atch)	Add Dr. Maxey as AU	19-Oct-2004
375 MDSS/SG (Memo w/o Atch)	Amendment request-add AU	02-Aug-2005
AFMOA/SG3PR (Memo w/ Atch)	Renewed permit: IL-04762-02/00AFP	18-Apr-2006
MDSS/SG (Memo w/o Atch)	Amendment request - Radiation Safety Committee (RSC) requirement modification	15-Jul-2006
MDSS/SG (Memo w/o Atch)	Amendment request - Radiation Safety Committee (RSC) requirement removal	29-Aug-2006
375 MDSS/SG (Memo w/o Atch)	Amendment request - RSO Change	29-Sep-2006

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375 MDOS/SGSSN (Memo w/o Atch)  
375 MDOS/SGSSN (Memo w/o Atch)

Amendment request - Remove AU  
Amendment request - RSO Change

26-Jul-2007  
30-Jul-2007

The Nuclear Regulatory Commission's regulations and United States Air Force directives shall govern the permittee's statements in applications or letters, unless the statements are more restrictive than the regulations and directives.

FOR THE USAF RADIOISOTOPE COMMITTEE:

Date 30 July 2007

By Robert A. Rodgers  
ROBERT A. RODGERS, MAJ, USAF, BSC  
Deputy Chief, Radiation Protection Division  
USAF Radioisotope Committee Secretariat  
Air Force Medical Operations Agency  
Office of the Surgeon General



SOUTHERN INDIANA  
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