



July 7, 2016

UNITED STATES NUCLEAR REGULATORY COMMISSION  
Region III, Medical Licensing  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4352

RE: Amendment to License No. 21 20153-01

Please add the following individuals as authorized users to our license.

Kelli Silverstrim, M.S.

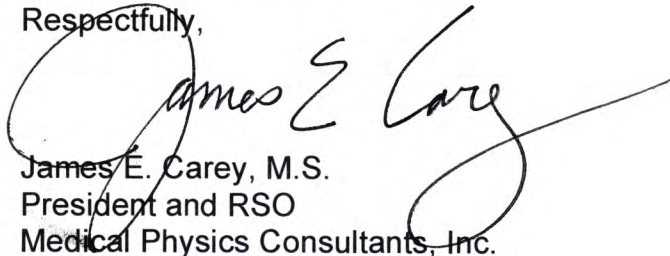
Ms Silverstrim has been listed on USAF License Nos. CO-01236-03/06AFP and TX-02682-03/02AFP. I have attached these licenses for your review.

Daniel J. Miron, C.H.P.

Mr. Miron has been listed on a State of Wisconsin License 079-2051-01, VA permit No. 48-02130-02 and VHA permit no. 12-01087-07.

Thank you for your assistance. Please contact Tracy King at 734-662-3197 or [tking@mpcphysics.com](mailto:tking@mpcphysics.com) if you have questions regarding this request.

Respectfully,

A handwritten signature in black ink, appearing to read "James E. Carey", is written over a circular stamp. The signature is fluid and cursive.

James E. Carey, M.S.  
President and RSO  
Medical Physics Consultants, Inc.

RECEIVED JUL 19 2016

214 E. Huron Street  
Ann Arbor, MI 48104  
(734) 662-9224 Fax  
(734) 662-3197



50 E. 91st Street, Suite 211  
Indianapolis, IN 46240  
(317) 581-1931 Fax  
(317) 581-1911



1731 E. Imperial Park Square  
Salt Lake City, UT 84106  
(734) 662-9224 Fax  
(801) 272-2952



N7375 Crystal Ridge Drive  
Beaver Dam, WI 53916  
(734) 662-9224 Fax  
(920) 885-9870



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS UNITED STATES AIR FORCE  
WASHINGTON DC

25 March 2008

MEMORANDUM FOR 59 MDW/CC  
59 RSQ/SGOXP  
IN TURN

FROM: AFMOA/SG3PR  
110 Luke Avenue, Room 405  
Bolling AFB DC 20032-7050

SUBJECT: Permit Amendment Request (14 February 2008), USAF Radioactive Material Permit No. TX-02682-03/01AFP, Docket No. 030-03259

**To the Permit RSO: Please make a copy for your files.**

We have received a permit amendment request dated 14 February 2008. Attached is amended Permit No. TX-02682-03/02AFP reflecting the requested radiation safety officer (RSO) changes. Capt David Winter is RIC approved to be the Permit RSO. Capt Craig Sutton, Capt Kelli Silverstrim, and Dr. Cindy L. Elmore are RIC approved to be the Alternate Permit RSOs.

Carefully review this permit to ensure that it lists the radioactive materials, authorized uses, and that you understand all permit conditions. Should you have any questions or note any apparent differences in source authorization, radionuclide, form, quantity, or use, call us immediately at the contact information provided below. The inspection category for this permit is 02110; the inspection frequency for this permit is every 1 year; this permit expires 31 Aug 2011.

If you have any questions regarding permit No. TX-02682-03/02AFP, then please contact me at DSN 297-4309; robert.rodgers-02@pentagon.af.mil or Mr. David Cessor-Culver at DSN 297-4300; david.cessor-culver.ctr@pentagon.af.mil. Additional contact information: telefax is DSN 754-8089; web page address is [https://kx.afms.mil/rad\\_prot](https://kx.afms.mil/rad_prot); cell phone for receiving after-duty-hours incident/accident reports is 703-340-0819.

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

Attachment:  
USAF Radioactive Material Permit No. TX-02682-03/02AFP

cc:  
HQ AETC/SGPB  
HQ AFIA/SGI (Lt Col Adams)  
USNRC, Region IV (Ms Browder)



# RADIOACTIVE MATERIAL PERMIT

USAF RADIOISOTOPE COMMITTEE

Page 1 of 5

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 purpose 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.

<b>1. ORGANIZATION</b>  59 MDW/CC (ATTN: 59 RSQ/SGOXP) PEPPERELL ST (MRI SITE II RM BU-31) LACKLAND AFB TX 78236-5300		<b>2. PERMIT NO.</b> TX-02682-03/02AFP	<b>3. AMENDMENT NO.</b> 2
		<b>4. EXPIRATION DATE</b> 31 Aug 2011	
		<b>5. DOCKET NO.</b> 030-03259	
<b>6. PERMIT RSO:</b> DAVID S. WINTER		<b>7. ALTERNATE PERMIT RSO:</b> CRAIG D. SUTTON	
<b>8. RADIOACTIVE MATERIAL</b> (Element and Mass Numbers)	<b>9. CHEMICAL/PHYSICAL FORM (NSN or Model Number)</b> (* Denotes sealed sources)	<b>10. MAXIMUM QUANTITY AUTHORIZED</b>	
A. Any byproduct or accelerator produced material with atomic numbers 3 thru 83	A. Any	A. As needed, not to exceed 20 curies per source, 250 curies total	
B. Hydrogen-3	B. Any	B. 100 millicuries	
C. Cesium-137	C. Any	C. 500 millicuries	
D. Any accelerator produced material with atomic numbers 3 thru 83, except Xenon-127	D. Any IND or FDA approved radiopharmaceutical	D. As needed, not to exceed 2 curies per source, 100 curies total	
E. Any accelerator produced material with atomic numbers 3 thru 83, except Xenon-127	E. Any	E. 100 millicuries per source, not to exceed 1 curie total	
F. Any accelerator produced diagnostic calibration standard	F. Any	F. 15 millicuries per source, not to exceed 600 millicuries total	
G. Cesium-137	* G. SS&DR No. NR-219-D-101-S; Model IBL-437C	G. 10,200 curies; 2 source sets of up to 3 sources, no individual source to exceed 1,900 curies	
H. Cobalt-57	* H. SS&DR No. TX-1153-S-101-S (International Isotopes Idaho, Inc., BM01-10)	H. 25 millicuries per source, not to exceed 1 curie total	
I. Cobalt-57	* I. Model 10-100-23-2	I. 95 microcuries	
J. Cobalt-57	* J. SS&DR No. TX-1153-S-802-S (International Isotopes Idaho, Inc., Model BM06-57)	J. 15 millicuries, not to exceed 1 curie total	
K. Iodine-125	* K. SS&DR No. IL-1074-S-101-S (Bard Brachytherapy Inc., Model STM 1251)	K. 15 millicuries per source, not to exceed 1 curie total	
L. Iodine-125	* L. SS&DR No. NR-460-S-926-S (3M Health Physics Services, Model 6711)	L. 100 millicuries per source, not to exceed 1 curie total	
M. Iridium-192	* M. SS&DR No. NR-0187-S-101-S (Best Medical International, Inc., Model 81-01 Series)	M. 100 millicuries per source, not to exceed 1 curie total	
N. Palladium-103	* O. SS&DR No. GA-0645-S-101-S (Theragenics Corp., TheraSeed Model 200)	O. 100 millicuries per source, not to exceed 1 curie total	
O. Sodium-22	* N. SS&DR No. CA-0406-S-106-S (Isotope Products Lab, Model 1104-74-9)	N. 95 microcuries	
<b>11. AUTHORIZED USE</b> A. Medical use; research and development B. Medical use; research and development C. Medical use; research and development D. Medical use; research and development E. Research and development; animal studies F. Calibration G. Used in blood irradiator CIS-US Inc. Model 437C H. Calibration I. Calibration			



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

Page 2 of 5

PERMIT NO.

TX-02682-03/02AFP

AMENDMENT NO.

2

DOCKET NO.

030-03259

J. Calibration

K. Any manual brachytherapy procedure permitted by 10 CFR 35.400

L. Any manual brachytherapy procedure permitted by 10 CFR 35.400

M. Any manual brachytherapy procedure permitted by 10 CFR 35.400

N. Any manual brachytherapy procedure permitted by 10 CFR 35.400

O. Calibration

**CONDITIONS**

12. 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.
13. 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.
14. Permitted material shall be used or stored only at the permittee's facilities: building 4430 (CID), rooms: 191, 197; building 4550 (WHMC), rooms: BA54, BU31, 1D11, 1D16, 1D28, 1D31, 1D37, 1D39, 1D47, 1D48, 1D65, 2D19, 2F10, 7D45; buildings 4892 (Storage shed), 7594, and 7595 located at Lackland AFB TX.
15. Individuals designated in writing as authorized users, authorized nuclear pharmacists, or authorized medical physicists, as defined in 10 CFR 35.2, shall meet the training and experience criteria established in 10 CFR Part 35, Subparts B, D, E, F, and G, and shall be designated by the permittee's Radiation Safety Committee.
16. In addition to item #7, the following individuals are RIC approved as Alternate Radiation Safety Officers for this permit:  
Cindy L. Elmore, PhD; Kelli Silverstrim.
17. A. In addition to the possession limits in item #10, the permittee shall further restrict the possession of sealed sources of permitted byproduct material to quantities below 10E5 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 10E5 times the applicable quantity specified in 10 CFR 30, Appendix B, for that radionuclide. The sum of the ratios for all radionuclides 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.
18. 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 an emergency response plan for responding to the release of permitted material in accordance with the criteria listed in 10 CFR 30.32(i)(3), Type A.
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 in this permit.
20. Experimental animals administered permitted materials or other products shall not be used for human consumption.
21. 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 32.210 or equivalent regulations of an Agreement State.
22. Specific calibration, transmission, and reference sources covered under 10 CFR 35.65 do not need to be listed in item #8.
23. Sealed sources containing permitted material shall not be opened or removed from devices by the permittee.



**RADIOACTIVE MATERIAL PERMIT**USAF RADIOISOTOPE COMMITTEE  
SUPPLEMENTARY

Page 3 of 5

PERMIT NO.  
TX-02682-03/02AFP  
AMENDMENT NO.  
2  
DOCKET NO.  
030-03259

24. Notwithstanding the requirements of 10 CFR 35.400(d) and (g), the permittee may use Iridium-192 as seeds encased on nylon ribbon and Palladium-103 as a sealed source in seeds for topical, interstitial, and intracavitary treatment of cancer. The permittee may deviate from the manufacturer's radiation safety and handling instructions to the extent that the instructions are not applicable to the type of use proposed by the permittee.
25. 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 leak 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 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.
26. The permittee shall conduct a physical inventory every 3 months to account for all sealed sources received and possessed pursuant to 10 CFR 35.57, 10 CFR 35.400, and 10 CFR 35.500, and every 6 months for all other sealed sources and devices received and possessed under this permit. The records of the inventories shall be maintained for 3 years from the date of the inventory and made available for inspection 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.
27. 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 in ordinary trash without regard to its radioactivity, CFR 35.92(a), 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.



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

**Page 4 of 5**

**PERMIT NO.**  
TX-02682-03/02AFP  
**AMENDMENT NO.**  
2  
**DOCKET NO.**  
030-03259

B. A record of each such disposal permitted under this permit pondition 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.

28. 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 thru 189, "Transportation" subject to any host nation restrictions under Status of Forces Agreements.

A. Permittee will ensure that an NRC approved quality assurance program pursuant to 10 CFR 71 is applied for and approved by the USAF Radioisotope Committee Secretariat prior to transport of material greater than Type A quantities off base to an authorized recipient.

B. Notwithstanding the requirement for an NRC approved quality assurance program for the material specified in Part A. of this condition, the permittee is relieved of the requirement if transport of permitted material will be handled by a manufacturer or contractor authorized to take possession of the material at the permittee's facilities and who possess an NRC approved transportation quality assurance program.

29. Transfer of permitted material may only be to a USAF or USN Radioactive Material 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.
30. A copy of the minutes of each Radiation Safety Committee meeting shall be forwarded to the USAF Radioisotope Committee Secretariat within 45 days of the meeting. Protocols for uses of radioactive materials approved by the Radiation Safety Committee should be submitted with the Radiation Safety Committee meeting minutes (AFMOA/SG3PR, 110 Luke Ave Room 405, Bolling AFB DC 20032-7050).
31. 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:

<b>DOCUMENT</b>	<b>SUBJECT</b>	<b>DATE</b>
759 MDTs/MTRP (Application w/ Atch)	Permit Renewal Application	28-Oct-2004
AFMSA/SGPR (Memo)	Deemed Timely Filed status for permit No. TX-02682-02/10AFP	19-Nov-2004
759 MDTs/MTRP (Memo)	Permit Amendment Request - RSO changes	01-Jun-2005
759 MDTs/MTRP (Memo w/ Atch)	Permit Amendment Request - RSO changes - TX-02682-02/11AFP	08-Aug-2005
AFMOA/SGPR (email w/ Atch)	Request for Information, Permit Renewal Application	06-Mar-2006
759 MDTs/MTRP (email w/Atch)	Supplemental information - Permit Renewal Application	04-May-2006
759 MDTs/MTRP (email w/Atch)	Supplemental information - Permit Renewal Application	14-Jul-2006
759 MDTs/MTRP (email w/Atch)	Supplemental information - Permit Renewal Application	17-Jul-2006
AFMOA/SGPR (email w/ Atch)	Request for Information, Permit Renewal Application	9-Aug-2006
759 MDTs/MTRP (email w/Atch)	Supplemental information - Permit Renewal Application	22-Aug-2006
AFMOA/SGPR (Memo w/Atch)	Permit No. TX-02682-03/00AFP	24-Aug-2006
59 RSQ/SGOXP (Memo w/Atch)	Permit Amendment: RSO changes; RSO Office Symbol Change	29-Aug-2007
59 RSQ/SGOXP (Memo)	Permit Amendment: RSO changes	14-Feb-2008

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.



**RADIOACTIVE MATERIAL PERMIT**  
USAF RADIOISOTOPE COMMITTEE  
SUPPLEMENTARY

Page 5 of 5

PERMIT NO.

TX-02682-03/02AFP

AMENDMENT NO.

2

DOCKET NO.

030-03259

Date

25 March 2008

FOR THE USAF RADIOISOTOPE COMMITTEE

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

**RADIOACTIVE MATERIAL PERMIT**  
USAF RADIOISOTOPE COMMITTEE

**Page 1 of 4**

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 purpose 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.

<b>1. ORGANIZATION</b>  10 MDG/CC 4102 PINION DR STE 100 USAF ACADEMY CO 80840-4000	<b>2. PERMIT NO.</b> CO-01236-03/06AFP	<b>3. AMENDMENT NO.</b> 6																				
	<b>4. EXPIRATION DATE</b> 30-Sep-2014																					
	<b>5. DOCKET NO.</b> 030-01236																					
<b>6. PERMIT RSO:</b> Mafi, Tevita	<b>7. ALTERNATE PERMIT RSO:</b> Silverstrim, Kelli																					
<b>8. RADIOACTIVE MATERIAL</b> (Element and Mass Numbers)	<b>9. CHEMICAL/PHYSICAL FORM (NSN or Model Number)</b> (* denotes sealed sources)	<b>10. MAXIMUM QUANTITY AUTHORIZED</b>																				
A. Any byproduct material permitted by 10 CFR Part 35.100	A. Any	A. As needed																				
B. Any byproduct material permitted by 10 CFR Part 35.200, except Xenon-127	B. Any	B. As needed, except Xenon-133 gas which is not to exceed 160 mCi																				
C. Sodium Iodide I-131 permitted by 10 CFR 35.300	C. Capsule	C. As needed																				
<b>11. AUTHORIZED USE</b> A. Any uptake, dilution, and excretion study permitted by 10 CFR 35.100 B. Any imaging and localization study permitted by 10 CFR 35.200 C. Any sodium iodide I-131 procedure permitted by 10 CFR 35.300 for which the patient can be released under the provisions of 10 CFR 35.75.																						
<table border="0" style="width:100%;"> <tr> <td style="width:40%;"><b>12. AUTHORIZED USERS</b></td> <td style="width:60%;"><b>AUTHORIZED USE</b></td> </tr> <tr> <td>NAME</td> <td></td> </tr> <tr> <td>Donald M. Meduna, M.D.</td> <td>35.100; 35.200; 35.300</td> </tr> <tr> <td>Phillip Middleton, M.D.</td> <td>35.100; 35.200</td> </tr> <tr> <td>Anton Nesse, M.D.</td> <td>35.100; 35.200 (except Xenon-133); 35.300</td> </tr> <tr> <td>William P. Abraham, M.D.</td> <td>35.100; 35.200; 35.300</td> </tr> <tr> <td>Robert J. Schimmel, M.D.</td> <td>35.100; 35.200; 35.300</td> </tr> <tr> <td>Arash K. Momeni, M. D.</td> <td>35.100; 35.200; 35.300</td> </tr> <tr> <td>Tevita M. Mafi</td> <td>Non-medical uses/calibration only of 8 A, B, C; Nuclear Medicine technologist under the direction/supervision of Authorized Users for 8 A, B, C.</td> </tr> <tr> <td>Kelli Silverstrim</td> <td>Non-medical uses/calibration only of 8 A, B, C</td> </tr> </table>			<b>12. AUTHORIZED USERS</b>	<b>AUTHORIZED USE</b>	NAME		Donald M. Meduna, M.D.	35.100; 35.200; 35.300	Phillip Middleton, M.D.	35.100; 35.200	Anton Nesse, M.D.	35.100; 35.200 (except Xenon-133); 35.300	William P. Abraham, M.D.	35.100; 35.200; 35.300	Robert J. Schimmel, M.D.	35.100; 35.200; 35.300	Arash K. Momeni, M. D.	35.100; 35.200; 35.300	Tevita M. Mafi	Non-medical uses/calibration only of 8 A, B, C; Nuclear Medicine technologist under the direction/supervision of Authorized Users for 8 A, B, C.	Kelli Silverstrim	Non-medical uses/calibration only of 8 A, B, C
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<b>CONDITIONS</b>																						
<b>13.</b> The authority for this permit is U.S. 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.																						
<b>14.</b> 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 instructions and directives of the USAF Radioisotope Committee necessary to insure compliance.																						
<b>15.</b> A. Permitted material may be used or stored only at the permittee's facilities located at the USAF Academy, CO: (building 4102) rooms 1235, 1238, 1275, 1284, 1286, 1287, 1289, 1327, 1432, 1434, 1436, 1441, and 1445. B. Permitted materials may be used at locations within building 4102 that are not specified above, for a limited time duration and without permit amendment, provided the permit radiation safety officer notifies the Radioisotope Committee Secretariat																						



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

**Page 2 of 4**

**PERMIT NO.**  
**CO-01236-03/05AFP**

**AMENDMENT NO.**  
**5**

**DOCKET NO.**  
**030-01236**

prior to the procedure/use and states the location of use, procedure to be performed, estimated length of time for the procedure, and the radionuclide to be used. A report must be provided by the permit radiation safety officer to the Radioisotope Committee Secretariat (USAF.RIC@pentagon.af.mil) within 5 duty days post room clearance/release indicating no residual contamination. In addition, the report shall include the exposure survey data showing compliance with 10 CFR 20.1301 and 10 CFR 20.1302 for the duration of the procedure.

16. A. Permitted material is only authorized for use by, or under supervision of individuals permitted to work as authorized users, authorized nuclear pharmacists, and/or authorized medical physicists in accordance with 10 CFR 35.13 and 35.14.

B. Individuals seeking to work via this permit as authorized users, authorized nuclear pharmacists, authorized medical physicists, or radiation safety officers as defined in 10 CFR 35.2, shall meet the training, experience, and recentness of training criteria established in 10 CFR Part 35, and shall submit the appropriate Training and Experience form(s), NRC Form 313A, to the USAF Radioisotope Committee Secretariat (RIC) and receive RIC approval prior to performing those duties.

17. The permittee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the permit. Records of inventories shall be maintained for 3 years from the date of the inventory and shall include the radionuclides, quantities, manufacturer's name and model numbers, and the date of the inventory.

18. Sealed sources containing permitted material shall not be opened or sources removed from the devices by the permittee.

19. For sealed sources not associated with 10 CFR Part 35 use, the following conditions apply:

A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the NRC under 10 CFR 32.210 or under equivalent regulations of an Agreement State.

B. Notwithstanding Paragraph A of this Condition, sealed sources designed primarily to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.

C. In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the NRC under 10 CFR 32.210 or under equivalent regulations of an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.

D. Sealed sources need not be tested if they contain only hydrogen-3; or they contain only a radioactive gas; or the half-life of the isotope is 30 days or less; or they contain not more than 100 microcuries of beta- and/or gamma-emitting material or not more than 10 microcuries of alpha-emitting material.

E. Sealed sources need not be tested if they are in storage and are not being used; however, when they are removed from storage for use or transferred to another person and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source shall be stored for a period of more than **10 years** without being tested for leakage and/or contamination.

F. The leak test shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, a report shall be filed within 1 duty day of the test with the USAF Radioisotope Committee Secretariat and the source shall be removed immediately from service and decontaminated, repaired, or disposed. The report shall include a description of the equipment involved, the test results, and the corrective action taken.

G. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the permittee and forwarded to USAFSAM or by other persons specifically licensed by the NRC, Agreement State, or Master Material License to perform such services.



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

**Page 3 of 4**

**PERMIT NO.**  
CO-01236-03/05AFP

**AMENDMENT NO.**  
5

**DOCKET NO.**  
030-01236

H. Records of leak test results shall be kept in units of microcuries and shall be maintained for 3 years.

20. For radioactive material held for decay in storage other than that held in accordance with 10 CFR 35.92, the permittee is authorized to hold radioactive material with a physical half-life or less than or equal to 120 days for decay-in-storage before disposal in ordinary trash, provided the permittee:

A. Monitors byproduct material at the surface before disposal and determines that its radioactivity cannot be distinguished from the background radiation level with an appropriate radiation detection survey meter set on its most sensitive scale and with no interposed shielding; and

B. Removes or obliterates all radiation labels, except for radiation labels on materials that are within containers and that will be managed as biomedical waste after they have been released from the permittee; and

C. Maintains records of the disposal of permitted materials for 3 years. The record must include the date of the disposal, the survey instrument used, the background radiation level, the radiation level measured at the surface of each waste container, and the name of the individual who performed the disposal.

21. A. The permittee is authorized to transport permitted material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transport of Radioactive Material."

B. Transfer of permitted material may only be to an authorized recipient as described in 10 CFR 30.41 and in accordance with AFI 40-201.

22. Except as specifically provided otherwise in this permit, the permittee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. This permit condition applies only to those procedures that are required to be submitted in accordance with NRC regulations and Air Force directives. Additionally, this permit condition does not limit the permittee's ability to make changes to the radiation protection program as provided for in 10 CFR 35.26. The NRC's regulations or Air Force directives shall govern unless the statements, representations, and procedures in the permittee's application and correspondence are more restrictive than the regulations or directives.

**DOCUMENT REFERENCE**

**SUBJECT**

**DATE**

10 MDG/SGOX (Application w/ Atch)	Permit Renewal Application	15-May-2009
AFMSA/SG3PB (Memo w/ Atch)	Deficiency Letter - Permit Renewal Application	24-Jul-2009
10 MDOS/SGOX (Memo w/ Atch)	Response to Deficiency Letter - Permit Renewal Application	15-Sep-2009
10 MDOS/SGOX (Memo w/o Atch)	Permit Amendment - Add RSO (Silverstrim)	17-Nov-2009
10 MDOS/SGOX (Memo w/ Atch)	Permit Amendment - Remove AU use area (Rm 1251)	10-Feb-2010
10 MDOS/SGOX (Memo w/ Atch)	Permit Amendment - Remove and Add AU	13-May-2010
10 MSGS/SGCR (Memo w/ Atch)	Permit Amendment - Remove and Add AU	13-Jul-2011
10 MDOS/SGOX (Memo w/ Atch)	Permit Amendment - Remove AU	22-Aug-2012
10 MDOS/SGOX (Memo w/ Atch)	Permit Amendment - Remove ARSO (Walker)	26-Oct-2012

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.



**RADIOACTIVE MATERIAL PERMIT**  
USAF RADIOISOTOPE COMMITTEE  
SUPPLEMENTARY

Page 4 of 4

PERMIT NO.  
CO-01236-03/05AFP

AMENDMENT NO.  
5

DOCKET NO.  
030-01236

Date

4 Dec 2012

FOR THE USAF RADIOISOTOPE COMMITTEE



By

Edward R. Kelly, Major, USAF, BSC  
Chief, Radiation Program Compliance  
Air Force Medical Support Agency  
Office of the Surgeon General



STATE OF WISCONSIN  
DEPARTMENT OF HEALTH SERVICES

**RADIOACTIVE MATERIALS LICENSE**

Under s.254.365, Wisconsin Statutes and Chapter DHS 157, Wisconsin Administrative Code, and in reliance on statements and representations made by the licensee, a license is issued authorizing the licensee to receive, acquire, possess and transfer radioactive material designated below; to use the material for the purpose(s) and at the place(s) designated below; and to deliver or transfer the material to persons authorized to receive it in accordance with Chapter DHS 157, Wisconsin Administrative Code. This license is subject to all applicable rules and orders of the Wisconsin Department of Health Services (DHS) including Chapter DHS 157, Wisconsin Administrative Code now or hereafter in effect, and to any conditions specified below.

Licensee Name and Address  1. Cardinal Health 414, LLC Cardinal Health Medical and Health Physics Services 2. 11214 West Lapham Street West Allis, WI 53214		In accordance with letter dated August 06, 2015, 3. License Number: 079-2051-01 <b>is amended in its entirety to read as follows:</b>	
		4. Amendment No.: 01	
		5. Expiration Date: March 31, 2019	
6. Radioactive material:	7. Chemical and/or physical form:	8. Maximum amount of radioactive materials that the licensee may possess at any one time under this license:	9. Authorized Use:
A. Cesium-137	A. Sealed Sources (QSA Global, Inc., Model 77302)	A. 400 millicuries, no single source to exceed 200 millicuries	A. One source to be used in the AEA technology Model 773 calibrator for calibration of survey instruments, including commercial calibration service for any person as defined by DHS 157.03. One source in its shipping container for source replacement.
B. Barium-133	B. Sealed Source	B. 0.500 millicuries per source	B. Dose calibrator calibration.
C. Technetium-99m	C. Liquid	C. 500 millicuries	C. Dose calibrator calibration and shielding integrity testing.
D. Cobalt-57	D. Sealed Source	D. 10 millicuries per source	D. Dose calibrator calibration.



**RADIOACTIVE MATERIALS  
LICENSE  
SUPPLEMENTARY SHEET**

License Number: 079-2051-01

Amendment No: 01

<b>E . Cesium-137</b>	<b>E . Sealed Source</b>	<b>E . 0.500 millicuries per source</b>	<b>E . Dose calibrator calibration</b>
<b>F . Any radioactive material with Atomic Nos. 3-83, inclusive</b>	<b>F . Analytical Samples</b>	<b>F . As Needed</b>	<b>F . Possession incident to the performance of wipe testing of customer sealed sources.</b>
<b>G . Any radioactive material with Atomic Nos. 3-83, inclusive, half-lives less than or equal to 120 days</b>	<b>G . Liquid</b>	<b>G . 15 millicuries per source</b>	<b>G . Dose calibrator calibration.</b>

**CONDITIONS**

10. A. Licensed material in subitem 6.A. and 6.C. may be used at the licensee's facility at 11214 W. Lapham Street, West Allis and at temporary jobsites of the licensee anywhere in Wisconsin where DHS maintains jurisdiction for regulating the use of licensed material.
- B. Licensed material may be used and stored at the licensee's facility located at 11214 W. Lapham Street, West Allis.
11. The Radiation Safety Officer for this license is Daniel J. Miron.
12. **Licensed material shall be used by, or under the supervision of: Sebastiano Anzalone, Duane Kanne, Daniel J. Miron, Michael Petrocchi, or Michael D. Plathe.**
13. The licensee is authorized to transport licensed material in accordance with the provisions of Chapter DHS 157, 'Radiation Protection', Subchapter XIII, 'Transportation'.
14. The licensee shall conduct a physical inventory every 6 months, or at other intervals approved by DHS, to account for all sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 5 years from the date of each inventory and shall include the radionuclides, quantities, manufacturer's name and model numbers, location of sealed sources and/or devices, and the date of the inventory.
15. Except for maintaining labeling as required by Chapter DHS 157 'Radiation Protection', Subchapter III or Subchapter XIII, the licensee shall obtain authorization from DHS before making any changes in the sealed source, device, or source-device combination that would alter the description or specifications as indicated in the respective Certificate(s) of Registration issued either by the NRC pursuant to 10 CFR 32.210 or by an Agreement State.
16. Notwithstanding the requirements of DHS 157.24, no sealed sources shall be stored for a period of more than 3 years without being tested for leakage or contamination.



**RADIOACTIVE MATERIALS  
LICENSE  
SUPPLEMENTARY SHEET**

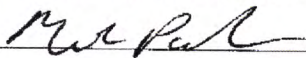
License Number: 079-2051-01

Amendment No: 01

17. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in DHS 157.15 for establishing decommissioning financial assurance.
18. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. Chapter DHS 157, 'Radiation Protection' shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the rule.
- A. Application with attachments, excluding item 6, 7, 8.2, and 11.13, dated September 12, 2013 and signed by Dan Miron.
  - B. Application certification dated December 5, 2013 and signed by Paul Gotti.
  - C. Letter with attachments, excluding item 11.16, dated December 12, 2013 and signed by Dan Miron.
  - D. Letter with attachments dated February 28, 2014 and signed by Dan Miron.

FOR THE WISCONSIN DEPARTMENT OF HEALTH SERVICES

SIGNATURE



Materials Program Supervisor

DATE

8/26/2015

# Department of Veterans Affairs

Page 1 of 4 pages	<b>MATERIALS PERMIT</b>	Amendment No. 88
In accordance with VHA Directive 1105.01 and 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 purpose and at the places listed below.		
<b>Permittee</b>  1. Clement J. Zablocki VA Medical Center  2. 5000 West National Avenue Milwaukee, Wisconsin 53295-1000	3. In accordance with your request of April 30, 2014, Permit Number 48-02130-02 is renewed and amended to read as follows.  4. Expiration date: June 30, 2024  5. Docket or Reference Number: 030-03427	

- |  |   |  |
|--|---|--|
| 6. Byproduct, source, and/or special nuclear material<br><br>A. Any byproduct material with Atomic Numbers 1-83<br><br>B. Any byproduct material with Atomic Numbers 3-83<br><br>C. Technetium 99m<br><br>D. Molybdenum 99<br><br>E. Iodine 131<br><br>F. Radium 223 | 7. Chemical and/or physical form<br><br>A. Any<br><br>B. Sealed sources<br><br>C. Any<br><br>D. Any<br><br>E. Any<br><br>F. Radium dichloride | 8. Maximum amount permittee may possess at any one time under this permit<br><br>A. 200 millicuries per radionuclide and 15 curies (Ci) total<br><br>B. 1.5 Ci per radionuclide and 15 Ci total<br><br>C. 10 Ci<br><br>D. 10 Ci<br><br>E. 1 Ci<br><br>F. 5 mCi |
|--|---|--|

9. Authorized Use.

- A. through F. Medical diagnosis, therapy, and research in humans. Research and development as defined in 10 CFR 30.4, including animal studies, instrument calibration, student instruction, and *in vitro* studies.

## CONDITIONS

10. Permitted material may be used or stored only at the permittee's facilities located at 5000 West National Avenue, Milwaukee, Wisconsin.
11. A. The Radiation Safety Officer for this permit is Dan J. Miron.
- B. The use of permitted material in or on humans shall be by an authorized user as defined in 10 CFR 35.2.
- C. Individuals designated to work as authorized users, authorized nuclear pharmacists, or authorized medical physicists as defined in 10 CFR 35 shall meet the training, experience, and recentness of training criteria established in 10 CFR 35, and shall be designated, in writing, by the permittee's Radiation Safety Committee.
- D. Permitted material for other than human use shall be used by, or under the supervision of, individuals designated by the Radiation Safety Committee.



**MATERIALS PERMIT  
SUPPLEMENTARY SHEET**

Page 2 of 4

Permit Number: 48-02130-02

Docket or Reference Number: 030-03427

Amendment No. 88

12. Permitted material shall not be used in field applications where activity is released except as provided otherwise by specific condition of this permit.
13. Experimental animals, or the products from experimental animals, that have been administered permitted material shall not be used for human consumption.
14. This permit does not authorize commercial distribution of permitted material.
15. For sealed sources not associated with 10 CFR 35 use, the following conditions apply.
  - A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State.
  - B. Notwithstanding Paragraph A of this permit condition, sealed sources designed to primarily emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.
  - C. Each sealed source fabricated by the permittee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.
  - D. In the absence of a certificate from a transferor indicating a leak test has been made within the intervals specified in the certificate of registration issued by the Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.
  - E. Sealed sources need not be tested if they contain only hydrogen 3, or they contain only a radioactive gas, or the half-life of the isotope is 30 days or less, or they contain not more than 100 microcuries of beta-and/or gamma-emitting material, or not more than 10 microcuries of alpha-emitting material.
  - F. Sealed sources need not be tested if they are in storage and are not being used; however, when they are removed from storage for use or transfer to another person and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
  - G. The leak test shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, a report shall be filed with the National Health Physics Program in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Nuclear Regulatory Commission regulations.
  - H. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the permittee or by other persons specifically licensed by the Nuclear Regulatory Commission or an Agreement State to perform such services.
16. Sealed sources or detector cells containing permitted material shall not be opened or sources removed from source holders by the permittee.
17. A. The permittee shall conduct physical inventories to account for all sealed sources and/or devices received and possessed under this permit.
  - (1) Quarterly, for sealed sources with either current activity greater than 1 millicurie or current activity greater than 1000 times the quantities in 10 CFR 20, Appendix C.
  - (2) Semiannually, for all other sealed sources, except sources specifically exempted by 10 CFR 30.



**MATERIALS PERMIT  
SUPPLEMENTARY SHEET**

Page 3 of 4

Permit Number: 48-02130-02

Docket or Reference Number: 030-03427

Amendment No. 88

- B. The permittee shall maintain records for 5 years from the date of each inventory and include the radionuclides, quantities, manufacturer's name and model numbers, and the date of the inventory.
- C. The permittee shall classify sealed sources, not in active use for their intended clinical or research purpose for a period of 24 months, as disused sources and evaluate the disused sources for disposal as expeditiously as possible.
- D. The permittee shall provide oversight for security of radioactive materials by:
  - (1) Compliance with regulations per 10 CFR 20.1801 and 10 CFR 20.1802.
  - (2) Prevention of adversary or unauthorized removal of, or access to, radioactive materials.
  - (3) Use of two delay methods for sealed sources not in use.
  - (4) Focus to security commensurate with possible risks of radioactive materials unauthorized use.
- 18. A. Detector cells containing a titanium tritide foil or a scandium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents the foil temperature from exceeding that specified by the manufacturer and approved by the Nuclear Regulatory Commission.
- B. When in use, detector cells containing a titanium tritide foil or a scandium tritide foil shall be vented to the outside.
- 19. Maintenance, repair, cleaning, replacement, and disposal of foils contained in detector cells shall be performed only by the device manufacturer or other persons specifically authorized by the Nuclear Regulatory Commission or an Agreement State to perform such services.
- 20. For radioactive material held for decay in storage other than that held in accordance with 10 CFR 35.92, the permittee is authorized to hold radioactive material with a physical half-life of less than 120 days for decay in storage before disposal in ordinary trash, provided:
  - A. Before disposal as ordinary trash, 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 its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.
  - B. A record of each such disposal permitted under this permit condition shall be retained for 3 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.
- 21. The permittee is authorized to transport permitted material in accordance with the provisions of 10 CFR 71, "Packaging and Transportation of Radioactive Material."



**MATERIALS PERMIT  
SUPPLEMENTARY SHEET**

Page 4 of 4

Permit Number: 48-02130-02

Docket or Reference Number: 030-03427

Amendment No. 88

22. Except as specifically provided otherwise in this permit, the permittee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. This permit condition applies only to those procedures required to be submitted in accordance with the regulations. Additionally, this permit condition does not limit the permittee's ability to make changes to the radiation protection program as provided for in 10 CFR 35.26. The Nuclear Regulatory Commission regulations shall govern unless the statements, representations, and procedures in the permittee's application and correspondence are more restrictive than the regulations.

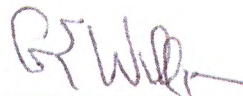
A. April 30, 2014, Final Renewal Application

**FOR THE DEPARTMENT OF VETERANS AFFAIRS**

Date

JUN 17 2014

By



Gary E. Williams  
Director, National Health Physics Program  
North Little Rock, Arkansas

# Department of Veterans Affairs

Page 1 of 5 pages	<b>MATERIALS PERMIT</b>	Amendment No. <b>88</b>
In accordance with VHA Directive 1105 and 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 purpose and at the places listed below.		
Permittee  1. Edward Hines Jr. VA Hospital  2. 5000 South 5th Avenue Hines, Illinois 60141-5000	3. In accordance with your <b>request of May 16, 2016</b> , Permit Number 12-01087-07 is renewed and amended to read as follows.  4. Expiration date: December 31, 2024  5. Docket or Reference Number: 030-01391	

6. Byproduct, source, and/or special nuclear material  A. Any byproduct material with Atomic Numbers 1-83  B. Hydrogen 3 C. Carbon 14 D. Sulfur 35 E. Technetium 99m F. Molybdenum 99 G. Iodine 125 H. Iodine 131 I. Radium 223 J. Any byproduct material with Atomic Numbers 3-83 K. Cesium 137 L. Americium 241 M. Radium 226 N. Technetium 99m	7. Chemical and/or physical form  A. Any  B. Any C. Any D. Any E. Any F. Any G. Any H. Any I. Radium dichloride J. Sealed sources K. Sealed sources (AECL Model C-161) L. Sealed or plated source (New England Nuclear Model NES-303) M. Sealed source (Facility ID No. HSS-011) N. Liquid	8. Maximum amount permittee may possess at any one time under this permit  A. 200 millicuries (mCi) per radionuclide and 15 curies (Ci) total  B. 750 mCi C. 750 mCi D. 500 mCi E. 15 Ci F. 15 Ci G. 750 mCi H. 1 Ci I. 5 mCi J. 1.5 Ci per radionuclide and 15 Ci total K. 2 sources, 930 Ci per source, and 1860 Ci total L. 10 microcuries M. 0.5 microcuries N. 150 mCi
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9. Authorized Use.

A. through J. Medical diagnosis, therapy, and research in humans. Research and development as defined in 10 CFR 30.4, including animal studies, instrument calibration, student instruction, and *in vitro* studies.



**MATERIALS PERMIT  
SUPPLEMENTARY SHEET**

Page 2 of 5

Permit Number: 12-01087-07

Docket or Reference Number: 030-01391

Amendment No. 88

- K. Storage only, pending transfer to an authorized licensee of an AECL Model Gammacell 40 self-shielded irradiator device in accordance with the certificate of registration issued by the Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State.
- L. Student instruction.
- M. For use as a reference source for instrument checks.
- N. For shielding evaluations conducted by or under direct supervision of the Radiation Safety Officer.

**CONDITIONS**

- 10. Permitted material may be used or stored only at the permittee's facilities located at 5000 South 5th Avenue, Hines, Illinois, and temporarily at 1201 Eagle Street, Joliet, Illinois (for shielding evaluations).
- 11. A. The Radiation Safety Officer for this permit is **Daniel J. Miron, C.H.P.** **A written continuity plan for a qualified Radiation Safety Officer shall be kept current and be approved, annually, by the Radiation Safety Committee. If the Radiation Safety Officer permanently discontinues duties under this permit, the permittee shall immediately notify the National Health Physics Program. Permit activities must cease, without a qualified Radiation Safety Officer, approved on this permit.**
  - B. The use of permitted material in or on humans shall be by an authorized user as defined in 10 CFR 35.2.
  - C. Individuals designated to work as authorized users, authorized nuclear pharmacists, or authorized medical physicists as defined in 10 CFR 35 shall meet the training, experience, and recentness of training criteria established in 10 CFR 35, and shall be designated, in writing, by the permittee's Radiation Safety Committee.
  - D. Permitted material for other than human use shall be used by, or under the supervision of, individuals designated by the Radiation Safety Committee.
  - E. Authorized users for research shall be reviewed and approved, in writing, by the Radiation Safety Committee using the criteria in 10 CFR 33.15(b)(1) and (2) and for the irradiator using NUREG-1556, Volume 5, Appendix G.
- 12. Permitted material shall not be used in field applications where activity is released except as provided otherwise by specific condition of this permit.
- 13. Experimental animals, or the products from experimental animals, that have been administered permitted material, shall not be used for human consumption.
- 14. This permit does not authorize commercial distribution of permitted material.
- 15. For sealed sources not associated with 10 CFR 35 use, the following conditions apply.
  - A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State.
  - B. Notwithstanding Paragraph A of this permit condition, sealed sources designed to primarily emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.
  - C. Each sealed source fabricated by the permittee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.



**MATERIALS PERMIT  
SUPPLEMENTARY SHEET**

Page 3 of 5

Permit Number: 12-01087-07

Docket or Reference Number: 030-01391

Amendment No. 88

- D. In the absence of a certificate from a transferor indicating a leak test has been made within the intervals specified in the certificate of registration issued by the Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.
- E. Sealed sources need not be tested if they contain only hydrogen 3, or they contain only a radioactive gas, or the half-life of the isotope is 30 days or less, or they contain not more than 100 microcuries of beta- and/or gamma-emitting material, or not more than 10 microcuries of alpha-emitting material.
- F. Sealed sources need not be tested if they are in storage and are not being used; however, when they are removed from storage for use or transfer to another person and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- G. The leak test shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, a report shall be filed with the National Health Physics Program in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Nuclear Regulatory Commission regulations.
- H. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the permittee or by other persons specifically licensed by the Nuclear Regulatory Commission or an Agreement State to perform such services.
16. A. Sealed sources or detector cells containing permitted material shall not be opened or sources removed from source holders by the permittee.
- B. Generally licensed sealed calibration sources not exceeding 20 microcuries each may be removed from permittee-owned liquid scintillation counters and disposed by the permittee per commitments in Condition 25A below.
17. A. The permittee shall conduct physical inventories to account for all sealed sources and/or devices received and possessed under this permit.
- (1) Quarterly, for sealed sources with either current activity greater than 1 millicurie or current activity greater than 1000 times the quantities in 10 CFR 20, Appendix C.
- (2) Semiannually, for all other sealed sources, except sources specifically exempted by 10 CFR 30.
- B. The permittee shall maintain records for 5 years from the date of each inventory and include the radionuclides, quantities, manufacturer's name and model numbers, and the date of the inventory.
- C. The permittee shall classify sealed sources, not in active use for their intended clinical or research purpose for a period of 24 months, as disused sources and evaluate the disused sources for disposal as expeditiously as possible.
- D. The permittee shall provide oversight for security of radioactive materials by:
- (1) Compliance with regulations per 10 CFR 20.1801, 20.1802, 20.2207, 10 CFR 37 to include the following.
- (a) Coordination with National Health Physics Program for annual reconciliation for National Source Tracking System.
- (b) Notification to National Health Physics for changes in designations for Reviewing Official(s).



**MATERIALS PERMIT  
SUPPLEMENTARY SHEET**

Page 4 of 5

Permit Number: 12-01087-07

Docket or Reference Number: 030-01391

Amendment No. 88

- (2) Prevention of adversary or unauthorized removal of, or access to, radioactive materials.
- (3) Use of two delay methods for sealed sources not in use.
- (4) Focus to security commensurate with possible risks of radioactive materials unauthorized use.
- 18. A. Detector cells containing a titanium tritide foil or a scandium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism that prevents the foil temperature from exceeding that specified by the manufacturer and approved by the Nuclear Regulatory Commission.
- B. When in use, detector cells containing a titanium tritide foil or a scandium tritide foil shall be vented to the outside.
- 19. Maintenance, repair, cleaning, replacement, and disposal of foils contained in detector cells shall be performed only by the device manufacturer or other persons specifically authorized by the Nuclear Regulatory Commission or an Agreement State to perform such services.
- 20. For radioactive material held for decay in storage other than that held in accordance with 10 CFR 35.92, the permittee is authorized to hold radioactive material with a physical half-life of less 120 days for decay in storage before disposal in ordinary trash, provided:
  - A. Before disposal as ordinary trash, 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 its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.
  - B. A record of each such disposal permitted under this permit condition shall be retained for 3 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.
- 21. The permittee is authorized to transport permitted material only in accordance with the provisions of 10 CFR 71, "Packaging and Transportation of Radioactive Material."
- 22. Regarding the self-shielded irradiators, the permittee shall not repair, remove, replace, or alter any of the following: electrical and mechanical systems that control source or shielding movement, the irradiator's shielding or sealed source, safety interlocks, or any component that may affect safe operation of the irradiator. A person specifically licensed by the Nuclear Regulatory Commission or an Agreement State to perform such services shall perform these activities.
- 23. Regarding the self-shielded irradiators, except for maintaining labeling as required by 10 CFR 20 or 71, the permittee shall obtain authorization from the National Health Physics Program before making any changes in the sealed source, device, or source-device combination that would alter the description or specifications as indicated in the respective Registration Certificates issued either by the Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or by an Agreement State.
- 24. The procedures contained in the manufacturer's instruction manual for each irradiator authorized by this permit shall be followed and a copy of the manual shall be made available to each person using or having responsibility for the use of the device.



**MATERIALS PERMIT  
SUPPLEMENTARY SHEET**

Page 5 of 5

Permit Number: 12-01087-07

Docket or Reference Number: 030-01391

Amendment No. **88**

25. Except as specifically provided otherwise in this permit, the permittee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. This permit condition applies only to those procedures required to be submitted in accordance with the regulations. Additionally, this permit condition does not limit the permittee's ability to make changes to the radiation protection program as provided for in 10 CFR 35.26. The Nuclear Regulatory Commission regulations shall govern unless the statements, representations, and procedures in the permittee's application and correspondence are more restrictive than the regulations.

A. August 21, 2014, Final Renewal Application

B. April 29, 2016, Memorandum

C. **May 16, 2016, Memorandum**

[change RSO from D. Derenzo to J. Hatten, Item 6K  
storage only pending disposal/transfer]

**[change RSO from J. Hatten to D. Miron]**



**FOR THE DEPARTMENT OF VETERANS AFFAIRS**

Date \_\_\_\_\_

**MAY 16 2016**

By \_\_\_\_\_

Craig L. Adams, M.P.H.  
Director, National Health Physics Program  
North Little Rock, Arkansas

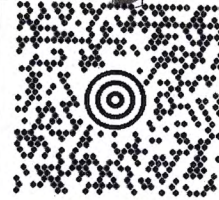


**FROM:**

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(734) 662-3197  
MEDICAL PHYSICS CONSULTANTS, I  
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**1 LBS****1 OF 1**

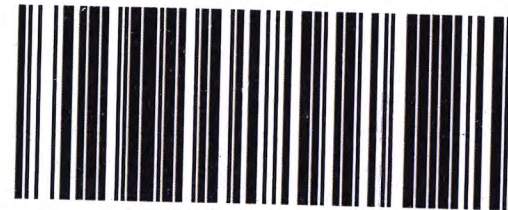
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**IL 603 9-03****SHIP TO:**

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USNRC, REGION III  
2443 WARRENVILLE ROAD SUITE 210  
**LISLE IL 60532-4352**

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