NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

Amendment No. 26

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

SC03611 319085

Licensee

1. MPI Research, Inc.

2. 54943 North Main Street
Mattawan, MI 49071

In accordance with **letter dated May 21 2010,**

3. License number 21-11315-02 is amended in its entirety to read as follows:

4. Expiration date: January 31, 2014

5. Docket No. 030-08546
Reference No.

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Any byproduct material Atomic Nos. 3 through 83 inclusive with half-lives less than or equal to 120 days	A. Any	A. Not to exceed **50** millicuries per radionuclide and **500** millicuries total except as listed below:
B. Hydrogen-3	B. Any	B. 500 millicuries
C. Carbon-14	C. Any	C. 750 millicuries
D. Iodine-125	D. Any	D. 250 millicuries
E. Zinc-65	E. Any	E. 12 millicuries
F. Fluorine-18	F. Any	F. 500 millicuries
G. Copper-64	G. Any	G. 100 millicuries
H. Radium-223	H. Any	H. 50 millicuries
I. Cobalt-57	I. Sealed Sources (Eckert & Ziegler Isotope Products d/b/a IPL, Model 1911, UPET Series, International Isotopes, Idaho, Inc., Model BM06E Series and BM06S Series, IPL Model USM Series and 374 Series)	I. 15 millicuries total (10 millicuries per source for the model 1911 Series, UPET Series and USM Series, and 10 microcuires per source for the 374 series)

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6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
J. Germanium-68	J. Sealed sources (Eckert & Ziegler Isotope Products d/b/a IPL, Model 1911, UPET Series for the Germanium-68/Gallium-68, Siemens Medical Solutions USA, Inc., Molecular Imaging, Model LS, International Isotopes Idaho, Inc., Model BM06E and BM06S, IPL USM Series and 374 Series)	J. 5 millicuries total (0.5 millicuries per source for model No. BM06E Series and BM06S Series, and 10 microcuries per source for model No. 374 Series)
K. Molydenum-99	**K. Any**	
L. Technetium-99m	**L. Any**	**K. 32 curies**
M. Cesium-137	**M. Sealed source (Isotope Products Laboratories, Inc. Model RV-XXX)**	**L. 32 curies**
		M. 0.250 millicurie

9. Authorized Use:

A. through J. To be used for laboratory research as defined in 10 CFR 30.4, including animal studies.
K. and L. To be used for laboratory research as defined in 10 CFR 30.4, including animal studies, and as described in letters dated May 21, 2010 and August 4, 2010.
M. To be used for PET scanner calibration.

CONDITIONS

10. Licensed material shall be used only at the licensee's facilities located at 54943 North Main Street, Mattawan, Michigan.

11. The Radiation Safety Officer for this license is Richard D. Granberg, CHP.

12. Licensed material shall be used by, or under the supervision of, individuals designated by the Radiation Safety Officer.

13. A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed 6 months or at such other intervals as specified by the certificate of registration referred to in 10 CFR 32.210.

B. In the absence of a certificate from a transferor indicating that a leak test has been made within 6 months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.

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C. Sealed sources need not be leak tested if:

(I) they contain only hydrogen-3; or

(ii) they contain only a radioactive gas; or

(iii) the half-life of the isotope is 30 days or less; or

(iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or

(v) they are not designed to emit alpha particles, 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 or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.

D. The leak test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. Records of leak test results shall be kept in units of microcuries and shall be maintained for inspection by the Commission. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission 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 Commission regulations.

E. The licensee is authorized to collect leak test samples for analysis by the device manufacturer. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.

14. 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 Commission or an Agreement State to perform such services.

15. 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 U.S. 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.

16. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.

17. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license.

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18. Licensed material shall not be used in or on human beings.

19. This license does not authorize commercial distribution of licensed material.

20. The licensee shall not use licensed material in field applications where activity is released except as provided otherwise by specific condition of this license.

21. Experimental animals, or the products from experimental animals, that have been administered licensed materials shall not be used for human consumption.

22. The licensee 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, byproduct material shall be surveyed at the container surface with the appropriate survey meter 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 removed or obliterated.

    B. A record of each disposal permitted under this License 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.

23. 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. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

    A. Application dated July 29, 2003 (with attachments) and February 25, 2008 (with attachments);

    B. Letters dated January 12, 2004, July 21, 2004, April 15, 2005, April 19, 2005, November 1, 2005, November 17, 2006, February 2, 2010, **May 21, 2010, and August 4, 2010**; and

    C. Facsimile dated April 15, 2005.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date AUG 05 2010

By _____
Kevin G. Null
Materials Licensing Branch
Region III