U.S. NUCLEAR REGULATORY COMMISSION **Amendment No. 37**

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.

Licensee	In accordance with letter dated **October 3, 2013**,
1. Aptuit, LLC	3. License number 24-15595-01 is amended in its entirety to read as follows:
2. 10245 Hickman Mills Drive Kansas City, MO 64134-0708	4. Expiration date September 30, 2014
	5. Docket No. 030-09415 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. Hydrogen-3	A. Any	A. **50 millicuries**
B. Carbon-14	B. Any	B. **60 millicuries**
C. Barium-133	C. Sealed Source (Model No. IND 1401)	C. 20 millicuries
D. Cesium-137	D. Sealed Source	D. 90 microcuries

9. Authorized use:

A. through B. Uses as described in February 28, 2013, Decommissioning Plan (ADAMS Accession No. ML13053A398) and associated supporting documents noted in the August 27, 2013, Aptuit, LLC Decommissioning Plan SER (ADAMS Accession No. ML13247A779).

E. To be used in a Perkin Elmer Tricarb 2900TR liquid scintillation counter.

F. To be used in a Beckman Model 100C, 3801, or 6500 or equivalent liquid scintillation counter.

CONDITIONS

10. Licensed material shall be used only at the licensee's facilities located at 10245 Hickman Mills Drive, Kansas City, Missouri.

11. The Radiation Safety Officer **(RSO)** for this license is Clint Gregg.

12. Licensed material listed in Item 6 above is only authorized for use by, or under the supervision of, Clint Gregg.

13. The licensee shall not use licensed material in or on human beings except as provided otherwise by specific condition of this license.

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

15. 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 U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State.

    B. 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 U.S. 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.

    C. 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.

    D. 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.

    E. 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 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.

    F. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the licensee or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.

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

16. The licensee is authorized to hold radioactive material with a physical half-life of less than or equal to 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.

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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.

17. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

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. This license condition applies only to those procedures that are required to be submitted in accordance with the regulations. 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. Applications dated October 25, 2007 (limited to the change in the RSO and Attachment 5, "Facility Diagrams."), and April 1, 2008; and

B. Letters dated April 7, 2008, February 2, 2009, June 8, 2009, July 2, 2009, March 29, 2010, May 21, 2010, June 2, 2010, October 8, 2010, January 21, 2011, October 20, 2011, November 2, 2012, February 20, 2013 (two letters referenced in ADAMS Accession Nos. ML13052A443 and ML13053A402), February 28, 2013 (including Decommissioning Plan referenced in ADAMS Accession No. ML13053A398), May 16, 2013, July 19, 2013 (including ADAMS Accession No. ML13204A418 and Safety Evaluation Report, ADAMS Accession No. ML13247A779), **October 3, 2013**, **December 4, 2013**, and **December 6, 2013**.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date DEC 19 2013

By _____
Cassandra F. Frazier
Materials Licensing Branch
Region III