UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
612 EAST LAMAR BOULEVARD, SUITE 400
ARLINGTON, TEXAS 76011-4125

August 26, 2008

U.S. Department of Commerce
National Institute of Standards and Technology
ATTN: Richard F. Kayser
Chief Scientist
325 Broadway - MC 815.00
Boulder, Colorado 80305-3328

SUBJECT: LICENSE AMENDMENT

Please find enclosed Amendment No. 30 to NRC License No. 05-03166-05 **authorizing the plutonium spill decontamination plan described in letters dated August 14, 2008 and facsimile dated August 22, 2008 - response to Request for Additional Information (RAI).** You should review the enclosed document carefully and be sure that you understand all conditions. If you have any questions you can contact me at 817-860-8132.

Please note that in the 2nd paragraph of your facsimile dated August 22, 2008 you state, in part, that portions of the item-by-item response and revised decontamination plan contain safeguards information inappropriate for release to the public. However, NRC does not agree with this assessment. The definition of safeguards information as defined in 10 CFR 73.2 means information not otherwise classified as National Security Information or Restricted Data which specifically identifies a licensee's or applicant's detailed, (1) security measures for the physical protection of special nuclear material, or (2) security measures for the physical protection and location of certain plant equipment vital to the safety of production or utilization facilities.

In addition, please note that NRC's Regulatory Issue Summary (RIS) 2005-31, provides criteria to identify security-related sensitive information and guidance for handling and marking of such documents. This ensures that potentially sensitive information is not made publicly available through ADAMS. The RIS may be located on the NRC Web site at: http://www.nrc.gov/reading-rm/doc-collections/gen-comm/reg-issues/2005/. Additionally, the link for frequently asked questions may be located at: http://www.nrc.gov/reading-rm/sensitive-info/materials.html.

Also note that 10 CFR 2.390 is the regulation that discusses public inspections, exemptions, and requests for withholding. 10 CFR 2.390 may be located on the NRC Web site at: http://www.nrc.gov/reading-rm/doc-collections/cfr/part002/part002-0390.html.

Please clarify if the following rooms are being used for the use or storage of licensed material:

1. **1-2007**
2. **Room 5552 of Wing 5**

If so, please confirm so that these additional rooms can be added as locations of use to your license, as appropriate.

Additionally, please note that License Condition (LC) 10 has been modified to list specific room numbers as identified in your responses to NRC Request for Additional Information dated August 22, 2008, Item 3. Please note that if you need to use or store licensed material in other rooms not specifically identified in LC 10, you must amend your license accordingly. Also please note that if you want to release any of the rooms identified in LC 10, please submit a final status survey (FSS) of the room and submit the results of the FSS to the NRC for approval so we can amend the license to delete the room, accordingly.

NRC expects licensees to conduct their programs with meticulous attention to detail and a high standard of compliance. Because of the serious consequences to employees and the public that can result from failure to comply with NRC requirements, you must conduct your radiation safety program according to the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, note that you must:

1. Operate by NRC regulations 10 CFR Part 19, "Notices, Instructions and Reports to Workers: Inspection and Investigations," 10 CFR Part 20, "Standards for Protection Against Radiation," and other applicable regulations.

2. Notify NRC in writing of any change in mailing address.

3. By 10 CFR 30.36(d) and/or license condition, notify NRC, promptly, in writing, and request termination of the license:

    a. When you decide to terminate all activities involving materials authorized under the license whether at the entire site or any separate building or outdoor area; or

    b. If you decide not to acquire or possess and use authorized material; or

    c. When no principal activities under the license have been conducted for a period of 24 months.

4. Request and obtain a license amendment before you:

    a. Change Radiation Safety Officers;

    b. Order byproduct material in excess of the amount, radionuclide or form authorized on the license;

c. Add or change the areas or address(es) of use identified in the license application or on the license; or

d. Change the name or ownership of your organization.

5. Submit a complete renewal application or termination request at least 30 days before the expiration date on your license. You will receive a reminder notice approximately 90 days before the expiration date. Possession of radioactive material after your license expires is a violation of NRC regulations.

NRC will periodically inspect your radiation safety program. Failure to conduct your program according to NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC may result in enforcement action against you. This could include issuance of a notice of violation; imposition of a civil penalty; or an order suspending, modifying, or revoking your license as specified in the Enforcement Policy. The NRC Enforcement Policy is available on the following internet address: http://www.nrc.gov/reading-rm/doc-collections/enforcement/.

The NRC no longer publishes the NRC Rules and Regulations loose leaf supplements. However, an electronic version of the NRC's regulations is available on the NRC Web site at www.nrc.gov. To view these regulations, highlight "Electronic Reading Room" and choose "Regulations" on the drop down menu. An electronic version of the NUREG-1556 Series publications is also available on the NRC Web site. To view these guidance documents, highlight "Electronic Reading Room"; choose "All Collections" on the drop down menu; choose "NUREGS (NRC Reports)"; and select "Publications Prepared by the NRC Staff". Then, choose "NUREG-1556" from the table and select the appropriate volume(s) for your license type.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

Thank you for your cooperation.

Sincerely,

/RA/

Jacqueline D. Cook, Senior Health Physicist
Nuclear Materials Safety Branch B

Docket: 030-03732
License: 05-03166-05
Control: 471902

Enclosure: As stated

Amendment No. 30

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	
1. U.S. Department of Commerce National Institute of Standards and Technology 2. 325 Broadway Boulder, Colorado 80305-3328	In accordance with letter and facsimile dated August 14, 2008 and August 22, 2008 3. License number 05-03166-05 is amended in its entirety to read as follows: 4. Expiration date May 31, 2015 5. Docket No. 030-03732 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. Nickel-63	A. Foils or plated sources (AEA Technology Model NBCD; DuPont Merck Pharmaceutical Model NER-004P) incorporated in a compatible gas chromatograph as specified in Item 9 of this license	A. 60 millicuries total. No single source to exceed the maximum activity specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State.
B. Iron-55	B. Sealed sources (Eckert & Ziegler Isotope Products, Inc., formerly known as Isotope Products Laboratories, Model XFB series)	B. 100 millicuries
C. Gadolinium-153	C. Sealed source (Isotope Products Laboratories, Model PHI-153 GFS Series)	C. 10 millicuries
D. Americium-241	D. Sealed source (Isotope Products Laboratories, Model PHI-241 GFS Series)	D. 10 millicuries
E. Uranium, Natural (source material)	E. Any solid, encapsulated form	E. 1 kilogram
F. Depleted Uranium	F. Any solid, encapsulated form	F. 2 kilograms

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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
G. Uranium 235	G. Any solid, encapsulated form, enriched to less than 20 weight percent in the Uranium-235 isotope	G. 175 grams total; not to exceed 60 grams per source
H. Thorium (source material)	H. Any solid, encapsulated form	H. 1 kilogram
I. Thorium-232	I. Sealed sources, monazite sand, wire and foils	I. 10 millicuries total; not to exceed 500 microcuries per source
J. Any plutonium isotope except Plutonium-238	J. Any solid, encapsulated form	J. 15 grams total; not to exceed 4 grams per source

9. Authorized use

A. To be used for sample analysis in compatible gas chromatography devices which have been registered either with NRC under 10 CFR 32.210 or with an Agreement State and have been distributed in accordance with an NRC or Agreement State specific license authorizing distribution to persons specifically authorized by an NRC or Agreement State license to receive, possess, and use the devices.

B. through J. To be used for physics research, materials and instrument development, testing and calibration of radiation detection instruments and measurement standards applications.

CONDITIONS

10. Licensed material identified in Item 6.A. through 6.J. may be used or stored only at the licensee's facilities located at 325 Broadway, Rooms 1-2019, 1-2120, I-2120A, 1-2124, and 1-2124A; Sealand (TM) intermodal container; Building 23, Boulder, Colorado.

11. A. Licensed material shall be used by, or under the supervision of, Lawrence E. Grimm, Sonja G. Ringen, Thomas J. Bruno, Ph.D, or Joel Ullom, Ph.D.

B. The Radiation Safety Officer for this license is Lawrence E. Grimm.

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

13. 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

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under 10 CFR 32.210 or under equivalent regulations of an Agreement State.

B. Notwithstanding Paragraph A of this 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. 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.

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 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. The report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region IV, 612 East Lamar Boulevard, Suite 400, Arlington, Texas 76011-4125, ATTN: Director, Division of Nuclear Materials Safety. The report shall specify the source involved, the test results, and corrective action taken.

G. Tests for leakage and/or contamination shall be performed by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services. In addition, the licensee is authorized to collect leak test samples but not perform the analysis; analysis of leak test samples must 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. The licensee shall conduct a physical inventory every 6 months, or at other intervals approved by the U.S. Nuclear Regulatory Commission, 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, and the date of the inventory.

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

17. Except for plutonium contained in a medical device designed for individual human application, no plutonium, regardless of form, shall be delivered to a carrier for shipment by air transport or transported in an aircraft by the licensee except in packages the design of which the U.S. Nuclear Regulatory Commission has specifically approved for transport of plutonium by air.

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. 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 December 15, 2004 (ML050260591)
    B. Letter dated February 15, 2007 (ML070640595)
    C. Letter dated August 14, 2008 (ML082330347)
    D. Facsimile dated August 22, 2008 response to RAI (ML082391032)

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

/RA/

Date August 26, 2008

By _____

Jacqueline D. Cook, Senior Health Physicist
Nuclear Materials Safety Branch B
Region IV
Arlington, Texas 76011