UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4352

NOV 2 3 2004

Christopher Blasio
Radiation Safety Officer
National Aeronautics & Space Administration
John H. Glenn Research Center Lewis Field
21000 Brookpark, Road
Cleveland, OH 44135

Dear Mr. Blasio:

Enclosed is Amendment No. 33 to your NRC Material License No.34-00507-16 in accordance with your request. Please note that the changes made to your license are printed in **bold** font.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region III office at (630) 829-9887 so that we can provide appropriate corrections and answers.

Please note that on October 25, 2004, the NRC suspended public access to ADAMS, and initiated an additional security review of publicly available documents to ensure that potentially sensitive information is removed from the ADAMS database accessible through the NRC's web site. Interested members of the public may obtain copies of the referenced documents for review and/or copying by contacting the Public Document Room pending resumption of public access to ADAMS. The NRC Public Document Room is located at NRC Headquarters in Rockville, MD, and can be contacted at 800-397-4209 or 301-415-4737 or pdr@nrc.gov.

Sincerely,

Toye L. Simmons
Materials Licensing Branch

License No. 34-00507-16
Docket No. 030-05626

Enclosure: Amendment No. 33

NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

Amendment No. 33

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.

OC 03620

Licensee

1. National Aeronautics and Space Administration
   John H. Glenn Research Center at Lewis Field
2. 21000 Brookpark Road
   Cleveland, OH 44135

In accordance with letter dated
October 29, 2004,

3. License number 34-00507-16 is amended in its entirety to read as follows:

4. Expiration date October 31, 2014

5. Docket No. 030-05626
   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. Carbon-14	A. Foil source (Amersham Corp. Model No. TQ77)	A. One source not to exceed 1 microcurie
B. Cesium-137	B. Sealed sources (NBS or Isotope Products, Inc.)	B. Two sources not to exceed 5 microcuries each
C. Americium-241/ Beryllium	C. Sealed source (General Nuclear, Inc.)	C. One source not to exceed 1 curie
D. Californium-252	D. Sealed source (Battelle Laboratories Model No. GI-Cf-Cs-1)	D. One source not to exceed 59 millicuries
E. Cesium-137	E. Sealed source (Berthold Systems, Inc. Dwg. No. P-2623-100)	E. One source not to exceed 150 millicuries and one source not to exceed 20 millicuries
F. Strontium-90	F. Sealed source (Isotope Products, Inc.)	F. One source not to exceed 1 microcurie
G. Cesium-137	G. Sealed sources (Texas Nuclear Model No. 5202 or 5203)	G. Two sources not to exceed 1 curie each
H. Promethium-147	H. Sealed Source (Amersham Corp. Model PHC.C1, Dwg. No. VZ-376)	H. One source not to exceed 30 millicuries
I. Cobalt-60	I. Sealed source (AEC/ORNL custom source)	I. One source not to exceed 1.5 millicuries
J. Cesium-137	J. Contaminated cyclotron components/equipment	J. 1 microcurie total

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number
34-00507-16

Docket or Reference Number
030-05626

Amendment No. 33

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
K. Americium-241	K. Plated Foil (Isotope Products Laboratories Model AFR Series)	K. One source not to exceed 100 microcuries
L. Polonium-210	L. Sealed solid metal foil (NRD, Inc. Model P-001)	L. **Six** sources not to exceed 800 microcuries each
M. Americium-241	M. Foil sources (Manufactured by AEA Technologies, Inc. and Nycomed Amersham Plc Model AMM.1001H)	M. Ten sources not to exceed 1 microcurie each
N. Americium-241	N. Foil sources (AEA Technologies, Inc. Model AMM)	N. Five sources not to exceed 1 millicurie each

9. Authorized Use:

A. and B. For storage.

C. and D. For storage only incident to disposal.

E. For use in densitometer in support of research activities.

F. For calibration of health physics instrumentation.

G. For use in densitometer in support of reseach activities.

H. For storage.

I. and J. For storage only incident to disposal.

K. For research as described in letter dated August 13, 1999.

L. through N. For research involving measurement of flow parameters or monitoring/characterization of aerosols or particles.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number
34-00507-16

Docket or Reference Number
030-05626

Amendment No. 33

CONDITIONS

10. Licensed material may be used and stored at John H. Glenn Research Center at Lewis Field, 21000 Brookpark Road, Cleveland, Ohio and may also be stored at Plum Brook Station, 6100 Columbus Avenue, Sandusky, Ohio.

11. Licensed material shall be used by, or under the supervision of, Gayle Reid, and/or Christopher Blasio.

12. The Radiation Safety Officer for this license is Christopher Blasio.

13. A. Sealed sources, detector cells, and foil 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 U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State, prior to transfer, a sealed source, detector cell or foil source received from another person shall not be put into use until tested and the test results received.

    C. Sealed sources need not be leak 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 leak 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 or detector cell 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 shall be performed by the licensee or by other persons specifically licensed by the 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 3 years.

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

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number
34-00507-16

Docket or Reference Number
030-05626

Amendment No. 33

15. The licensee shall conduct a physical inventory every 6 months 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.

16. 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 June 29, 2004; and

    B. Letters dated August 12, 1999, February 7, 2001, January 8, 2004, February 12, 2004, **October 29, 2004**, and **November 10, 2004**.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date NOV 2 3 2004

By Toye L. Simmons

Toye L. Simmons
Materials Licensing Branch
Region III

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE RD STE 210
LISLE IL 60532-4352

OFFICIAL BUSINESS

Christopher Blasio, Radiation Safety Officer
National Aeronautics & Space Administration
John H. Glenn Research Center at Lewis Field
21000 Brookpark Road
Cleveland, OH 44135

NRC FORM 532A (RIII)
(10-2004)

LICENSE NUMBER 34-00507-16

MAIL CONTROL NUMBER 313875

AMENDMENT ✓ TERMINATION _____ NEW LICENSE _____

This is to acknowledge the receipt of your (letter) application (dated) 10/29/04 ,
and to inform you that the initial processing, which included an administrative review, has been performed.

☑ There were no administrative omissions identified during our initial review.

☐ Your application for a new NRC license did not include your taxpayer identification number. Please fill out NRC Form 531, which is being sent to you separately.

A copy of your action has been forwarded to our License Fee and Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your application has been assigned the above listed **MAIL CONTROL NUMBER**. When calling to inquire about this action, please refer to this control number. Your application has been forwarded to a technical reviewer. Please note that the technical review, which is normally completed within 180 days for a renewal application (90 days for all other requests), may identify additional omissions or require additional information. If you have any questions concerning the processing of your application, you may contact us at 630-829-9887.