DL-072996_04

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W., SUITE 2900
ATLANTA, GEORGIA 30323-0199

July 29, 1996

United States Department of Interior
U.S. Geological Survey (USGS)
ATTN: Mr. Gregory Alan Wandless,
Radiation Safety Officer (RSO)
12201 Sunrise Valley Drive
Reston, VA 22092

SUBJECT: TRANSMITTAL AND EXPLANATION OF A MATERIALS LICENSE AMENDMENT (REFERENCE: 257104; DOCKET NO. 030-10034)

Dear Mr. Wandless:

Enclosed is Amendment No. 28 to License No. 45-15923-01 issued in response to your letter dated June 14, 1996. This amendment authorizes the relocation of research activities conducted by Drs. Charles and Nancy Naeser to Room 3C232 of the J. W. Powell Building.

However, prior to decommissioning their former laboratory in Room 3D231, please provide the additional information specified in Mr. Jay Henson's letter of July 9, 1996 (copy enclosed). Please do not release Room 3D231 for non-radiological use until you have received written NRC authorization.

Also, I have reviewed your letter dated May 29, 1996 concerning the down-sizing of your program for use of licensed material. Outlined below are my comments.

1. Information referenced in Items 2, 3, and 4 of your letter has been reviewed by Mr. Jay Henson. His comments are contained in his letter to you dated July 9, 1996 (copy enclosed).

2. Concerning the other items in your letter:

   A. Item 1: Be sure that the documentation you provide to me for licensed material transferred includes the isotope, activity and the Item number on your NRC license that authorizes the isotope (for example, 6.A. Hydrogen 3, 6.B. Cobalt 60, ...).

   B. Item 5 and 6: Specify the anticipated date the information will be provided to the NRC.

   C. Item 7: Upon satisfactory completion of Dr. Naeser's training program for RSO, provide me with a letter attesting to his competency to independently perform the RSO duties.

   Even though the USGS program is being down-sized, I am not sure that 24 hours of on-the-job training in radiation safety, as you proposed, would be adequate for naming Dr. Naeser as sole Radiation Safety Officer (RSO).

   Accordingly, I have revised Condition No. 11 of License No. 45-15923-01 to continue to name Gregory Wandless as RSO and to identify Dr. Charles Naeser as "RSO in training".

When Dr. Naeser satisfactorily completes the 24-hour classroom training given by Mr. Michael Terpilak and at least three months (no specified clock hours) of on-the-job training in radiation safety under the supervision of Mr. Gregory Wandless, please provide me with a letter specifying inclusive dates of training and attesting to Dr. Naeser's competency to independently perform the RSO duties. This letter should be signed by the persons giving the training.

D. Item 8: No further information is required.

Please provide two copies of your response and refer to Mail Control No. 256959.

Thank you for your cooperation in this matter. If you have questions about this letter or your license, please call me at 404/331-5617 (FAX: 404/331-7437).

Sincerely,

Earl G. Wright

Earl G. Wright
Senior License Reviewer
Division of Nuclear Materials Safety

Enclosure:

1. Letter dated July 9, 1996

CC:
Mr. Gordon Eaton, Director USGS
Mr. Michael Terpilak, Consultant to USGS
bcc: Mr. Jay Henson MLIB 2, DNMS, RII

NRC FORM 374
(7-84)

U.S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE

Amendment No. 28

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 the Interior
   Geological Survey
   National Center
2. M.S. 927
   12201 Sunrise Valley Drive
   Reston, Virginia 22092

In accordance with the letter dated June 14, 1996

3. License Number 45-15923-01

is amended in its entirety to read as follows:

4. Expiration Date November 30, 2000 (extended)

5. Docket or Reference No. 030-10034

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. 2 millicuries (74 MBq) total
B. Carbon 14	B. Any	B. 8 millicuries (296 MBq) total
C. Phosphorus 32	C. Any	C. 2 millicuries (74 MBq) total
D. Phosphorus 33	D. Any	D. 2 millicuries (74 MBq) total
E. Sulphur 35	E. Any	E. 4 millicuries (148 MBq) total
F. Chlorine 36	F. Liquid	F. 50 microcuries (1.85 MBq)
G. Cobalt 60	G. Sealed sources	G. 3 sources, not to exceed 16 microcuries (592 kBq) total
H. Cobalt 60	H. Any	H. 500 microcuries (18.5 MBq) total
I. Nickel 63	I. Foils in Shimadzu Model EDC-M2 detector cells	I. Not to exceed 15 millicuries (555 MBq) per foil
J. Nickel 63	J. Sealed or plated sources	J. Not to exceed 15 millicuries (555 MBq) per sealed or plated source
K. Iron 55	K. Any	K. 10 millicuries (370 MBq)
L. Zinc 65	L. Any	L. 200 microcuries (7.4 MBq)
M. Strontium 89	M. Any	M. 10 microcuries (370 kBq)
N. Strontium 90	N. Any	N. 10 microcuries (370 kBq)
O. Tin 113	O. Any	O. 10 microcuries (370 kBq)

License Number 45-15923-01

MATERIALS LICENSE
SUPPLEMENTARY SHEET

Docket or Reference No. 030-10034

Amendment No. 28

Continued -

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
P. Antimony 125	P. Any	P. 100 microcuries (3.7 MBq)
Q. Barium 133	Q. Any	Q. 500 microcuries (18.5 MBq) total
R. Cesium 137	R. Sealed sources	R. 3 sources, not to exceed 20 microcuries (740 kBq) total
S. Cesium 137	S. Any	S. 10 millicuries (370 MBq)
T. Promethium 147	T. Sealed sources	T. 2 millicuries (74 MBq)
U. Protactinium 231	U. Any	U. 10 microcuries (370 kBq) total
V. Neptunium 237	V. Any	V. 10 microcuries (370 kBq) total
W. Americium 241	W. Any	W. 500 microcuries (18.5 MBq) total
X. Americium 241	X. Sealed sources (custom made)	X. 20 sources, not to exceed 40 millicuries (1.48 GBq) total
Y. Any byproduct material	Y. Activated samples	Y. 530 millicuries (19.65 GBq) total
Z. Technetium 99	Z. Liquid	Z. 1 millicurie (37 MBq)

9. Authorized Use:

A. through E.
For use in laboratory tracer studies and molecular biology procedures

F. For use in molecular biology procedures

G. For use in the testing, evaluation, and calibration of detectors

H. For use in laboratory tracer studies

I. For use in Shimadzu Mini-2E gas chromatographs for sample analysis

J. For use in gas chromatographs for sample analysis

K. through Q.
For use in laboratory tracer studies

R. For use in testing, evaluation, and calibration of detectors

MATERIALS LICENSE SUPPLEMENTARY SHEET

9. Authorized Use (Continued)

S. through W.
For use in laboratory tracer studies

X. For use in X-ray fluorescence studies

Y. For possession incident to neutron activations and radioactive dating studies

Z. For use in laboratory studies

CONDITIONS

10. Licensed material may be used at:

A. Geological Survey Physics Building, Lot "O" off South Lakes Drive, and the National Center (John Wesley Powell Federal Building), 12201 Sunrise Valley Drive, Reston Virginia.

B. Room 519, U.S. Geological Survey, Stephenson Center, Suite 129, 729 Gracern Road, Columbia, South Carolina.

11. The Radiation Safety Officer (RSO) for this license is Gregory A. Wandless. The Radiation Safety Officer in-training is Charles W. Naeser, Ph.D.

12 Authorized users:

A.	Allan B. Tanner	For materials listed in Subitems 6.A. through Z.
B.	Eurybiades Busenburg	For material listed in Subitem 6.I.
C.	Nancy D. Naeser	For materials listed in Subitem 6.Y.
D.	Philip A. Baedecker	For materials listed in Subitems 6.F, H, L through O, S, U through W and Y.
E.	Jeffrey N. Grossman	For materials listed in Subitems 6.F, H, L through O, S, U through W, and Y.
F.	Michael J. Kunk	For materials listed in Subitem 6.Y.
G.	Edward R. Landa	For material listed in Subitem Z.
H.	Derek R. Lovely	For materials listed in Subitems 6.A through C, D, J and Z.
I.	John W. Morgan	For materials listed in Subitems 6.F, H, J through O, S, U through W, and Y.
J.	Curtis A. Palmer	For materials listed in Subitems 6.F, H, J through O, S, U through W, and Y.
K.	Elizabeth J. Jones	For materials listed in Subitems 6.A through C, E and J.
L.	Michael J. Pickering	For materials listed in Subitems 6.G, R, and Y.

License Number 45-15923-01

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MATERIALS LICENSE
SUPPLEMENTARY SHEET

CONDITIONS

Continued-

12. Authorized Users: (Continued)

M.	John F. Sutter	For materials listed in Subitem 6.Y.
N.	Gregory A. Wandless	For materials listed in Subitems 6.F, H, L through Q, S, V through Y.
O.	Joan Woodward	For materials listed in Subitems 6.A through E, and J.
P.	Francis H. Chapelle	For materials listed in Subitems 6.B, C and J.
Q.	Paul M. Bradley	For materials listed in Subitems 6.C, D and J.
R.	James E. Landmeyer	For materials listed in Subitems 6.C, D and J.
S.	Debra J. Lonergan	For materials listed in Subitems 6.C, D and F.
T.	Peggy K. Widman	For materials listed in Subitems 6.A through E, and J.
U.	Charles W. Naeser	For materials listed in Subitems 6.Y.

13. A.(1) The sealed source(s) specified in Item 7, shall be tested for leakage and/or contamination at intervals not to exceed 6 months. Any sealed source received from another person which is not accompanied by a certificate indicating that a test was performed within 6 months before the transfer shall not be put into use until tested.

(2) Notwithstanding the periodic leak test required by this condition, any licensed 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.

B. Any source in storage and not being used need not be tested. When the source is removed from storage for use or transfer to another person, it shall be tested before use or transfer.

C. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the source shall be removed from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. A report shall be filed within 5 days of the date the leak test result is known with the U. S. Nuclear Regulatory Commission, Region II, Division of Nuclear Materials Safety, Nuclear Materials Licensing/Inspection Branch, 101 Marietta Street, Suite 2900, Atlanta, Georgia 30323. The report shall specify the source involved, the test results, and corrective action taken. Records of leak test results shall be kept in units of microcuries and shall be maintained for inspection by the Commission. Records may be disposed of following Commission inspection.

D. 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.

14. Sealed sources containing licensed material shall not be opened by the licensee.

License Number 45-15923-01

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Amendment No. 28

MATERIALS LICENSE SUPPLEMENTARY SHEET

CONDITIONS

Continued-

15. Detector cells containing licensed material shall not be opened or the sources removed from the detector cell by the licensee.

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

17. Licensed material shall not be used in or on human beings or in products distributed to the public.

18. The licensee shall maintain records of information important to safe and effective decommissioning at the U.S. Department of the Interior, Geological Survey, National Center, 12201 Sunrise Valley Drive, Reston, Virginia, pursuant to the provisions of 10 CFR 30.35(g) until this license is terminated by the Commission.

19. In addition to the possession limits in item 8, the licensee shall further restrict the possession of licensed material as follows.

    A. For unsealed sources to quantities less than 10^5 times the applicable limits in Appendix B, 10 CFR 30 as specified in 10 CFR 30.35(d) and

    B. For sealed sources, to quantities less than 10^{10} times the applicable limits in Appendix B, 10 CFR 30 as specified in 10 CFR 30.35(d).

20. The licensee may transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

NRC FORM 374A
(7-94)

U.S. NUCLEAR REGULATORY COMMISSION

License Number 45-15923-01

Docket or Reference Number 99-10034

Amendment No. 28

MATERIALS LICENSE
SUPPLEMENTARY SHEET

CONDITIONS

Continued-

21. 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 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 26, 1990

B. Letters dated:

(1) October 4, 1990	
(2) August 29, 1991	
(3) December 10, 1991	
(4) January 14, 1993	[Add Columbia SC and authorized users there]
(5) January 14, 1993	[Add P-32, Ms. Lonergan as user, reinstate Cl-36 use]
(6) November 23, 1993	[Add P-33 w/Ms. Lonergan as user, deletes Yuri Gorby and Steven Mee as authorized users]
(7) July 1, 1994	[Change user names, add authorized user, delete departed users, change rooms]
(8) August 22, 1994	[Change Radiation Safety Officer]
(9) January 30, 1995	[Add authorized users]
(10) February 22, 1995	[Increase C-14 limit to 8 mCi]
(11) March 1 1996	[NRC letter extends expiration date per 10 CFR 30.36]
(12) June 14, 1996	[New laboratory location, Room 3C232 of J. W. Powell Building]

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

EARL G. WRIGHT

DATE JUL 29 1996

BY Earl G Wright

Region II, Division of Nuclear Materials Safety
101 Marietta Street, N.W., Suite 2900
Atlanta, GA 30323-0199

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