

MATERIALS LICENSE

Amendment No. 36

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.

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Licensee		In accordance with the letter dated July 31, 1996,	
1. Armed Forces Radiobiology Research Institute		3. License Number 19-08330-03 is amended in its entirety to read as follows:	
2. Bethesda, Maryland 20889-5603		4. Expiration Date December 31, 2003	
		5. Docket or Reference No. 030-06931	
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. Cobalt 60	A. Sealed sources specified in Condition 12	A. 400,000 curies total	
9. Authorized use			
A. For irradiation of materials other than explosives, flammables, or corrosives and for instrument calibrations.			

CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at Armed Forces Radiobiology Research Institute, Bethesda, Maryland.
11. A. Licensed material shall only be used by, or under the supervision and in the physical presence of, individuals who have received the training described in application dated August 12, 1993 and have been designated in writing by the Radiation Safety Officer. The licensee shall maintain records of individuals designated as users for five years following the last use of licensed material by the individual.
- B. The Radiation Safety Officer for this license is David McKown.
12. The licensee is authorized to use the following sealed sources in the irradiator:
- | | |
|------------------------|------------------|
| <u>Manufacturer</u> | <u>Model No.</u> |
| Neutron Products, Inc. | NPRP 635-25-L |
13. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.

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PDR ADDCK 03006931
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**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number

19-08330-03

Docket or Reference Number

030-06931

Amendment No. 36

14. The licensee shall conduct a physical inventory every six months to account for all sealed sources and devices containing licensed material received and possessed under the license. Records of inventories shall be maintained for five years from the date of each inventory, and shall include the quantities and kinds of byproduct material, manufacturer name and model numbers, location of sources and/or devices, and the date of the inventory.
15. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR 71, "Packaging and Transportation of Radioactive Material."
16. Irradiation and distribution of foods for human consumption shall be in accordance with the rules and regulations of the Food and Drug Administration.
17. In accordance with 10 CFR 36.17(a) and notwithstanding the requirements of 10 CFR 36.23(b), the licensee is authorized to use the alternative independent backup access control system described in its letter to NRC Region I dated July 2, 1993, and its letter to NRC Headquarters dated October 27, 1993. The testing of the control room radiation area monitor shall include using a check source to ensure the operability of the detector itself.
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 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 August 12, 1993
 - B. Letter dated November 5, 1993
 - C. Letter dated November 24, 1993

AUG 22 1996

Date _____

For the U.S. Nuclear Regulatory Commission

Original Signed By:

John D. Kinneman

By

Nuclear Materials Safety Branch
Region I

King of Prussia, Pennsylvania 19406

AUG 22 1996

Eric Kearsley, Capt. MSC, USN
Director
Armed Forces Radiobiology Research Institute
8901 Wisconsin Avenue
Bethesda, MD 20889-5603

Dear Capt. Kearsley:

This refers to your license amendment request. Enclosed with this letter is the amended license. Please note that as part of this amendment, in accordance with 10 CFR 30.36, effective February 15, 1996, the expiration date of your license has been extended by a period of five years. Your new expiration date is stated in Item 4 of the license.

Please review the enclosed document carefully and be sure that you understand and fully implement all the conditions incorporated into the amended license. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region I Office, Licensing Assistance Team, (610) 337-5093 or 5239, so that we can provide appropriate corrections and answers.

Thank you for your cooperation.

Sincerely,

Original Signed By:

John D. Kinneman

John D. Kinneman, Chief
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety

License No. 19-08330-03
Docket No. 030-06931
Control No. 123519

Enclosure:
Amendment No. 36

DOCUMENT NAME: R:\WPS\MLTR\L1908330.03

To receive a copy of this document, indicate in the box: "C" = Copy w/ attach/encl "E" = Copy w/ attach/encl "N" = No copy

OFFICE	DNMS/RI	N	DNMS/RI	N				
NAME	SLodhi		JKinneman					
DATE	08/16/96		08/20/96		08/ /96		08/ /96	

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ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE

8901 WISCONSIN AVENUE
BETHESDA, MARYLAND 20889-5603

MS16
Q-2

605.02
16 August 1996

Mr. Sattar Lodhi
USNRC Region I, Mail Control 123519
475 Allendale Road
King of Prussia, PA 19406

Dear Mr. Lodhi,

As requested in your telephone call of August 15, 1996 to Dr. David McKown of AFRRI, we are providing additional information below to allow for continued review of our request to amend License No. 19-08330-03, dated July 31, 1996.

This letter provides additional information regarding Dr. McKown's experience in the use of a panoramic wet source-storage irradiator facility similar to AFRRI's.

During Dr. McKown's employment as Senior Research Scientist at the Missouri University Research Reactor Facility (1969-78), he had considerable experience in the use of a 20,000 Ci Co-60 source panoramic irradiator facility similar in operation to AFRRI's facility. Additionally, he was responsible for training and supervising other users of the facility.

Although Dr. McKown has limited experience as an actual RSO or ARSO at a panoramic irradiator facility, we submit that his previous experience in facility use and user supervision together with his technical background, recent broad license RSO experience, and the intensive on-the-job training directly with AFRRI's Cobalt Irradiator facility adequately meets the intent of the requirement for at least 3 months RSO experience as specified in our License No. 19-08330-03 documents.

Thank you for your prompt attention to this response.

FOR THE DIRECTOR:

CURTIS W. PEARSON
Colonel, USAF, MSC
Deputy Director for Administration

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123519

AUG 22 1996

FAX REC'D

AUG 16 1996

MNSB TELEPHONE CONVERSATION RECORD

Person Called: David McKown, RSO (designate) Phone No.: (301) 295 1285
Person Calling: Sattar Lodhi Date: 8/13/96
Facility Name: Armed Forces Radiobiology Research Institute Time: 9:30 a.m.
License No. 19-08330-02 Docket No. 030-06931

Subject: Additional Information for amendment request

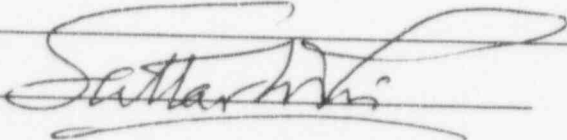
Summary: I called Dr. McKown to review the possession limits on their license (It appeared to me that they may need to submit decommissioning funding plan with the existing possession limits), and to verify if his experience included working with an irradiator similar to that at AFRRRI (because their irradiator license application states that the RSO must have at least three months full time equivalent experience with a similar irradiator).

He agreed to review the possession limits with the RSC Chairman and the users and also conduct an inventory of the licensed material on hand to verify that they did not exceed the limit beyond which they may need to submit a DFP.

On the question of his qualifications, he stated that the irradiator he worked with at the University of Missouri was similar to the one at AFRRRI. He would send a statement to this effect.

He requested that he be allowed some time to respond to possession limits and stated that he will call me back next week with the information.

Action Required/Taken: Document/wait for response

Signature: 

Mail Control No. 123518

8 123519

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ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE

8901 WISCONSIN AVENUE
BETHESDA, MARYLAND 20889-5603

030-06931

605.02
31 July 1996

Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Dear Mr. McGrath,

The Radiation Safety Officer (RSO), Thomas J. O'Brien, will be departing the Armed Forces Radiobiology Research Institute (AFRRI) on August 5, 1996, to take a position with NRC headquarters.

To allow for a seamless transition, it is requested that Mr. David McKown be approved as acting RSO until the vacancy is filled. Mr. McKown's extensive experience and educational background qualifies him as RSO for our NRC licenses 19-08330-02 and 19-08330-03. His resume is attached for your review. Additionally, Mr. McKown has logged 25 hours working and training directly with AFRRI's Cobalt Irradiator facility.

The work performed and training received on the cobalt irradiator included the areas specified below:

- Review of irradiator license with current RSO, Thomas J. O'Brien.
- Review and observation of cobalt facility operations with facility operators John Broom and Dan McClung. This includes start up and shutdown operations, observing actual experimental runs, experimenter entry restrictions, facility maintenance items, and radiological safety surveys.
- Self study of NRC license 19-08330-03, 10 CFR 36, Health Physics Procedure 4-4.B, "Cobalt Facility Health Physics", NUREG 1345, and NUREG 1392.
- Participation in the license required annual audit of the cobalt irradiator which provided a detailed review and discussion of license conditions/requirements, current operating procedures and practices, and "hands on" inspection of records.

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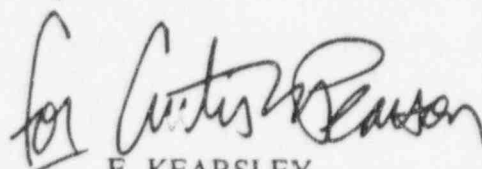
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- Participation in the semi-annual license required safety interlock check of the cobalt irradiator.

Thank you for your prompt attention to this request.

Attachment:
as stated

 Col USAF
E. KEARSLEY
CAPT, MSC, USN
Director

RESUME

DAVID M. MCKOWN

Health Physicist, Safety and Health Department
Armed Forces Radiobiology Research Institute (AFRRI)

EDUCATION: B.S., CHEMISTRY (Math minor), West Virginia University, 1964
Ph.D., NUCLEAR-RADIOCHEMISTRY (Physics minor), Univ. of Kentucky, 1969

EXPERIENCE: Twenty-seven years experience in radionuclide/radiation related research and development, utilization, and radiation safety administration (45 technical publications or presentations).

1969-1978: Senior Research Scientist, Nuclear and Radiochemistry Group, Missouri University Research Reactor Facility (MURR), Columbia, MO.

- Experience in radioassay, neutron activation analysis, radiochemistry, radiography, XRF, and gamma and reactor port irradiators.
- Development and management of the nuclear science research and applications laboratories at MURR. Supervision of reactor laboratory users.
- Adjunct faculty teaching of courses in nuclear science and radioanalytical applications. Thesis research co-advisor for nine graduate students.

1978-1993: Research Chemist, TRIGA Reactor Facility, U.S. Geological Survey, Denver, CO.

- Experience in radioassay, neutron activation analysis, and radiochemistry.
- Management and supervision of the radioactivation and radiochemistry project.
- Applied research related to trace element geochemistry, biogeochemistry, environmental studies.

1993-1995: Radiation Safety Officer (RSO), Administrative Division, U.S. Geological Survey (USGS), Denver, CO.

- NRC approved RSO for broadscope Byproduct Material and Special Nuclear Material licenses, and limited Source Material license.
- Developed and implemented a revised radiation safety program mandated by the revised 10 CFR 20 regulations.
- Developed new procedures, manuals, and license documents for renewal of the broadscope license (renewal granted 9/94).
- Experience in radiation safety program management, regulatory oversight, and health physics duties.
- Experience in reviewing, evaluating, and resolving radiological safety issues.
- Hosted two unannounced NRC inspections with no violations or deviations.

7/96-date: Health Physicist, Safety and Health Department, Armed Forces Radiobiology Research Institute, Bethesda, MD.

- Intensive self-study and on the job training to become familiar with AFRRI's overall radiation safety program, and the specific license requirements and health physics procedures.

TRAINING:

Other Specific Radiological Health and Safety Training.

- Graduate-level courses in nuclear physics/chemistry including radiological protection (15 semester hours).
- Radiation safety short courses at MURR and USGS.
- Radiation Safety Committee work at MURR (1977-78) and USGS (1979-95, member/chairman/secretary). Reactor Operations Committee at USGS (1981-95, member/onsite co-chair).

BETWEEN:

[illegible]

A. REGION

2. FEE ATTACHED

AMOUNT: _____
CHECK NO.: _____

8. COMMENTS

REF 1235A.

SIGNED _____
DATE 2/4/96

B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED /__/)

1. FEE CATEGORY AND AMOUNT: _____

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR:

AMENDMENT
RENEWAL
LICENSE

3. OTHER _____

SIGNED _____
DATE _____