

03007666

VOID SHEET

TO: License Fee Management Branch

FROM: RTV

SUBJECT: VOIDED APPLICATION

Control Number: 464850 26-14095-01

Applicant: Dept. of the Army

Date Voiced: 8/17/93

Reason for Void: Duplication of M/C # 464828 which was completed 7/30/93

14:313

Bill Bruszynski 8/17/93  
Signature Date

Attachment:  
Official Record Copy of  
Voided Action

FOR LFMB USE ONLY

Final Review of VOID Completed:

- Refund Authorized and processed
- No Refund Due
- Fee Exempt or Fee Not Required

**FEE EXEMPT**

173 SEP 16 PM 4:50

Comments: \_\_\_\_\_

Log completed   
Processed by: [Signature]

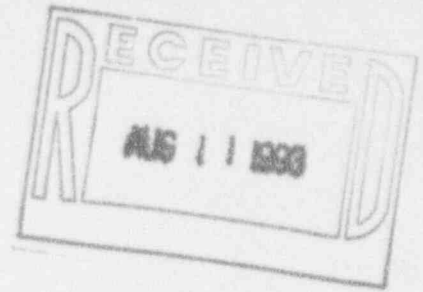
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DEPARTMENT OF THE ARMY

U.S. Army Corps of Engineers  
WASHINGTON, D.C. 20314-1000

July 27, 1993



REPLY TO  
ATTENTION OF:

Safety and Occupational  
Health Office (385-11m)

U.S. Nuclear Regulatory Commission, Region IV  
ATTN: Ms. Billie Gruszynski  
Nuclear Materials Licensing Section  
611 Ryan Plaza Drive, Suite 1000  
Arlington, TX 76011

Dear Ms. Gruszynski:

Our Missouri River Division would like to terminate their NRC material license, number 26-14095-01 as specified in their enclosures.

Enclosed for your review and use is the supporting information for the license termination request.

Mr. Joseph Drugmand of our Missouri River Division has been working on this action with Ms. Jacqueline Burks so you may wish to coordinate this request with her.

Please notify us when this action will be completed. Should additional information be necessary feel free to contact us at AC 202 272-8565.

Sincerely,

Bruce A. Zaczynski, C.I.H.  
Radiation Control Officer  
Safety and Occupational Health Office

Enclosures

464850



DEPARTMENT OF THE ARMY  
MISSOURI RIVER DIVISION, CORPS OF ENGINEERS  
P.O. BOX 103, DOWNTOWN STATION  
OMAHA, NEBRASKA 68101-0103



REPLY TO  
ATTENTION OF

CEMRD-SO (385-11m)

28 May 1993

MEMORANDUM FOR CDR USACE (CESO-I), Room 4124C, WASH DC 20314-1000

SUBJECT: Request for Termination of USNRC License No. 26-14095-01

1. Reference letter, USNRC, Region IV, 30 Sep 92, License No. 26-14095-01, Amendment No. 11.
2. Please forward this request to the U. S. Nuclear Regulatory Commission, Region IV.
3. Enclosed is the original of the NRC Form 314, Certificate of Disposition of Materials (encl 1). The form has the request to terminate the subject license.
4. Enclosed are copies of the following documents:
  - a. Straight Bill of Lading, Chem-Nuclear Systems, Inc., 21 Oct 92, Work Order Number 540989, subject: Americium-Beryllium Source, Activity 3.1 Curies (encl 2). The bill of lading provides information regarding the shipment of the source.
  - b. Letter, Amersham Corporation, 5 May 93, subject: Am-241:Be, 3.1 Curies, Serial Number N268 (encl 3). The letter shows that Amersham has accepted ownership of the source.

FOR THE COMMANDER:

*Joseph R. Drugmand*

3 Encls  
as

JOSEPH R. DRUGMAND, CSP, P.E.  
Chief, Safety and Occupational  
Health Office and Radiation  
Protection Officer

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION  
COLLECTION REQUEST: 30 MINUTES FORWARD COMMENTS REGARDING  
BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH  
(MNRB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC  
20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (COST 0000),  
OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

### CERTIFICATE OF DISPOSITION OF MATERIALS

INSTRUCTIONS: ALL ITEMS MUST BE COMPLETED -- PRINT OR TYPE  
SEND THE COMPLETED CERTIFICATE TO THE NRC OFFICE SPECIFIED ON THE REVERSE

LICENSEE NAME AND ADDRESS

Department of the Army  
Corps of Engineers  
Missouri River Division Laboratory  
P.O. Box 103, Downtown Station  
Omaha, NE 68101-0103

LICENSEE NUMBER

26-14095-01

LICENSE EXPIRATION DATE

31 July 1994

#### A. MATERIALS DATA (Check one and complete as necessary)

THE LICENSEE OR ANY INDIVIDUAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE LICENSEE CERTIFIES THAT:  
(Check and/or complete the appropriate item(s) below.)

1. NO MATERIALS HAVE EVER BEEN PROCURED OR POSSESSED BY THE LICENSEE UNDER THIS LICENSE.

OR  
 2. ALL MATERIALS PROCURED AND/OR POSSESSED BY THE LICENSEE UNDER THE LICENSE NUMBER CITED ABOVE HAVE BEEN  
DISPOSED OF IN THE FOLLOWING MANNER. (If additional space is needed, use the reverse side or provide attachments.)  
Describe specific material transfer actions and, if there were radioactive wastes generated in terminating this license, the disposal actions including the  
disposition of low-level radioactive waste, mixed waste, Greater-than-Class-C waste, and sealed sources, if applicable.

For transfers, specify the date of the transfer, the name of the licensed recipient, and the recipient's NRC license number or Agreement State name and  
license number.

Shipped on 21 Oct 92 to Amersham Corp., 2636 S. Clearbrook Dr., Arlington Heights,  
IL 60005. Attached are Illinois Radioactive Materials License Number  
12-12836-01 and letter extending the expiration date.

If materials were disposed of directly by the licensee rather than transferred to another licensee, licensed disposal site or waste contractor, describe the  
specific disposal procedures (e.g., decay in storage).

FFF EXEMPT

#### B. OTHER DATA

1. OUR LICENSE HAS NOT YET EXPIRED. PLEASE TERMINATE IT.  
2. WAS A RADIATION SURVEY CONDUCTED TO CONFIRM THE ABSENCE OF LICENSED RADIOACTIVE MATERIALS AND TO DETERMINE WHETHER  
ANY CONTAMINATION REMAINS ON THE PREMISES COVERED BY THE LICENSE? (Check one)

NO (Attach explanation)

YES. THE RESULTS (Check one)

ARE ATTACHED, or Memorandum with leak test results.  
 WERE FORWARDED TO NRC ON (Date)

3. THE PERSON TO BE CONTACTED REGARDING THE  
INFORMATION PROVIDED ON THIS FORM

NAME

Joseph R. Drugmand

TELEPHONE NUMBER (include Area Code)

(402) 221-7211

4. MAIL ALL FUTURE CORRESPONDENCE REGARDING THIS LICENSE TO

U.S. Army Corps of Engineers; Missouri River Division;  
ATTN: CEMRD-SO (Joseph R. Drugmand); P.O. Box 103, Downtown Station;  
Omaha, NE 68101-0103

#### CERTIFYING OFFICIAL

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

PRINTED NAME AND TITLE

Joseph R. Drugmand  
Radiation Protection Officer

SIGNATURE

Joseph R. Drugmand

DATE

28 May 93

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS  
REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001  
MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY  
OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

FILE CERTIFICATES AS FOLLOWS:

IF YOU ARE A DISTRIBUTOR OF EXEMPT PRODUCTS, SEND TO:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY  
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS  
U.S. NUCLEAR REGULATORY COMMISSION  
WASHINGTON, DC 20555-0001

ALL OTHERS, IF YOU ARE LOCATED IN:

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE,  
MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY,  
NEW YORK, PENNSYLVANIA, RHODE ISLAND, OR VERMONT,  
SEND APPLICATIONS TO:

LICENSING ASSISTANT SECTION  
NUCLEAR MATERIALS SAFETY BRANCH  
U.S. NUCLEAR REGULATORY COMMISSION, REGION I  
476 ALLENDALE ROAD  
KING OF PRUSSIA, PA 19406-1415

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH  
CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE,  
VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND  
APPLICATIONS TO:

NUCLEAR MATERIALS SAFETY SECTION  
U.S. NUCLEAR REGULATORY COMMISSION, REGION II  
101 MARIETTA STREET NW, SUITE 2900  
ATLANTA, GA 30323

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI,  
OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING SECTION  
U.S. NUCLEAR REGULATORY COMMISSION, REGION III  
788 ROOSEVELT ROAD  
GLEN ELLYN, IL 60137

ARKANSAS, COLORADO, IDAHO, KANSAS, LOUISIANA,  
MONTANA, NEBRASKA, NEW MEXICO, NORTH DAKOTA,  
OKLAHOMA, SOUTH DAKOTA, TEXAS, UTAH, OR WYOMING,  
SEND APPLICATIONS TO:

MATERIAL RADIATION PROTECTION SECTION  
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV  
800 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TX 76011-8064

ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON,  
WASHINGTON, AND U.S. TERRITORIES AND POSSESSIONS IN  
THE PACIFIC, SEND APPLICATIONS TO:

NUCLEAR MATERIALS SAFETY SECTION  
U.S. NUCLEAR REGULATORY COMMISSION, REGION V  
1450 MARIA LANE  
WALNUT CREEK, CA 94598-5368

COPY



RECEIVED

DEC 04 1991

REGULATORY AFFAIRS

STATE OF ILLINOIS  
DEPARTMENT OF NUCLEAR SAFETY  
1035 OUTER PARK DRIVE  
SPRINGFIELD, IL 62704  
(217) 785-9900

THOMAS W. ORTICIGER  
DIRECTOR

December 2, 1991

JIM EDGAR  
GOVERNOR

RADIOACTIVE MATERIALS LICENSE  
12-12836-01

Bryan W. Baker, Ph.D.  
Manager, Environmental and Safety  
Regulatory Affairs  
Amersham Corporation  
2636 South Clearbrook Drive  
Arlington Heights, Illinois 60005-4692

Post-it™ brand fax transmittal memo 7671 # of pages = 10

To	Joseph Drugmand	From	Kathy Morrison
Co.		Co.	Amersham
Dept.		Phone #	
Fax #	(402) 221-7449	Fax #	

SUBJECT: LICENSE RENEWAL APPLICATION

Dear Dr. Baker:

This is to acknowledge receipt of your application for the renewal of the Illinois Radioactive Material License identified above. Your application is deemed timely filed and, accordingly, the license will not expire until final action has been taken by this office.

Any correspondence regarding the renewal application should reference your license number and be submitted in duplicate.

This is an acknowledgement of receipt only. It is not a reply to your communication.

Sincerely,

Sandra M. Kessinger  
Licensing Section  
Division of Radioactive Materials

SMK

LM-004-01(12/87)

STATE OF ILLINOIS  
DEPARTMENT OF NUCLEAR SAFETY

RADIOACTIVE MATERIAL LICENSE

DIVISION OF NUCLEAR MATERIALS  
1035 OUTER PARK DRIVE  
SPRINGFIELD, ILLINOIS 62704

ISSUED in accordance with the Illinois Radiation Protection Act and the rules and regulations in 92 Illinois Administrative Code promulgated thereunder, and in reliance on the statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, own, possess and transfer radioactive material(s) listed herein, and to use such radioactive material(s) for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations and orders of the Illinois Department of Nuclear Safety now or hereafter in effect and to any conditions specified in the license.

Licensee: IBM Corporation South Clearbrook Drive Northbrook Heights, Illinois 60065  Contact: Bryan W. Baker, Ph.D. -Manager, Env. and Safety Reg. Affairs	LICENSE NUMBER 12-12836-01(IL)	EXPIRATION DATE December 31, 1991
	AMENDMENT NUMBER <input type="checkbox"/> INITIAL LICENSE      35	REFERENCE NUMBER 9110776
	<input type="checkbox"/> Initial License <input type="checkbox"/> Amendment      through Amendment      constitutes a complete license. <input type="checkbox"/> PREVIOUS AMENDMENTS ARE VOID.	

In accordance with letter dated February 1, 1989 License Number 12-12836-01(IL) is amended in its entirety.

RADIONUCLIDE	CHEMICAL and/or PHYSICAL FORM	MAXIMUM ACTIVITY* PER QUANTITY	MAXIMUM POSSESSION LIMIT
Any byproduct material with Atomic Number between 1 and 83, inclusive.	Any	The activity per single process where unsealed forms are used shall not exceed 1 Ci	30 Ci per radionuclide except: H-3      1,000 Ci C-14      50 Ci Co-60      250 Ci Kr-85      400 Ci Sr-90      250 Ci Cs-137    3,700 Ci Pu-239    100 Ci Gd-153      60 Ci Tm-170      50 Ci Ir-192      425 Ci
Any accelerator produced or naturally occurring radionuclide with atomic number between 1 and 105, inclusive.	Any		1 Ci per radionuclide except: Co-57      5 Ci Cd-109      5 Ci In-111      5 Ci Pb-201      10 Ci Ra-226      2 Ci

Signature: *Joseph G. Klingner*  
 Joseph G. Klingner, Head of Licensing Section

DATE	PAGE	OF	PAGES
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LM-004-02 (12/87)

STATE OF ILLINOIS  
DEPARTMENT OF NUCLEAR SAFETY  
RADIOACTIVE MATERIAL LICENSE

EE ham Corporation		LICENSE NUMBER 12-12836-01(IL)	AMENDMENT NUMBER <input type="checkbox"/> INITIAL LICENSE 35	EXPIRATION DATE December 31, 1991
W	RADIONUCLIDE	CHEMICAL and/or PHYSICAL FORM	MAXIMUM ACTIVITY PER SOURCE	MAXIMUM POSSESSION LIMIT

	Any accelerator produced or naturally occurring radionuclide with atomic number between 1 and 105, inclusive	Any	Each sealed source, or product not to exceed the limits specified 32 Ill. Adm. Code 330, Appendix B	Any
.	Po-208	Any		10 mCi
.	Po-209	Any		10 mCi
.	Po-210	Any		5 Ci
.	Ac-227	Any		10 mCi
.	Hp-237	Any	The activity per single process where unsealed forms are used shall not exceed 1 mCi	20 mCi
.	Am-241	Any	The activity per single process where unsealed forms are used shall not exceed 1 mCi	500 Ci
.	Cm-242	Any	The activity per single process where unsealed forms are used shall not exceed 1 mCi	20 mCi
.	Cm-244	Any	The activity per single process where unsealed forms are used shall not exceed 1 mCi	10 Ci
.	Cf-252	Any	The activity per single process where unsealed forms are used shall not exceed 1 mCi	3 mgram
M.	Pu-238	Sealed sources or leak test samples		5 gram

Reverts: mCi-Bq: Ci-Curie

ISSUED BY:  
Joseph G. Klinger, Head of Licensing Section  
3-0059

DATE: September 29, 1989 PAGE 2 OF 9 PAGES



VS.FLM-004-02 (12/87)

STATE OF ILLINOIS  
DEPARTMENT OF NUCLEAR SAFETY  
RADIOACTIVE MATERIAL LICENSE

OWNER Orsham Corporation	LICENSE NUMBER 12-12836-01(IL)	AMENDMENT NUMBER <input type="checkbox"/> INITIAL LICENSE 35	EXPIRATION DATE December 31, 1991
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ITEM	RADIOISOTOPE	CHEMICAL and/or PHYSICAL FORM	MAXIMUM ACTIVITY* PER SOURCE	MAXIMUM POSSESSION LIMIT
N.	Pu-239	Sealed sources or leak test samples		1 gram
O.	Pu-240	Sealed sources or leak test samples		0.2 gram
P.	Pu-241	Sealed sources or leak test samples		0.1 gram
Q.	Pu-242	Sealed sources or leak test samples		0.1 gram
R.	Pu-238	Sealed sources or leak test samples		2 ugram
S.	U-233	Sealed sources or leak test samples		0.1 gram
T.	U-235	Sealed sources or leak test samples		0.1 gram
U.	Mo-99/Tc-99m	Generators	10 Ci per generator	Any
V.	P-32	Any	3 Ci per item	30 Ci
W.	S-35	Any	3 Ci per item	30 Ci
X.	Xe-133	Gas or gas in solution	20 Ci per item	40 Ci
Y.	Th-227	Any		100 mCi
Z.	Th-228	Any		8 mCi
AA.	Th-229	Any		3 mCi
BB.	Th-230	Any		3 mCi
CC.	Th-232	Any		100 mCi
DD.	Pa-233	Any		2 mCi
EE.	U-232	Any		30 mCi
FF.	U-233	Any		100 mCi
GG.	U-234	Any		100 mCi
HH.	U-235	Any		100 mCi
II.	U-236	Any		100 mCi
JJ.	U-237	Any		2 mCi

\*Microcurie; mCi-Millicurie; Ci-Curie

DATE ISSUED BY:

Joseph G. Klinger, Head of Licensing Section  
173-0059

DATE

September 29, 1989

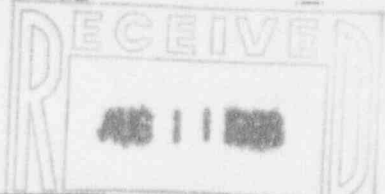
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S.FLM-004-02 (12/87)

STATE OF ILLINOIS  
DEPARTMENT OF NUCLEAR SAFETY  
RADIOACTIVE MATERIAL LICENSE

NAME rsham Corporation	LICENSE NUMBER 12-12836-01(IL)	AMENDMENT NUMBER <input type="checkbox"/> INITIAL LICENSE 35	EXPIRATION DATE December 31, 1991
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ITEM	RADIOISOTOPE	CHEMICAL and/or PHYSICAL FORM	MAXIMUM ACTIVITY* PER SOURCE	MAXIMUM POSSESSION LIMIT
KK.	U-238	Any		100 mCi
LL.	U-natural	Any		100 mCi
MM.	Pu-236	Any		2 mCi
NN.	Pu-237	Any		2 mCi
OO.	Pu-238	Any		3 mCi
PP.	Pu-239	Any		2 mCi
QQ.	Pu-240	Any		2 mCi
RR.	Pu-241	Any		100 mCi
SS.	Pu-242	Any		3 mCi
TT.	Cm-242	Any		100 mCi
UU.	Am-243	Any		8 mCi
IV.	In-111	Labeled Oxyquinoline Solution		15 Ci

PERMITTED USE:

- B., and through T. For storage and possession incident to:
- (1) Research and development as defined in 32 Ill. Adm. Code 310.20.
  - (2) Leak testing of sealed sources and/or devices.
  - (3) Assembling of sources into devices.
  - (4) Instrument calibration.
  - (5) Packaging for shipment.
  - (6) Dose profile characterizations.
  - (7) Commercial processing, manufacturing, fabrication of products, repackaging and storage.

Source: mCi-Batteries, Bi-Durlo

SIGNED BY: Joseph G. Klinger, Head of Licensing Section -0059	DATE September 29, 1989	PAGE 4	OF 9	PAGES
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464850

IDNS.FLM-004-02 (12/87)

STATE OF ILLINOIS  
DEPARTMENT OF NUCLEAR SAFETY  
RADIOACTIVE MATERIAL LICENSE

CORRECTED COPY

LICENSEE Amersham Corporation		LICENSE NUMBER 12-12836-01(IL)	AMENDMENT NUMBER <input type="checkbox"/> INITIAL LICENSE 35	EXPIRATION DATE December 31, 1991
ITEM	RADIONUCLIDE	CHEMICAL and/or PHYSICAL FORM	MAXIMUM ACTIVITY* PER SOURCE	MAXIMUM POSSESSION LIMIT

- (8) Distribution to persons authorized to receive the licensed material pursuant to the terms and conditions of a specific license issued by the U.S. Nuclear Regulatory Commission or an Agreement State, or to recipients in other states, in accordance with the particular state regulations applicable to the receipt and use of such material.
- (9) Demonstration of In vitro diagnostic kits, when the licensed material is less than exempt quantities as defined in 32 Ill. Adm. Code 330.40.
- C. Distribution to persons exempt from licensing pursuant to 32 Ill. Adm. Code 330.40(b), or to recipients in other states in accordance with the particular state regulations applicable to the receipt and use of such material.
- U. To be used for elution, preparation of reagent kits and testing of generators or eluates.
- V. thru X. Dispensing of bulk solutions into vials for distribution to persons authorized to receive the licensed material pursuant to the terms and conditions of a specific license issued by the U.S. Nuclear Regulatory Commission or an Agreement State.
- Y. thru UU. For storage and possession incident to:
- (1) Packaging for shipment.
- (2) Distribution to persons authorized to receive the licensed material pursuant to the terms and conditions of a specific license issued by the U.S. Nuclear Regulatory Commission or an Agreement State.
- VV. Distribution to persons specifically licensed pursuant to 32 Ill. Adm. Code 330.260, or to recipients in other states in accordance with the particular state regulations applicable to the receipt and use of such material.

CONDITIONS

1. A. Radioactive material shall be used only at the licensee's facilities located at 2636-38 South Clearbrook Drive, Arlington Heights, Illinois in accordance with statements, representations and procedures listed in License Condition 18.
- B. Radioactive material listed in License Schedule Item C. may be used at temporary jobsites of the licensee in the State of Illinois.

\*  $\mu$ Ci-Microcurie; mCi-Millicurie; Ci-Curie

PAGE 1 SIGNED BY:

Joseph G. Klinger, Head of Licensing Section

IL 473-0058

DATE

January 31, 1991

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OF

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IDHS.FLM-004 02 (4/89)

STATE OF ILLINOIS  
DEPARTMENT OF NUCLEAR SAFETY  
RADIOACTIVE MATERIAL LICENSE

CORRECTED COPY

LICENSEE Amersham Corporation		LICENSE NUMBER 12-12836-01(IL)	AMENDMENT NUMBER <input type="checkbox"/> INITIAL LICENSE 35	EXPIRATION DATE December 31, 1991
ITEM	RADEINCLIDE	CHEMICAL SYM OR PHYSICAL FORM	MAXIMUM ACTIVITY PER SOURCE	MAXIMUM POSSESSION LIMIT

(Condition 1. continued)

- C. The licensee's Radiation Protection and General Safety Committee shall review and approve operations and/or facilities for the use and storage of radioactive material located at the licensee's facilities at 2636-38 South Clearbrook Drive, Arlington Heights, Illinois in accordance with statements, representations and procedures listed in application dated February 1, 1989. The licensee shall maintain records of all approved use or storage locations for Department inspection.
- The licensee shall maintain records showing the receipt, transfer, use, storage and disposal of all sources of radiation in accordance with 32 Ill. Adm. Code 310.40.
  - Notwithstanding the restrictions specified elsewhere in this license, the licensee is authorized to distribute radioactive materials listed in License Schedule Item C, containing cerium-139 of not more than one microcurie to persons exempt from licensing pursuant to 32 Ill. Adm. Code 330.40(b), or to recipients in other states in accordance with the particular state regulations applicable to the receipt and use of such material.
  - Distribution of radioactive material in exempt quantities as authorized by this license shall be in accordance with 32 Ill. Adm. Code 330.280(b).
  - Radioactive material shall be used by, or under the supervision of, individuals designated by the licensee's Radiation Protection and General Safety Committee, Phillip G. Douglas, Ph.D., Chairman. The licensee shall maintain documentation of all individuals designated to use or supervise the use of radioactive material under this license.
  - The Radiation Safety Officer for the activities authorized by this license is Mark A. Doruff.
  - The licensee shall comply with the provisions of the regulations contained in 32 Ill. Adm. Code.
  - Any proposed change in primary packaging, product shielding, product labeling, or package insert, which changes either exposure to handlers and users, or recommended uses of material, shall be submitted to the Department. Any other change to packaging shielding, labeling, or package inserts shall be maintained by the licensee, and available for inspection by representatives of this Department.
  - Radioactive material manufactured for distribution as a pharmaceutical for human use shall be manufactured, labeled, and packaged in accordance with the Federal Food, Drug and Cosmetic Act.
  - Radioactive material shall not be used in or on human beings.

\* ACI - microcurie; mCi - millicurie;  $\mu$ Ci - Curie; MBq - Megabecquerel; GBq - Gigabecquerel; TBq - Terabecquerel;  $\mu$ g - gram;  $\mu$ g - microgram; ng - Nanogram

DATE	PAGE	OF	PAGES
January 31, 1991	6		9

PAID 1 SIGNED BY: *JES*  
Joseph E. Klinger, Head of Licensing Section

S.F.L.M-004-02 (12/87)

STATE OF ILLINOIS  
DEPARTMENT OF NUCLEAR SAFETY  
RADIOACTIVE MATERIAL LICENSE

LICENSEE Sham Corporation	LICENSE NUMBER 12-12836-01(IL)	AMENDMENT NUMBER <input type="checkbox"/> INITIAL LICENSE 35	EXPIRATION DATE December 31, 1991
FORM	RADIOISOTOPE	CHEMICAL and/or PHYSICAL FORM	MAXIMUM ACTIVITY PER SOURCE
			MAXIMUM POSSESSION LIMIT

- A. (1) Each sealed source acquired from another person and containing radioactive material, other than hydrogen-3, with a half-life greater than 30 days and in any form other than gas shall be tested for leakage and/or contamination before use. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to transfer, the sealed source received from another person 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 ten microcuries or less of alpha emitting material.
- B. Except for alpha sources, the periodic leak test required by this condition does not apply to sealed sources that have been removed from use and are in protective and secure storage. The sources excepted from this test shall be tested for leakage prior to use or transfer to another person, unless they have been leak tested within six months prior to the date of use or transfer.
- C. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to use or transfer as a sealed source. If the inspection or test reveals any construction defects or 0.005 microcurie or greater of contamination, or in the case of radium sources, the presence of 0.005 microcurie of external radon-daughter contamination or, the escape of radon at the rate of 0.001 microcurie or greater per 24 hours, the source shall not be used or transferred as a sealed source until it has been repaired, decontaminated and retested.
- D. Each sealed source containing radioactive material, other than hydrogen-3, with a half-life greater than 30 days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months except that each source designed for the purpose of emitting alpha particles shall be tested at intervals not to exceed three months.
- E. Leak tests shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample, or in the case of radium sources, the presence of 0.005 microcurie of external radon-daughter contamination or the escape of radon at the rate of 0.001 microcurie per 24 hours. The test samples shall be taken from the sealed source or from the surfaces of the device in which the sealed source is permanently or semipermanently mounted or stored upon which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for Department inspection for a period of five years from the date of analysis of the test sample.

Microcurie; mCi-Millicurie; Ci-Curie

ISSUED BY:  
eph G. Klinger Head of Licensing SectionDATE  
September 29, 1989

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DNS.FLM-004-02 (4/89)

STATE OF ILLINOIS  
DEPARTMENT OF NUCLEAR SAFETY  
RADIOACTIVE MATERIAL LICENSE

CORRECTED COPY

LICENSEE Amersham Corporation		LICENSE NUMBER 12-12836-01	AMENDMENT NUMBER <input type="checkbox"/> INITIAL LICENSE 35	EXPIRATION DATE December 31, 1991
ITEM	RADIOISOTOPE	CHEMICAL and/or PHYSICAL FORM	MAXIMUM ACTIVITY* PER SOURCE	MAXIMUM POSSESSION LIMIT

(Condition 11, continued)

- F. If the test required by subsection A, or D, of this condition reveals the presence of 0.005 microcurie or more of removable contamination, or in the case of radium sources, the presence of 0.005 microcurie of external radon-daughter contamination or the escape of radon at the rate of 0.001 microcurie or greater per 24 hours, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired, or to be disposed of in accordance with the 32 Ill. Adm. Code. A report shall be filed within five days of the test with the Department, describing the source and equipment involved, the test results and the corrective action taken.
- 12. In lieu of using the conventional radiation caution colors (magenta or purple on yellow background) as provided in 32 Ill. Adm. Code 340.2030(a)(1), the licensee is hereby authorized to label detector cells and cell baths containing radioactive material and used in gas chromatography devices with conspicuously etched or stamped radiation caution symbols without a color requirement.
- 13. A. Detector cells containing titanium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents foil temperatures from exceeding 225 degrees centigrade.  
B. Detector cells containing scandium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents foil temperatures from exceeding 325 degrees centigrade.
- 14. The licensee shall maintain and execute the response measure of the latest version of its Radiological Contingency Plan submitted to and approved by the Department. The licensee shall also maintain implementing procedures for its Radiological Contingency Plan as necessary to implement the plan. The licensee shall not make any change in its Radiological Contingency Plan that would decrease the response effectiveness of the plan without prior Departmental approval as evidenced by license amendment. The licensee may make changes to its Radiological Contingency Plan without prior Departmental approval if the changes do not decrease the response effectiveness of the plan. The licensee shall maintain records of changes that are made to the plan without prior approval and shall submit a report containing a description of each change to the Department within 30 days after the change is made.
- 15. The transport of radioactive material or delivery of radioactive material to a carrier for transport shall be in accordance with the provisions of 32 Ill. Adm. Code 341.
- 16. The licensee shall not transport plutonium by air, or deliver plutonium to a carrier for air transport, unless the conditions of 32 Ill. Adm. Code 341.160 have been met.

µCi-microcurie; mCi-millicurie; Ci-Curie; MBq-Megabecquerel; GBq-Gigabecquerel; TBq-Terabecquerel; g-gram; µg-microgram; kg-kilogram

PAGE 1 SIGNED BY: <i>Joseph G. Klinder</i> Joseph G. Klinder, Head of Licensing Section	DATE January 31, 1991	PAGE 8	OF 9	PAGES
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RFI M/006.02 (12/87)

STATE OF ILLINOIS

NAME -sham Corporation		LICENSE NUMBER 12-12836-01(IL)	AMENDMENT NUMBER <input type="checkbox"/> INITIAL LICENSE 35	EXPIRATION DATE December 31, 1991
FORM	RADIOISOTOPE	CHEMICAL AND/OR PHYSICAL FORM	MAXIMUM ACTIVITY PER SOURCE	MAXIMUM POSSESSION LIMIT

The licensee shall not transfer possession and/or control of materials or products containing radioactive material except:

- A. By transfer as waste to an authorized recipient;
- B. By transfer to a specifically licensed recipient; or
- C. As provided otherwise by specific conditions of this license.

Except as specifically provided otherwise by the license, the licensee shall manufacture, package, label, distribute, possess and use radioactive material described in all schedules of this license in accordance with statements, representations and procedures contained in, or enclosed with, the documents listed below. The regulations contained in 32 Illinois Administrative Code shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.

- A. Application dated February 1, 1989.
- B. Letters dated February 8, 1988 and July 31, 1989.
- C. Letters, with attachments, dated February 22, 1989 and August 14, 1989.
- D. Quality assurance program for Type B radioactive material transport packages as revised October 15, 1987.

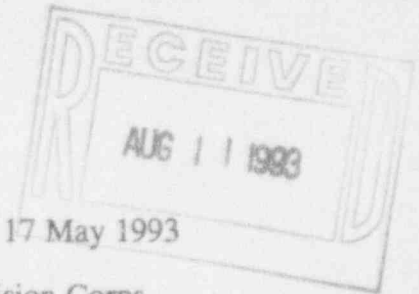
:KAA:jcm

Mercuric; mCl-48K source; Cl-Curie

SIGNED BY: eph G. Klinger, Head of Licensing Section	DATE September 29, 1989	PAGE 9	OF 9	PAGES
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DEPARTMENT OF THE ARMY  
U.S. ARMY IONIZING RADIATION DOSIMETRY CENTER  
LEXINGTON—BLUE GRASS ARMY DEPOT  
LEXINGTON, KY 40511-5102



AMXTM-SR-DN

MEMORANDUM FOR: Department of the Army, Missouri River Division Corps  
of Engineers, ATTN: CEMRD-SO, PO Box 103,  
Downtown Station, Omaha, NE 68101-0103

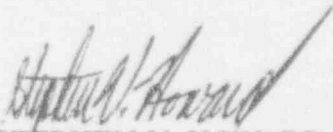
SUBJECT: Leak Test of Radioactive Sources

1. A review of our records indicates that the leak test performed at your installation on 18 August 1992 and received at this center on 24 August 1992, indicated the following amount of removable contamination.

NOMENCLATURE	SERIAL	MICROCURIES Alpha
Am-214	N268	0.000

Note: Detection Limit (LD) is 0.000002 uCi for Alpha.

2. Point of contact for this action is the undersigned, DSN 745-3942.

  
STEPHEN V. HOWARD  
Chief, Special Nuclear Services  
USAIRDC





# CHEM-NUCLEAR SYSTEMS INC.

P.O. Box 726 • Barnwell, South Carolina 29812 • (803) 259-1781

## STRAIGHT BILL OF LADING — SHORT FORM — ORIGINAL — NOT NEGOTIABLE. RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

The property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), Marked, consigned, and destined as indicated below, which said carrier (the word "carrier" being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination. And as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the uniform domestic, straight bill of lading set forth (1) in official Southern, Western and Illinois Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

(MAIL OR STREET ADDRESS OF CONSIGNEE — FOR PURPOSES OF NOTIFICATION ONLY.)

FROM Corps of Engineers - Missouri River Division Date 20 OCT 92  
At 420 South 18th Street, Omaha, NE 68102-2586

CONSIGNEE TO Tri-State Motor Transit Co

DESTINATION Amersham Corporation, 7636 S. Clearbrook Dr., Arlington Heights, IL  
STATE \_\_\_\_\_ COUNTY \_\_\_\_\_

\* Emergency Contact: Barnwell Security (803) 259-1786

TSMT Work Order  
Control Number  
540989

Tractor No. 770

Trailer No. 448619

LENGTH  
Legal

HEIGHT  
Legal

WIDTH  
Legal

NO. PKGS.	HM	KIND OF PACKAGE, DESCRIPTION OF ARTICLES, LINER NUMBERS, SPECIAL MARKS & EXCEPTIONS	*WEIGHT (Sub. to Correction)
1	X	Radioactive Material, N.O.S., UN 2982, RQ, 1 Drum containing a Americium-Beryllium source in a special form package. Radionuclide: Americium-241, beryllium Activity: 3.1 Curies Physical Form: Oxides <sup>Solid</sup> <del>pow</del> Chemical Form: Oxides Type Packaging: DOT 7A Type A Spec. Labels: Yellow III TI: 2.5  This shipment is consigned exclusive-use and shall not be loaded or unloaded by anyone other than the Consignor or Consignee. The vehicle is placarded "Radioactive"	152

IMPORTANT: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

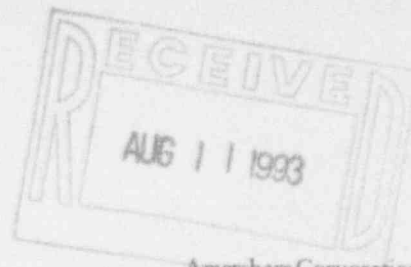
Signature Jeff Miller  
Company CNSI Date \_\_\_\_\_

Received the property described above in good condition, except as otherwise noted.

Carrier TSMT  
Driver Janice Clevenger  
Date and Time 10/21/92 0900

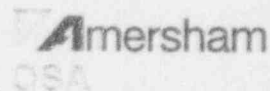
SCHEDULED TO ARRIVE	DATE	TIME	COMPLETED LOADING	DATE	TIME	SHIPPER'S SIGNATURE
	<u>10/21/92</u>	<u>8:00</u> A.M. P.M.		<u>10/21/92</u>	<u>9:30</u> A.M. P.M.	<u>[Signature]</u>
ARRIVED AT SHIPPER	DATE	TIME	LEFT SHIPPER	DATE	TIME	SHIPPER'S SIGNATURE
	<u>10/21/92</u>	<u>8:30</u> A.M. P.M.		<u>10/21/92</u>	<u>10:30</u> A.M. P.M.	<u>[Signature]</u>

SHIPPER IMPORTANT NOTE: Your signature certifies that the above dates and times are correct for record keeping and billing purposes.



Amersham Corporation  
2636 S. Clearbrook Drive  
Arlington Heights, IL 60005  
tel (708) 593-6300  
fax (708) 593-8091

May 5, 1993



Mr. Drugmand  
Department of the Army  
Missouri River Division  
Corps of Engineers  
P.O. Box 103, Downtown Station  
Omaha, NE 68101-0103  
Attention: CEMRD-SO

Dear Mr. Drugmand:

I am writing to inform you that we have taken formal possession of the 3.1 Ci Am-241/Be Neutron Source (S/N:N268) manufactured by General Nuclear. This source has been inspected and it has passed all visual and wipe leak tests. If there is any other questions that need to be answered, or information provided, please contact the Customer Service Department (1-800-323-6695) for further assistance.

I will send a similar letter to Mr. Styvaert at the Munitions and Chemical Command in Rock Island, IL.

Sincerely,

Richard Warsewa CSR  
Amersham Corporation  
Quality and Safety Assurance

/jc