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MATERIALS LICENSE

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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.

| | |
|---|--|
| <p>Licensee</p> <p>1. U.S. Army Communication-Electronics Command</p> <p>2. AMSEL-SF Fort Monmouth, New Jersey 07703-5024</p> | <p>In accordance with the letter dated May 13, 1998,</p> <p>3. License number 29-01022-14 is amended in its entirety to read as follows:</p> <p>4. Expiration date October 31, 2003</p> <p>5. Docket No. 030-29741 Reference No.</p> |
|---|--|

| 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. | A. |
| B. Cobalt 60 | B. | B. |
| C. Cobalt 60 | C. | C. |
| D. Krypton 85 | D. | D. |
| E. Strontium 90 | E. | E. |
| F. Strontium 90 | F. Sealed sources (ECOM Dwg. No. SM-B-509048) | F. Not to exceed 150 microcuries per source and 45 millicuries total |

Information in this record was deleted in accordance with the Freedom of Information Act, exemptions 2
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**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number
29-01022-14

Docket or Reference Number
030-29741

Amendment No. 17

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. Strontium 90

G.

G.

H. Strontium 90

H. Sealed sources (3M Dwg., No. 12-1921-0474-8)

H. Not to exceed 36 microcuries per source and 18 millicuries total

I. Cesium 137

I.

I.

J. Cesium 137

J.

J.

K. Plutonium 239

K. Electroplated sources (Eberline Instrument Corp., Model 594-1)

K. Not to exceed 23 micrograms (1.4 microcuries) per set and 0.0115 grams total

L. Americium 241

L. Sealed sources (Amersham Radiochemical Center, Amersham Code 2084)

L. Not to exceed 10 millicuries per source and 50 millicuries total

M. Americium 241

M. Sealed sources (Amersham Model AMR 8122)

M. Not to exceed 1 microcurie per source and 100 microcuries total

N. Americium 241

N. Sealed sources (Amersham Model AMRB 8152)

N. Not to exceed 10 microcuries per source and 50 microcuries total

O. Americium 241

O. Sealed sources (Amersham Model AMRB 1659)

O. Not to exceed 20 microcuries per source and 100 microcuries total

P. Thorium 230

P. Electroplated source (Eberline Instrument Corp., Model No. CS-12)

P. Not to exceed 0.98 micrograms (20 nanocuries) per source and 1 milligram total

Q. Thorium 232

Q. Metal foils

Q. Not to exceed 2.7 grams (300 nanocuries) per source and 4.05 kilograms total

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**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

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|---|
| License Number 29-01022-14 |
| Docket or Reference Number 030-29741 |
| Amendment No. 17 |

- | | | |
|---|--|--|
| 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 |
| R. Plutonium 239 | R. Electroplated sources (Eberline Instrument Corp., Model No. CS-1) | R. Not to exceed 163 nanograms (10 nanocuries) per source and 1 gram total |
| S. Thorium 232 | S. Solid (Thorium Fluoride coating on optical systems) | S. Not to exceed 3 grams (0.330 microcuries) per optical system and 40 kilograms total |
| T. Cesium 137 | T. [Redacted] | T. [Redacted] |
| U. Cesium 137 | U. [Redacted] | U. [Redacted] |
| V. Hydrogen 3 | V. Tritiated paint in Lensatic Compasses (NSN 6605-00-846-7618) | V. 120 millicuries per compass and 480 curies total |
| W. Hydrogen 3 | W. Sealed light sources in Lensatic Compasses (NSN-6605-00-151-5337) | W. 190 millicuries per compass and 5700 curies total |

9. Authorized use:

- A. through R. Calibration and operational checking of radiation detection instrumentation.
- S. Optical coating on thermal imaging devices.
- T. For use in FEMA Model CDV-794 calibrators for instrument calibrations.
- U. For use in FEMA Model CDV-790 calibrators for instrument calibrations.
- V. and W. For Possession, storage, and distribution to any U.S. Department of Defense elements and reserve components including the U.S. Army, U.S. Navy, U.S. Marine Corps, U.S. Air Force, Defense Supply Agency, the National Guard and the Air National Guard.

CONDITIONS

- 10. Licensed material may be used only at the licensee's facilities located at Fort Monmouth, New Jersey, and at Department of Defense installations anywhere in the United States.

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11. A. Licensed material shall only be used by, or under the supervision and in the physical presence of, individuals who have completed the training described in application dated July 20, 1992 and letter dated May 1, 1998, with enclosures.
- B. The Radiation Safety Officer for this license is Joseph M. Santarsiero.
12. A. Sealed sources and detector cells containing licensed material shall be tested for leakage and/or contamination at intervals not to exceed six months or at such other intervals as are specified by the certificate of registration referred to in 10 CFR 32.210, not to exceed three years.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed three months.
- C. In the absence of a certificate from a transferor indicating that a leak test has been made within six months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
- D. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.
- E. Sealed sources and detector cells need not be leak tested if:
- (i) they contain only hydrogen-3; or
 - (ii) they contain only a radioactive gas; or
 - (iii) the half-life of the isotope is 30 days or less; or
 - (iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or
 - (v) they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transfer 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.
- F. 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, a report shall be filed with the U.S. Nuclear Regulatory Commission and the source or detector cell shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within five days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region I, ATTN: Director, Division of Nuclear Materials Safety, 475 Allendale Road, King of Prussia, Pennsylvania 19406. The report shall specify the source or detector cell involved, the test results, and corrective action taken.

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- G. The licensee is authorized to collect leak test samples for analysis by licensee. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
13. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
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.
15. The licensee shall not acquire licensed material in a sealed source or device unless the source or device has been registered with the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or equivalent regulations of an Agreement State.
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 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 July 20, 1992
 - B. Letter dated June 15, 1993
 - C. Letter dated April 6, 1994
 - D. Letter dated February 28, 1997
 - E. Letter dated July 30, 1997
 - F. Letter dated August 27, 1997, with attachment
 - G. Letter dated September 10, 1997
 - H. Letter dated May 1, 1998
 - I. Letter dated July 2, 1998
 - J. Letter dated May 13, 1998, with attached survey report

For the U.S. Nuclear Regulatory Commission

*Original signed by Steven W. Shaffer*Date August 25, 1998

By

Steven W. Shaffer
Decommissioning and Laboratory Branch
Division of Nuclear Materials Safety
Region-I
King of Prussia, Pennsylvania 19406

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August 26, 1998

Docket Nos. 030-05248
030-29741
Control Nos. 125693
125694

License Nos. 29-01022-06
~~29-01022-14~~

Steven A. Horne
Director, Safety Risk Management
Department of the Army
U.S. Army Communications -
Electronics Command
Fort Monmouth, NJ 07703-5024

Dear Mr. Horne:

This refers to your license amendment request to amend NRC License Nos. 29-01022-06 and 29-01022-14. Enclosed with this letter are the amended licenses. The Antenna Test Field, designated survey zone 2 and the DIANA Project Site, designated survey zone 3, sub-zone east may be released for unrestricted use.

Please note that your most recent submittal did not include a full description of your QA/QC program for your field and laboratory instrumentation. Since this program has remained unchanged since your submittal in the fall of 1997 and has continued to be inspected throughout this project, the license actions were completed without requiring additional submittals. A full description of your QA/QC program should be submitted with each release request regarding the Evans Area. Also, note that the museum storage building, which was found to be contaminated with radium-226, upper walls and ceiling were not surveyed. If the contamination had been regulated by the NRC an unaffected area survey would have been required on the upper walls and ceiling of that building.

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.

ML10

S. Horne
Department of the Army

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Thank you for your cooperation.

Sincerely,

Original signed by Steven W. Shaffer

Steve W. Shaffer
Health Physicist
Decommissioning and Laboratory Branch
Division of Nuclear Materials Safety

Enclosure:
Amendment No. 45
Amendment No. 17

cc:
Joseph M. Santarsiero, Radiation Safety Officer

Jennifer Goodman, Research Scientist
State of New Jersey
Department of Environmental Protection
Radiation Protection Programs
Bureau of Environmental Radiation
P.O. Box 415
Trenton, NJ 08625-0415

TELEPHONE CONVERSATION LOG

| | | |
|---|--|--|
| PERSON CALLED: David Craig | ORGANIZATION: US Army Ft. Monmouth | TELEPHONE NUMBER: 732-427-5591 |
| LICENSE NUMBER: 29-01022-06; 29-01022-14 | DOCKET NUMBER: 030-05248; 030-29741 | MAIL CONTROL NUMBER: 125693; 125694 |

PERSON CALLING: Steve W. Shaffer (610) 337-5256
 USNRC Region I FAX Numbers
 475 Allendale Road (610) 337-5269 or
 King of Prussia, PA 19406 (610) 337-5393

SUBJECT: Need for Additional Information Regarding Release Request.

SUMMARY:

Mr. Craig called re regarding our conversation on August 3, 1998. He stated that he reviewed their original submittal and that the second volume contained the majority of the information I was requesting.

I reviewed the second volume and concurred with him.

FEE EXEMPT

ACTION REQUIRED/TAKEN: Have the MILESTONE 15 deleted from the system.

| | |
|---|----------------------|
| SIGNATURE: <i>SSW</i> Steve W. Shaffer | DATE: August 5, 1998 |
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TELEPHONE CONVERSATION LOG

| | | |
|---|---|--|
| PERSON CALLED: David Craig | ORGANIZATION: US Army Ft. Monmouth | TELEPHONE NUMBER: 732-427-5591 |
| LICENSE NUMBER: 29-01022-06; 29-01022-14 | DOCKET NUMBER: 030-05248; 030-29741 | MAIL CONTROL NUMBER: 125693; 125694 |
| PERSON CALLING: | Steve W. Shaffer USNRC Region I 475 Allendale Road King of Prussia, PA 19406 | (610) 337-5256 FAX Numbers (610) 337-5269 or (610) 337-5393 |
| SUBJECT: Need for Additional Information Regarding Release Request. | | |

SUMMARY:

I requested that the isotopic analysis of the soils from Sub-zone k be submitted. I also let Mr. Craig know that all subsequent submittals must include there QA/QC descriptions. I said Irealized that they are unchanged from the original release submittal, submitted last year, but they must be submitted each time. However for this action I would not require the information be submitted.

I also let Mr. Craig know that building which require decon. work are required to have their upper walls and ceilin surveyed at least at an unaffected area survey frequency. The old museum storage building which was only contaminated with radium fell under this category and was not surveyed. I let Mr. Craig know that I would inform the state of New Jersey.

ACTION REQUIRED/TAKEN: MILESTONE 15

| | |
|---|----------------------|
| SIGNATURE:  Steve W. Shaffer | DATE: August 3, 1998 |
|---|----------------------|



DEPARTMENT OF THE ARMY
 HEADQUARTERS, US ARMY COMMUNICATIONS-ELECTRONICS COMMAND
 AND FORT MONMOUTH
 FORT MONMOUTH, NEW JERSEY 07703-5000

REPLY TO
 ATTENTION OF

13 May 1998

Directorate of Safety Risk Management

U.S. Nuclear Regulatory Commission
 Region I, DNMS
 Attention: Mr. Steven W. Shaffer
 475 Allendale Road
 King of Prussia, PA 19406-1415

New Jersey Department of Environmental Protection
 Bureau of Environmental Radiation
 Attention: Jennifer Moon
 25 Arctic Parkway
 Ewing, NJ 08625-0415

This refers to US Nuclear Regulatory Commission (NRC) License Numbers 29-01022-06 and 29-01022-14 and to our Radiological Characterization Plan, date 6 September 1996.

We are hereby requesting that you grant unrestricted release to the portion of Fort Monmouth, New Jersey, Subpost Camp Evans covered by the accompanying radiological survey report. The portion of Camp Evans covered by this report is the Antenna Test Field, designated survey zone 2 and the DIANA Project Site, designated survey zone 3, sub-zone east.

Base Realignment and Closure (BRAC), Army Execution Plan, BRAC 93, Public Law 101-510, requires the closure of Camp Evans property and its release from US Army control. To facilitate timely completion of this plan radiological surveys are in progress. The accompanying radiological survey report covers portions of Camp Evans that are no longer used for any US Army activities. The remainder of Camp Evans is currently being surveyed or will be surveyed as radioactive material is removed from site.

We are requesting expeditious processing of this request for unrestricted release of this property so that we can begin the transfer of property from US Army control as soon as possible.

OFFICIAL RECORD COPY ML 10

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MAY 14 1998

Our Point of Contact is Mr. Joseph M. Santarsiero CECOM RPO
or Mr. David E. Craig, IceSolv, Inc, Contracted to the CECOM
Directorate of Safety Risk Management, Facsimile on (908) 542-
7161 or Voice on (908) 427-4427/3112.

Sincerely,



Steven A. Horne
Director

Copy Furnished:

Commander, U.S. Army Materiel Command, ATTN: AMCSF-P, 5001
Eisenhower Avenue, Alexandria, Virginia 22333-0001

1 2 5 6 9 4

This is to acknowledge the receipt of your letter/application dated

5-13-98, and to inform you that the initial processing which includes an administrative review has been performed.

There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

Please provide to this office within 30 days of your receipt of this card

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

Your action has been assigned Mail Control Number **125694**
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

Sincerely,
Licensing Assistance Team Leader