



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

November 26, 2004

Docket No. 030-35668
Control No. 135693

License No. 45-25551-01

Richard Stoermann
Acting Chief, Environment, Health & Safety
Defense Threat Reduction Agency
8725 John J. Kingman Road MS 6201
Fort Belvoir, VA 22060-6201

SUBJECT: DEFENSE THREAT REDUCTION AGENCY, ISSUANCE OF LICENSE
AMENDMENT, CONTROL NO. 135693

Dear Mr. Stoermann:

This refers to your license amendment request. Enclosed with this letter is the amended 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) 337-5239, so that we can provide appropriate corrections and answers.

An environmental assessment for this action is not required, since this action is categorically excluded under 10 CFR 51.22(c)(14).

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 NRC 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.

Thank you for your cooperation.

Sincerely,

Original signed by Bryan A. Parker

Bryan A. Parker
Health Physicist
Commercial and R&D Branch
Division of Nuclear Materials Safety

R. Stoermann
Defense Threat Reduction Agency

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Enclosure:
Amendment No. 8

cc:
Robert Burkhardt, Radiation Safety Officer

DOCUMENT NAME: E:\Filenet\ML043370009.wpd

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OFFICE	DNMS/RI	N	DNMS/RI		DNMS/RI			
NAME	BParker/BAP							
DATE	11/26/04							

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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.

<p>Licensee</p> <p>1. Defense Threat Reduction Agency</p> <p>2. 8725 John J. Kingman Road MS 6201 Fort Belvoir, Virginia 22060-6201</p>	<p>In accordance with the letter dated September 13, 2004,</p> <p>3. License No. 45-25551-01</p> <p>is amended in its entirety to read as follows:</p> <p>4. Expiration Date: April 30, 2011</p> <p>5. Docket No. 030-35668</p>	
<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Americium 241</p> <p>B. Californium 252</p> <p>C. Americium 241</p> <p>D. Barium 133</p> <p>E. Bismuth 207</p> <p>F. Californium 252</p>	<p>7. Chemical and/or physical form</p> <p>A. Sealed source (Gammatron Inc. Model AN-HP or AN-L-N)</p> <p>B. Sealed source (Frontier Technology Corporation Model 100 Series)</p> <p>C. Sealed source (Isotope Products Laboratories Models GF-241 and Am1.NO2)</p> <p>D. Sealed source (Isotope Products Laboratories Model GF-133 or HEG-0099)</p> <p>E. Sealed source (Isotope Products Laboratories Model GF-207)</p> <p>F. Sealed source (Isotope Products Laboratories Model N-252 or HEG-0099)</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. No single source to exceed 100 millicuries (mCi)] per source and 500 mCi total activity</p> <p>B. No single source to exceed 10 micrograms (5.2 mCi) per source and 50 micrograms (26 mCi) total activity</p> <p>C. No single source to exceed 100 mCi per source and 500 mCi total activity</p> <p>D. No single source to exceed 2 mCi per source and 40 mCi total activity</p> <p>E. No single source to exceed 10 microcuries (uCi) per source and 50 uCi total activity</p> <p>F. Not to exceed 1 mCi per source and 25 mCi total activity</p>

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| 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. Cobalt 60 | G. Sealed source (Isotope Products Laboratories Models GF-060 and GF-0245) | G. No single source to exceed 100 uCi per source and 1 mCi total activity |
| H. Cesium 137 | H. Sealed source (Isotope Products Laboratories Model GF-137 or HEG-0099) | H. No single source to exceed 50 uCi per source and 1 mCi total activity |
| I. Europium 152 | I. Sealed source (Isotope Products Laboratories Model GF-152) | I. No single source to exceed 20 uCi per source and 100 uCi total activity |
| J. Sodium 22 | J. Sealed source (Isotope Products Laboratories Model GF-022) | J. No single source to exceed 100 uCi per source and 500 uCi total activity |
| K. Cadmium 109 | K. Sealed source (Amersham Corp. Model CUC.D1 or CUCP.1; Isotope Products Model XFB Series 3204 and 3205; North American Scientific Model IND 1602; New England Nuclear Model NER-467 Capsule LE66 or NER-465) | K. No single source to exceed 20 mCi per source and 100 mCi total activity |
| L. Nickel 63 | L. Sealed source (Isotope Products Laboratories Model NER-004) | L. No single source to exceed 10 mCi per source and 1,000 mCi total activity |
| M. Americium 241 | M. Sealed source (Isotope Products Laboratories Model AF Series) | M. No single source to exceed 1 uCi per source and 5 uCi total activity |

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| 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 |
| N. Curium 244 | N. Sealed source (Isotope Products Laboratories Model AF Series) | N. No single source to exceed 1 uCi per source and 5 uCi total activity |
| O. Nickel 63 | O. Sealed source (Du Pont Merck Model NER-004R or AEA Technology QSA Models NBC and NBCD) | O. No single source to exceed 15 mCi per source and 1,000 mCi total activity |
| P. Cesium 137 | P. Sealed source (CPN Model CPN-131) | P. 10 mCi per source and 50 mCi total |
| Q. Americium 241 | Q. Sealed source (CPN Model CPN-131) | Q. 50 mCi per source and 250 mCi total |

9. Authorized use:

- A. For calibration and testing of radiation detection equipment.
- B. Used in conjunction with the Portable Isotopic Neutron Spectroscopy Chemical Assay system.
- C.-J., M. & N. Research and development, calibration and instrument checks.
- K. For use in NITON Corporation Model XL-II Series Field Portable X-ray Fluorescence Analyzers.
- L. For use in Ion Track Instruments, Inc. Model ITEMISER and VaporTracer2 Ion Mobility Spectrometers for detection of explosive and narcotic substances.
- O. For use in U. S. Army Models CAM or ICAM and Graseby Dynamics Limited Model GID-3 chemical agent detectors for the detection of hazardous elements.
- P. & Q. For use in CPN International Model 500 Series portable gauges for calibration and instrument checks.

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10. A. Licensed material may be used or stored only at the licensee's facilities located at:
- 1) DTRA Point of Entry, 44965 Aviation Drive, Dulles, Virginia;
 - 2) DTRA Headquarters Warehouse, 6750 Fleet Drive, Alexandria, Virginia;
 - 3) DTRA San Francisco Detachment, 510 Hickman Avenue, Building 250, Travis Air Force Base, California;
 - 4) 9001 McCutchen Road, Building 2476, Ft. Belvoir, Virginia;
 - 5) Area 300 Storage, Ft. Belvoir, Virginia;
 - 6) Technical On-site Inspection Site, Building PPC 481, Kirtland Air Force Base, Albuquerque, New Mexico; and
 - 7) Department of Defense installations and Formerly Used Defense Sites (FUDS) where the U. S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material.
- B. Licensed material may be used or stored at temporary job sites of the licensee anywhere the U. S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material.
11. The Radiation Safety Officer (RSO) for this license is Robert Burkhart, CHP, and in his absence, Elizabeth Jenny.
12. Licensed material shall be used by, or under the supervision and in the physical presence of, individuals who have received the training described in the application dated February 2, 2001. The licensee shall maintain records of individuals designated as users for three years following the last use of licensed material by the individual.
13. A. Sealed 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 the U. S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.

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- C. Sealed sources need not be 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 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 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, including leak test sample collection and analysis, shall be performed by the licensee or by other persons specifically licensed by the U.S. Nuclear Regulatory 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 five years.
14. Sealed sources or source rods containing licensed material shall not be opened or sources removed or detached from source rods or gauges by the licensee, except as specifically authorized.
15. The licensee shall conduct a physical inventory every six months, or at other intervals approved by the U. S. Nuclear Regulatory Commission, 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. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in 10 CFR 30.35(d) for establishing decommissioning financial assurance.
17. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

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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 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 February 2, 2001
- B. Letter dated December 26, 2001 [add storage location (6750 Fleet Dr., Alexandria, VA); and add alt RSO]
- C. Letter dated May 24, 2002 [add NITON Cd-109 devices]
- D. Letter dated May 30, 2002 [add Ion Track Ni-63 devices]
- E. Letter dated July 11, 2002 [add location (Aviation Dr); delete location (Willard Rd), incl leak test]
- F. Letter dated September 24, 2002 [clarify location (Aviation Dr); add sources; revise audit program]
- G. Letter dated December 27, 2002 [add Ni-63 CAM devices, and add alt RSO]
- H. Letter dated March 20, 2003 [add Ni-63 source and add'l storage location]
- I. Letter dated December 15, 2003 [add Co-60 & Am-241 sources; add storage locations (McCutchen Rd., Ft. Belvoir & TOSI, Kirtland AFB); delete location (Remote Sensing Lab, Andrews AFB)]
- J. Letter dated February 24, 2004 [add authorization to conduct leak test analysis]

For the U. S. Nuclear Regulatory Commission

Date November 26, 2004

By **Original signed by Bryan A. Parker**
Bryan A. Parker
Commercial and R&D Branch
Division of Nuclear Materials Safety
Region I
King of Prussia, Pennsylvania 19406