



Tennessee Valley Authority
1101 Market Street, LP 3R
Chattanooga, Tennessee 37402-2801

R. M. Krich
Vice President
Nuclear Licensing

May 26, 2010

Br 3

10 CFR 30.38

Licensing Assistance Team
Division of Nuclear Materials Safety
U.S. Nuclear Regulatory Commission, Region I
475 Allendale Road
King of Prussia, PA 19406-1415

Tennessee Valley Authority
Material License No. 41-25219-01
Docket No. 030-32925

2010 MAY 27 AM 10:47

RECEIVED
REGION 1

Subject: **By-Product Material License Amendment Request for Tennessee Valley Authority's Cumberland Fossil Plant**

The Tennessee Valley Authority (TVA) requests an amendment to the subject by-product material license. The purpose of this amendment is to request removal of a sealed neutron source and applicable references. TVA has transferred the NuMat On-Line Elemental Coal Analyzer containing the source to Western Kentucky University in accordance with the requirements of 10 CFR 30.41, "Transfer of byproduct material."

Enclosure 1 provides a copy of the proposed amendment that is keyed to NRC Form 313. A list of License Conditions requested to be removed from the license is provided. These License Conditions are those associated with the transferred NuMat On-Line Elemental Coal Analyzer. Enclosure 2 provides a copy of the current License Amendment No. 7 with the requested deleted License Conditions shown lined-out.

Also included in Enclosure 1 is a request to change the "Name of the Applicant" in License Application Item 2 (License Condition 1) due to organization name change. The change is shown in bold type.

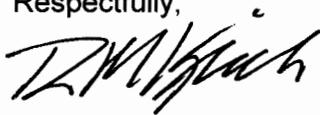
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NMSS/RGN1 MATERIALS-002

U.S. Nuclear Regulatory Commission
Page 2
May 26, 2010

In accordance with the requirements of 10 CFR 170.11 (a) (4), an amendment fee is not required. If you have any questions regarding this amendment request, please contact Kevin Casey at (423) 751-8523.

Respectfully,

A handwritten signature in black ink, appearing to read "R. M. Krich", written in a cursive style.

R. M. Krich

Enclosures

1. TVA's Proposed License Amendment [Keyed to NRC Form 313]
2. Copy of License 41-25219-01 Amendment No. 7 With Requested Deleted Sections Shown Lined-Out

cc (Enclosures):

NRC Document Control Desk

ENCLOSURE 1

**TVA'S Proposed License Amendment
[Keyed to NRC Form 313]**

APPLICATION FOR MATERIALS LICENSE

Estimated burden per response to comply with this mandatory collection request: 4.3 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

OFFICE OF FEDERAL & STATE MATERIALS AND ENVIRONMENTAL MANAGEMENT PROGRAMS
DIVISION OF MATERIALS SAFETY AND STATE AGREEMENTS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM
DIVISION OF NUCLEAR MATERIALS SAFETY
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

IF YOU ARE LOCATED IN:

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

MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
612 E. LAMAR BOULEVARD, SUITE 400
ARLINGTON, TX 76011-4125

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PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR (Check appropriate item)

- A. NEW LICENSE
- B. AMENDMENT TO LICENSE NUMBER **41-25219-01**
- C. RENEWAL OF LICENSE NUMBER

2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)

**Tennessee Valley Authority
Senior Vice President, Fossil Generation
1101 Market Street
Chattanooga, Tennessee 37402-2801**

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

**Cumberland Fossil Plant
Tennessee Valley Authority
Cumberland City, TN 37050**

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Kevin E. Casey
TELEPHONE NUMBER

(423) 751-8523

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

- 5. RADIOACTIVE MATERIAL**
a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.
- 7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.**
- 9. FACILITIES AND EQUIPMENT.**
- 11. WASTE MANAGEMENT.**

- 6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.**
- 8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.**
- 10. RADIATION SAFETY PROGRAM.**
- 12. LICENSE FEES (See 10 CFR 170 and Section 170.31)**

FEE CATEGORY	AMOUNT ENCLOSED	\$

13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 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.

CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE

R. M. Krich, VP Nuclear Licensing

SIGNATURE

DATE

5/26/10

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		

APPROVED BY

DATE

144719

License Condition 1

License Application Item 2

Name and Mailing Address of Applicant

2. Tennessee Valley Authority
Senior Vice President, Fossil Generation
1101 Market Street
Chattanooga, Tennessee 37402-2801

The following License Conditions are requested to be deleted from the license due to transfer of the NuMat On-Line Elemental Coal Analyzer. Enclosure 2 provides a copy of the current License No. Amendment 7 with these requested deleted License Conditions shown lined-out.

- 6.A delete "Byproduct, source, and/or special nuclear material" 6.A
- 7.A delete "Chemical and/or physical form" 7.A
- 8.A delete "Maximum amount that licensee may possess at any one time under this license"
8.A
- 9.A delete "Authorized use" 9.A
- 11.A delete "Condition" 11.A
- 19.A delete "Condition" 19.A
- 19.B delete "Condition" 19.B
- 19.C delete "Condition" 19.C
- 26.A delete "Reference" 26.A
- 26.B delete "Reference" 26.B
- 26.C delete "Reference" 26.C

ENCLOSURE 2

Copy of License 41-25219-01 Amendment No. 7
With Requested Delete Sections Shown Lined-Out

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 style="text-align: center;">Licensee</p> <p>1. Tennessee Valley Authority Executive V.I.P., Fossil Fuel Group</p> <p>2. 1101 Market Street Chattanooga, Tennessee 37402-2801</p>	<p>In accordance with the letter dated April 15, 2005,</p> <p>3. License number 41-25219-01 is amended in its entirety to read as follows:</p> <hr/> <p>4. Expiration date March 31, 2013</p> <hr/> <p>5. Docket No. 030-32925 Reference No.</p>
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<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Hydrogen 3</p> <p>B. Cesium 137</p>	<p>7. Chemical and/or physical form</p> <p>A. Sealed neutron source (EMR Photoelectric Model 761)</p> <p>B. Sealed Sources (Ohmart Corp Models A-2100 and A-2102, Thermo Measure Technology Models 696894 and 57157)</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. 10 curies per source</p> <p>B. No single source to exceed the maximum activity specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State</p>
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9. Authorized use.
- A. ~~For use in a MF Physics Corporation Model A-325 LL Neutron Generator Accelerator Head device (contained in a NuMat On-Line Elemental Coal Analyzer) for coal neutron activation analysis.~~
- B. To be used, for measuring properties of materials, controlling industrial processes, in fixed gauging devices that have been registered either with the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or with an Agreement State and have been distributed in accordance with a Commission or Agreement State specific license authorizing distribution to persons specifically authorized by a Commission or Agreement State license to receive, possess, and use the devices.

CONDITIONS

10. Licensee material may be used or stored only at the licensee's facilities located at Cumberland Fossil Plant, Cumberland City Road, Cumberland, Tennessee.

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number
41-25219-01

Docket or Reference Number
030-32925

Amendment No. 07

11. A. ~~Licensed material in Item 6.A. shall be used by persons who have received training in the use of the neutron generator as provided in by the vendor at the time of installation, and have received annual refresher training provided by the TVA Radiation Safety Staff.~~
- B. Licensed material in Item 6.B. shall be used by, or under the supervision of James M. Grasty, or other individuals who have received the training described in the application dated November 25, 2002, and have been designated, in writing, by the Radiation Safety Officer. The licensee shall maintain records of individuals designated as users for 3 years following the last use of licensed material by the individual.
12. The Radiation Safety Officer for this license is James M. Grasty.
13. 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.
14. A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed six months or at 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.
- 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.

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number

41-25219-01

Docket or Reference Number

030-32925

Amendment No. 07

- 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 5 years.
15. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
16. 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.
17. A. Each gauge shall be tested for the proper operation of the on-off mechanism (shutter) and indicator, if any, at intervals not to exceed 6 months or at such longer intervals as specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or the equivalent regulations of an Agreement State.
- B. Notwithstanding the periodic on-off mechanism (shutter) and indicator test, the requirement does not apply to gauges that are stored, not being used, and have the shutter lock mechanism in a locked position. The gauges exempted from this periodic test shall be tested before use.
18. A. Installation, initial radiation surveys, relocation, removal from service, alignment, replacement, and non-routine maintenance of Ohmart Corporation, and Texas Nuclear Corporation/Thermo Measure Tech fixed gauging devices shall be performed only by the licensee, or other individuals who have completed the training specified in letter dated March 19, 2003, or by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
- B. The following services shall not be performed by the licensee: dismantling, disposal of the sealed sources and repair of components related to the radiological safety of the gauge. These services shall be performed only by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
19. ~~A. The following services for NuMat On-Line Elemental Coal Analyzer shall not be performed by the licensee: installation, relocation, removal from service, dismantling, alignment, replacement, disposal of the sealed source and non-routine maintenance or repair of components related to the radiological safety of the device (including the sealed source, the neutron generator accelerator head, on-off mechanism, any component of the safety interlock system, and shielding). These services shall be performed only by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.~~

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number
41-25219-01

Docket or Reference Number
030-32925

Amendment No. 07

- ~~B. Prior to initial use and after installation, relocation, dismantling, alignment, or any other activity involving the source or removal of the shielding, the licensee shall assure that a radiological survey is performed to determine radiation levels around, above and below the NuMat On-Line Elemental Coal Analyzer with the Neutron Generator Tube in operation. This survey shall be performed only by TVA's Radiation Safety Staff or other persons authorized to perform such services by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services. A record of the results of this survey shall be maintained for the duration of the license.~~
- ~~C. The licensee shall test the safety interlock system of the NuMat On-Line Elemental Coal Analyzer prior to initial use and at intervals not to exceed six months, or following any repairs of the safety interlock system.~~
20. The licensee may initially mount a gauge if permitted by the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State and under the following conditions:
- A. The gauge must be mounted in accordance with written instructions provided by the manufacturer;
 - B. The gauge must be mounted in a location compatible with the "Conditions of Normal Use" and "Limitations and/or Other Considerations of Use" in the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State;
 - C. The on-off mechanism (shutter) must be locked in the off position, if applicable, or the source must be otherwise fully shielded;
 - D. The gauge must be received in good condition (i.e., package was not damaged); and
 - E. The gauge must not require any modification to fit in the proposed location.
- Mounting does not include electrical connection, activation or operation of the gauge. The source must remain fully shielded and the gauge may not be used until it is installed and made operational by a person specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such operations.
21. A. The licensee may maintain, repair, or replace device components that are not related to the radiological safety of the device and that do not result in the potential for any portion of the body to come into contact with the primary beam or in increased radiation levels in accessible areas.
- B. The licensee may not maintain, repair, or replace any of the following device components: the sealed source, the source holder, source drive mechanism, on-off mechanism (shutter), shutter control, or shielding, or any other component related to the radiological safety of the device, except as provided otherwise by specific condition of this license.
22. Prior to initial use and after installation, relocation, dismantling, alignment, or any other activity involving the source or removal of the shielding, the licensee shall assure that a radiological survey is performed to

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number
41-25219-01

Docket or Reference Number
030-32925

Amendment No. 07

determine radiation levels in accessible areas around, above, and below the gauge with the shutter open. This survey shall be performed only by persons authorized to perform such services by the U.S. Nuclear Regulatory Commission or an Agreement State.

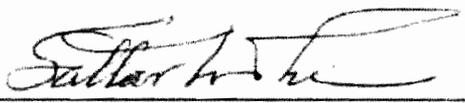
23. The licensee shall operate each device containing licensed material within the manufacturer's specified temperature and environmental limits such that the shielding and shutter mechanism of the source holder are not compromised.
24. The licensee shall assure that the shutter mechanism, for each device containing licensed material, is locked in the closed position during periods when a portion of an individual's body may be subject to the direct radiation beam. The licensee shall review and modify, as appropriate, its "lock-out" procedures whenever a new device is obtained to incorporate the device manufacturer's recommendations.
25. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
26. 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. ~~Letter dated December 3, 2001 (ML020070395)~~
 B. ~~Letter dated February 28, 2002 (ML020640398)~~
 C. ~~Letter dated June 10, 2002 (ML021640401)~~
 D. Letter dated September 11, 2002 (ML030990639)
 E. Facsimile dated September 11, 2002 (ML022820636)
 F. Application dated November 25, 2002 (ML030990621)
 G. Letter dated March 12, 2003 (ML030760747)
 H. Letter dated March 19, 2003 (ML031600907)

For the U.S. Nuclear Regulatory Commission

Date June 13, 2005

By


 Sattar Lodhi, Ph.D.
 Materials Security and Industrial Branch
 Division of Nuclear Materials Safety
 Region I
 King of Prussia, Pennsylvania 19406

732110

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

5/26/2010, and to inform you that the initial processing which includes an administrative review has been performed.

AMCARD. 41-25219-01
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** 144719.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.