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

R. M. Krich
Vice President
Nuclear Licensing

MSIB
J-6

January 21, 2011

10 CFR 30.38
NRC Form 313

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

RECEIVED
REGION 1
2011 JAN 25 AM 11:11

Tennessee Valley Authority
Material License No. 41-08165-18
Docket No. 030-35695

Subject: **Response to Request For Additional Information - By-Product Material License No. 41-08165-18 - License Amendment for Tennessee Valley Authority's Central Laboratories**

References:
1. Letter from TVA to NRC, "By-Product Material License No. 41-08165-18 - License Amendment for Tennessee Valley Authority's Central Laboratories," dated December 9, 2010
2. Letter from NRC to TVA, "Tennessee Valley Authority, Request for Additional Information Concerning Application for Amendment to License, Control No. 574066," dated December 22, 2010

By letter dated December 9, 2010 (Reference 1), the Tennessee Valley Authority (TVA) requested an amendment to the subject material license. The purpose of the amendment is to request a change to the individual responsible for the use of licensed material. By letter dated December 22, 2010 (Reference 2), the NRC requested additional information regarding the amendment. The NRC indicated that the subject information should be submitted within 30 calendar days which TVA determined to be January 21, 2011.

574066

NMSS/RGN1 MATERIALS-002

Enclosure 1 provides TVA's response to the Reference 2 RAI. Enclosure 2 provides a copy of the proposed amendment that is keyed to NRC Form 313. A revision bar has been added and the requested change to the license has been bolded to highlight the proposed revision. The change is made in License Application Item 7, "Individual(s) Responsible for Radiation Safety Program and Their Training Experience," (License Condition 11.A).

In accordance with the requirements of 10 CFR 170.11(a)(4), a renewal fee is not required.

There are no new regulatory commitments contained in this letter. If you have any questions concerning this issue, please contact Josh Perrel at (423) 751-7737.

Respectfully,

R. M. Krich

cc (Enclosures):
U.S. NRC Document Control Desk

ENCLOSURE 1

Tennessee Valley Authority

Response to Request for Additional Information Regarding Application for Amendment to By-Product Material License 41-08165-18

NRC Question

You have proposed Sammy R. Walker to be an authorized user on your license. You have submitted his radiation training and experience with radioactive materials in support of his qualification. Based on your submittal, it does not appear that Mr. Walker has any experience in handling radioactive material and thus does not appear to be qualified to be an authorized user. Please provide additional information associated with Mr. Walker's radioactive material handling experience or alternatively submit another candidate to be an authorized user.

TVA Response

TVA has reviewed the training and qualification criteria in NUREG-1556, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Service Provider Licenses," (Volume 18) and has identified an individual with enhanced qualifications. That individual is Alyce B. Brooks. The training on radiation safety topics provided by TVA to Ms. Brooks as well as Ms. Brooks' resume are provided in Enclosure 2.

In her duties as Operation Manager - Central Laboratories Services, Ms. Brooks has:

1. Received and handled contaminated test equipment from each of the three TVA Nuclear sites, including packaging the contaminated equipment for shipment.
2. Provided technical advice for calibration of contaminated test equipment.
3. Tracked contaminated test equipment while at Central Laboratories and ensured that all test equipment shipped is returned to the site.
4. Coordinated with Radiation Safety personnel to schedule shipments and calibrations, and assisted with the receipt and shipment of contaminated test equipment.

The Radiation Safety Officer listed on the license confirmed that Ms. Brooks has experience handling radioactive material and that he has supervised her performing the tasks authorized on the license commensurate with the expected hazards. He has assessed that Ms. Brooks is qualified to work independently by observing Ms. Brooks performing licensed activities.

ENCLOSURE 2

TVA'S PROPOSED LICENSE AMENDMENT

[Keyed to NRC Form 313]

NRC FORM 313 (3-2009) 10 CFR 30, 32, 33, 34, 35, 36, 39, and 40	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB: NO. 3150-0120	EXPIRES: 3/31/2012

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

03035695

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 **41-08165-18**

C. RENEWAL OF LICENSE NUMBER

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

Tennessee Valley Authority
PSC 1B-C
1101 Market Street
Chattanooga, Tennessee 37402-2801

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

TVA Central Laboratories Services Building
Chickamauga Power Services Center
N. Side Chickamauga Reservation
Chattanooga, Tennessee

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Joshua Perrel

TELEPHONE NUMBER

(423) 751-7737

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.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM

11. WASTE MANAGEMENT.

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	SIGNATURE	DATE
R.M. Krich, Vice President, Nuclear Licensing		1/24/2011

FOR NRC USE ONLY

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

APPROVED BY | DATE

Proposed Changes

License Application Item 7

(License Condition 11)

Individual(s) Responsible for Radiation Safety Program
And Their Training Experience

11.A. Licensed material shall be used by, or under the supervision of, **Alyce B. Brooks.**

Training and Experience
(including resume)

Ms. Brooks completed TVA's Radiation Safety Training course on August 27, 2010. This training was presented by James B. Colagross, Radiation Safety Supervisor. Ms. Brooks' work and education experience is provided on the attached resume.

The Radiation Safety Training objectives included:

I. Introduction

II. Basic Principles

A. Basic Atomic and Nuclear Structure
1. Atoms and Elements
2. Fundamental Particles (Protons, Neutrons, and Electrons)
3. Isotopes and half-life

B. Types of Radiation - Properties, Absorption, and Shielding
1. Alpha + 2 charge
2. Beta -1 charge
3. Gamma radiation and X-rays no charge

C. Radioactive Decay and Half-life
1. The Curie and Millicurie - Typical quantities for this license
2. Decay Curves

D. Interaction of Radiation With Matter
1. Ionization and Excitation
2. Different Penetrating Power of Alpha, Beta, and Gamma Rays

E. Sources of Radiation
1. Natural - Cosmic, solar, terrestrial, food, geographic location, elevation
2. Man-made - Medical, nuclear-power, others

F. Difference Between Contamination and Radiation

III. Radiation Measurements and Monitoring Techniques

A. Dose Units
Roentgen, Rem, and Rad - Typical doses/dose rates for this license

B. Radiation Monitoring Equipment - Instruments
Survey Meters, How to Read, Dosimeters (TLD Badges), Friskers

IV. Radiation Protection Standards, Guidelines and Control Methods and Postings

A. Code of Federal Regulations, Title 10, Energy, Chapter 1, Nuclear Regulatory Commission
   1. Part 19 - Notices, Instructions, and Reports to Workers
   2. Part 20 - Standards for Protection Against Radiation
   3. Part 21 - Reporting of Defects and Noncomplicance

B. The Energy Reorganization Act of 1974

C. NRC Form 3

D. NRC License Overview/Conditions
   1. Locations
   2. Authorized Users and Supervision
   3. Leak Testing
   4. Source Inventory
   5. Records
   6. Security

E. Additional Requirements, Guidance and Regulations (EPP, RSC, and RCS)

V. Principles of Controlling Dose
   1. Prevent Contamination and Its Spread for Internal Dose
   2. ALARA - As Low As Reasonability Achievable (Time, Distance, and Shielding)
   3. Barricades, Signs, Symbols, and Posting
   4. NRC and TVA Permissible Dose Limits - Unrestricted and Restricted Areas
   5. Radioactive Material Signs
   6. Radiation Area Sign

VI. Prenatal Indoctrination (Appendix to Reg. Guide 8.13 and 8.29)

VII. Biological Effects of Radiation

A. Types of Effects
   1. Genetic or Somatic
   2. Stochastic or Non-stochastic
   3. Short Term or Long Term Effects
   4. Acute or Chronic

B. Risk Factors and Comparison with other Risks

VIII. Radioactive Material Shipments

A. What to Do When a Shipment Arrives

B. What to Do When We need to Ship Our Radioactive Material

IX. Emergency Response Procedures

Alyce B Brooks

[redacted]abbrooks@tva.gov

Experience

October 1979 to January 1985 — Tennessee Valley Authority — Soddy-Daisy, TN/ Spring City, TN

Instrument Mechanic Apprentice/Instrument Mechanic

- Enrolled in TVA Instrument Mechanic Apprenticeship Program. Training included nuclear plant operation, instrumentation as well as radiological practices.

January 1985 to January 1986 — Workforce, Inc — Clinton, IL

Instrument Technician

- Responsible for initial calibration of plant instrumentation at Clinton Power Station
- Maintained radiological training and general employee training for security access.

January 1986 to October 1987 — WISCO — Waynesboro, GA

Instrument Technician/Procedure Writer

- Responsible for calibration of plant instrumentation at Vogtle Nuclear Plant
- Maintained security access to the plant which included radiological training.

January 1989 to October 2008 — Tennessee Valley Authority — Soddy-Daisy, TN

Measuring and Test Equipment Supervisor

- Responsible for the M&TE Program at Sequoyah Nuclear Plant.
- Responsible for maintaining M&TE in the Radiological Controlled and Clean Areas. Duties included calibration scheduling for offsite and onsite calibration of contaminated test equipment. Coordinated with the Radiological Control Group (RCG) for shipments to Central Laboratories which included surveying and packaging to meet procedural requirements. Other duties included working with the RCG on surveys of test equipment exiting the RCA, and handling and control of test equipment for decontamination.
- Maintained security access which included Radiological, Fitness for Duty, and Plant Access Training
- Purchased and maintained test equipment for Sequoyah Dry Cask Campaigns. Coordinated post testing of instrumentation with Central Laboratories. Maintained round the clock support for post testing and calibration activities.

October 2008 to present — Tennessee Valley Authority — Chattanooga, TN

Operations Manager - Central Laboratories Services

- Received contaminated shipments from TVA Nuclear sites. Provided support of calibrations at Central Laboratories which included coordination of radiological shipments with the RSO. Continue to maintain Nuclear Plant and RCA Access at TVA's nuclear plants. Training also includes CLS Radiological Training in support of hot shipments to CLS.