



704 S. Illinois Avenue, Suite C203
Oak Ridge, Tennessee 37830
Phone: 865-425-0002
Fax: 865-425-0029

March 25, 2002

Nuclear Materials Licensing Section
U.S. Nuclear Regulatory Commission
101 Marietta Street, NW, Suite 2900
Atlanta, GA 30323-0199

RE: EMERGENCY-PRIORITY License Application

Dear Sir/Madam:

Enclosed please find NRC Form 313, Duratek Federal Services' application for a Radioactive Material License, accompanied by the Application Fee in the amount of \$1300 as instructed by Ms. Shirley Crutchfield. Per my telephone conversation with Ms. Cynthia Taylor on March 14, 2002, I am requesting an emergency priority be placed on this application. I am the proposed Radiation Safety Officer (RSO) for this license. In the event the Commission does not approve me as the RSO, David Williams will be the proposed RSO.

The following additional documents are included with this Application:

- Summary of my experience and qualifications
- Copy of Troxler training certificate for Mr. David Williams, our alternately-proposed RSO in the event I am rejected as the RSO;
- Copy of correspondence from NIST affirming the essential similarity of the NVLAP and DOELAP accreditation programs for personnel dosimetry devices;
- A copy of our leak testing procedure and the instrumentation to be used.

I trust you will find everything in order. If you have any questions or require additional information, please feel free to contact me at the address above, by telephone at (865) 574-6517 or by email at gmarshall@duratekinc.com.

Sincerely,

A handwritten signature in cursive script that reads "Glenn R. Marshall".

Glenn R. Marshall
Senior Radiological Control Technician

GRM:mjm

cc: Paul Corpstein David Pope
 Jeff MacDonald Project File
 Don Miller

EMERGENCY-- PRIORITY

Appendix A

<p>NRC FORM 313 (7-98) 10 CFR 30, 32, 33 34, 35, 36, 39 and 40</p>	<p>U. S. NUCLEAR REGULATORY COMMISSION</p>	<p>APPROVED BY OMB: NO. 3180-0120</p>	<p>EXPIRES: 7/31/99</p>		
<p>APPLICATION FOR MATERIAL LICENSE</p>		<p>Estimated burden per response to comply with this information collection request: 7 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. Forward comments regarding burden estimates to the Information and Records Management Branch (T-8 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0120), Office of Management and Budget, Washington, DC 20503. NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.</p>			
<p>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.</p>					
<p>APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:</p> <p>DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS U.S. NUCLEAR REGULATORY COMMISSION WASHINGTON, DC 20555-0001</p> <p>ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:</p> <p>IF YOU ARE LOCATED IN:</p> <p>CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:</p> <p>LICENSING ASSISTANT SECTION NUCLEAR MATERIALS SAFETY BRANCH U.S. NUCLEAR REGULATORY COMMISSION, REGION I 475 ALLENDALE ROAD KING OF PRUSSIA, PA 19408-1415</p> <p>ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:</p> <p>NUCLEAR MATERIALS LICENSING SECTION U.S. NUCLEAR REGULATORY COMMISSION, REGION II 101 MARIETTA STREET, NW, SUITE 2900 ATLANTA, GA 30323-0199</p>		<p>IF YOU ARE LOCATED IN:</p> <p>ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:</p> <p>MATERIALS LICENSING SECTION U.S. NUCLEAR REGULATORY COMMISSION, REGION III 801 WARRENVILLE RD. LIBLE, IL 60532-4351</p> <p>ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:</p> <p>NUCLEAR MATERIALS LICENSING SECTION U.S. NUCLEAR REGULATORY COMMISSION, REGION IV 611 RYAN PLAZA DRIVE, SUITE 400 ARLINGTON, TX 78011-8064</p>			
<p>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.</p>					
<p>1. THIS IS AN APPLICATION FOR (Check appropriate item)</p> <p><input checked="" type="checkbox"/> A. NEW LICENSE</p> <p><input type="checkbox"/> B. AMENDMENT TO LICENSE NUMBER _____</p> <p><input type="checkbox"/> C. RENEWAL OF LICENSE NUMBER _____</p>		<p>2. NAME AND MAILING ADDRESS OF APPLICANT (Include Zip code)</p> <p>Duratek Federal Services 704 S. Illinois Ave, Suite C203 Oak Ridge, TN 37830</p>			
<p>3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED</p> <p>9983 East Bear Creek Road Oak Ridge, TN 37830</p>		<p>4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION</p> <p>Glenn R. Marshall</p> <p>TELEPHONE NUMBER 865-574-6517</p>			
<p>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.</p>					
<p>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.</p>		<p>6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.</p>			
<p>7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.</p>		<p>8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.</p>			
<p>9. FACILITIES AND EQUIPMENT.</p>		<p>10. RADIATION SAFETY PROGRAM.</p>			
<p>11. WASTE MANAGEMENT.</p>		<p>12. LICENSEE FEES (See 10 CFR 170 and Section 170.31)</p> <p>FEE CATEGORY 3-P AMOUNT ENCLOSED \$1300.00</p>			
<p>13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.</p> <p>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.</p> <p>WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 82 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.</p>					
<p>CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE</p> <p>Glenn R. Marshall-- Lead RCT</p>		<p>SIGNATURE</p> 	<p>DATE</p> <p>3/15/02</p>		
<p>FOR NRC USE ONLY</p>					
TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		
APPROVED BY				DATE	

EMERGENCY-- PRIORITY

Appendix A

NRC FORM 313 (7-98) 10 CFR 30, 32, 33 34, 35, 36, 39 and 40	U. S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB: NO. 3180-0120 EXPIRES: 7/31/99	Estimated burden per response to comply with this information collection request: 7 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. Forward comments regarding burden estimates to the Information and Records Management Branch (T-8 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0120), Office of Management and Budget, Washington, DC 20503. NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.		
<h2 style="margin: 0;">APPLICATION FOR MATERIAL LICENSE</h2>					
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: DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS U.S. NUCLEAR REGULATORY COMMISSION WASHINGTON, DC 20555-0001 ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS: 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 475 ALLENDALE ROAD KING OF PRUSSIA, PA 19408-1415 ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO: NUCLEAR MATERIALS LICENSING SECTION U.S. NUCLEAR REGULATORY COMMISSION, REGION II 101 MARIETTA STREET, NW, SUITE 2600 ATLANTA, GA 30323-0199		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 801 WARRENVILLE RD. LISLE, IL 60532-4361 ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, 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 SECTION U.S. NUCLEAR REGULATORY COMMISSION, REGION IV 611 RYAN PLAZA DRIVE, SUITE 400 ARLINGTON, TX 78011-8064			
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) <input checked="" type="checkbox"/> A. NEW LICENSE <input type="checkbox"/> B. AMENDMENT TO LICENSE NUMBER _____ <input type="checkbox"/> C. RENEWAL OF LICENSE NUMBER _____		2. NAME AND MAILING ADDRESS OF APPLICANT (include Zip code) Duratek Federal Services 704 S. Illinois Ave, Suite C203 Oak Ridge, TN 37830			
3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED 9983 East Bear Creek Road Oak Ridge, TN 37830		4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION Glenn R. Marshall TELEPHONE NUMBER 865-574-6517			
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. LICENSEE FEES (See 10 CFR 170 and Section 170.31) FEE CATEGORY 3-P AMOUNT ENCLOSED \$1300.00			
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 Glenn R. Marshall-- Lead RCT		SIGNATURE 	DATE 3/15/02		
FOR NRC USE ONLY					
TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
APPROVED BY				DATE	

DURATEK FEDERAL SERVICES LICENSE APPLICATION
Troxler 3400 series Surface Moisture/Soil Density Gauge

ITEMS 5 & 6: MATERIALS TO BE POSSESSED AND PROPOSED USES					
NO	RADIOISOTOPE	MANUFACTURER/MODEL NO.	QUANTITY	MOST COMMON USE	SPECIFY OTHER USES NOT LISTED ON SSD CERTIFICATE
1	Cesium-137	Sealed Source per Troxler drawing A-102112 Registry No. NC-646-D-130-S. Used in Troxler 3400 series Surface Moisture/Soil Density Gauge	Not to exceed 9 mCi	Measure physical properties of materials	N/A
2	Americium-241	Sealed Am-Be source per Troxler Drawing A-102451 Registry No. NC-646-D-130-S. Used in Troxler 3400 series Surface Moisture/Soil Density Gauge	Not to exceed 44 mCi	Measure physical properties of materials	N/A

ITEMS 7 THROUGH 11: TRAINING AND EXPERIENCE, FACILITIES AND EQUIPMENT, RADIATION PROTECTION PROGRAM, AND WASTE DISPOSAL		
ITEM NO. AND TITLE	RESPONSE	ALTERNATE PROCEDURES ATTACHED
7. INDIVIDUAL RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE—RADIATION SAFETY OFFICER Name: Glenn Marshall David Williams is the proposed RSO in the event the Commission disapproves the first choice.	Qualifications and experience of the proposed RSO are attached for review. Before being named as the RSO , future RSOs will have successfully completed one of the training courses described in Criteria in the section entitled "Individual(s) Responsible for Radiation Safety Program and Their Training and Experience - Radiation Safety Officer" in NUREG-1556, Vol. 1, May 1997, or will have other training and experience approved by the Commission.	Please see attached summary of qualifications and experience for Glenn Marshall Alternatively, David Williams' Troxler training certificate is attached.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS	Before using licensed materials, authorized users will have successfully completed one of the training courses described in Criteria in the section entitled 'Training for Individuals Working In or Frequenting Restricted Areas' in NUREG-1556, Vol. 1, 'Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Portable Gauge Licenses,' dated May 1997.	
9. FACILITIES AND EQUIPMENT	N/A	
10. RADIATION SAFETY PROGRAM – AUDIT PROGRAM	N/A	
10. RADIATION SFETY PROGRAM – TERMINATION OF ACTIVITIES	N/A	
10. RADIATION SAFETY PROGRAM - INSTRUMENTS	We will either possess and use, or have access to and use, a radiation survey meter that meets the Criteria in the section entitled 'Radiation Safety Program - Instruments' in NUREG-1556, Vol. 1, 'Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Portable Gauge Licenses,' dated May 1997, in the event of an incident	
10. RADIATION SFETY PROGRAM – MATERIAL RECEIPT AND ACCOUNTABILITY	Physical inventories will be conducted at intervals not to exceed 6 months, to account for all sealed sources and devices received and possessed under the license.	
10. RADIATION SAFETY PROGRAM – OCCUPATIONAL DOSIMETRY	<p>We will maintain, for inspection by NRC, documentation demonstrating that unmonitored individuals are not likely to receive, in one year, a radiation dose in excess of 10 percent of the allowable limits in 10 CFR Part 20. Individuals authorized to use the gauge or frequent areas where the gauge is used will be monitored. Dosimetry for monitored individuals is provided by our Department of Energy (DOE) Prime Contractor and is processed quarterly. Dosimetry is currently processed by a DOELAP-accredited dosimetry provider.</p> <p>The major contributor of individual radiation exposure is expected to be the general work area, NOT the gauge.</p>	Please find attached documentation from NIST affirming the similarity of the DOELAP and NVLAP accreditation programs.
10. RADIATION SAFETY PROGRAM – PUBLIC DOSE	N/A	
10. RADIATION SFETY PROGRAM – OPERATING AND EMERGENCY PROCEDURES	We will implement and maintain the operating and emergency procedures in <i>Appendix H</i> of NUREG-1556, Vol. 1, dated May 1997, and provide copies of these procedures to all gauge users and at each job site.	

10. RADIATION SAFETY PROGRAM – LEAK TEST	Leak tests will be performed at intervals approved by the NRC or an Agreement State and specified in the Sealed Source and Device Registration Sheet. Leak tests will be performed by individuals qualified as Radiological Control Technicians (RCT's), using approved procedures.	Please find supporting documentation attached.
10. RADIATION SAFETY PROGRAM - MAINTENANCE	<p>Routine cleaning and lubrication: We will implement and maintain procedures for routine maintenance of our gauges according to each manufacturer's recommendations and instructions.</p> <p>Non-routine maintenance or repair operations that require detaching the source or source rod from the gauge: We will send the gauge to the manufacturer or other person authorized by NRC or an Agreement State to perform non-routine maintenance or repair operations that require detaching the source or source rod from the gauge.</p>	
10. RADIATION SAFETY PROGRAM - TRANSPORTATION	N/A	We expect to use the gauge at the location specified.
11. WASTE MANAGEMENT – GAUGE DISPOSAL AND TRANSFER	N/A	

From: carroll brickenkamp <carroll.brickenkamp@nist.gov>
To: "Glenn marshall" <gmarshall@duratekinc.com>
Date: 2/26/02 2:59PM
Subject: Re: NVLAP-DOELAP

Dear Mr. Marshall,

Yes, the requirements for the accuracy of results reported by personnel ionizing radiation dosimetry testing laboratories are very similar for the National Voluntary Laboratory Accreditation Program (NVLAP) and the Department of Energy Laboratory Accreditation Program (DOELAP). Both programs require that dosimeters meet the requirements of ANSI/HPS N13.11 for whole body dosimeters and ANSI/HPS N13.32 for extremity dosimeters. Both programs conduct proficiency testing programs, the measurement results of which are both traceable to the National Institute of Standards and Technology. I hope this information will permit Tennessee to recognize DOELAP accreditation for your purposes.

Dr. Carroll S. Brickenkamp
National Voluntary Laboratory Accreditation Program
Program Manager, Dosimetry Laboratory Accreditation Program
National Institute of Standards and Technology
Stop 2140
Gaithersburg, Maryland 20899-2140
U.S.A.
Telephone: 301.975.4291 or 301.926.4607
Fax: 301.926.2884 or 301.926.4607
carroll.brickenkamp@nist.gov or cbrickenkamp@earthlink.net

GLENN RICHARD MARSHALL
Summary of Qualifications and Experience

Professional Memberships

National Registry of Radiation Protection Technologists (NRRPT)
East Tennessee Chapter, Health Physics Society

Summary of Experience

- Wide variety of radioactive materials and radioisotopes: nuclear power generation, laundry, waste processing and handling, D&D, sealed sources.
- Personally handled or supervised the handling of hundreds of curies of fission and activation products, tritium, uranium, Am-241, C-14, and NORM.
- Supervisory and management experience in applied health physics, production, ALARA, and dosimetry,
- Diverse operational experience at all levels: technician, count room, dosimetry, ALARA, shielding, training, shipping, and more
- HIS-20 dose tracking program administrator.
- Fluent in office software, VARSKIN, Microshield.
- Instrument repair and Calibration.
- Sealed Source Custodian.
- Face-to-face experience with regulatory personnel.
- Extensive knowledge of 10 CFR 20, 10 CFR 835, and Tennessee State Regulations.
- An extensive personal library of NUREG's, Regulatory Guides, DOE Technical Standards, etc.

Professional Work History

DURATEK FEDERAL SERVICES; Lead RCT (2002-present)

Responsible for Radiation Protection Program development and implementation for DOE-operated LLW and CERCLA waste disposal facility.

OAK RIDGE NATIONAL LABORATORY; Sr. RCT (2001-2002)

Provide Health Physics advice and support as part of a team performing large-scale cleanup and D&D projects at ORNL. Promote a safer and more efficient operation by providing continuous, on-the-job training with workers. Extensive past experience allowed me to recommend and implement cost-effective techniques for handling difficult radiological challenges.

DURATEK (1998-2001); ALARA Engineer

Supervised Dosimetry department servicing 2000 monitored workers. Performed DAC-hour tracking and internal dose calculations. Performed and approved internal, external, and shallow dose calculations. Tracked individual and collective radiation exposure and made recommendations to management team. Conducted GET for new workers, ongoing ALARA training for employees, RCT training for Health Physics Technicians. Wrote and approved work procedures and RWP's for handling of non-routine waste. Provided Marketing group with necessary information to make profitable bids on difficult work. Worked directly with customers and regulatory personnel to properly assess

radiological and other hazards of incoming waste streams. Reviewed all incoming work and assisted in planning for its completion. Worked daily with workers and supervisors to promote safer, more ALARA-promoting work practices to ensure a more productive work environment.

MK FERGUSEN OF OAK RIDGE (1997-1998); Health Physics Technician

Worked under contract with Department of Energy Gaseous Diffusion Plant, Paducah, KY. Provided Health Physics and Health and Safety support for RCRA decontamination project involving PCB's and transuranic waste.

MOLTEN METAL TECHNOLOGY (1996-1997); Health Physics Supervisor

Developed Radiation Protection Program for new spent-resin processing facility. Supervised dosimetry, instrumentation, and count-room operations. Conducted radiological GET/GERT training for all workers. Supervised a staff of 12 technicians. Wrote and approved work packages and RWP's. Acted as site ALARA coordinator. Tracked individual and collective radiation exposure. Implemented specific changes in work procedures and recommended engineering upgrades to reduce exposure.

SCIENTIFIC ECOLOGY GROUP (SEG) (1993-1996); Associate Health Physics Engineer

Acted as HP shift supervisor with responsibility for 6 technicians. Continuously worked to find safer and more effective methods of handling and processing radioactive waste from commercial, DOE and research facilities.

INTERSTATE NUCLEAR SERVICES (currently UNITECH) (1988-1993); Assistant Plant Manager

Served as Production Manager and Assistant Radiation Safety Officer at two facilities. Responsible for all operations, health physics, dosimetry, and environmental monitoring. Significantly improved radiological controls while nearly doubling plant productivity. Interfaced with customers daily. Supervised radwaste shipping and driver training.

US NAVY (1979-1987); Engineering Laboratory Technician, RADCON Shift Supervisor

Responsible for chemistry and radiological controls. Performed and supervised preventive, corrective, and emergency maintenance of nuclear submarines.

Education

Navy Nuclear Power School; Orlando, FL
Thomas Edison State College; Trenton, NJ

Professional Reference

Brian Neikirk, Radiation Safety Officer, Duratek RADWASTE Processing. Phone: (865) 481-0222

TROXLER ELECTRONIC LABORATORIES, INC.

CERTIFICATION OF COMPLETION OF TRAINING

TROXLER NUCLEAR GAUGE RADIATION SAFETY TRAINING CLASS

This is to certify that

Name: Dave Williams

of

Company: Duratek Federal Services

has successfully completed the Troxler Nuclear Gauge Radiation Safety Training Class on this date.

Training Class Location: Atlanta, GA

Training Class Date: Feb. 12, 2002

Instructor: ROBERT E. JOINES

SIGNED: Robert E Joines

Note: This is a temporary certificate issued by the instructor upon completion of the class. The official certificate will be issued as soon as possible.

LEAK TESTS

Leak tests will be performed by the Radiation Safety Officer or designee; as a minimum, individuals performing leak tests will be qualified as Radiological Controls Technicians (RCT's) and qualified to operate the instruments used. The Radiation Safety Officer will review leak test results.

The following instrumentation (or equivalent) will be used. Instruments will be calibrated by a calibration facility licensed by the NRC or an Agreement State to perform calibrations. All calibration sources shall be NIST traceable.

Smear Counter

Manufacture	Ludlum Measurements, Inc.
Model	2929 Alpha/Beta Scaler
Radiation Detected	Alpha and Beta
Efficiencies (approx.)	Alpha: 37% TH-230, 39% U-238, 37% Pu-239 Beta: 22% Tc-99, 29% Cs-137, 26% Sr-90/Y-90
Actual efficiency to be determined during calibration.	

Dose Rate Instrument

Manufacture	Ludlum Measurements, Inc.
Model	Model 14C with 44-38 probe (energy-compensated GM)
Radiation Detected	Beta and Gamma
Total Range	0 – 2,000 mR/hr

Procedure

Leak test of all sealed sources will be leak tested per DFS-RC-020, Radioactive Source Control. Only qualified RCT's will perform leak test and analysis.

- Leak test shall be performed:

Upon receipt of radioactive sources,

When damage to sources is suspected,

At least once every six months, or more frequently if indicated on the SSD Registration Certificate.

Elevated contamination levels are detected on handling equipment or storage areas that are not readily attributable to another radiation source,

When transferring the source offsite, and

Prior to source disposition.

- Source leak tests shall be capable of detecting radioactive material leakage $\geq 0.005 \mu\text{Ci}$.

CAUTION: Do not expose sources that are mounted and enclosed in a shielded holder requiring disassembly to access the source for leak testing. Swipe the area of the holder where the contamination is most likely, near the source itself.

- Perform a wipe test using a dry filter paper for each source. A cotton swab may be used to wipe inaccessible areas.
- Count the wipe using the alpha/beta scaler indicated above (or equivalent contamination monitor).
- Calculate the activity of the wipe as follows:

$$(\text{Gross cpm} - \text{Background cpm}) / (\text{efficiency} \times 2.22\text{E}6) = \text{uCi}$$

- The individual performing the leak test shall document the results, including the serial number of each source surveyed, then sign and date the documentation. The Radiation Safety Officer will review leak test documentation.
- The RSO shall be notified and the source immediately removed from service if any leak test detects 0.005 uCi of activity or greater. The NRC shall be notified also.