NRC FORM 313 (3-2009) 10 CFR 30, 32, 33, 34, 35, 36, 39, and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR MATERIALS LICENSE

APPROVED BY OMB: NO. 3150-0120 EXPIRES: 3/31/2012

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

03032526
X

IF YOU ARE LOCATED IN:

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

Br.4

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

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
- [x] C. RENEWAL OF LICENSE NUMBER 44-28698-01

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

Health Physics Services
137 Pine St.
Brattleboro, VT 05301

RECEIVED
REGION 1
2011 SEP 29 AM 10:48

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

137 Pine St.
Brattleboro, VT 05301

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Bob N. Leach

TELEPHONE NUMBER

(802) 257-7467

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 **Small Entity** 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
Bob N. Leach, Health Physicist	B N Leach	**08/10/2011**

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			$		
APPROVED BY				DATE	

NRC FORM 313 (3-2009)

PRINTED ON RECYCLED PAPER

57-047

NMSS/RGN1 MATERIALS-002

Item 5. RADIOACTIVE MATERIAL

Subitem 5a. Element and Mass Number

Any byproduct material with atomic numbers 1 through 96 licensed material

Subitem 5b. Chemical and Physical Form

Leak test and environmental samples

Subitem 5C. Maximum Amount

10 microcuries per radionuclide and 10 millicuries total.

Financial Assurance and Recordkeeping for Decommissioning

The licensee shall restrict the possession for licensed material to quantities below the minimum limit specified in 10 CFR 30.35, 40.36, and 70.25 for establishing financial assurance for decommissioning.

Pursuant to 10 CFR 30.35 (g), the license shall maintain drawings and records important to decommissioning. These records will be transferred to a new licensee before licensed activities are transferred, or assigned to the appropriate NRC Regional Office before the license is terminated.

Item 6. PURPOSE FOR WHICH LICENSED MATERIAL WILL BE USED

The possession will be for use in performing leak test services and analysis of environmental samples.

Item 7. INDIVIDUAL RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE.

Radiation Safety Officer: Bob N. Leach
Alternate: Carl N. Leach

See attached Resumes´.

Authorized Users. Before using licensed material, authorized users will have the demonstrated knowledge and experience or receive the training described in Appendix H in NUREG-1556, Vol. 18, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Service Provider Licenses." Dated November 2000.

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

Only the responsible individuals will handle any radioactive material received. All sources to be leak tested will be wiped on the owners premises. The wipes will be handled in the counting room by the responsible individuals identified in Item 7.

The counting room will be maintained as a non-restricted area. If radiological conditions in the counting room for any reason meet the requirements of a restricted are, the room will be secured to all except the responsible individuals, until the conditions area eliminated.

Item 9. FACILITIES AND EQUIPMENT

Per NUREG-1554, Vol. 18 "Consolidated Guidance About Materials Licenses, Program-Specific Guidance About Service Provider Licenses", Section 8.9, for "Leak Test Service Providers and Environmental Laboratories. No response required for facilities".

Item 10. RADIATION SAFETY PROGRAM

10.1 Radiation Monitoring Instruments

RADIATION DETECTION INSTRUMENTS

Type	Number Available	Radiation Detected	Efficiency
Portable thin-window GM survey meter	3	Beta Alpha Gamma	Moderate Moderate <1%
Stationary thin-window GM Counting system	2	Beta Alpha Gamma	Moderate Moderate <1%
Portable thin-walled GM survey meter	4	Beta Gamma	Moderate <1%
Portable ion-chamber	1	Beta Gamma	NA,exposure rate meter
Portable BF3 neutron instrument	2	Neutrons	Moderate
Portable ion-Chamber x-ray survey system	2	x-rays Gamma	NA, survey of x-ray installations, rate meter

We will use instruments that meet the radiation monitoring instrument specifications above and as published in Appendix J to NUREG-1556, Vol. 18, "Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Service Provider Licenses," dated November 2000. We reserve the right to upgrade our survey instruments as necessary.

10.2 Material Receipt and Accountability

Ordering licensed material and package receipt and opening will follow the model procedures in NUREG-1556, Vol. 18, Appendix K.

10.3 Occupational Exposure

We have done a prospective evaluation and determined that unmonitored individuals are not likely to receive, in one year, a radiation dose in excess of 10% of the allowable limits in 10 CFR 20.

In the event the need arises for dosimetry, NVLAP-accredited dosimetry will be used and processed by a NVLAP-accredited entity. The dosimetry will be exchanged at the frequency specified in Section 8.10.4 of NUREG-1556, Vol. 18.

10.4 Surveys

We will survey our facility and maintain contamination levels in accordance with the survey frequencies and contamination levels published in NUREG-1556, Vol. 18, "Program Specific Guidance About Service Provider Licenses," dated November 2000.

10.5 Leak Test

Leak testing will follow the guidelines provided in Appendix O of NUREG-1556, dated November 2000.

We will provide leak test kits as described in the model leak test kit description in Section 8.10.8 of NUREG-1556, Vol. 18, dated November 2000.

10.6 Maintenance

We will implement and maintain procedures for routine maintenance of any licensed devices according to each manufacturer's written recommendations and instructions.

We will have the manufacturer or other person authorized by the NRC or an Agreement State perform non-routine maintenance.

Item 11. WASTE MANAGEMENT

We will use the "disposal of Liquids Into Sanitary Sewerage" model waste procdure that is published in Appendix N to NUREG-1556, Vol. 18, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Service Provider Licenses," dated November 2000.

The radioactive material that is discharged is in the form of metal salts or metal oxides absorbed on paper smears. The paper smears are of a type and quality that meet the requirement "readily dispersible biological material." In the last ten years of operation, the facility has discharged a total of .063 µCi of activity into the sanitary sewer system. This equates to a maximum of .0002 ALI, or less than 1 mrem committed effective dose

equivalent over the ten year period if one adult individual had ingested the entire amount.

The highest concentration for a daily discharge was 1.0 e-9 µCi/ml which is less than .1% of the limit for the effected isotope. There were a total of only 13 discharges in the ten year period.

Carl Nelson Leach II

[redacted] [redacted]

Experience

- Directed removal, packaging, and shipment of three million pounds of radioactive, hazardous, and mixed waste from Connecticut Yankee Atomic Power Company. Generated required documentation, including manifests. Maintained waste streams, inventories, and schedules. Developed and implemented large component shipment plans. Provided customer with waste solutions. Intimately familiar with RADMAN Shipping program.

- Provided Radiochemistry services and Special Nuclear Materials management for ABB/CE broad scope license. Supervised mixed waste collection, identification and disposition at Building 5. Reconciled defunct SNM inventories with regulatory authorities and maintained accountability. Upgraded gamma spectroscopy system from 1980's technology to PC based operation without service interruption.

- Directed excavation, processing, and shipment of 6000 cubic yards of Uranium contaminated soil at Texas Instruments facility in support of license termination.

- Directed removal, decontamination, and disposal of Upjohn Pharmaceutical research laboratories in support of facility upgrades.

- Performed as lead radwaste technician for four consecutive refuel outages at Vermont Yankee Nuclear Power Station. Responsible for scheduling and utilization of ten plus junior technicians.

- ANSI qualified 3.1 Health Physics Technician

Education

BS Management and Organization, Central Connecticut State University, [redacted]

Training

49CFR DOT Radioactive and Hazardous Materials Shipping Certification, August 1999

WMG Radman and RamShip software Certification, September 1999

Canberra Fastscan WBC and Genie 2000 Certification, March 1999

Haz-Mat Technician OSHA 40 hour; 1994, Updated for 2000

Computing

Proficient with WMG's Radman and RamShip

Proficient with Microsoft Word and Excel

Semi-proficient with Microsoft Access, Power Point, and SqlPlus

Proficient with Canberra's Genie 2000

Detailed employment history and references upon request

BOB N. LEACH
137 Pine St. Brattleboro, VT 05301 (802)257-7467

EXPERIENCE

Management

- Several years as a senior manager responsible for Radiation Protection (RPM), Chemistry, Emergency Planning, Radioactive Waste, Industrial Safety, Environmental Protection, and Licensing at a Nuclear Power Station.
- Certified as a Senior Reactor Operator.

Radiation Protection

- Developed and implemented the Radiation Protection Program at a Nuclear Power Station.
- Maintained total Exposure (Man-Rem) below national average at my station.
- Maintained Radwaste production to the lowest in the industry at my station
- No individuals received an internal uptake of radioactive material above the level requiring investigation.
- Performed the duties of a Staff Health Physicist during the early phases of decommissioning a BWR facility.

Industrial Safety

- Developed, directed and implemented the Industrial Safety Program at a Nuclear Power Station.
- No "lost time accidents" in my department.
- Attained the status of "Second in the Nation" under my management.

Environmental Protection

- Developed, implemented and maintained the Environmental Program per Appendix I 10 CFR 50.
- Implemented and maintained the NPDES Permit at a Nuclear Power Station.
- Received no citations for violations of the radiological or non-radiological environmental regulations.
- Developed and maintained the Hazardous Materials Program at a Nuclear Power Station.

Training

- Certified trainer by Vermont Yankee Nuclear Power Station, Millstone Nuclear Power Station, the State of Vermont, and the Environmental Protection Agency

EXPERIENCE (Continued)

Emergency Planning

- Managed development and implementation of the post TMI Emergency Plan.
- Served as Vermont State Emergency Response Commissioner.
- As Local Emergency Planning Committee Chairman, developed and implemented the Local Emergency Plan.
- Called upon to respond and assist at several radiological emergencies including Three Mile Island, Nuclear Fuel Accident in Springfield, MA, highway accident in Vermont, and after Chernobyl.

Licensing

- Served 3 years as Sr. Licensing Engineer at a recovering Nuclear Power Station shut down by the NRC.
- Conducted all licensing activities related to Radiation Protection, Emergency Planning and Environmental Protection.
- Licensing consultant for Byproduct Material License holders.
- Maintain a license for Health Physics Services.

EMPLOYMENT HISTORY

1997-2008	**Millstone Nuclear Power Station** Senior Scientist, Licensing, Staff Health Physicist
1969-1997	**Vermont Yankee Nuclear Power Station** Radiation Protection Manager Chemistry and Health Physics Manager Industrial Safety Director
1967-1969	**University of Rochester** Junior Health Physicist
1961-1967	**United States Navy** Nuclear Power Machinist Mate

EDUCATION

B.S. in Mathematics, Mark Hopkins College
Keene State College
University of Rochester
SRO Certification Vermont Yankee
US Navy Nuclear Power School

This is to acknowledge the receipt of your letter/application dated 8/10/2011 rec'd in Region 1 9/29/11, and to inform you that the initial processing which includes an administrative review has been performed.

(Renew) 44-28698-01

☐ 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** 576097. When calling to inquire about this action, please refer to this control number. You may call us on (610) 337-5398, or 337-5260.

NRC FORM 532 (RI)
(6-96)

Sincerely,
Licensing Assistance Team Leader