

**UNDERWOOD
ENGINEERING
INC.**

Q-2

143 Harding Avenue, Bellmawr, NJ 08031
856-933-1818 • Fax 856-933-3121
William R. Underwood, P.E. - President

March 26, 2015

United States Nuclear Regulatory Commission
Washington, D.C. 20555-0001

RE: License # 29-23425-01
Control # 586310

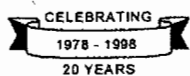
03021053

To Whom It May Concern,

We expect to use three (3) gauges in NRC jurisdiction at any one time. The model numbers of the gauges we use are #3411 and # 3430.



William R. Underwood, P.E.
Owner, President
Underwood Engineering Inc.



GEOTECHNICAL • ENVIRONMENTAL • SEPTIC SYSTEMS
SOILS • CONCRETE • ASPHALT • MASONRY • STRUCTURAL STEEL • ROOFING

REC'D IN LAT. 3/26/15

586310
NMSS/RGN1 MATERIALS-002

NRC FORM 313
(03-2014)
10 CFR 30, 32, 33, 34,
35, 36, 37, 39, and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0120

EXPIRES: 05/31/2015



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 FOIA, Privacy, and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollections.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. *AMENDMENTS/RENEWALS THAT INCREASE THE SCOPE OF THE EXISTING LICENSE TO A NEW OR HIGHER FEE CATEGORY WILL REQUIRE A FEE.

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
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PA 19406-2713

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
1600 E. LAMAR BOULEVARD
ARLINGTON, TX 76011-4511

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
- ☒ C. RENEWAL OF LICENSE NUMBER

29-23425-01

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

Underwood Engineering, Inc.
143 Harding Avenue
Bellmawr, NJ 08031

3 ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

143 Harding Avenue
Bellmawr, NJ 08031

4 NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Daniel Ruch, RSO

BUSINESS TELEPHONE NUMBER
(856) 933-1818

BUSINESS CELLULAR TELEPHONE NUMBER
(215) 901-3481

BUSINESS EMAIL ADDRESS

mjohnson@underwood-engineering.com

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 (Fees required only for new applications, with few exceptions*)
(See 10 CFR 170 and Section 170.31)**

FEE CATEGORY

N/A - Renewal

AMOUNT
ENCLOSED \$

0.00

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, 37, 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 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.

CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE

William R. Underwood, P.E., Owner

SIGNATURE

DATE

FOR NRC USE ONLY

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

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APPENDIX B

ITEMS 5 AND 6: MATERIALS TO BE POSSESSED AND PROPOSED USES

Yes	No	Radioisotope	Manufacturer or Distributor Model No.	Quantity	Use As Listed on SSD Certificate	Specify Other Uses Not Listed on SSD Certificate
X		Cesium-137 AEA Technology	Sealed source manufacturer or distributor and model number: <u>X-1218, X.8</u> Device manufacturer or distributor and model number: <u>3411-B, 3430</u> <u>3440, 4646</u>	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	Yes <input checked="" type="checkbox"/> Specific description of the gauge use: <u>to</u> <u>measure</u> <u>density</u>	<input type="checkbox"/> Not applicable <input type="checkbox"/> Uses are: (Submit safety analysis supporting safe use)
		Troxler	<u>3411-B, 3430</u> <u>3440, 4646</u>			
		Humboldt	<u>5001 Series</u>			
X		Americium-241 AEA Technology	Sealed source manufacturer or distributor and model number: <u>X-1, X.12</u> Device manufacturer or distributor and model number: <u>3411-B, 3430</u> <u>3440</u>	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	Yes <input checked="" type="checkbox"/> Specific description of the gauge use: <u>To</u> <u>measure</u> <u>moisture</u>	<input type="checkbox"/> Not applicable <input type="checkbox"/> Uses are: (Submit safety analysis supporting safe use)
		Troxler	<u>3411-B, 3430</u> <u>3440</u>			
		Humboldt	<u>5001 Series</u>			

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APPENDIX B

ITEMS 7 THROUGH 11: TRAINING AND EXPERIENCE, FACILITIES AND EQUIPMENT, RADIATION SAFETY PROGRAM, AND WASTE DISPOSAL

Item No. And Title	Suggested Response	Yes	Alternative Procedures Attached
7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE - RADIATION SAFETY OFFICER Name: <u>Daniel Ruch</u>	Before obtaining licensed materials, the proposed RSO 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, Rev. 1, dated November 2001.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS	Before using licensed materials, authorized users will have successfully completed one of the training course described in Criteria in the section entitled "Training for Individuals Working In or Frequenting Restricted Areas" in NUREG-1556, Vol. 1, Rev 1, dated November 2001.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. FACILITIES AND EQUIPMENT	No information needs to be submitted in response to this item; key issues are addressed under "Radiation Safety Program - Public Dose" and "Radiation Safety Program - Operating and Emergency Procedures."	Separate Item 9 Response Need Not Be Submitted With Application	
10. RADIATION SAFETY PROGRAM - AUDIT PROGRAM	The applicant is <i>not</i> required to, and should not, submit its audit program to NRC for review during the licensing phase.	Need Not Be Submitted With Application	
10. RADIATION SAFETY PROGRAM - TERMINATION OF ACTIVITIES	The applicant is <i>not</i> required to submit a response to the termination of activities section during the initial application. However, when the license expires when the licensee ceases operation, NRC Form 314 must be submitted.	Need Not Be Submitted With Application	
10. RADIATION SAFETY PROGRAM - SURVEY 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, Rev. 1, dated November 2001.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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Item No. And Title	Suggested Response	Yes	Alternative Procedures Attached
10. RADIATION SAFETY 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. RADIATION SAFETY PROGRAM - OCCUPATIONAL DOSIMETRY	Either we will maintain, for inspection by NRC, documentation demonstrating that unmonitored individuals are not likely to receive a radiation dose in excess of 10 percent of the allowable limits in 10 CFR Part 20, or we will provide dosimetry processed and evaluated by an NVLAP-approved processor that is exchanged at a frequency recommended by the processor.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. RADIATION SAFETY PROGRAM - PUBLIC DOSE	The applicant is <i>not</i> required to submit a response to the public dose section during the licensing phase. This matter will be examined during an inspection.	Need Not Be Submitted With Application	
10. RADIATION SAFETY PROGRAM - OPERATING AND EMERGENCY PROCEDURES	We will implement and maintain the operating and emergency procedures in Appendix H of NUREG-1556, Vol. 1, Rev. 1, dated November 2001, and provide copies of these procedures to all gauge users and at each job site.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	OR Operating and emergency procedures will be developed, implemented, and maintained and will meet the criteria in the section entitled "Radiation Safety Program - Operating and Emergency Procedures" in NUREG-1556, Vol. 1, Rev. 1, dated November 2001.	<input type="checkbox"/>	
10. RADIATION SAFETY PROGRAM - LEAK TEST	Leak tests will be performed at intervals approved by NRC or an Agreement State and specified in the Sealed Source and Device Registration Sheet. Leak tests will be performed by an organization authorized by NRC or an Agreement State to provide leak testing services for other licensees or using a leak test kit supplied by an organization authorized by NRC or an Agreement State to provide leak test kits to other licensees and according to the kit supplier's instructions.	<input checked="" type="checkbox"/>	<input type="checkbox"/> The information in Appendix J supporting a request to perform leak testing and sample analysis is attached.

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Item No. And Title	Suggested Response	Yes	Alternative Procedures Attached
10. RADIATION SAFETY PROGRAM - MAINTENANCE	<i>Routine Cleaning and Lubrication</i> We will implement and maintain procedures for routine maintenance of our gauges according to each manufacturer's recommendations and instructions.	✓	<input type="checkbox"/>
	<i>Non-Routine Maintenance</i> 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 the removal of the source or source rod from the gauge.	✓	<input type="checkbox"/> The information listed in Appendix G supporting a request to perform non-routine maintenance in-house is attached.
10. RADIATION SAFETY PROGRAM - TRANSPORTATION	The applicant is <i>not</i> required to submit its response to transportation during the licensing process. However, this issue will be reviewed during inspection.		Need Not Be Submitted With Application
11. WASTE MANAGEMENT - GAUGE DISPOSAL AND TRANSFER	The applicant is <i>not</i> required to submit a response to waste management during the licensing process. However, the licensee should develop, implement, and maintain gauge transfer and disposal procedures in its radiation protection program.		Need Not Be Submitted With Application