

CIVIL ENGINEERING  
LAND SURVEYING

## BENCHMARK ENGINEERING, INC.

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February 3, 2015

Materials Licensing Branch  
U.S. Nuclear Regulatory Commission, Region III  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4352

Re: Renewal of License #21-20496-01  
Docked #030-18446

To Whom It May Concern:

Please find enclosed (2) copies of a renewal application and supplemental pages for License #21-20496-01.

If you have any questions or need further clarification, please do not hesitate to contact me.

Sincerely,

Patricia Swiss, RSO  
Benchmark Engineering Inc.

Enc.

RECEIVED FEB 10 2015

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



U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR MATERIALS  
LICENSE

APPROVED BY OMB: NO. 3150-0120

EXPIRES: 05/31/2015

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](mailto: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

21-20496-01

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

Benchmark Engineering Inc.  
607 East Lake Street  
Harbor Springs, Michigan 49740

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

607 East Lake Street  
Harbor Springs, Michigan 49740

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Patricia Swiss, RSO

BUSINESS TELEPHONE NUMBER

2315262119

BUSINESS CELLULAR TELEPHONE NUMBER

BUSINESS EMAIL ADDRESS

benchmark607@gmail.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

Small Business

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, 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 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

Joseph B. O'Neill, President

SIGNATURE

DATE

2-3-15

FOR NRC USE ONLY

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

ITEM 5

SEALED SOURCES AND DEVICES

<b>a. Element and mass number</b>	<b>b. Chemical and/or physical form</b>	<b>c. Maximum amount that will be possessed at one time</b>
A. Cesium – 137	Sealed source Troxler Dwg. 102112	No single source to exceed 9 MCi
B. Americium-241	Sealed source Troxler Dwg. 102451	No single source to exceed 44 MCi

ITEM 6

PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED

To be used in Troxler Model 3400 series gauges for measurement of physical properties of materials.

ITEM 7

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

Radiation Safety Officer:

Patricia Swiss

Current, proposed, and future RSO's will have successfully completed Troxler's Nuclear Gauge Safety Training Class or Troxler's Radiation Safety Officer Training Class.

Supplemental pages to Application for renewal of License 21-20496-01

ITEM 8

TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

Before using licensed materials, all gauge users will have successfully completed the Troxler Nuclear Gauge Safety Training Class

They will have received copies of, and been trained in, the applicant's gauge operating and emergency procedures.

They will have been designated as an authorized user by the RSO

ITEM 9

FACILITIES AND EQUIPMENT

Additional information will be provided upon request

ITEM 10

RADIATION SAFETY PROGRAM

10.1 PERSONNEL MONITORING

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.

10.2 RADIATION DETECTION 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.

### 10.3 SEALED SOURCE LEAK TESTING

Leak tests will be performed at intervals not to exceed 12 months using an approved kit, such as Troxler Leak Test Kit (Model 3880), in accordance with the kit supplier's instructions. Leak test samples will be analyzed by an organization authorized by the NRC or Agreement State to provide leak test services, such as Troxler Electronic Laboratories, Inc. (North Carolina License No. 031-0182-1).

### 10.4 MATERIAL RECEIPTY AND ACCOUNTABILITY

Records of receipt, transfer, and disposal of gauges will be maintained for at least three years. Physical inventories of sealed sources will be conducted at intervals not to exceed six months.

### 10.5 PUBLIC DOSE

We will ensure that gauges are used, transported, and stored in such a way that no member of the public receives a dose of more than 100 mrem in one year. We will control and maintain constant surveillance over gauges that are not in storage and secure gauges from unauthorized use or removal.

### 10.6 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 at each job site.

### 10.7 MAINTENANCE

We will implement and maintain procedures for routine maintenance (cleaning and lubrication) of our gauges according to the manufacturer's recommendations and instructions.

We will send the gauge to the manufacturer to perform non-routine maintenance or repair operations that require removal of the source or source rod from the gauge.

### 10.8 TRANSPORTATION

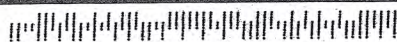
We will implement and maintain safety programs that ensure gauges are transported in compliance with DOT regulations.

### 10.9 AUDIT PROGRAM

An audit of the radiation safety program content and implementation will be performed and documented annually. Records of audits will be maintained for at least three years. Corrective actions will be taken promptly to prevent recurrence of deficiencies.

## ITEM 11 WASTE MANAGEMENT

Licensed material will be returned to the manufacturer for disposal.



TRAVERSITY MI 498  
TUE 03 FEB 2015 PM

**Benchmark Engineering, Inc.**

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