

APPLICATION FOR MATERIAL LICENSE

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.

APPLICATIONS FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

U.S. NUCLEAR REGULATORY COMMISSION
DIVISION OF FUEL CYCLE AND MATERIAL SAFETY, NMSS
WASHINGTON, DC 20545

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:

U.S. NUCLEAR REGULATORY COMMISSION, REGION I
NUCLEAR MATERIALS SAFETY SECTION B
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA,
PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR
WEST VIRGINIA, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION II
NUCLEAR MATERIALS SAFETY SECTION
101 MARIETTA STREET, SUITE 2900
ATLANTA, GA 30323

IF YOU ARE LOCATED IN:

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

U.S. NUCLEAR REGULATORY COMMISSION, REGION III
MATERIALS LICENSING SECTION
799 ROOSEVELT ROAD
GLEN ELLYN, IL 60137

ARKANSAS, COLORADO, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA,
NEW MEXICO, NORTH DAKOTA, OKLAHOMA, SOUTH DAKOTA, TEXAS, UTAH,
OR WYOMING, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
MATERIAL RADIATION PROTECTION SECTION
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TX 76011

ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON, WASHINGTON,
AND U.S. TERRITORIES AND POSSESSIONS IN THE PACIFIC, SEND APPLICATIONS
TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION V
NUCLEAR MATERIALS SAFETY SECTION
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CA 94596

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 JURISDICTION.

1. THIS IS AN APPLICATION FOR (Check appropriate item)

- ☐ A. NEW LICENSE
☐ B. AMENDMENT TO LICENSE NUMBER _____
☒ C. RENEWAL OF LICENSE NUMBER 22-01376-04

2. NAME AND MAILING ADDRESS OF APPLICANT (Include Zip Code)

Twin City Testing Corporation
662 Cromwell Avenue
St Paul, Minnesota 55114

3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED.

See Attached Letter

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Howard T Schulze

TELEPHONE NUMBER

612/641-9327

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 AND 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 3P-Renewal AMOUNT
ENCLOSED \$ 120.00

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, AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN,
IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

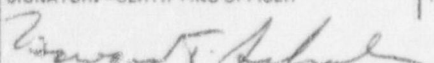
WARNING: A VIOLATION OF SECTION 1001 ACT OF JUNE 25, 1948, 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION
TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

SIGNATURE—CERTIFYING OFFICER

TYPED/PRINTED NAME

TITLE

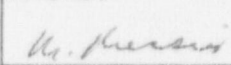
DATE

 Howard T Schulze

Radiation Safety Officer 5/25/88

8906080219 BB0706
REG 3 LIC 30
22-01376-04 PDR

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	COMMENTS	APPROVED BY
Ren	Ren-4-III	3P		
AMOUNT RECEIVED	CHECK NUMBER	CONTROL NO 85512		DATE
\$120	2280			6/7/88

RECEIVED
MAY 31 1988
REGION III

MAY 31 1988



twin city testing
corporation

662 CROMWELL AVENUE
ST. PAUL, MN 55114
PHONE 612/645-3601

May 23, 1988

U S Nuclear Regulatory Commission
Region III
Materials Licensing Section
799 Roosevelt Road
Glen Ellyn, IL 60137

Gentlemen

Subj: Renewal of License Number
22-01376-04

I wish to renew our NRC Materials License and accordingly am furnishing the following information required by NRC Form 313:

Item 3 Address where licensed material will be used or possessed.

Minnesota offices -

662 Cromwell Avenue
St Paul, MN 55114

1355 Mendota Heights Road
Suite 220
Mendota Heights, MN 55120

226 North Central Avenue
Duluth, MN 55807-7168

Rural Route 5
Mankato, MN 56001-9303

3908 Commerce Court SW
Rochester, MN 55902-1252

301 Sundial Drive
Waite Park, MN 56387-0416

CONTROL NO. 85512

Wisconsin Offices -

705 Hickory Farm Lane
Appleton, WI 54914-3073

2730 Melby Road
Eau Claire, WI 54703-0560

2710 Commerce Street
La Crosse, WI 54603-1705

4111 Schofield Avenue
Schofield, WI 54476

South Dakota Offices -

2843-T Samco Road
Rapid City, SD 57702-9368

601 East 48th Street North
Sioux Falls, SD 57104-0698

Item 5 Radioactive Material

<u>Element/Mass No</u>	<u>Chemical/Physical Form</u>	<u>Maximum Amount to be possessed at any one time</u>
1. Americium 241	Sealed source-Troxler Drwg No A-102451	No single source to exceed 50 millicuries
2. Cesium 137	Sealed source-Troxler Drwg No A-102112	No single source to exceed 9 millicuries
3. Americium 241 Cesium 137	Sealed source-Troxler Drwg No A-100281	No single source to exceed 50 millicuries of Americium 241 a n d 1 0 millicuries of Cesium 137
4. Americium 241	Sealed source-Troxler Drwg No A-102451	No single source to exceed 40 millicuries

5. Cesium 137	Sealed source-Troxler Drwg No A-102112	No single source to exceed 10 millicuries
6. Americium 241	A-100608	No single source to exceed 100 millicuries

Item 6 Purpose(s) for which licensed material will be used

- 1 and 2 To be used in Troxler Electronics Laboratories, Inc Model 3400 series gauges for determining the moisture content and density of soil.
- 3 To be used in Troxler Electronics Laboratories, Inc Model 2401 gauge for determining the moisture content and density of soil.
- 4 To be used in Troxler Electronics Laboratories, Inc Model 3216 Roof Reader II gauge for determining the moisture content of construction materials.
- 5 To be used in Troxler Electronics Laboratories, Inc Model 1351 Depth Density gauge for determining the density of construction materials.
- 6 To be used in Troxler Electronics Laboratories, Inc Model 3241C Portable Measuring Gauge for determining asphalt content of bituminous materials.

Item 7 Individual(s) responsible for radiation safety program and their training and experience

The Radiation Safety Office, Howard T Schulze, would be responsible for the radiation safety program and the operator training program.

I have been with the company since 1950.

I have a degree in Civil Engineering from the University of Minnesota and have obtained training in the use of these sources of radiation and the principles of radiation safety through seminars, on-the-job training and self-study.

I have been responsible for the development of training programs for both radiography and the soil moisture/density gauge operators.

I have worked with x-ray equipment, Iridium 192, Cobalt 60, Cesium 137, and Radium 226 for over 30 years.

In addition to the training programs, I have prepared the Operating and Emergency Procedure Manuals for both programs.

I am responsible for the maintenance of required records which includes training records, utilization logs, inventories, leak testing of sources, calibration records and shipping records.

Item 8 Training for Individuals working in or frequenting restricted areas

In the case of soil moisture/density gauges, an individual working in restricted areas would be the operator of the gauge.

The training given these gauge operator would cover the subjects outlined in the attached training course outline.

Training of operators could be given in-house, by the manufacturer of these gauges - Troxler Electronics Laboratories, Inc or by a third party organization who has personnel knowledgeable in the subjects outlined.

We also have an in-house examination to test the operator's knowledge and comprehension of the subjects covered in such a course.

Item 9 Facilities and Equipment

Facilities for storage of these gauges at the St Paul office and each of the branch offices listed under Item 3 consists of a locked closet or room which is posted and restricted to entry by authorized personnel only.

The equipment used under this license is listed under Items 5 and 6.

Item 10 Radiation Safety Program

A. Training -

Training consists of covering the subjects listed in the attached training outlines. In-house training may consist of lectures, demonstrations in the use of gauges, training aids such as video tapes and assigned reading material.

B. Personnel Monitoring -

Each operator of these gauges wears a film badge supplied by R S Landauer Jr & Company of Glenwood, Illinois. These badges contain a dual badge for recording both gamma and neutron radiation.

Gauge operators are limited to a quarterly whole body dose of 1250 millirems.

C. Leak Testing of Sources -

We use IT-1 kits supplied by ICN of Irvine, California. Instructions for using this kit are found on a printed card supplied with the kit and in our operator's manual.

D. Maintenance -

Cleaning of these gauges is described in the Operating and Emergency Procedures Manual. Repair and calibration of these gauges is done by authorized agencies such as Troxler Service Center in the Chicago area.

E. Transportation of Gauges -

Transportation of these gauges must be done with the gauges secured in an authorized DOT 7A case. We use the cases supplied by Troxler with these gauges. A bill of lading must also be carried in the vehicle alongside of the driver.

Item 11 Waste Management

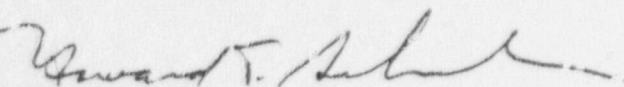
Disposal of sources in these gauges is accomplished by sending the gauge back to Troxler in North Carolina. To date, gauges sent to Troxler were done so either because the gauge was obsolete or inoperative and these gauges were used as a trade-in on a current model.

A check in the amount of \$120.00 in payment for the renewal fee accompanies this application.

If you have any questions regarding this application or need additional information, please contact me at 612/641-9327.

Very truly yours

TWIN CITY TESTING CORPORATION


Howard T Schulze
Radiation Safety Officer

TWIN CITY TESTING CORPORATION

TRAINING COURSE OUTLINE

FOR

SOIL MOISTURE/DENSITY GAUGE OPERATOR

<u>Subject</u>	<u>Hours</u>
1. <u>Radiation Principles and Safety</u>	3.0
a. Principles of Radiation Protection	
b. Biological effects from radiation	
c. Characteristics of Sources used in gauges	
d. Leak Testing of Sources	
e. Transporting Sources	
f. Emergency Procedures to be followed in case of accident	
g. Use of Monitoring Equipment - Film Badges	
2. <u>Instrument Theory</u>	0.5
Principles of Density and Moisture Measurement	
3. <u>Control Functions</u>	0.5
4. <u>Calibration Prior to Use</u>	0.5
5. <u>Density and Moisture Measurements</u>	1.0
Backscatter	
Direct Transmission	
6. <u>Field Applications</u>	1.0
Site Preparation	
Density measurements and dry density determinations	
Moisture measurements and percent moisture determinations	
7. <u>Maintenance of Gauges</u>	0.5
Periodic Maintenance	
Service	
Checkout procedure	

CONTROL NO. 8551 2

<u>Subject</u>	<u>Hours</u>
8. <u>Practical Demonstration on Use of Gauges</u>	0.5
9. <u>Examination</u>	
Written Examination covering Radiation Safety and use of Gauge.	
Practical demonstration by trainee in the use of gauge in determining density and moisture content of material under the supervision of an experienced technician at a field site.	