

**COPY**

This Copy is For Your Files

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter 1, Parts 30, 31, 32, 33, 34, 35, 36, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s); and to import such byproduct and source material. This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee <i>Western Engineers &amp; Architects</i>		
1. Engineering Services, Inc. <i>←</i> Soils Testing	3. License number	49-17984-01
2. 501 N. Sun Drive Casper, Wyoming 82601	4. Expiration date	April 30, 1983
	5. Docket or Reference No.	
6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Cesium 137	A. Sealed Sources (Troxler Dwg. No. A-102112)	A. 3 sources of 8 milli- curies each
B. Americium 241:Be	B. Sealed Sources (Troxler Dwg. No. A-102451)	B. 3 sources of 40 milli- curies each
9. Authorized use		
A. and B. To be used in Troxler Electronic Laboratories, Inc. Model 3401 Compac or 3411 portable gauges to measure moisture and surface density of materials.		

## CONDITIONS

10. Licensed material shall be used only at the licensee's address stated in Item 2 above and at temporary job sites of the licensee throughout the State of Wyoming.
11. The licensee shall comply with the provisions of Title 10, Chapter 1, Code of Federal Regulations, Part 19, "Notices, Instructions and Reports to Workers; Inspections" and Part 20, "Standards for Protection Against Radiation."
12. Licensed material shall be used by, or under the supervision and in the physical presence of, Duane Fehringer or Bobby T. Edwards.

8511190127 850926  
REG4 LIC30  
49-19334-02 PDR

## MATERIALS LICENSE

Supplementary Sheet

License Number 49-17984-01

## CONDITIONS

Docket or

Reference No. \_\_\_\_\_

(continued)

13. A(1) Each sealed source containing licensed material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, a sealed source received from another person shall not be put into use until tested.
- (2) The periodic leak test required by this condition does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakage prior to any use or transfer to another person unless they have been leak tested within six months prior to the date of use or transfer.
- B. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the sealed source is permanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the Commission.
- C. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Commission regulations. A report shall be filed within 5 days of the test with the U.S. Nuclear Regulatory Commission, Region IV, Office of Inspection and Enforcement, 611 Ryan Plaza Drive, Suite 1000, Arlington, Texas 76012, describing the equipment involved, the test results, and the corrective action taken.
- D. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically authorized by the Commission or an Agreement State to perform such services.

## MATERIALS LICENSE

Supplementary Sheet

License Number 49-17984-01

## CONDITIONS

Docket or

Reference No. \_\_\_\_\_

(continued)

14. Sealed sources containing licensed material shall not be opened or removed from the portable nuclear moisture-density gauges by the licensee.
15. The licensee may transport licensed material or deliver licensed material to a carrier for transport, in accordance with the provisions of Section 71.5, Title 10, Code of Federal Regulations, Part 71, "Packaging of Radioactive Material For Transport".
16. Except as specifically provided otherwise by this license, the licensee shall possess and use licensed material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in application dated January 14, 1978.

APR 12 1978

Date \_\_\_\_\_

For the U. S. Nuclear Regulatory Commission

*Joseph M. Brown Jr.*  
by Radioisotopes Licensing BranchDivision of Fuel Cycle and  
Material Safety  
Washington, D.C. 20555

# INFORMATION REQUIRED FOR ITEMS 15, 16 AND 17

Describe in detail the information required for Items 15, 16 and 17. Begin each item on a separate page and key to the application as follows:

15. **RADIATION PROTECTION PROGRAM.** Describe the radiation protection program as appropriate for the material to be used including the duties and responsibilities of the Radiation Protection Officer, control measures, bioassay procedures *(if needed)*, day-to-day general safety instruction to be followed, etc. If the application is for sealed source's also submit leak testing procedures, or if leak testing will be performed using a leak test kit, specify manufacturer and model number of the leak test kit.
16. **FORMAL TRAINING IN RADIATION SAFETY.** Attach a resume for each individual named in Items 6 and 7. Describe individual's formal training in the following areas where applicable. Include the name of person or institution providing the training, duration of training, when training was received, etc.
  - a. Principles and practices of radiation protection.
  - b. Radioactivity measurement standardization and monitoring techniques and instruments.
  - c. Mathematics and calculations basic to the use and measurement of radioactivity.
  - d. Biological effects of radiation.
17. **EXPERIENCE.** Attach a resume for each individual named in Items 6 and 7. Describe individual's work experience with radiation, including where experience was obtained. Work experience or on-the-job training should be commensurate with the proposed use. Include list of radioisotopes and maximum activity of each used.

## 18. CERTIFICATE

*(This item must be completed by applicant)*

*The applicant and any official executing this certificate on behalf of the applicant named in Item 2, certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Part 30, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our 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.

a. LICENSE FEE REQUIRED <i>(See Section 170.31, 10 CFR 170)</i>	b. CERTIFYING OFFICIAL <i>(Signature)</i>
	c. NAME <i>(Type or print)</i>
(1) LICENSE FEE CATEGORY:	d. TITLE
(2) LICENSE FEE ENCLOSED: \$	e. DATE



# COPY RADIOACTIVE SOURCE CERTIFICATE

Code	47	Customer Number	W1928WYAS
Source Number	CAA-1349	Code	40
Type	Americium 241:Beryllium	Source Number	CC-2200
Type of Radiation	Gamma/Neutron	Type	Cesium 137
Activity	40 mCi	Type of Radiation	Gamma
Neutron Output	$7.7 \times 10^{**4}$	Activity	8.2 mCi
		Neutron Output	----

Sources are encapsulated in stainless steel, Special Form Type A containers

2/14/78	DATE OF MEASUREMENT	3/09/78
WIPE TEST RECORD	Less than .005 micro-curies removable contamination.	WIPE TEST RECORD
5/11/78		5/11/78

## COMPETENT AUTHORITY

Special Form Certificate

## ORIGINAL USE

Enclosed in Model 3411-B, Serial No. 5232  
Date Shipped 5/11/78  
To Western Engr. & Arch.  
501 North Sun Drive  
Casper, Wyoming 82601  
Attn: Pat Garnroth  
Customer P. O. No. Verbal, License No. 49-17984-01  
W. O. No. 8583

## RECOMMENDATIONS

1. Treat radioactive source with respect.
2. Do not touch with hands or body. Use tongs.
3. Do not expose to personnel.
4. Wipe test every six months.
5. If dropped, or struck, immediately wipe test.
6. Consult your Radiological Safety Officer on shipping, handling and surveillance procedures.
7. If questions arise contact Troxler Electronic Laboratories, Inc.
8. Wipe Test Kits available.

## CLASSIFICATION OF RADIOACTIVE SOURCE

According to regulations of the Department of Transportation, this source is Special Form. Whenever shipped by public carrier, a special shipping label is required.

*Joe Daugherty*  
RADIOLOGICAL SAFETY OFFICER



Joe Daugherty

P. O. BOX 12057 RESEARCH TRIANGLE PARK, N.C. 27709 USA

07959

Manufacturers of Surface Moisture, Surface Density, Depth Moisture, and Depth Density Equipment

**COPY**

**RADIOACTIVE SOURCE CERTIFICATE**

Code	_____	Customer Number	W1928WYAS
Source Number	_____	Code	16
Type	_____	Source Number	RB-4069
Type of Radiation	_____	Type	Ra:Be
Activity	_____	Type of Radiation	Gamma/Neutron
Neutron Output	_____	Activity	2.1 mCi
		Neutron Output	2.6 x 10 <sup>4</sup> NPS

Sources are encapsulated in stainless steel, Special Form Type A containers

_____	DATE OF MEASUREMENT	9-5-74
<b>WIPE TEST RECORD</b>		<b>WIPE TEST RECORD</b>
_____	Less than .005 micro-curies	3-4-75
_____	removable contamination.	_____
_____	Sensitive wipe test negative	_____
_____	Sensitive wipe test negative	_____
_____	Sensitive wipe test negative	_____

**ORIGINAL USE**

Enclosed in Model 2401, Serial No. 3208  
Date Shipped March 4, 1975  
To Western Engineering & Architects  
2111 E. 2nd  
Casper, Wyoming 82601  
Customer P. O. No. Verbal, License No. NA  
W. O. No. 6116

**RECOMMENDATIONS**

1. Treat radioactive source with respect.
2. Do not touch with hands or body. Use tongs.
3. Do not expose to personnel.
4. Wipe test every six months.
5. If dropped, or struck, immediately wipe test.
6. Consult your Radiological Safety Officer on shipping, handling and surveillance procedures.
7. If questions arise contact Troxler Electronic Laboratories, Inc.
8. Wipe Test Kits available.

**CLASSIFICATION OF RADIOACTIVE SOURCE**

According to regulations of the Department of Transportation, this source is Special Form, Radioactive Yellow-II. Whenever shipped by public carrier, a special shipping label is required.

*H. Keith Hix*  
\_\_\_\_\_  
RADIOLOGICAL SAFETY OFFICER

H. Keith Hix

RALEIGH, N. C. 27607 USA

P. O. BOX 5997



Manufacturers of Surface Moisture, Surface Density, Depth Moisture, and Depth Density Equipment