

030-18345

NRC Form 313 I (12-81) 10 CFR 30 U.S. NUCLEAR REGULATORY COMMISSION APPLICATION FOR BYPRODUCT MATERIAL LICENSE INDUSTRIAL <i>See attached instructions for details.</i> <i>Completed applications are filed in duplicate with the Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety, and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555 or applications may be filed in person at the Commission's office at 1717 H Street, NW, Washington, D. C. or 7915 Eastern Avenue, Silver Spring, Maryland.</i>		1. APPLICATION FOR: <i>(Check and/or complete as appropriate)</i> ☒ a. NEW LICENSE ☐ b. AMENDMENT TO LICENSE NUMBER ☐ c. RENEWAL OF LICENSE NUMBER Expired 5-31-83 34-16119-02		
2. APPLICANT'S NAME <i>(Institution, firm, person, etc.)</i> <u>Solar Testing Laboratories, Inc.</u> TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION <u>216-663-1800</u>		3. NAME AND TITLE OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION <u>Dennis L. Sanderson</u> TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION <u>216-663-1800</u>		
4. APPLICANT'S MAILING ADDRESS <i>(Include Zip Code)</i> <i>(Address to which NRC correspondence, notices, bulletins, etc., should be sent.)</i> 9540 Midwest Avenue Garfield Heights, Ohio 44125		5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED <i>(Include Zip Code)</i> 9540 Midwest Avenue Garfield Heights, Ohio 44125		
(IF MORE SPACE IS NEEDED FOR ANY ITEM, USE ADDITIONAL PROPERLY KEYED PAGES.)				
6. INDIVIDUAL(S) WHO WILL USE OR DIRECTLY SUPERVISE THE USE OF LICENSED MATERIAL <i>(See Items 16 and 17 for required training and experience of each individual named below)</i>				
FULL NAME BY REGION <u>III</u>		Check No. <u>002346</u>		
a. See Attachment #1 Date <u>6/22/83</u>		Title <u>Director</u>		
Log <u>June 20 36</u>		Amount/Fee <u>\$110.34</u>		
b. By <u>Cap</u>		Type of Fee <u>Appel</u>		
c. Orig. To <u>ML 2/1/82</u>		Date Check Rec'd <u>7/1/83</u>		
7. RADIATION PROTECTION OFFICER Dennis L. Sanderson See Attachment 2 & 3		Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15.		
8. LICENSED MATERIAL				
LINE NO.	ELEMENT AND MASS NUMBER	CHEMICAL AND/OR PHYSICAL FORM	NAME OF MANUFACTURER AND MODEL NUMBER <i>(If Sealed Source)</i>	MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTIVITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME
(1)	Cesium - 137	Sealed source Troxler DWG#102112	Troxler 3401 or 3411	No single source to exceed 9 millicuries
(2)	Americium - 241 BE	Sealed source Troxler DWG#102451	Troxler 3401 or 3411	No single source to exceed 40 millicuries
(3)				
(4)				
DESCRIBE USE OF LICENSED MATERIAL				
E				
(1)	Used in the Troxler densometer for measuring moisture and density of materials.			
(2)	Same as (1)			
(3)	RECEIVED			
(4)	JUN 20 1983			
	REGION III			
	8810280151 B80614 REG3 LIC30 PNU 34-16119-03			

9. STORAGE OF SEALED SOURCES

LINE NO.	CONTAINER AND/OR DEVICE IN WHICH EACH SEALED SOURCE WILL BE STORED OR USED. A.	NAME OF MANUFACTURER B.	MODEL NUMBER C.
(1)	Storage container provided by manufacturer as designed for this purpose.	Troxler	3411-B
(2)	Same as (1)		
(3)			
(4)			

10. RADIATION DETECTION INSTRUMENTS

LINE NO.	TYPE OF INSTRUMENT A.	MANUFACTURER'S NAME B.	MODEL NUMBER C.	NUMBER AVAILABLE D.	RADIATION DETECTED (alpha, beta, gamma, neutron) E.	SENSITIVITY RANGE (milliroentgens/hour or counts/minute) F.
(1)	N/A					
(2)						
(3)						
(4)						

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

☐ a. CALIBRATED BY SERVICE COMPANY NAME, ADDRESS, AND FREQUENCY N/A If required, sent back to manufacturer (Troxler)	☐ b. CALIBRATED BY APPLICANT Attach a separate sheet describing method, frequency and standards used for calibrating instruments. N/A
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12. PERSONNEL MONITORING DEVICES

TYPE (Check and/or complete as appropriate.) A.	SUPPLIER (Service Company) B.	EXCHANGE FREQUENCY C.
☒ (1) FILM BADGE ☐ (2) THERMOLUMINESCENCE DOSIMETER (TLD) ☐ (3) OTHER (Specify): _____ _____ _____	R.S. Landauer Jr. and Company Division of Technical Operations, Inc. Glenwood Science Park Glenwood, Illinois 60425	☒ MONTHLY ☐ QUARTERLY ☐ OTHER (Specify): _____ _____ _____

13. FACILITIES AND EQUIPMENT (Check where appropriate and attach annotated sketch(es) and description(s).)

- ☐ a. LABORATORY FACILITIES, PLANT FACILITIES, FUME HOODS (Include filtration, if any), ETC.
☐ b. STORAGE FACILITIES, CONTAINERS, SPECIAL SHIELDING (fixed and/or temporary), ETC.
☐ c. REMOTE HANDLING TOOLS OR EQUIPMENT, ETC.
☐ d. RESPIRATORY PROTECTIVE EQUIPMENT, ETC. N/A

14. WASTE DISPOSAL

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED
N/A

b. IF COMMERCIAL WASTE DISPOSAL SERVICE IS NOT EMPLOYED, SUBMIT A DETAILED DESCRIPTION OF METHODS WHICH WILL BE USED FOR DISPOSING OF RADIOACTIVE WASTES AND ESTIMATES OF THE TYPE AND AMOUNT OF ACTIVITY INVOLVED. IF THE APPLICATION IS FOR SEALED SOURCES AND DEVICES AND THEY WILL BE RETURNED TO THE MANUFACTURER, SO STATE

N/A If required in future we will contact manufacturer (Troxler Laboratories) for disposal procedures.

9. STORAGE OF SEALED SOURCES

*LINE NO.	*CONTAINER AND/OR DEVICE IN WHICH EACH SEALED SOURCE WILL BE STORED OR USED. A.	NAME OF MANUFACTURER B.	MODEL NUMBER C.
(1)	Storage container provided by manufacturer as designed for this purpose.	Troxler	3411-B
(2)	Same as (1)		
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13. FACILITIES AND EQUIPMENT (Check where appropriate and attach annotated sketch(es) and description(s).)

- ☐ a. LABORATORY FACILITIES, PLANT FACILITIES, FUME HOODS (Include filtration, if any), ETC.
☐ b. STORAGE FACILITIES, CONTAINERS, SPECIAL SHIELDING (fixed and/or temporary), ETC.
☐ c. REMOTE HANDLING TOOLS OR EQUIPMENT, ETC.
☐ d. RESPIRATORY PROTECTIVE EQUIPMENT, ETC. N/A

14. WASTE DISPOSAL

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED N/A
b. IF COMMERCIAL WASTE DISPOSAL SERVICE IS NOT EMPLOYED, SUBMIT A DETAILED DESCRIPTION OF METHODS WHICH WILL BE USED FOR DISPOSING OF RADIOACTIVE WASTES AND ESTIMATES OF THE TYPE AND AMOUNT OF ACTIVITY INVOLVED. IF THE APPLICATION IS FOR SEALED SOURCES AND DEVICES AND THEY WILL BE RETURNED TO THE MANUFACTURER, SO STATE N/A If required in future we will contact manufacturer (Troxler Laboratories) for disposal procedures.

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:

(See Attachment #2)

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.

(See Attachment #3)

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.

(See Attachment #4)

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

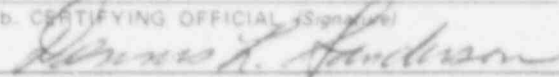
(This item must be completed by applicant)



Dennis L. Sanderson
Vice President of Operations

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> Dennis L. Sanderson
(1) LICENSE FEE CATEGORY: \$110.00	d. TITLE Vice President of Operations
(2) LICENSE FEE ENCLOSED \$ \$110.00	e. DATE 6-15-83

ATTACHMENT #1

Item 6: Individuals who will use or directly supervise the use of licensed material.

<u>FULL NAME</u>	<u>TITLE</u>
1. Dennis L. Sanderson	Radiation Protection Officer Director of Training Vice President of Operations
2. Michael T. Kichurchak	Director of Cleveland Operations Assistant Director of Training
3. George J. Ata, P.E.	Director of Engineering
4. Douglas R. McCluggage	Engineering Assistant
5. Michael E. Birtic	Canton Office Manager
6. Preston L. Ruark	Pittsburgh Office Manager
7. Dumitru Toaxen	Laboratory Manager
8. Donald Hollenbaugh	Assistant Laboratory Manager
9. Paul Schmidt	Field Technician
10. James Grady	Field Technician
11. Robert Corcoran	Field Technician
12. Paul Swaidner	Field Technician
13. Jeffrey Berk	Field Technician
14. Dennis Ciufo	Field Technician
15. Richard Cookson	Field Technician
16. Kevin Wiley	Field Technician
17. Randy Robinson	Field Technician

ATTACHMENT #2

Radiation Protection Program

All those using the equipment are made aware of radiation characteristics, exposure limitation, handling procedures, security, personal and public safety, transportation procedures, storage and monitoring records and reports. This is done first through formal in-house training and reviewed during field training. Frequently the men are reminded of their responsibilities and safety requirements. At the beginning of each assignment, procedures are checked to verify compliance to safety regulations. Safety posters are used as a constant reminder. The radiation protection officer sees that only licensed operators use the equipment requiring a license and that each man is properly trained and has a thorough knowledge of safety requirements. He is made aware of any irregularities, equipment not working, or non-compliance to the rules and regulations. Film badges are used during operations of equipment. The badges are sent monthly for testing and analysis. The radiation protection officer is to be made aware of the findings and records are kept.

The leak test used is: Troxler Model 3880 Leak Test Kit or Equal, every 6 months on each unit.

Troxler Electronic Laboratories, Inc.
and Subsidiary
Troxler International, Limited
Research Triangle Park, North Carolina 27709

Control No. 75111

ATTACHMENT #3

16.) Formal Training in Radiation Safety

Dennis L. Sanderson: Received formal training on Seaman Nuclear on A,B,C and D from Toledo Testing Laboratories, (8) 1970 thru 1975 in-house and field. Received formal training on A,B,C and D from Troxler Laboratories, January, 1979; 16 hours in-house.

Michael T. Kichurchak: Received formal training on A,B,C and D by Solar Testing Laboratories, Inc., eight (8) hours in-house, eight (8) hours in field prior to 1975. Received formal training on A,B,C and D by Troxler Laboratories, January 11th and 12th, 1979; 16 hours in-house.

George J. Ata: Received formal training on A,B,C and D from Solar Testing Laboratories, Inc. prior to 1979. Received formal training on A,B,C, and D from Troxler Laboratories, January 11th and 12th, 1979; 16 hours in-house.

Douglas R. McCluggage: Received formal training on A,B,C and D from Solar Testing Laboratories, Inc. prior to 1979. Received formal training on A,B,C and D from Troxler Laboratories January 11th and 12th, 1979; 16 hours in-house.

Michael E. Birtic: Received formal training on A,B,C and D by Solar Testing Laboratories, Inc.; eight (8) hours in-house, eight (8) hours in field prior to 1975. Received formal training on A,B,C and D by Troxler Laboratories, January 11th and 12th, 1979; 16 hours in-house.

Preston L. Ruark: Received formal training on A,B,C and D by Solar Testing Laboratories, Inc.; eight (8) hours in-house and (8) hours in field prior to 1976. Received formal training on A,B,C and D from Troxler Laboratories on January 11th and 12th, 1979; 16 hours in-house. Received periodic training by Solar Testing on A,B,C and D for the last three years.

Dumitru Toaxen: Same

Donald Hollenbaugh: Received formal training on A,B,C and D by Solar Testing Laboratories, Inc.; 16 hours in-house and 16 hours field.

<u>Paul Schmidt:</u>	Same
<u>James Grady:</u>	Same
<u>Robert Corcoran:</u>	Same
<u>Paul Swaidner:</u>	Same
<u>Jeffrey Berk:</u>	Same
<u>Dennis Ciufo:</u>	Same
<u>Richard Cookson:</u>	Same
<u>Kevin Wiley:</u>	Same
<u>Randy Robinson:</u>	Same