

FORM NRC-313 (1-79) U.S. NUCLEAR REGULATORY COMMISSION 10 CFR 30		1. APPLICATION FOR (Check and/or complete as appropriate)		
APPLICATION FOR BYPRODUCT MATERIAL LICENSE INDUSTRIAL		31-17558		
See attached instructions for details.  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.		X	a. NEW LICENSE	
			b. AMENDMENT TO LICENSE NUMBER 03128	
			c. RENEWAL OF LICENSE NUMBER 64619401	
2. APPLICANT'S NAME (Institution, firm, person, etc.) Ted Forsi & Associates, Inc. (907) 274-9517 <small>TELEPHONE NUMBER AREA CODE - NUMBER EXTENSION</small>		3. NAME OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION Keith Mobley (907) 274-9517 <small>TELEPHONE NUMBER AREA CODE - NUMBER EXTENSION</small>		
4. APPLICANT'S MAILING ADDRESS (Include Zip Code) 124 East Seventh Avenue Anchorage, Alaska 99501		5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED (Include Zip Code) a) Primary storage same as #4 b) Used at temporary job sites within State of Alaska		
(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 (See Items 16 and 17 for required training and experience of each individual named below)				
FULL NAME		TITLE		
a. Keith Mobley Applicant Check No. 1581 Amount/Fee Category 1/10 (3) Type of Fee Application Date Check Rec'd 6/23/80		Civil Engineer Date MAY 29 1980 Log May 28 1980 By BROWN Title To		
7. RADIATION PROTECTION OFFICER Keith Mobley		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 (If Sealed Source)	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 A-102112	One source 8 m Ci
(2)	Americium 241	Sealed Source	Troxler A-102541	One source 40 m Ci
(3)				
(4)				
DESCRIBE USE OF LICENSED MATERIAL E				
(1)	Sealed in one Troxler Electronic Laboratories, Inc. model 3401 surface gauge,			
(2)	which will be used to measure the moisture and density of engineering materials.			
(3)	8510310229 850926 REGS LIC30 50-19401-01 PDR			
(4)				

## 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)	Portable Moisture Density Gauge	Troxler Electronic Lab	3401
(2)			
(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

<input type="checkbox"/> a. CALIBRATED BY SERVICE COMPANY NAME, ADDRESS, AND FREQUENCY  N/A	<input type="checkbox"/> 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.
<input checked="" type="checkbox"/> (1) FILM BADGE  <input type="checkbox"/> (2) THERMOLUMINESCENCE DOSIMETER (TLD)  <input type="checkbox"/> (3) OTHER (Specify): _____ _____	United States Testing Co., Inc. 2800 George Washington Way Richland, Washington 99352  PH (509) 946-5157	<input checked="" type="checkbox"/> MONTHLY  <input type="checkbox"/> QUARTERLY  <input type="checkbox"/> 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.

See attached drawing

## 14. WASTE DISPOSAL

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED

Source will be returned to the manufacturer

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

# 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.

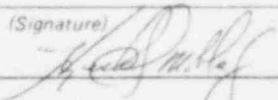
## 18. CERTIFICATE

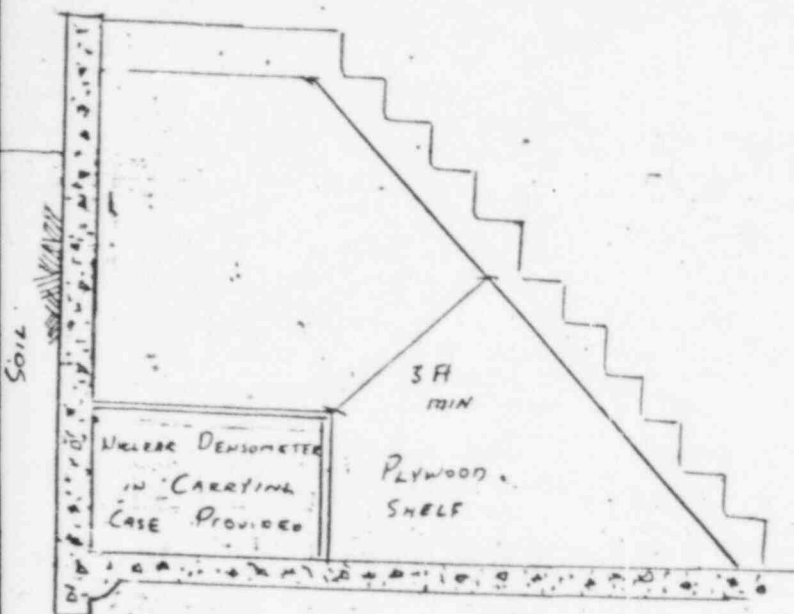
(This item must be completed by applicant)



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.

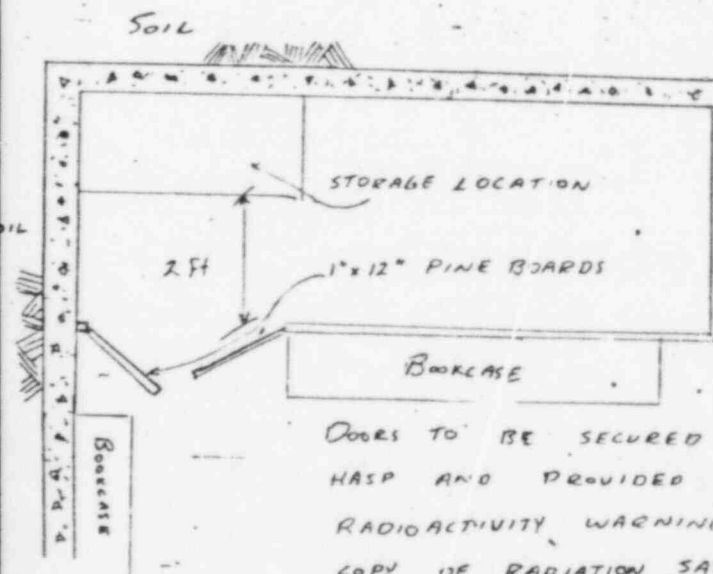
a. LICENSE FEE REQUIRED (See Section 170.31, 10 CFR 170)  <div style="text-align: right;">\$110.00</div>	b. CERTIFYING OFFICIAL (Signature)  c. NAME (Type or Print) KEITH F. MOSLEY
(1) LICENSE FEE CATEGORY: 3-L <div style="text-align: right;">RECEIVED</div>	d. TITLE Radiation Safety Officer
(2) LICENSE FEE ENCLOSED: \$ 110.00	e. DATE June 16, 1980



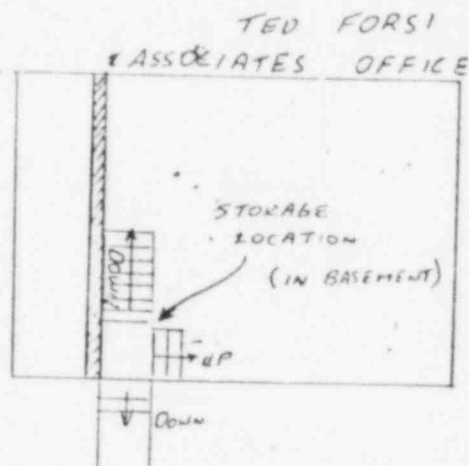
ELEVATION

NOT TO SCALE

PLAN VIEW



DOORS TO BE SECURED WITH LOCK AND  
HASP AND PROVIDED WITH N.R.C.  
RADIOACTIVITY WARNING SYMBOLS AND  
COPY OF RADIATION SAFETY PROGRAM



VICINITY

NOT TO SCALE



Ph. 907-274-9517  
Ted Forsi & Associates, Inc.  
124 East 7th Avenue  
Anchorage, Ak. 99501

PERMANENT STORAGE  
FACILITIES FOR NUCLEAR  
DENSITY TEST APPARATUS



# Ted Forsi and Associates, Inc.

124 East Seventh Avenue • Anchorage, Alaska 99501 • (907) 274-9517  
P.O. Box 2470 • Soldotna, Alaska 99669 • (907) 262-5531

Item #15

## RADIATION SAFETY PROGRAM

### A. SAFETY PROCEDURES

1. Do not operate or attempt to operate a gauge unless you have been authorized to do so.
2. Do not attempt to repair, modify or open the sealed source under any circumstances.
3. Wear a film badge at all times while operating or transporting a gauge.
4. Follow operating procedures, when using the gauge, in accordance with the Troxler instruction manual, the radiation control regulations and this safety program.
5. Keep unauthorized persons away from the gauge.
6. Do not leave the gauge unattended when in use or outside of the storage enclosure or locked vehicle.
7. Keep the gauge in the "SAFE" or storage position when not in use.
8. Be sure that the gauge is locked within an authorized enclosure (e.g. closet, cabinet, vehicle, etc.) when it is not in use. Security against the theft of a radioisotope is of utmost importance and must not be neglected. The storage enclosure must be labeled with a radiation warning sign bearing the symbol as described in 10 CFR 20.203 and the words "CAUTION RADIOACTIVE MATERIALS".
9. Gauge(s) may be only transported by authorized personnel in approved vehicles. The gauge(s) may not be transported on the front or rear seats of any vehicle. If a pickup truck is used, the gauge(s) must be locked in an enclosure (e.g. cabinet, shipping case, etc.) and the enclosure tied securely (e.g. chained, bolted, etc.) to the body of the truck in order to prevent loss or theft.

A. Continued

10. Ensure that the gauge is leak tested at the intervals required by the licensee's Radioactive Materials License. The wipe sample will be collected by the Radiation Protection Officer using a Troxler model 3880 leak test kit. The leak test measurement on the wipe sample will be performed by Troxler Electronic Laboratories, Inc., P. O. Box 12057, Research Triangle Park, NC 27709.
11. When in doubt, ask your Radiation Protection Officer.

B. EMERGENCY PROCEDURES

1. Accidents

- a. In the event of possible damage to source or source control mechanism, the operator will keep unauthorized persons at least ten feet from gauge and prevent removal of gauge from site until authorized by RPO or appropriate authority.
- b. If there is any possibility the source capsule might be ruptured, the location must be covered by a sheet of material (plastic, tarp, etc.), held down by weights, (rocks, bags of material, etc.) to prevent scattering of radioactive material by the elements.
- c. The operator must then immediately notify his RPO of the incident and given an appraisal of the probable condition of the source.
- d. The RPO will then immediately notify the following authority who will provide instructions and assistance in accordance with the circumstances of the incident.

Region V, USNRC  
Office of Inspection and Enforcement  
1990 N. California Blvd., Suite 202  
Walnut Creek, CA 94596

Daytime, night & holiday phone: (415) 932-8300

2. Source stolen or lost

- a. The operator must immediately notify local police or other law enforcement agency within whose jurisdiction the incident occurred.
- b. The operator must also notify his RPO who will notify the authority listed in item B-1-d above.

C. DUTIES OF THE RADIATION PROTECTION OFFICER

1. Assure compliance with all pertinent parts of the controlling agency's (NRC) regulations.
2. Assure compliance with the conditions in licensee's Radioactive Materials license and amendments and above items given in this safety program.
3. Maintain the following items in a radiation file and keep available for inspection by controlling agency if requested.
  - (a) Current Radioactive Materials License.
  - (b) Copies of license application, attachments and all pertinent correspondence referred to in the conditions of the license and amendments.
  - (c) Gauge Source Certificate(s) issued with the gauge(s) by the manufacturer.
  - (d) Film badge reports.
  - (e) Leak test reports.
  - (f) Records concerning disposal, inventory and useage of source(s).
  - (g) Copies of this safety program.
  - (h) A current copy of the controlling agency's regulations.



Item 16

# TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

Keith Mobley

of

Ted Forsi & Associates

HAS SUCCESSFULLY COMPLETED THE TROXLER ELECTRONIC LABORATORIES, INC.  
TRAINING COURSE FOR THE USE OF NUCLEAR TESTING EQUIPMENT.

SUBJECTS INCLUDED IN THIS COURSE WERE AS FOLLOWS:

Radiological Safety

1. Principles and practices of radiation protection.
2. Leak testing procedures.
3. Mathematics and calculations basic to the use and measurement of radioactivity.
4. Biological effects of radiation.
5. Radioactivity measurement standardization and monitoring techniques and instruments.
6. Accident and incident procedures.
7. Procedures for nuclear gauge storage and transportation.
8. General safety precautions.

Gauge Operation

1. Instrument theory
2. Operating procedures
3. Maintenance
4. Field application
5. Gauge calibration

Daniel R. Howe  
INSTRUCTOR

March 27 & 28, 1980  
DATE

William F. Troxler  
PRESIDENT





# Ted Forsi and Associates, Inc.

124 East Seventh Avenue • Anchorage, Alaska 99501 • (907) 274-9517  
P.O. Box 2470 • Soldotna, Alaska 99669 • (907) 262-5531

Item #17

Keith F. Mobley

## Education, Registration, and Associations

Professional Civil Engineer: California Registration  
R.C.E. 30683 (August 1979)

Continuing education course for Nuclear Density Gauges by  
Troxler Electronics including brief field experience on use  
of gauges.

San Diego State University: Continuing education post grad-  
uate courses in soil mechanics, hydraulics, and water treat-  
ment.

Montana State University: B.S. Civil Engineering, awarded  
March 1976. Major emphasis: Structures, Soils.

Member: Society of American Military Engineers

## Employment History

1980-Present: Project Engineer for Ted Forsi and Associates,  
Inc. Responsible for the design of water storage facilities,  
docks and airports. Also responsible for coordination of soils  
investigations for engineering projects.

1977-1980: Civil Engineer for San Dieguito Engineering, P. O.  
Box 2004, Rancho Santa Fe, California. Superior: John B. Fox,  
President. Responsibilities included management of the soils  
department for a small consulting engineering firm which entailed  
client contact, job cost estimating, job and equipment scheduling,  
governmental agency contact, report preparation and review of re-  
ports prepared by other people in the office, cost review and  
billing, and hiring and training of personnel. I was also in-  
volved with the decision making processes, scheduling and planning  
for the entire company.

Jobs included landslide and settlement analysis, site stability  
and geologic reconnaissance including recommendations for proper  
development, grading and compaction certification, foundation

design, seepage analysis, independent septic system design for individual homes and small commercial developments, frequent contact with the San Diego County Health Department, and contact with the Environmental Analysis Division, State Water Quality Control Board, and the Regional Coast Commission.

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