

NRC Form 313 I (12-81) 10 CFR 30		U.S. NUCLEAR REGULATORY COMMISSION	
APPLICATION FOR BYPRODUCT MATERIAL LICENSE INDUSTRIAL		1. APPLICATION FOR: <i>(Check and/or complete as appropriate)</i>	
<i>See attached instructions for details.</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.		a. NEW LICENSE	
		b. AMENDMENT TO: LICENSE NUMBER	
		c. RENEWAL OF: LICENSE NUMBER X 12-06030-03	
2. APPLICANT'S NAME <i>(Institution, firm, person, etc.)</i> Neutronics Laboratory TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION 312 - 560-0700		3. NAME AND TITLE OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION Leslie Johnson TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION 312 - 560-0700	
4. APPLICANT'S MAILING ADDRESS <i>(Include Zip Code)</i> <i>(Address to which NRC correspondence, notices, bulletins, etc., should be sent.)</i> 168th & Kilpatrick Ave. Tinley Park, Il. 60477		5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED <i>(Include Zip Code)</i> same as in Box 4	
(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		TITLE	
a. Leslie Johnson		Owner	
b. Applicant			
c. Check No. 18826			
7. RADIATION PROTECTION OFFICER		Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15.	
Type of Fee			
Date Check Rec'd 8/1/85			
8. LICENSED MATERIAL			
L I N E NO.	RECEIPT AND MASS NUMBER	CHEMICAL AND/OR PHYSICAL FORM	NAME OF MANUFACTURER AND MODEL NUMBER <i>(If Sealed Source)</i>
	A	B	C
(1)	Cesium-137		RR-137 Nuclear-Chicago 2.92mCi
(2)			(activity on 8/15/83)
(3)	8512020627 851112		
(4)	REG3 LIC30 12-06030-03 PDR		
DESCRIBE USE OF LICENSED MATERIAL E			
(1)	Used to evaluate response of Thermoluminescent Dosimeters		
(2)			
(3)			
(4)			

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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)	See description submitted with original License Application		
(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)	Gamma MicroR Meter	Ludlum	19	1	Gamma	0-25 mR/hr to 0-5000 mR/hr
(2)	Single Channel					
(3)	Analyzer	Ludlum	2200	1	Gamma, Beta Alpha	999999c/m ²
(4)						

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

<input type="checkbox"/> a. CALIBRATED BY SERVICE COMPANY NAME, ADDRESS, AND FREQUENCY	<input checked="" type="checkbox"/> b. CALIBRATED BY APPLICANT <i>Attach a separate sheet describing method, frequency and standards used for calibrating instruments.</i>
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12. PERSONNEL MONITORING DEVICES

TYPE (Check and/or complete as appropriate.) A	SUPPLIER (Service Company) B	EXCHANGE FREQUENCY C
<input type="checkbox"/> (1) FILM BADGE <input checked="" type="checkbox"/> (2) THERMOLUMINESCENCE DOSIMETER (TLD) <input type="checkbox"/> (3) OTHER (Specify): _____ _____ _____	Monitored by applicant	<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.

14. WASTE DISPOSAL

- a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED
None generated
- b. IF COMMERCIAL WASTE DISPOSAL SERVICE 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)

230.00

b. CERTIFYING OFFICIAL (Signature)

Leslie Johnson
c. NAME (Type or print)
Leslie Johnson

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(1) LICENSE FEE CATEGORY:

d. TITLE

Owner

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(2) LICENSE FEE ENCLOSED: \$230.00

e. DATE

July 19, 1985

Vanderbilt 7-4456



Post Office Box 457
Oakton Station
Des Plaines, Illinois

YOUR ORDER NO. Verbal

REQ. NO.

INVOICE DATE 2/18/60

Neutronics Lab.
163th & Kilpatrick
Tinley Park, Illinois

SHIPPED TO

Same

TERMS: 1% 10 DAYS NET 30 DAYS (NO ANTICIPATION)

64853

DATE SHIPPED	SHIPPED VIA	PPD.	COLL.	F.O.B. FACT. DEST.	S.R. NO.	S.O. NO.	SALES
2/15/60	United Parcel	X		X		53235	301

SE, CONSUMPTION, COMPENSATING AND SIMILAR TAXES ARE NOT INCLUDED IN THE ABOVE PRICE, UNLESS SPECIFICALLY STATED AS A SEPARATE
EM. IF THESE TAXES ARE NOT SO STATED, BUYER ASSUMES RESPONSIBILITY FOR ANY SUCH TAXES APPLICABLE TO THIS TRANSACTION.

E HEREBY CERTIFY THAT THESE GOODS WERE PRODUCED IN COMPLIANCE WITH ALL THE APPLICABLE REQUIREMENTS OF SECTIONS 6, 7 AND
OF THE FAIR LABOR STANDARDS ACT, AS AMENDED, AND ALL REGULATIONS AND ORDERS OF THE UNITED STATES DEPARTMENT OF LABOR
ISSUED UNDER SECTION 14 THEREOF.

ALL CLAIMS MUST BE MADE WITHIN 10 DAYS AFTER RECEIPT OF GOODS

ITEM NO.	MODEL NO.	SERIAL NO.	DESCRIPTION	QTY.	PRICE	AMOUNT
1	RR-137		Cesium-137 Sources	2 pkgs 5 mc	110.00	220.00
			3 1/2% Sales Tax			5.80
						225.80
			Shipping charges			1.16
						226.96
						221.16
						2.20
						218.96
	A.E.C. Auth. 12-6030-1(L61)					
	For Resale					
			5 mC at 2/15/60, 23 1/2 year 1/2 life, activity on 8/15/83 - 2.92 mC			

ORIGINAL - INVOICE

Oct. 6, 1983

Items 6 & 7 in renewing License 12-06030-03

Leslie Johnson has been working with Radiation Instrumentation since Feb. 1946, when he started with the Manhattan Engineering District, later to become Argonne National Laboratory. He left there in 1953 and started Neutronics Lab, which he has had to the present time. He has at the present time a contract to maintain the radiation instruments in the U. S. EPA's Chicago Laboratory, and will use the referenced source for evaluating TLDs of that Lab. The TLDs will be read out on a Harshaw Auto Integrating Picoammeter and Detector. This instrument will be used also for monitoring personnel dosage incurred from the source involved with this License.