

FORM NRC-313 I (1-79) 10 CFR 30		U.S. NUCLEAR REGULATORY COMMISSION 1. APPLICATION FOR: <i>(Check and/or complete as appropriate)</i> Radioisotope source		
APPLICATION FOR BYPRODUCT MATERIAL LICENSE INDUSTRIAL		a. NEW LICENSE b. AMENDMENT TO: LICENSE NUMBER 34-20007-01 c. RENEWAL OF: LICENSE NUMBER		
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		
2. APPLICANT'S NAME <i>(Institution, firm, person, etc.)</i> M. Berkowitz & Company, Inc. TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION (216) 652-5817		3. NAME OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION I. Tafel TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION (216) 652-5817		
4. APPLICANT'S MAILING ADDRESS <i>(Include Zip Code)</i> P. O. Box 312 Niles, Ohio 44446		5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED <i>(Include Zip Code)</i> 852 Ann Street Niles, Ohio 44446		
(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. Henry Zimmerman		Plant Manager		
b.				
c.				
7. RADIATION PROTECTION OFFICER Dr. Leslie v. Szirmay		Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15. See attached.		
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 ACTI- VITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME
(1)	(0202) Cd-109	Elemental Cd	IPL No. PH109	3 Sources of 8 mCi each.
(2)	Am-241	Americium Oxide	IPL No. PH241	Do
(3)				
(4)				
DESCRIBE USE OF LICENSED MATERIAL E				
(1)	The device is to be used in a Kevex Energy Dispersive X-Ray Analyzer to			
(2)	provide a source of X-Ray energy to fluorescence X-Rays from a sample for			
(3)	the purpose of alloy sorting and identification and for quantitative			
(4)	chemical analysis.			

9. STORAGE OF SEALED SOURCES

LINE NO.	CONTAINER AND/OR DEVICE IN WHICH EACH SEALED SOURCE WILL BE STORED OR USED.	NAME OF MANUFACTURER	MODEL NUMBER
	A.	B.	C.
(1)	Source Housing	Kevex Corporation	0202
(2)			
(3)			
(4)			

10. RADIATION DETECTION INSTRUMENTS

LINE NO.	TYPE OF INSTRUMENT	MANUFACTURER'S NAME	MODEL NUMBER	NUMBER AVAILABLE	RADIATION DETECTED (alpha, beta, gamma, neutron)	SENSITIVITY RANGE (milliroentgens/hour or counts/minute)
	A	B	C	D	E	F
(1)	Survey Meter	Nuclear Assoc.	05-571	1	Gamma & X-Ray	0-10
(2)						
(3)						
(4)						

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

<input type="checkbox"/> a. CALIBRATED BY SERVICE COMPANY NAME, ADDRESS, AND FREQUENCY Not applicable to Mini Monitor II	<input type="checkbox"/> b. CALIBRATED BY APPLICANT Attach a separate sheet describing method, frequency and standards used for calibrating instruments.
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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): _____ _____ _____	R. S. Landauer & Company Glenwood Science Park Glenwood, Illinois 60425 TEL: (312) 755-7000	<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
Not applicable
- 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.
- Disposal of source will be provided by Kevex Corporation.

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:

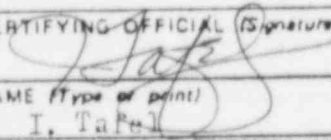
15. RADIATION PROTECTION PROGRAM. Describe the radiation protection program as appropriate for the material to be used including the duties and responsibilities of the Radiation Protection Officer, control measures, bioassay procedures (if needed), day-to-day general safety instruction to be followed, 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)	b. CERTIFYING OFFICIAL (Signature) 
Addition to License No. 34-20007-01	c. NAME (Type or print) I. Taft
(1) LICENSE FEE CATEGORY: 3L	d. TITLE Secretary
(2) LICENSE FEE ENCLOSED: \$ 40.00	e. DATE 9/3/81

CONTROL NO. 05341

- 15A - Routine monitoring of system will be accomplished using MiniMonitor II. Sources will be kept installed in instrument at all times except when removed by Manufacturer's Service Engineer. If removed, the source will be kept in a locked cabinet marked "Caution - Radioactive Material". The instrument the source is installed in will be clearly marked the same way with approved labeling.
- B - The Radiation Protection Officer will maintain all records of area monitoring and filmbadge exposures. The RPO will safeguard and not open any box containing a source delivered to the site. The manufacturer's service engineer will open the package, install the source and perform initial radiation survey. He will also perform all service, repairs, or replacement of the source and will be responsible for disposal of spent devices.
- C - Leak tests will be performed semi-annually by the manufacturer's service engineer using test kits provided by Radiation Detection Company of Sunnyvale, California.

Dr. Leslie v. Szirmay -

- 16A -) Masters Degree in Nuclear Engineering and PHD in Chemical.
- B -)
- C -)
- D -)

Will read "Radiation Safety Guide" published by Kevex and all Operators Manuals. Kevex personnel will provide orientation program covering Items 16 a-d upon installation of system at our site.

- 17 - Actively working with radiation.