

January 3, 1965

TO: DR. ALFRED C. SCHRAM
MR. ERNEST CARLSON
DR. ABSALON

FROM: DR. ALFRED A. KRAUS, JR.

We are in the process of amending our license for radioactive materials. We would like to have your name included as one of those who can assume primary responsibility for the handling of these materials. In order to have your name included we need some information about you. Please find enclosed a copy of TRC Form 41-2. We would appreciate it if you would include the data requested on the top of the page having to do with your training and experience.

A list of the isotopes we are interested in handling is given below. Please comment about the advisability of any other additions. If possible, we would like the forms returned by January 18.

TEXAS STATE DEPARTMENT OF HEALTH
APPLICATION FOR RADIOACTIVE MATERIAL LICENSE

INSTRUCTIONS - Complete Items 1 through 16 if this is an initial application. If application is for renewal of a license, complete only Items 1 through 7 and indicate new information or changes in the program as requested in Items 8 through 15. Use supplemental sheets where necessary. Item 16 must be completed on all applications. Mail two copies to: Texas State Department of Health, Division of Occupational Health and Radiation Control, 1100 West 49th Street, Austin, Texas 78756. Upon approval of this application, the applicant will receive a Texas Radioactive Material License, issued in accordance with the general requirements contained in Texas State Department of Health regulations on radiation and the Texas Radiation Control Act.

<p>1. (a) NAME AND STREET ADDRESS OF APPLICANT. (Institution, firm, hospital, person, etc.)</p> <p>West Texas State University Canyon, Texas</p>	<p>(b) LOCATION(S) AT WHICH RADIOACTIVE MATERIAL WILL BE USED. (If different from 1(a).)</p> <p>Science Building Room 117</p>	
<p>2. DEPARTMENT TO USE RADIOACTIVE MATERIAL</p> <p>Physics, Chemistry and Biology</p>	<p>3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.)</p> <p>1-583 and 1-584</p>	
<p>4. INDIVIDUAL USER(S). (Name and title of individual(s) who will use or directly supervise use of radioactive materials. Give training and experience in Items 8 and 9.)</p> <p>Alfred A. Kraus, Jr. Alfred C. Schram Ernest R. Carlson</p>	<p>5. RADIATION PROTECTION OFFICER (Name of person designated as radiation protection officer if other than individual user. Attach resume of his training and experience as in Items 8 and 9.)</p> <p>Alfred A. Kraus, Jr.</p>	
<p>6. (a) RADIOACTIVE MATERIAL (element and mass number)</p> <p>Hydrogen 3 Carbon 14 Sodium 22 Manganese 54 Cobalt 57 Cobalt 60 Iodine 131 Barium 133 Cesium 137 Cerium 139 Polonium 210 Thorium 228</p>	<p>(b) CHEMICAL AND/OR PHYSICAL FORM</p> <p>Any Any Any Any Any Any Any Any Any Any Any Any</p>	<p>(c) NUMBER OF MILLICURIES OF EACH FORM THAT YOU WILL POSSESS AT ANY ONE TIME.</p> <p>25 25 25 25 25 25 100 25 25 50 25 25</p>

7. DESCRIBE PURPOSE FOR WHICH RADIOACTIVE MATERIAL WILL BE USED. (If radioactive material is for "human use," Supplement A (TRC FORM 41-2a) must be completed in lieu of this item. If radioactive material is in the form of sealed sources, include the make and model number of the storage container and/or device in which the source will be stored and/or used).

To fabricate small sources (approx. 50 μ c) for instructional purposes
 Low temperature nuclear physics research (adiabatic demagnetization to produce nuclear orientation)
 Chemical reaction kinetics, perhaps in (non-human) biological systems
 Tracer techniques in (non-human) biological systems
 Experiments in a radio-chemistry course (such as Cs¹³⁷-Ba¹³⁷ separation).

TRC FORM 41-2

TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM 4 (Use supplemental sheets if necessary)

8. TYPE OF TRAINING	WHERE TRAINED	DURATION OF TRAINING	ON THE JOB (Circle answer)		FORMAL COURSE (Circle answer)	
			Yes	No	Yes	No
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						

9. EXPERIENCE WITH RADIATION (Actual use of radioisotopes or equivalent experience.)

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE

10. RADIATION DETECTION INSTRUMENTS (Use supplemental sheets if necessary.)

TYPE OF INSTRUMENTS (Include make and model number of each)	NUMBER AVAILABLE	RADIATION DETECTED	SENSITIVITY RANGE (mr/hr)	WINDOW THICKNESS (mg/cm ²)	USE (Monitoring, Surveying, measuring)

11. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE

12. LEAK TESTS. Submit leak testing procedures where applicable, name, training, and experience of person to perform leak tests and arrangements for performing initial radiation survey, servicing, maintenance and repair of the source.

INFORMATION TO BE SUBMITTED ON ADDITIONAL SHEETS

13. FACILITIES AND EQUIPMENT. Describe laboratory facilities and remote handling equipment storage containers, shielding, fume hoods, etc. Explanatory sketch of facility is attached (Circle answer) Yes No

14. RADIATION PROTECTION PROGRAM. Describe the radiation protection program including control measures. For film badges, specify method of calibrating and processing, or name of supplier and arrangements for performing initial radiation survey, servicing, maintenance and repair of the source.

15. WASTE DISPOSAL. If a commercial waste disposal service is employed, specify name of company. Otherwise, submit detailed description of methods which will be used for disposing of radioactive wastes and estimates of the type and amount of activity involved.

CERTIFICATE

(This item must be completed by applicant)

16. THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE APPLICANT NAMED IN ITEM 1, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TEXAS STATE DEPARTMENT OF HEALTH REGULATIONS ON RADIATION AND THAT ALL INFORMATION CONTAINED HEREIN, INCLUDING ANY SUPPLEMENTS ATTACHED HERETO, IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

Applicant named in Item 1

Date _____

By: _____

Title of certifying official authorized to act on behalf of the applicant