1	(12-81) 10 CFR 30	1. APPLICATION FOR: (Check and/or complete as appropriate)						
	APPLICATION FOR							
1		X . NEW LICENSE						
Col	ee attached instructions for deteils. empleted applications are filed in c	fuplicate with the Division of	Fuel Cycle and Material Salary	6. AMENDMENT TO LICENSE NUMBER				
0f1 Wa: 171	fice of Nuclear Material Safety, ar shington, DC 20555 or applicatio 17 H Street, NW, Washington, D.	nd Safeguards, U.S. Nuclear R ns may be filed in person at C. or 7915 Eastern Avenue, S	legulatory Commission, the Commission's office at Silver Spring, Maryland,	C. RENEWAL OF: LICENSE NUMBER				
2. /	APPLICANT'S NAME (Institution,	firm, person, etc.)	3. NAME AND TITLE OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION Larry W. Jensen Health Physicist TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION					
TE	LEPHONE NUMBER: AREA COL	DE - NUMBER EXTENSION						
(312) 886-6175 APPLICANT'S MAILING ADDRESS (Include Zip Code) (Address to which NRC correspondence, notices, bulletins, etc., should be sent.) 5AR-26 230 S. Dearborn, Chicago, II. 60604			(312) 886-6175 5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USE (Include Zip Code) Room 102A 536 S. Clark St., Chicago, I1, 60605					
6. II	(IF MORE SPACE IS NDIVIDUAL(S) WHO WILL U	NEEDED FOR ANY ITEN SE OR DIRECTLY SUPER	USE ADDITIONAL PROPERT	LY KEYED PAGES.)				
	FULL NA	aining and experience of each in ME	ndividual named below)	IN STERIAL				
. L	arry W. Jensen		Health Physicist	TITLE				
. P	ete Tedeschi	1	Health Physicist					
L	eslie E. Johnson		Radiation Specialist					
La	ADIATION PROTECTION OFFICE arry W. Jensen	a	Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15.					
		8. LICENSE	DMATERIAL					
L I N E	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 ACTI- VITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME				
,	Cs-137	B	c	D				
+			Nuclear-Chicago RR13	2.92 mCi activity				
"				on 8/83				
1								
)								
		DESCRIBE USE OF .	ICENSED MATERIAL	1				
	Will be used to check	k the operation of	survey instruments					
	CEE	EVENADT		ECEIVED				
	TLE	. Lattaties 6		OCT 21 1985				
FO	RM 313 1 (12-81) 8601220197 851114	99 ⁹⁹		OCT BEGION III				

		9	STORAGE OF	SEALED SOURC	ES		
L-NEO.	CONTAINER AND/O SOURCE WILL BE S	DR DEVICE IN WHICH E TORED OR USED. A.	ACH SEALED NAME OF MANUFACTURER 8.		MODEL NUMBER		
(1)	See attached	drawing				1.00	
(2)							
(3)							
(4)							
	L	10. BA	DIATION DETEC	TION INSTRUM	IENTS		
L-ZE	TYPE OF INSTRUMENT	MANUFACTURER'S NAME	MODEL NUMBER	NUMBER AVAILABLE	RADIATION DETECTED (alpha, beta,	SENSITIVITY RANGE (milliroentgens/t-sur	
NO.	A	В	c	D	gamma, neutron) E	or counts/minute/	
(1)	Gamma MicroR	Ludlum	MicroR-19	2	Gamma	0-25 uR/hr to 0-5000 uR/hr	
(2)		<u>.</u>					
(3)							
(4)							
	•	11. CALIBRA	ATION OF INSTR	UMENTS LISTE	D IN ITEM 10		
A	rgonne, Il. (Check and/or complete	12. PEI	RSONNEL MONI	TORING DEVICE SUPPLIER Service Company)	ES	EXCHANGE FREQUENCY	
Q(1) FILM BADGE			Landauer			MONTHLY	
(2) THERMOLUMINESCENCE DOSIMETER (TLD)						O QUARTERLY	
3) OTHER (Specify):						OTHER (Specify):	
_	13. FACILITIES	AND EQUIPMENT (CI	neck were appropr	iate and attach an	nnotated sketch(es) a	and description(s).	
	a. LABORATORY FAC b. STORAGE FACILIT c. REMOTE HANDLIN	ILITIES, PLANT FACIL IES, CONTAINERS, SPE G TOOLS OR EQUIPMEN	ITIES, FUME HOO CIAL SHIELDING (NT, ETC.	DS (Include filtratio fixed and/or tempor	on, if any), ETC. rary), ETC.		
	I. RESPIRATORY PRO	TECTIVE EQUIPMENT,	ETC.	DISDOCAL			
a. N	AME OF COMMERCIA	L WASTE DISPOSAL SE	RVICE EMPLOYED	DISPUSAL			
b. IF B T	COMMERCIAL WAST E USED FOR DISPOSI HE APPLICATION IS F	E DISPOSAL SERVICE I NG OF RADIOACTIVE V OR SEALED SOURCES	S NOT EMPLOYED	SUBMIT A DETAI MATES OF THE TY D THEY WILL BE F	ILED DESCRIPTION OF PE AND AMOUNT OF RETURNED TO THE M	F METHODS WHICH WILL ACTIVITY INVOLVED. IF IANUFACTURER, SO STAT	
	inis 1	s a seared sour	.e, will be i	eturned to	manuracturer.		
IRC	FORM 313 I (12-81)						

1 1

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 (*it 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.
 - e. 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 ep licant 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)
Covernment Assess	Dary Juleian
overmaenc Agency	c. NAME (Type or print)
	GARY GULEZIAN
TI LICENSE FEE CATEGORY:	d. TITLE CHIEF, REGULATORY AWALYSIS SECTION
	AIR AND RADIATION BRANCH
12) LICENSE FEE ENCLOSED: \$ none required	O. DATE
NRC FORM 3131(12-81)	October 18, 19 BECEI
	CPO 000-410
	OCT 211
	LONTROL NO. 79992
	REGION
	Day -

-6 % diameter

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Item 9. Diagram of source in sealed container



15. Radiation Protection Program

Semi-annual swipe tests will be taken. If a reading is found, they will be investigated with a Multichannel Analyzer, Davidson Model 4106-DS, to check the gamma ray spectrum for evidence of leakage.

The source will be kept in the laboratory where the entrance door is locked, and whose keys are restricted to the possession of the users of the facility mentioned in Item 6. The room the source is in and the shielded source container are marked with radiation caution signs.

The Radiation Protection Officer will assure caution signs are in place, assure semi-annual swipes are taken and analyzed, and, in general, assure the source is used safely by the persons listed in Item 6.

* Housekeeping, maintenance and administrative management personnel have keys that allow them access to the laboratory room.

LARRY JENSEN 5017 N. Winchester Chicago, Illinois 60640 312/275-0760

PROFESSIONAL EXPERIENCE

U.S. Environmental Protection Agency, Chicago, Illinois; Radiation Specialist (GS-12); 1979 - Present

Conducted surveys and studies relating principally to uranium, thorium and radium; observed and reviewed State Radiation Emergency Response Plans as part of the federal Regional Advisory Committee; dealt with State radiation programs on matters of mutual concern; served as a member of EPA's National Task Force on Kerr-McGee (West Chicago Facility); conducted training sessions on dose assessment using EPA's Protective Action Guides; reviewed and commented on proposed standards, technical reports and environmental impact statements; supervised co-op students; responded to radiation inquiries by general public.

Commonwealth Edison Company, Chicago, Illinois; Health Physicist; 1978-79

Edited a manual for dose assessment from nuclear power plant releases, and oversaw the programming of these models for detailed record-keeping and rapid emergency analysis.

Baldwin-Whitehall School District, Pittsburgh, Pennsylvania; Teacher; 1971-78

Taught PSSC Physics and Project Physics; jointly established a self-paced physics curriculum; created Earth & Space Science Seminar for advanced high school seniors; established annual Mousetrap Derby.

Additional Experience:

Community College of Allegheny County, Pittsburgh, Pennsylvania; Instructor (evenings); 1974-77.

Bureau of Mines, Bruceton, Pennsylvania; Physicist (part-time), 1977-78.

Braham High School, Braham, Minnesota; Teacher; 1970-71.

Madison Area Technical College, Madison, Wisconsin; Instructor; 1969-70.

University of Wisconsin, Madison, Wisconsin; Project and Research Assistant; 1966-69.

Ames Laboratory of Iowa State University, Ames, Iowa; FORTRAN Programmer; 1965-66.

EDUCATIONAL EXPERIENCE

University of Pittsburgh, Pittsburgh, Pennsylvania - Radiation Health, M.S., 1978. Master's Paper "Application of Gamma-Ray Spectrometry to I-131 in Chinese Fallout and Hospital Effluents"

Rensselaer Polytechnic Institute, Troy, New York - Natural Science, M.S., 1973.

University of Wisconsin, Madison, Wisconsin - Graduate Meteorology, 1966-69.

Iowa State University, Ames, Iowa - Physics, B.S., 1966.

ACADEMIC DISTINCTIONS

Phi Eta Sigma Freshman Scholastic Honorary Fraternity; Iowa State University; 1963. Honors Program; Iowa State University; 1964-66.

National Science Foundation Traineeship; Iowa State University; 1964-65.

PRESENTATIONS, PUBLICATIONS AND COPYRIGHTS

Health Physics Society, National Conference; Las Vegas, Nevada; June, 1982. "Air Sampling Near a Former Thorium Processing Plant in West Chicago, Illinois."

American Industrial Hygiene Association, National Conference; Cincinnati, Ohio; June, 1982. "Residual Thorium Contamination in a Building Formerly Used to Manufacture Gas Light Mantles."

Western Pennsylvania Chapter of the American Association of Physics Teachers; Pittsburgh, Pennsylvania; November, 1972.

"Individualized Physics at Baldwin High School."

"Go Vector," Science Teacher, March, 1974.

"Apparent Weight Changes in an Elevator," Physics Teacher, October, 1976.

Fin-to-Tail. produced and copyrighted as an educational scientific game, 1975.

Weight Changes in an Elevator, copyrighted as an educational film, 1976.

PROFESSIONAL SOCIETIES

Health Physics Society, National and Midwest Chapter.

Transcripts, references and further information available upon request.

NAME: Pete Tedeschi Radiation Specialist U.S. Environmental Protection Agency 230 S. Dearborn Street Chicago, Illinois 60604

EDUCATION:

Pre-engineering, University of Illinois, 1946-47. B.S. Physics, Southern Illinois University, 1947-50.

EXPERIENCE: Argonne National Laboratory, Lemont, Illinois.

2/26/51 - 9/30/53 : Worked as a technician in the Metallurgy Division applied research Group.

10/1/53 - 9/19/54: Health Physics Representative for the Physics and Biology Divisions.

9/20/54 - 10/1/56: Health Physics Representative for the Reactor Operations Division and the Reactor engineering Exponential Experiments Group.

10/2/56 - 6/30/58: Health Physics Representative to the Remote Control Division"Hot Cell" Operation Group, Plant Services Reclamation and waste disposal group, and the Chemical Engineering Waste Treatment Group.

6/30/58 - 9/1/61: Developed System and procedures for converting Radiation exposure records from a manual system to an automated system. Simultaneous served as Health Physicist. Also supervised the Personnel Monitoring system and processes.

9/1/61 - 4/10/77: Served as Health Physicist for the State of Illinois Department of Health.

4/10/77- to date: Currently serving as Radiation Specialist for the U.S. Environmental Protection Agency.

Leslie E. Johnson, U.S. Environmental Protection Agency

Duties consist of:

1. Operating and maintaining EPA's Environmental Radiation Ambient Monitoring System in Chicago. Responsibility is assumed for twice weekly collection of ambient air and precipitation samples, for radiological field analysis, for record keeping and reporting and for equipment maintainance.

2. Operating EPA's External Gamma Ambient Monitoring Program in Chicago. Responsibility was assumed for monthly annealing of gamma monitoring dosimeters and their controls, placing and retrieving them from the field and for record keeping and maintainance.

3. Field supervision for performance on radiation instrument calibration contract with Argonne National Laboratory. This consists of specification of required calibrations, procedures, radiation sources used, oversight on performance of calibrations and maintainance of calibration records suitable for scientific and legal defense.

4. Assisting in and performing radiological surveys related to identification of environmental contamination and to verification of decontamination to the required criteria.

5. Designing, construction and implementing a computer based tracking system for radiation survey instruments to assure their accurate calibration and to assure scheduled calibrations are performed.

6. Responsibility for seeing that all radiation instrumentation is in operating condition and that when equipment failures occur, dealing directly with the manufacturers to have equipment restored to proper working order.

CONTROL NO. 79992

University of Chicago, Basic Physics Courses, Post Graduate course in Radio-Chemistry in 1948.

Patents. Hold two U.S. Patents on Ionization Chamber design.

. . . .

Publications.

"Evolution of Neutron Sensing Elements--Scientific Laboratory to Industrial Application."

Teaching.

Taught a class on nuclear instrumentation for the International Institute of Nuclear Science and Engineering at ANL in 1959.

Licenses.

Hold a current FCC issued Commercial Radiotelephone License.

Professional Societies.

Chicago Chapter of the American Nuclear Society. Midwest Chapter of the Health Physics Society

18.

Manhattan Engineering District.	2-46	to	6-46
Argonne National Laboratory	6-46	to	10-53
Neutronics Laboratory	10-53	to	1973
U.S. Environmental Protection Agencey	5-83	to	present

My experience at the Manhattan Engineering District and ANL involved use of the following sources: RaBe, PuBe, At Neutronics Laboratory, a 5 mCi Cs-137 source. At Neutronics I also had 92% enriched U-235 in my possession, using it to coat elements for fission chambers.

16.

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