

NRC Form 313 I (12-81) 10 CFR 30		U.S. NUCLEAR REGULATORY COMMISSION		1. APPLICATION FOR: <i>(Check and/or complete as appropriate)</i>	
APPLICATION FOR BYPRODUCT MATERIAL LICENSE INDUSTRIAL				a. NEW LICENSE	
<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.				b. AMENDMENT TO: LICENSE NUMBER	
				c. RENEWAL OF: LICENSE NUMBER 20-18423-01	
2. APPLICANT'S NAME <i>(Institution, firm, person, etc.)</i> Victor S. Sapirstein, Ph.D. TELEPHONE NUMBER: AREA CODE — NUMBER EXTENSION 893-3500 617 137			3. NAME AND TITLE OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION Srinivasa Raghavan, Ph.D. TELEPHONE NUMBER: AREA CODE — NUMBER EXTENSION 893-3500 617 130		
4. APPLICANT'S MAILING ADDRESS <i>(Include Zip Code)</i> <i>(Address to which NRC correspondence, notices, bulletins, etc., should be sent.)</i> Eunice Kennedy Shriver Center 200 Trapelo Road Waltham, MA 02254			5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED <i>(Include Zip Code)</i> Eunice Kennedy Shriver Center 200 Trapelo Road Waltham, MA 02254		
(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		
Victor S. Sapirstein, Ph.D. a. Gerald Schwarting, Ph.D.			Associate Biochemist Associate Biochemist		
Wayne Miller, M.D. b. Leu-Fen Lin, Ph.D.			Dir. of Genetics Department Research Associate		
Kathleen S. Rockland, Ph.D. c.			Research Fellow		
7. RADIATION PROTECTION OFFICER Srinivasa Raghavan, Ph.D.			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					
L I N E NO.	ELEMENT AND MASS NUMBER A	CHEMICAL AND/OR PHYSICAL FORM B	NAME OF MANUFACTURER AND MODEL NUMBER <i>(If Sealed Source)</i> C	MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTI- VITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME D	
(1)	Iodine (125)	Protein-bound		1.0	
(2)	Calcium (45)	chloride salt		5.0	
(3)	Sodium (22)	Ionic (solution)		0.2	
(4)	Chloride (36) Potassium (42)	Ionic (solution) Ionic (solution)		0.2 0.2	
DESCRIBE USE OF LICENSED MATERIAL E					
(1)	Radioimmunoassay				
(2)	Study of calcium transport				
(3)	Ion transport studies				
(4)	In tissue culture				

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)	N/A					
(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)	Tri-Carb LSC	Packard	3380	1	Beta, gamma	
(2)	Tri-Carb LSC	Packard	3320	1	Beta, gamma	
(3)	Survey Meter	Eberline	E-120	1	Beta, gamma	0.50
(4)						

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10	
<input checked="" type="checkbox"/> a. CALIBRATED BY SERVICE COMPANY NAME, ADDRESS, AND FREQUENCY Packard Instrument Company Brookline, MA (twice per year)	<input type="checkbox"/> b. CALIBRATED BY APPLICANT Attach a separate sheet describing method, frequency and standards used for calibrating instruments. Measuring instruments checked as needed using reference sources supplied by manufacturer.

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): _____ _____ _____	Harvard University Environment Health Service	<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).)
<input checked="" type="checkbox"/> a. LABORATORY FACILITIES, PLANT FACILITIES, FUME HOODS (Include filtration, if any), ETC. <input checked="" type="checkbox"/> b. STORAGE FACILITIES, CONTAINERS, SPECIAL SHIELDING (fixed and/or temporary), ETC. <input type="checkbox"/> c. REMOTE HANDLING TOOLS OR EQUIPMENT, ETC. <input type="checkbox"/> d. RESPIRATORY PROTECTIVE EQUIPMENT, ETC.

14. WASTE DISPOSAL
a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED Interex Corporation, Natick, MA
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)

b. CERTIFYING OFFICIAL (Signature)

c. NAME (Type or print)

Srinivasa Raghavan, Ph.D.

(1) LICENSE FEE CATEGORY: 3K

d. TITLE

Associate Biochemist

(2) LICENSE FEE ENCLOSED: \$150.00

e. DATE

March 29, 1984

Item 16, Training

Victor S. Sapirstein, Ph.D. (This covers areas 16 ABCD)	Tracer Methodology Mt Sinai Grad. Sch. of Biomedical Sciences City University of New York - 1970	1 semester
Gerald A. Schwarting, Ph.D. (This covers areas 16, ABCD)	Albert Einstein Medical School, New York, York	6 years experience
Wayne Miller, M.D. Dir. of Genetics Dept.	Columbia University College of Physicians & Surgeons Mass. General Hosp. Genetics Unit	3 years experience 2 1/2 years experience
Leu-Fen Lin, Ph.D. Research Assoc.	University of Minn St. Paul Minn	5 years experience
Kathleen S. Rockland, Ph.D. Research Fellow	Boston University School of Medicine Dr. Shapiro's Radioactivity course Harvard Univ.	1 semester
Srinivasa Raghavan, Ph.D. Associate Biochemist	Eunice Kennedy Shriver Ctr.	10 years experience

Supplement B to Form NRC-313, Item 17

Victor S. Saprstein, Ph.D.

C^{14}	1 milliourie	Mount Sinai	6 years	Biomedical Research
C^{14}	1 millicurie	E.K.S.	5 years	"
3H	5 millicuries	Mount Sinai	6 years	"
3H	5 millicuries	E.K.S.	5 years	"
S^{35}	5 millicuries	Mount Sinai	2 years	"
Na^{22}	200 microcuries	Mount Sinai	1 years	"
P^{32}	20 millicuries	E.K.S.	5 years	"
^{35}S	50 millicuries	E.K.S.	5 years	"
^{125}I	10 millicuries	E.K.S.	5 years	"
^{45}Ca	2 millicuries	E.K.S.	5 years	"

Gerald A. Schwarting, Ph.D.

3H	10 millicuries	E.K.S.	6 years	Biomedical Research
^{125}I	1 millicurie	E.K.S.	6 years	"

Wayne Miller, M.D.

3H	5 millicuries	Columbia University	3 years	Biomedical Research
^{125}I	3 millicuries	Columbic Univ.	3 years	"

Leu-Fen Lin, Ph.D.

3H	500 millicuries	Mount Sinai	3 years	Biomedical Research
^{14}C	5 millicurie	Harvard	3 years	"
	50 millicurie	E.K.S.	1 year	"

Supplement B to Form NRC-313, Item 17 (cont.)

Kathleen S. Rockland, Ph.D.

^3H	5 millicuries	Bedford VA Hosp. MA	2 years	Biomedical Research
	5 millicuries	Univ. of S. Carolina Childrens Hosp, Brookline, MA		
^{35}S	1 millicurie	Dept. of Opthal- mology, Med. Univ. of S. Carolina	2 years	"
^{125}I	.1 millicurie	E.K.S.	6 months	

Srinivasa Raghavan, Ph.D.

^3H	100 millicuries	E.K.S.	6 years	Chemical Reaction
^{14}C	2 millicuries	"	"	Biomedical Research
^{35}S	2 millicuries	"	5 years	"
^{32}P	2 millicuries	"	"	"

Appendix to the renewal of license number 20-18423-01

Item 7 - Radiation Protection Officer

Dr. Srinivasa Raghavan is the Radiation Protection Officer. He is serving in this capacity from 1982, ever since the previous officer, Dr. Pierre Stoffyn, retired from the Shriver Center. He is responsible for the review of all users of radioactive materials prior to their names being submitted to the N.R.C. for approval. His authority is derived from the Director of the Center and he has the authority to suspend any operation deemed unsafe or which violates the regulations. His duties may be summarized as follows:

1. Provide consulting services on all aspects of radiation protection.
2. Maintain radiation exposures at the lowest possible level (ALARA) by the supervision and operation of an effective and appropriate radiation protection program.
3. Develop and maintain a procedure for evaluation and retention of the personnel exposure and contamination records.
4. Indoctrinate personnel in the proper procedures to be used, and in the equipment necessary for the safe use of radioisotopes. Also to insure that every new person is indoctrinated in accord with 10-CFR-19.12 and that each person has the necessary training to meet these requirements.
5. Provide assurance that the waste disposal program and the associated records are appropriate and meet the regulations. Each person handling waste must have had training and be familiar with the DOT regulations and the packaging instructions promulgated by the commercial vendor and the burial grounds.
6. Supervise a continuous program of area and environmental radiation hazard analysis.
7. Ensure maintenance of records of procurement, distribution, and subsequent disposal.
8. Furnish all users of radioactive materials a copy of the pertinent regulations and to inform them where copies of the Federal Regulations may be located.

Item 11 -

I. Calibration of Instruments

Laboratory equipment is checked daily with a reference source when in use.

Survey Instruments are checked monthly with cross comparison to a calibrated instrument or a small check source. The instruments are calibrated with a standard source of ^{60}Co , radium, or ^{137}Cs semi-annually. The instruments used for the surveys in the laboratories by the safety staff are calibrated monthly and prior to each survey where exact dose measurements are required. They are also spot-checked prior to every field survey.

The calibration is carried out in a special facility by the radiation protection staff. The standards available for instrumentation calibration are:

II. Beta Standards for GM counter

Beta reference sources from New England Nuclear Co. including ^{14}C , ^{60}Co , ^{204}Tl , ^{210}Bi , and ^{234}Pa .

III. Gama Standards for Scintillation Counter

Gamma reference sources to include ^{137}Cs , ^{60}Co , ^{57}Co , and ^{22}Na from NENUC.

IV. Gamma Standards for Iodine Surveys and Thyroid Scans

^{125}I and ^{131}I simulated standards, including ^{125}I NES 211S and ^{131}I NES 214.

V. Standrads for Liquid Scintillation Counter

Standard Source Set with Packard Tri-Carb including ^{14}C , ^3H , and ^{36}Cl .

R-Meter for X and Gamma Fields

Victoreen Instrument Co. Model 570 Condenser R-Meter with chambers from 0.025 R to 100 R including low and medium energy chambers (7).

Gamma Sources for Instrument Calibration

Radium	50 mg,	3 m,	10 mg,	and two less than 1 mg.
^{60}Co	3 mCi,	15 mCi,	100 mCi,	and 250 mCi.
^{137}Cs	5 mCi,	25mCi.		

VII. Additional Equipment is Available through Harvard University Environment Health Service.

Item 12 -

Monthly surveys, including wipe tests, film badge monitoring and meter checks of areas where isotopes are handled are conducted by the Harvard Radiation Protection Office.

Item 14 - Radioactive Waste Disposal

The radioactive waste is disposed via thirty gallon commerical barrels (Interex, Co., Natick, MA) after packaging by staff members of Harvard University who have been specifically trained for this task.

Small amounts of liquid waste may be disposed via the sanitary sewage system (after appropriate decay, if necessary, in plastic carboys) in accord with 10-CFR-20.303. Each laboratory is limited to the amount in Appendix C which is 10% of the permissible level, unless specific written authorization is granted by the Radiation Safety Officer to dispose of larger quantities in accord with

10-CFR-20.303.

Item 15 - Radiation Protection Programs.

I. Introduction.

The Eunice Kennedy Shriver Center is under the supervision of the Harvard University Radiation Protection Program with the surveys conducted monthly for dose levels, contamination, personal interview regarding handling and disposal, posting of signs, instrument calibration, air sampling when required, disposal supervision, and investigation of adherence to rules and regulations. The survey covers the laboratory areas, storage areas, and receipt and disposal. The survey records are maintained indefinitely by Harvard and are required to be kept by the user since the NRC inspection.

- II. All incoming shipments of radioactive materials are received at the front desk where they are processed, the packages checked for leaks and other physical damage, and logged in with a crosscheck made as to the possession limits. A wipe is taken of the out the container and counted in a scintillation counter in the laboratory of the radiation safety officer. The purchase orders are countersigned by the Radiation Safety Officer to insure that the proper licensed materials are ordered and that the order would not cause the possession limit to be exceeded.

The person ordering the material is notified by the front desk that the package has arrived and that the package is to be picked up immediately. The packages are not opened until in the laboratory of the procurer where a wipe test is made of the inner container and the results recorded. Any contamination would be reported immediately to the Radiation Safety Officer.

Users are instructed not to place any telephone orders without specific clearance by the Radiation Safety Officer. Normally, no deliveries are received or accepted after hours. The building is locked with a guard on duty and in the event of any unusual occurrence, has instructions to sign for the package and to place it in a secured cold room on the third floor. This is noted in the receipt book and the investigator notified upon arrival the following morning.

- III. The routine surveys consist of discussions with personnel, survey meter dose rates, wipe tests, posting of signs, labels, and notices, instrument calibrations, hood flow measurements, security, waste disposal review as to procedures and records, film badges, review of opening procedures, inspection for violation of rules, and review of emergency procedures, surveys are conducted monthly. The areas surveyed include counting area, storage and disposal areas, receipt and counting areas. Leak tests of sealed sources are done at proper intervals. No levels of contamination that can be detected are acceptable. All areas of contamination must be decontaminated. Follow-up survey of these areas will be made. Records of surveys are maintained by the safety consultant, with permanent records also maintained by the safety office.

IV. Educational Contents of Formal Instruction for Acceptance.

- A. Basic information which is included in technicians course to include properties and units of radiation, interaction with matter, dosimetry handling procedures, regulations, labelling, animal use requirements, waste disposal, responsibilities of personnel, principles of radiation detection and instrumentation, protection principles, and hazards associated with the isotopes in use. The material includes sources of information and NRC publications as 10-CRF-19 and 20.
 - B. The training for investigators must include transportation regulations, advanced instrumentation, external and internal dosimetry, shielding, statistics, measurements, licensing procedures and requirements, responsibilities, and public health considerations in addition to the material presented to the technicians.
 - C. Time is also given to answer questions pertaining either to individual problems or associated materials.
- V. Available to all faculty members, their technicians and graduate students will be informal (non-credit) lectures and demonstrations covering the fundamentals of radiation safety. The series of lectures will be given as considered necessary by Mr. Johnson and associates from Harvard University, Environment Health Service.

The informal (non-credit) training program will consist of lectures, movies hand out materials, and practical work for those using radioactive materials. Those wishing authorization for independent work who have not had any formal training or experience must attend the training program. The training program will vary in length and detail, which will depend on the radioisotopes to be used. The training will be provided by Mr. Johnson or another authorized person.

BIOGRAPHICAL SKETCH

Give the following information for key professional personnel listed on page 2, beginning with the Principal Investigator/Program Director. Photocopy this page for each person.

NAME Srinivasa Raghavan	TITLE Associate Biochemist	BIRTHDATE (Mo., Day, Yr.) July 1, 1940	
EDUCATION (Begin with baccalaureate or other initial professional education and include postdoctoral training)			
INSTITUTION AND LOCATION	DEGREE (circle highest degree)	YEAR CONFERRED	FIELD OF STUDY
Loyola College Univ. of Madras, India	B.Sc.	1960	Chemistry
Presidency College, Univ. of Madras, India	M.Sc.	1963	Chemistry
Indian Institute of Sci., Bangalore, India	Ph.D.	1970	Biochem-Lipid-Metab.

RESEARCH AND/OR PROFESSIONAL EXPERIENCE: Concluding with present position, list in chronological order previous employment, experience, and honors. Include present membership on any Federal Government Public Advisory Committee. List, in chronological order, the titles and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. **DO NOT EXCEED TWO PAGES.**

1982-present Assoo. Biochemist, Eunice Kennedy Shriver Center for Mental Retardation, Biochemistry Dept., Waltham, MA

1979-present Asst. Biochemist, Mass General Hospital, Neurology Service, Boston, MA

1983- Research Fellow in Neurology, Harvard University, Cambridge, MA

1978-1982 Asst. Biochemist, Eunice Kennedy Shriver Center for Mental Retardation, Biochemistry Dept., Waltham, MA

1977-1978 Senior Research Associate, Eunice Kennedy Shriver Center for Mental Retardation, Biochemistry Department, Waltham, MA

1974-1977 Senior Research Fellow, Eunice Kennedy Shriver Center for Mental Retardation, Biochemistry Dept., Waltham, MA

1973-1974 Research Associate, Eunice Kennedy Shriver Center for Mental Retardation, Biochemistry Dept., Waltham, MA

1970-1973 Research Fellow, Mass. General Hospital, Neurology Research, Boston, MA

Experience in working with radioactive elements

I started working with ^{14}C , ^3H , ^{35}S , and ^{32}P in 1970 at the Eunice Kennedy Shriver Center in Dr. Julian Kanfer's laboratory. Dr. Robert H. McCluer was the Radiation Protection Officer and a collaborator on common research projects. From that time I have been constantly working with radioactive materials.

I have studied the book "Radiation Protection" by Dr. Jacob Shapiro.

Soon after Dr. Pierre Stoffyn retired from E.K. Shriver Center in 1982 I took over the responsibility of Radiation Protection Officer.

A session of training has been given in 1975 at the E.K. Shriver Center by Mr. Robert U. Johnson, Director of Radiological Services at Harvard University. This lecture was videotaped and has since been shown regularly for the instruction of new personnel working with radioactive materials in this institution.

17352

BIOGRAPHICAL SKETCH

Give the following information for key professional personnel listed on page 2, beginning with the Principal Investigator/Program Director. Photocopy this page for each person.

NAME	TITLE	BIRTHDATE (Mo., Day, Yr.)	
Victor S. Sapirstein	Associate Biochemist	November 2, 1945	
EDUCATION (Begin with baccalaureate or other initial professional education and include postdoctoral training)			
INSTITUTION AND LOCATION	DEGREE (circle highest degree)	YEAR CONFERRED	FIELD OF STUDY
New York University, New York, NY	B.S.	1968	Biology
City University of New York	Ph.D.	1975	Physiology & Physics
(Mt. Sinai School of Medicine)			

RESEARCH AND/OR PROFESSIONAL EXPERIENCE: Concluding with present position, list in chronological order previous employment, experience, and honors. Include present membership on any Federal Government Public Advisory Committee. List, in chronological order, the titles and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. **DO NOT EXCEED TWO PAGES.**

1982-present Associate Biochemist, Eunice Kennedy Shriver Center for Mental Retardation, Inc., Waltham, MA.

1978-present Director, Animal Tissue Culture Facility, E.K. Shriver Center, Waltham, MA.

1978-1982 Assistant Biochemist, E.K. Shriver Center, Waltham, MA, and Mass General Hosp.

1977-present Associate, Biological Chemistry, Harvard Medical School, Boston, MA.

1976-1977 Research Fellow, E.K. Shriver Center, Waltham, MA.

1975-1977 Research Fellow, Biological Chemistry, Harvard Medical School, Boston, MA.

1975-1976 Research Fellow, Biological Research Labs., McLean Hospital, Belmont, MA

1973-1975 Research Assistant, Dept. of Physiology, Mt. Sinai School of Medicine, New York, N.Y.

1969-1971 Research Assistant, Dept. of Hematology, Mt. Sinai School of Medicine, New York, N.Y.

HONORS

Nathan A. Selz Award for Research In Renal Physiology-1974-Awarded by Mt. Sinai School of Medicine, American Society for Neurochemistry and Sigma Xi, 1975

date

4-12-84

NOTE FOR: Region I

THRU: License Fee Management Branch

FROM: Licensing Assistance Section
Fuel Cycle Material Safety
Office of Nuclear Material Safety Safeguards

Enclosed is the original copy of the application for a pending licensing action to be processed by your region.

CONTROL NO. 17352

LICENSEE: Enrico Kennedy Shreve Co.

LICENSE NUMBER: 20-18423-01 DOCKET NUMBER: 30-15057

X The duplicate copy of the application has already been sent to your region.

Attached also is the official file. Please return the duplicate folder to LAS, FCMS, upon receipt of this file. 4/30/84

FOR LFMB USE

Fee Category and Amount: 3K \$150

Correct fee has been paid.

Application may be processed for: amendment / renewal license

LFMB Reviewer: J. Bryan by 4/18/84