

Stepney Water Laboratory, Inc.

22 WOODLAND DRIVE  
REDDING, CONNECTICUT 06612  
(203) 268-5163

*h-21365*

August 31, 1988

*030-30520*

United States Nuclear Regulatory  
Commission  
Region I  
475 Allendale Road  
King of Prussia, Pennsylvania 19406

RE: LICENSE NO. ~~06-21365-01~~

Gentlemen:

Please be so good as to renew my License No. ~~06-21365-01~~. There has been no change in my program. We perform a "wipe test" every six (6) months. Our latest "wipe test" is with the Leak Test Center now.

We have also been informed by your License Fee Office to enclose the renewal fee of \$120.00, which is attached.

Thank you.

Very truly yours,

STEPNEY WATER LABORATORY, INC.

By: *Constantine G. Linardos*  
Constantine G. Linardos, M.Sc.  
Director

og1/mal  
enc. (1) (check)

Log	<i>Oct. 1<sup>st</sup></i>
Remitter	
Check No.	<i>6111 / 5179</i>
Amount	<i>\$ 120 + 1810</i>
Fee Category	<i>3P</i>
Type of Fee	<i>APP</i>
Date Check Rec'd.	<i>10/3/88</i>
Date Completed	<i>10/2/88</i>
By:	<i>S. Kimberly</i>

*(Envelope is postmarked 9/2)*

9001170309 881125  
REG1 LIC30  
06-21365-02 PDR

RECEIVED-REG-1  
1988 SEP -9 PM 1:35

"OFFICIAL RECORD COPY" ML 10

109543

SEP 06 1988

Stepney Water Laboratory, Inc.

22 WOODLAND DRIVE  
EASTON, CONNECTICUT 06612  
(203) 268-5163

MS-12  
P9

July 25, 1983

United States  
Nuclear Regulatory Commission  
Region 1  
631 Park Avenue  
King of Prussia, Pennsylvania 19406

Attention: Mr. Jordan Davis

RE: STEPNEY WATER LAB., INC.  
Docket No. 030-20565  
Control No. 14682

Dear Mr. Jordan:

Sorry for the delay in getting out a reply to you, but I recently returned from vacation and have been trying to catch-up on my workload, including the information requested.

Attached are answers to questions Nos. 5, 7, 8 and 10.

Thank you for being patient.

Very truly yours,

STEPNEY WATER LABORATORY, INC.

*Constantine G. Liardos*  
By: Constantine G. Liardos, M.Sc.  
Director

cgl/mel  
Mr. Jordan Davis  
Nuclear Materials Section B  
Division of Engineering  
and Technical Programs

14682

28 JUL 1983

QUESTIONS NOS.

5. Perkin-Elmer Wipe Test Kit (009-1667)
7. Cell returned to supplier for foil replacement. Cleaning of cell accomplished by attached procedure.
8. When use of foil is discontinued (if ever), it will be returned to the supplier (Perkin-Elmer).
10. There was no training in safety aside from what was provided by Perkin-Elmer with the manual. I have had extensive training in the Army Chemical Corps regarding radiation detection and safety as an officer of the 43rd Chemical Lab Det. My training included a six month course in radiation including the use of film badges, dosimeters, counters, etc.. Following the course I was appointed Radiation Officer of my unit.

*C. G. Linardos*

C.G. LINARDOS  
STEPNEY WATER LAB, INC.  
DOCKET NO. 030-20565  
Control No. 14682

- 5) With the linear temperature programmer installed:
- a) Open the oven door and let the oven cool below the desired initial temperature. (It may be necessary to readjust the detector ZERO controls.)
  - b) Set the INITIAL and FINAL TIME and TEMPERATURE digiswitches, and the RATE switch, as desired; then close the oven door.
  - c) After the START button lights, simultaneously inspect sample and press the START button.

## 8E. CLEANING AND MAINTENANCE PROCEDURES

### 8E,1. Cleaning the Electron Capture Detector by Baking Out

It is often possible to decontaminate the electron capture detector without disassembling it by purging it with carrier gas at a flow rate between 50 and 100 ml/min. and raising its temperature. The temperature of the detector should be raised to 350°C.

Caution: When the detector is operated at a temperature near its upper limit (350°C), the detector temperature should be monitored initially to insure that the high temperature safety switch prevents a temperature in excess of 350°C.

Allow the detector to purge and periodically obtain curves of standing current vs. frequency (see Sec. 8D,2). The curves will improve as the detector cleans up. Completing clean-up may require baking for periods of several hours up to several days, depending on the type of contamination and its extent.

Important: Never attempt to flush the detector cell assembly with acidic solvents as this will result in removal of radioactive material from the foil.

### 8E,2. Wipe Test

The United States Nuclear Regulatory Commission requires that the detector be wipe tested at least once every six months and that a record of the results of these tests be maintained for N.R.C. inspection. The purpose of the wipe test is to assure that removable radioactive contamination on the external portions of the cell remains at a safe level.

Caution: Until the results of the wipe test are known, assume the cell is contaminated and handle it only with suitable protection. All equipment coming into contact with the cell should be considered contaminated and handled accordingly.

It is strongly recommended that the user become familiar with the N.R.C. regulations covering the use of nickel 63, as well as any state or local requirements.

Make the wipe test as follows:

- 1) Shut down the instrument as described in Sec. 3.
- 2) Remove the top panel to the right of the column oven (see Fig. 8-5).
- 3) Remove the right side panel from the instrument and slide insulation block 045-1305 out the side of the instrument.
- 4) Unscrew the knurled connector on the electrode cable and carefully withdraw the cable and the attached electrode. The electrode need be withdrawn only far enough so that it is outside of the detector housing.
- 5) Remove the top from the detector housing (see Fig. 8-1).
- 6) Using the ECD wrench assembly, provided, unscrew the detector cell and remove it. Do not bend or crimp the effluent tube. DO NOT DISASSEMBLE THE CELL.

Note: While the detector cell is out of the instrument, bake out the carrier gas system to eliminate any contaminants in the system that might contribute to fouling of the detector. To do so, set a carrier gas flow of 50-100 ml/min., and raise the injector, column oven, and interface temperatures above the levels at which they have normally been run. The baking period should be 2 to 4 hours, longer if the contamination is severe.

- 7) Refer to the instructions included with the wipe test kit (009-1667) supplied with the detector, and wipe the surface around the joint between the cell body and cell cap. Also wipe around the top of the effluent tube. Once the wipe test paper has been moistened and any part of the cell has been wiped, do not remoisten the paper. Also, do not allow any of the wipe test solution to enter the inlet or outlet of the cell.
- 8) Put the paper in the container provided in the wipe test kit. Include a data sheet stating that the wipe test was performed on a Perkin-Elmer electron capture detector cell, part no. 009-0282, and give the date when the test was performed. Return the container to either:

Nuclear Radiation Dev. Corp.  
2937 Alt. Blvd.  
Grand Island, N.Y.

or

Nuclear Sources & Services  
5711 Etheridge  
Houston, Texas 77017

\*The sensitivity of the wipe test is 0.001 microcuries.

Request that a new wipe test kit be forwarded with the test results.

- 9) Replace the cell assembly in the detector housing; use the ECD wrench assembly to tighten it.
- 10) Carefully push the electrode and its cable back into the detector housing. The electrode assembly is aligned by a pin and slot arrangement and will slide easily into the housing when positioned correctly. Do not use excessive force. The electrode, itself, is a spring clip which attaches to the detector effluent tube.
- 11) Replace the top of the detector housing and slide insulation block 045-1305 back through the side of the instrument (see Fig. 8-5). Replace the instrument right side panel and the top panel at the right of the column oven.
- 12) Wait for the detector to stabilize and obtain a curve of standing current vs. frequency (see Sec. 8D,2).

#### 8E,3. Cleaning or Replacing the Radioactive Foil

Warning: The following procedure requires removal of the electron capture detector cell assembly. Cell assemblies must be wipe tested every six months, in accordance with the procedure given in Sec. 8E,2, in order to assure that any removable radioactive contamination on the external portions of the cell remains at a safe level. Within the six-month period after a wipe test, it should be safe to handle the cell without special precautions. Otherwise, consider the cell contaminated and handle it only with suitable protection. All equipment coming into contact with a contaminated cell should also be considered contaminated after contact and handle accordingly.

Remove the detector cell as described in Sec. 8E,2. DO NOT DISASSEMBLE THE CELL. Put the cell in a package marked with the international radiation symbol and mail it to either:

Nuclear Radiation Dev. Corp.  
2937 Alt. Blvd.  
Grand Island, New York

or

Nuclear Sources & Services  
5711 Etheridge  
Houston, Texas 77017

(Check with the carrier for possible additional shipping requirements.)

Request that the cell be cleaned and the standing current tested. Also request that, should the foil have to be replaced, the corporation which is to replace the cell advise the customer and quote a price.

Specify the Nickel 63 foil for use in Perkin-Elmer electron capture detector assembly 009-0282. Indicate that the foil must be one of the following:

Model NER-002  
New England Nuclear Corp.  
575 Albany  
Boston, Mass.

Model N1001  
Nuclear Radiation Development Corp.  
2937 Alt. Blvd.  
Grand Island, New York

Model NBC 7020  
Amersham/Searle Corp.  
2637 S. Clearbrook Drive  
Arling Heights, Illinois

When the cell is returned, replace it as described in Section 8E,2.

## 8F. INSTALLATION

### 8F,1. Connecting Gas Supplies

Connect the carrier gas and air\* supplies as shown in Fig. 8-6 but do not open the cylinder valves. If the instrument is to be connected in a manner other than that shown in Fig. 8-6 use only clean stainless steel, aluminum, or copper connecting tubing.

Make all fittings finger-tight; then, using a 7/16-in. open end wrench, tighten the detector and carrier gas line fittings an additional 1/8 turn. Excessive tightening may damage fittings. Two wrenches should always be used when tightening or removing fittings to prevent movement of the stationary fittings.

\*Air is required (for the door opener) only if the Linear Temperature Programmer Accessory is installed.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
631 PARK AVENUE  
KING OF PRUSSIA, PENNSYLVANIA 19406

16 JUN 1983

"OFFICIAL RECORD COPY"

License No.  
Docket No. 030-20565  
Control No. 14682

Stepney Water Lab., Inc.  
ATTN: Constantine Linandos  
Laboratory Director  
22 Woodland Drive  
Easton, CT 06612

Gentlemen:

Your application dated April 17, 1983 for a new license  
has been assigned to Jordan Davis for review.

Certain items of your application are not in sufficient detail to enable us to complete our review. Please refer to the reverse side of this form on which we have checked one or more items requiring more information.

We are using this form letter to enable us to process your application in a timely manner. Your cooperation in promptly submitting the requested information will also help us to decrease the process time for your application.

In providing the requested information, please reply in duplicate and reference your assigned mail control number.

If you have any questions, please contact the Licensing Assistant at telephone number (215) 337-5351.

Sincerely,

John E. Glenn, Ph.D., Chief  
Nuclear Materials Section B  
Division of Engineering and  
Technical Programs

Enclosure:

A Guide for Preparation of Applications for  
the Use of Sealed Sources in Gas Chromatography  
Devices and X-Ray Fluorescence Analyzers



PROVIDE INFORMATION ONLY FOR THE CHECKED ITEMS

1.  Your application is being returned for signature.
2.  Location(s) where gas chromatographs will be used (street name, number, building number, etc.)
3.  Name(s) of employee(s) who will use and/or supervise use of the gas chromatographs.
4.  Name(s) of the manufacturer(s) and model number of each detector cell and the name of the manufacturer of each gas chromatograph.
5.  Leak test procedures for the nickel-63 foil. If you use a commercial leak test kit, please provide the name of the supplier and model number of the kit.
6.  Leak test procedures for the nickel-63 foil. If you conduct your own leak tests, please provide descriptions of the following:
  - a. The materials and procedures used for collecting leak test samples.
  - b. The name of the manufacturer and model number of the measuring instrument used to analyze leak test samples.
  - c. Your procedures for calibration of the measuring instrument including a sample calculation showing how leak test results are converted to microcuries.
7.  Procedures for cleaning detector cells and/or removal and exchange of detector cell foil. If you follow the manufacturer's recommended procedures, please provide a copy of the procedures. If detector cells are returned to your supplier for cleaning of detector cells and/or removal and exchange of foil, please specify this.
8.  Procedure for disposal of foil when use has been discontinued. If you return foil to the supplier, please specify this.
9.  Procedure for venting detector cells containing hydrogen-3 foil.
10.  Training in Radiation Safety. Such as training obtained at the time of installation of the gas chromatograph unit.

DETP

JDavis

6/15/83

DETP

JKinneman

6/16/83

DETP

JGlenn

6/16/83

MAY 12 1983

Stepney Water Lab, Inc.  
ATTN: Ms. Constantine Linandos  
Lab Director  
22 Woodland Drive  
Easton, Connecticut 06612

Gentlemen:

This refers to your letter dated April 17, 1983, for a materials license.

Your application referenced the enclosure of a \$110 fee, which we did not receive. An application fee of \$110 is required as specified in Section 170.31 (3L) of 10 CFR 170, copy enclosed. Payment should be made to the U.S. Nuclear Regulatory Commission and mailed to my attention at our Washington, D.C. address.

Your application will be processed by the Region I Licensing staff located at 631 Park Avenue, King of Prussia, Pennsylvania 19406. The fee, however, is required prior to issuance of the license. When submitting the fee, please refer to CONTROL NUMBER 14682.

Sincerely,

Original Signed By  
Glenda Jackson

Glenda Jackson  
License Fee Management Branch  
Office of Administration

Enclosure:  
10 CFR 170

DISTRIBUTION:  
Pending Fee File  
Mats. Reading File  
Weekly Reading File

*Called Linandos  
5/17 - told him  
to ignore  
this letter -  
Ch was put w/ other  
app by LAs  
to J*

OFFICER	LFMB:ADM	LFMB:ADM				
SURNAME	FBrown:rej	G.Jackson	8			
DATE	5/11/83	5/11/83				

NRC Form 313 I (12-81) 10 CFR 30		U.S. NUCLEAR REGULATORY COMMISSION		1. APPLICATION FOR: (Check and/or complete as appropriate)	
APPLICATION FOR BYPRODUCT MATERIAL LICENSE INDUSTRIAL				<input checked="" type="checkbox"/> a. NEW LICENSE	
See attached instructions for details.				<input type="checkbox"/> b. AMENDMENT TO LICENSE NUMBER <b>30-20525</b>	
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.				<input type="checkbox"/> c. RENEWAL OF LICENSE NUMBER <b>LET 21365</b>	
2. APPLICANT'S NAME (Institution, firm, person, etc.) <b>Stepney Water Lab, Inc</b> TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION <b>203-268 5163</b>			3. NAME AND TITLE OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION <b>Constantine Linandos 03120</b> TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION <b>203 268 5163</b>		
4. APPLICANT'S MAILING ADDRESS (Include Zip Code) (Address to which NRC correspondence, notices, bulletins, etc., should be sent.) <b>22 Woodland Drive          Easton, Ct. 06612</b>			5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED (Include Zip Code) <b>22 Woodland Drive          Easton, Ct. 06612</b>		
(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 (See Items 16 and 17 for required training and experience of each individual named below)					
FULL NAME			TITLE		
a. <b>Constantine Linandos</b>			RECEIVED BY LFM Laboratory Director		
b.			Date <b>5/10/83</b>		
c.			Ldg <b>May 31</b>		
7. RADIATION PROTECTION OFFICER			By <b>Brown</b>		
NA			Orig. To <b>Brown</b>		
Action Com.			Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe how it meets the above.		
RECEIVED BY LFM Laboratory Director Date <b>5/17/83</b> Ldg <b>May 31</b> By <b>Brown</b> Orig. To <b>Brown</b> Action Com.			Applicant <b>2780</b> Check No. <b>2780</b> Amount/Fee <b>9/110-3L</b> Date Check Rec'd <b>5/17/83</b> Received By <b>Brown</b>		
L I N E N O.	ELEMENT AND MASS NUMBER	CHEMICAL AND/OR PHYSICAL FORM	NAME OF MANUFACTURER AND MODEL NUMBER (If Sealed Source)	NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTIVITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME	
(1)	Nickel 63	Foil	Piercen - Elmcor Part 009-0282	10 mCi	
(2)					
(3)					
(4)					
DESCRIBE USE OF LICENSED MATERIAL					
(1)	Detection and quantitation of electrophilic organic				
(2)	compounds by gas chromatography.				
(3)					
(4)					

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)	Electron Capture Detector of Gas Chromatograph	Perkin-Elmer	3920 B
(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)	None					
(2)						
(3)						
(4)						

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

a. CALIBRATED BY SERVICE COMPANY  
NAME, ADDRESS, AND FREQUENCY  
NA

b. CALIBRATED BY APPLICANT  
Attach a separate sheet describing method, frequency and standards used for calibrating instruments.

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 type="checkbox"/> MONTHLY
<input type="checkbox"/> (2) THERMOLUMINESCENCE DOSIMETER (TLD)		<input type="checkbox"/> QUARTERLY
<input type="checkbox"/> (3) OTHER (Specify): <u>None</u>		<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  
NA

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.
- NA
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.
- NA
- Principles and practices of radiation protection.
  - Radioactivity measurement standardization and monitoring techniques and instruments.
  - Mathematics and calculations basic to the use and measurement of radioactivity.
  - 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)

110.00

ES:ED 62 JUL 68

b. CERTIFYING OFFICIAL (Signature)

c. NAME (Type or print)

Constantine G. Limandos

d. TITLE

Lab Director

e. DATE

4/17/83

(1) LICENSE FEE CATEGORY:

(2) LICENSE FEE ENCLOSED: \$ 110.00

Our EC Detector has not been functional and not in use for over a year. Our efforts to make it functional resulted in our inadvertent failure to renew our license. We are very sorry about this because renewal now requires a new application and a fee which our small operation can ill afford.

As I said, the detector is not functioning properly. I am checking the system for carrier gas leaks. If none are found, the detector will be sent to the factory for re-foiling.

In the future we will keep our license in our "Surprise Folder" to assure prompt renewal as indicated.

Sincerely  
C. H. Linardos -

C. H. Linardos -

B.S. in chemistry 1947

B.A. in bacteriology 1955

M.S. in bacteriology + biochemistry 1955

Radiation Detection Team - 43rd Chem. Lab Det,  
U.S. Army (Chemical Corps) 1950-1953. Used  
counters and scales on field radiation problems.

Army Chemical Centre, Edgewood, Md - Radiation  
Course at the Officers School, 1950. -

This radiation source is a nickel 63 foil enclosed (sealed) in the detector. It has an output of ca. 10 mCi when functioning properly.

off.

(FOR LFMS USE)  
INFORMATION FROM LTS

BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM  
AND  
REGIONAL LICENSING SECTIONS

PROGRAM CODE: \_\_\_\_\_  
STATUS CODE: 3  
FEE CATEGORY: \_\_\_\_\_  
EXP. DATE: 0  
FEE COMMENTS: \_\_\_\_\_

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

APPLICANT/LICENSEE: STEPNEY WATER LABORATORY, INC.  
RECEIVED DATE: 88J906  
DOCKET NO: 3030820  
CONTROL NO.: 109543  
LICENSE NO.:  
ACTION TYPE: NEW LICENSE

2. FEE ATTACHED

AMOUNT: \$120.00  
CHECK NO.: 541

3. COMMENTS

Expired License

SIGNED R. J. Brown  
DATE 88/02/26

B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED 1  1)

1. FEE CATEGORY AND AMOUNT: 3P \$ 230

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR:

AMENDMENT \_\_\_\_\_  
RENEWAL \_\_\_\_\_  
LICENSE ✓ \_\_\_\_\_

3. OTHER \_\_\_\_\_

SIGNED L. Kimberly  
DATE 11/2/88