Reg. I 04/16/82

FRANK S. CRANE, III
Executive Vice President

BRIDGEPORT HOSPITAL
a community resource
267 GRANT STREET • BRIDGEPORT, CONNECTICUT 06602

February 15, 1982

Director
Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

We wish to amend the Bridgeport Hospital Materials License No. 06-01060-01 to incorporate in-vitro laboratory testing currently performed at this institution under a general license, registration No. 2549, in accordance with 10CFR31.11. The 200 mCi limit of the general license is no longer sufficient for the needs of this hospital. We request a 3 mCi limit for the uses listed in 10CFR 31.11.

A floor plan of the hospital's Chemistry Laboratory is enclosed. In-vitro tests are conducted in the indicated radiochemistry area, using two automatic well counters (one Beckman Gamma 5500 and one Beckman Gamma 4000 unit). Radioisotopes are stored for daily use in the refrigerator located in this area, and for longer term use in the indicated cold room (a refrigerated storage room). The cold room is locked when the Chemistry Laboratory is closed. All radioisotope storage areas are marked with appropriate caution signs. A GM survey meter with a thin end window will be kept in the laboratory, for use in radiation surveys.

Radioactive waste will be disposed of as provided in our current specific license, except that disposal of water-soluble liquid waste by the sanitary sewerage system will be the routine practice in the Radiochemistry Laboratory. The average daily quantity of sewage released into the sewer by Bridgeport Hospital is approximately 185 to 350 thousand gallons, or 127 million gallons annually. This is well in excess of the amount required by 10CFR20.303 for the quantities of radioisotopes involved. Liquid scintillation media containing tritium will be disposed of by commerical service only. Please refer to the enclosed sheet outlining our modified waste disposal procedures.

All other applicable terms of the hospital's material license will be followed with respect to the operation of the Radiochemistry Laboratory. Certain instruction and information sheets of the license have been modified to incorporate Radiochemistry, and are attached.

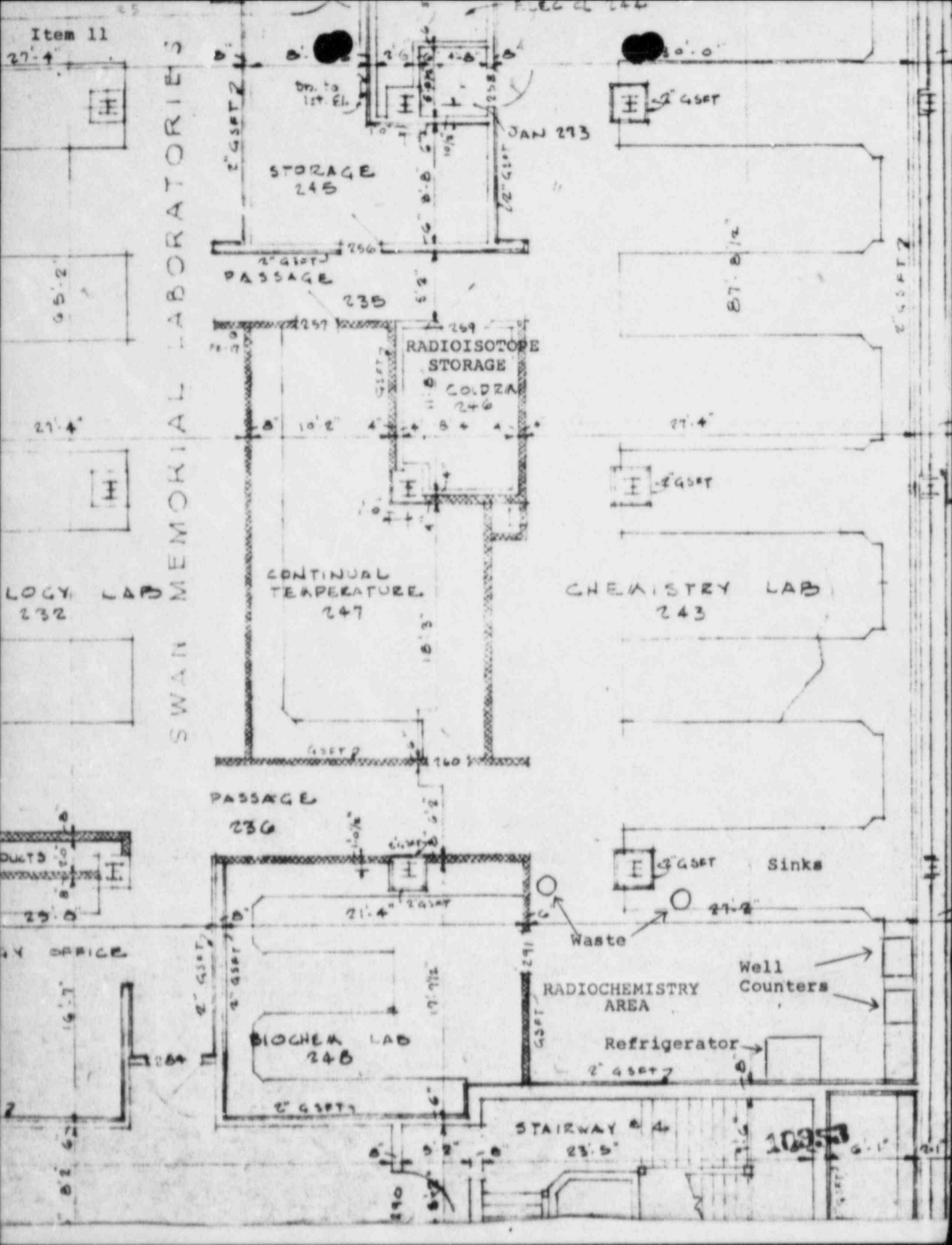
The Radiochemistry Laboratory is currently directed by John F. Klein Robbenhaar, M.D., a pathologist. The daily operations of the Laboratory are supervised by Ms. Margie C. Irbe, an authorized user of radioisotopes for in-vitro tests on New York City Materials License No. 602-19 (Department of Pathology, Beth Israel Medical Center, New York, New York). A copy of the amendment authorizing M. Irbe as a user of radioisotopes is enclosed. Dr. Robbenhaar has no formal training in radioisotope handling techniques, although he has been involved with the Radiochemistry Laboratory for several years and has had informal training.

Enclosed please find the required amendment fee of $40.00, pursuant to 10CFR170.31. If any additional information is required, please do not hesitate to contact us.

Sincerely,

Frank S. Crane, III
Executive Vice President

FSC:dmp
Enclosures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10953

STATE OF NEW YORK
RADIOACTIVE MATERIALS LICENSE

AMENDMENT NUMBER 3

License Number 602

RECEIVED
CLINICAL PATHOLOGY
DATE 30 June 1978

Beth Israel Medical Center
Department of Pathology (Chemistry)
10 Nathan Perlman Place
New York, New York 10003

Attention: David Tiersten, M.D.

In accordance with letter dated June 9, 1978, from Gerald Shapiro, Radiation Safety Officer, and applications dated May 9, 1978, from Joseph W. Winter, Ph.D. and Margie Irbe, respectively, License Number 602-19 is hereby amended to add the names of Joseph W. Winter, Ph.D. and Margie Irbe as authorized users and to read as follows:

11. Radioactive material shall be used by, or under the supervision of, David Tiersten, M.D., Joseph W. Win ter, Ph.D. or Margie Irbe.

13. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Subitems 6, 7 and 9 of this license in accordance with statements, representations and procedures contained in applications dated September 2, 1976, and May 9, 1978.

(2) Letters dated Septmber 29, 1976 and June 9, 1978.

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FOR THE NEW YORK CITY DEPARTMENT OF HEALTH

Date

by
Assistant to the Director for

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ORDER AND RECEIPT OF RADIOACTIVE MATERIALS

RADIOCHEMISTRY LABORATORY

1. Radioactive materials will be ordered only from manufacturers holding an unexpired license to sell and distribute them.

2. Only that type and quantity of material for which the facility is licensed will be ordered.

3. The material will be used only in procedures for which the facility is licensed.

4. The material will be used only in procedures specified by the manufacturer, and according to the manufacturer's instructions.

5. Routinely used radioactive material will be placed on a standing order whenever possible by the radiochemistry supervisor. Their periodic receipt will be recorded in a log book including the date, type, and activity of material.

6. Specified type and activity of radioactive material will be ordered by telephone or in writing by, or under the supervision of, the radiochemistry supervisor as required.

7. During normal working hours, radioactive material ordered by the Radiochemistry Laboratory will be delivered to the hospital's Receiving Department, which will immediately bring the material to the Radiochemistry Laboratory.

8. The radiochemistry supervisor will be notified by the person accepting receipt of radioactive material during normal working hours.

9. Opening and monitoring of packages will be performed no later than three hours after they are received in the department during normal working hours.

10. During off-duty hours, radioactive materials will be delivered to the Security Department, and taken immediately by the security guard on duty to the Chemistry Laboratory. Packages will be placed on a designated shelf in the "cold room" (a refrigerated storage room; see floor plan). This room is marked with a "CAUTION - RADIOACTIVE MATERIAL" sign, and is locked when the Chemistry Laboratory is closed.

11. Any person accepting a package during off-duty hours will record the date, time, description of the package, and his own name in the log book kept next to the storage area.

12. The radiochemistry supervisor will check the log book at the start of each work day. Any package received during off-duty hours will be opened and monitored within three hours.

13. Security personnel who will accept receipt for radioactive materials will be given a copy of the memo entitled "Receipt of Packages Containing Radioactive Materials" (attached), and will be included in the radiation safety training program.

14. The radioisotope storage room will be secured against unauthorized access at all times.

BRIDGEPORT HOSPITAL

MEMORANDUM

February 16, 1982

TO: Captain G. Bood, Security Department
FROM: James E. Bond, Radiation Safety Officer
SUBJECT: RECEIPT OF PACKAGES CONTAINING RADIOACTIVE MATERIAL

Any packages containing radioactive material that arrive between 4:30 p.m. and 7:00 a.m. or on weekends shall be signed for by the security guard on duty. Packages addressed to the Nuclear Medicine Department shall be taken immediately to that department, and placed inside the radioisotope storage room. Unlock the door, place the package on the counter top to the right of the door, sign the log, and relock the door. Packages addressed to the Chemistry Laboratory shall be taken immediately to that Laboratory, and either given to the acting supervisor (when the Laboratory is open), or placed inside the "cold room" (the refrigerated storage room). Unlock the door, place the package on the shelf to the right of the door, sign the log, and relock the door.

If the package is wet or appears to be damaged, immediately contact the hospital Radiation Safety Office or the hospital Director of Nuclear Medicine. Ask the carrier to remain at the hospital until it can be determined that neither he nor his delivery vehicle is contaminated.

Most packages received by the hospital will be marked with a WHITE-I or a YELLOW-II label. These can be properly carried by hand. Infrequently, a YELLOW-III labeled package may be delivered to the Nuclear Medicine Department. Such a package should be placed in a cart or wheelchair during transport. Personnel should not spend time unnecessarily in the vicinity of any package containing radioactive material, in particular a package with a YELLOW-III label.

RADIATION SAFETY OFFICER:	James E. Bond, Ph.D.
OFFICE PHONE:	384-3168
HOME PHONE:	(203) 281-7982
DIRECTOR OF NUCLEAR MEDICINE:	John A. Creatura, M.D.
OFFICE PHONE:	384-3228 or 384-3170
HOME PHONE:	227-0127

cc: W. A. Moran, Director of Transportation/Security

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PACKAGE MONITORING RECORD

BRIDGEPORT HOSPITAL

RADIOCHEMISTRY LABORATORY

DATE	COMPANY	ISOTOPE				RADIATION LEVELS (mR/hr)							
						3 Feet	Sides of Box						Wipes
		I-125	Co-57	Cr-51	Other		1	2	3	4	5	6	

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RADIATION SURVEY PROCEDURES

1. All areas indicated on the attached survey sheets will be surveyed daily with a GM survey meter sufficiently sensitive to detect 0.1 mR/hr, and decontaminated if necessary. A GM survey meter with a thin end window will be used in the Radiochemistry Laboratory. Acceptable levels of radiation are 0.2 mR/hr in noncontrolled areas and 2 mR/hr in controlled areas.

2. Wipe tests will be performed at the end of each week. Alcohol wipes will be taken in all areas currently used for elution, preparation, injection and in-vitro testing. Each wipe shall cover an area of at least 100 cm^2, or 4" x 4".

   The wipes will be counted for 60 seconds in an appropriate counter, at designated instrument settings. In the Nuclear Medicine Department, a well counter will be used, with an 80 KeV to infinity window (spanning the Tc-99m photopeak). In the Radiochemistry Laboratory, a well counter will be used to detect gamma emitters, with a 10 KeV to infinity window (spanning the I-125, Co-57 and Cr-51 photopeaks). When tritium is used in the Radiochemistry Laboratory, a separate set of wipes will be counted with an appropriate liquid scintillation counter. Background will be counted for 60 seconds in all cases, and subtracted. The efficiency of our well counting systems for counting radioisotopes such as Tc-99m and I-125 is $\sim$100%. Contamination levels less than 100 dpm ($\sim$ twice background) can be readily detected. An area will be cleaned if the measured contamination level exceeds 100 dpm/100 cm^2.

3. A permanent record will be kept of all survey results, including negative ones. The record will include

   a) Location, date, and type of equipment used;

   b) measured exposure rates, keyed to locations on a drawing;

   c) detected contamination levels, keyed to locations on a drawing;

   d) corrective action taken, when necessary, together with subsequent measurements of exposure rate or contamination level.

RADIOCHEMISTRY LABORATORY

BRIDGEPORT HOSPITAL

Record maximum reading in surrounding area at each location.

Take corridor readings in all accessible areas.

Check survey meter for battery and standard indications prior to use.

Location	Surveys - mR/hr					Wipes	Comments
	/ /	/ /	/ /	/ /	/ /	/ /	
Bkgnd							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
Surveyor							
Instrument							

Item 18

WASTE DISPOSAL PROCEDURES

1. LIQUID WASTE

Liquid waste will be disposed of either

a) by a commercial waste disposal service, or

b) in the sanitary sewer system (water-soluble waste only) in accordance with 10CFR 20.303.

Liquid scintillation media containing H-3 or C-14 will be disposed of only by a commercial service. Disposal of water-soluble waste by the sanitary sewer system shall be a routine practice in the Radiochemistry Laboratory. A record shall be kept of liquid waste disposed of by either method, including the date, quantity and type of radioisotope and person responsible for the disposal. Drains and traps of sinks used for flushing radioactive waste will be monitored daily (during the routine area surveys) to assure that radiation levels are less than 2 mR/hr. The radiation levels will also be checked, and the Radiation Safety Office notified, prior to any plumbing modification or repair.

Disposable containers (e.g., glass test tubes) of liquid waste discarded by the second method will either be treated as solid waste (see below), or thoroughly washed and monitored with an appropriate low-level survey instrument (e.g., an end-window geiger counter capable of detecting 0.01 mR/hr.). When radiation levels do not exceed background (in close proximity to the containers, with all shielding removed), radioactivity warning labels will be obliterated and the containers discarded with ordinary trash. Otherwise, the containers will be treated as solid waste.

2. SOLID WASTE

Trash receptacles clearly marked with radiation symbols are to be provided at each restricted area where contaminated trash is generated. Trash cans designated for such use will not be kept in unrestricted areas. Cans shall be monitored daily (during the routine area surveys) to assure that radiation levels at their external surfaces do not exceed 2 mR/hr. When trash cans reach the maximum radiation limit, or when they become full, the trash will be transferred to designated drums in the radioisotope storage room. The trash shall subsequently be either

a) disposed of by a commercial waste disposal service, or

b) held for decay until radiation levels (measured with a low-level survey meter, with all shielding removed) have reached background levels.

2. SOLID WASTE (cont)

The second method shall be the routine procedure for discarding waste in the Nuclear Medicine Department. A copy of instructions issued to personnel for disposing of waste by the decay method is attached. All radiation labels will be removed or obliterated before any waste is disposed of in the normal trash. A record shall be kept of waste disposed by either method.

3. Mo-99/Tc-99m GENERATORS

Mo-99/Tc-99m generators will be held for decay until radiation levels (as measured with a low-level survey meter with all shielding removed) have reached background levels. All applicable procedures given above for the disposal of other solid wastes will be followed.

4. COMMERCIAL WASTE DISPOSAL SERVICE

The commercial waste disposal service which will be used when the other methods of disposal are either inapplicable or impracticable is

Nuclear Diagnostic Laboratories, Inc.
P. O. Box 791
Peekskill, New York 10566