Newton-Wellesley Hospital

An Affiliate of NeWell Health Corporation
2014 Washington Street
Newton, MA 02162
(617) 964-2800

'85 FEB 27 A10:22

February 20, 1985

Materials Licensing Branch
Division of Fuel Cycle & Material Safety
United States Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

A request for renewal of our NRC License 20-02615-01 expiring March 31, 1985 is made. Our license reflects accurately the uses and individual users. The Radiation Safety Committee consists of the following members.

Edward Moore, M.B.A., Vice President for Professional Services

Jane Comerford, R.N. Nurse Manager

Harold Simon, M.D., Associate Chief Radiologist, Division Head, Nuclear Medicine (Radiology) & Radiation Safety Officer

Ralph Scott, M.D. Pathologist, charged with Nuclear Medicine (Pathology)

Egilda D. Witherell, Radiological Physicist, Radiation Safety Officer

The duties of this committee are as stated in 10CFR 35 Vol. 47, #177, 40149, September 13, 1982.

Our enclosed instrumentation list reflects recently purchased instrumentation. We are presently having Mr. Neil Gaeta of Medford, Massachusetts calibrating the Dose Calibrator and survey instruments annually. We perform tests on Dose Calibrator as stated in our license application of 2/20/79 and in a clarifying letter of February 7, 1980. Nuclear Instrument Co., Rockland, MA. repairs our instruments and calibrates them after repair. The Feb. 7, 1980 letter also documents our annual training for technologists. The following deletions should be made on page 2 or the Feb. 7, 1980 letter. Procedure for Radioactive Patients with 125I and 198 Au Interstitial seeds on Floor, O.R., Recovery and Intensive Care. Appendix J, (enclosed) Waste Disposal is revised since we no longer use liquid scintillation vials. We return generators to manufacturers. There have beeen slight changes in placement of our equipment, and new diagrams of facilities

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(except Pathology use) are included. Also included are air flow measurements with diagrams by Cox Engineering Company, Brighton, MA. Attached with slight revision are Rules for Safe Handling of Radioactive Material, and Procedure in the Event of Radioactive Contamination. Our personnel are wearing film badges, TLD wrist and ring badges supplied by Landauer Jr., & Co. on a monthly basis.

The letters documenting our license are as follows: Feb, 20, 1979, Feb. 7, 1980, April 21, 1980, April 23, 1981, July 1, 1981 and July 23, 1981, Model ALARA program in Appendix O of Reg. Guide 10.8 Oct. 1980, Nov. 1, 1983 and Feb. 6, 1984.

Delete the following letters: April 4, 1979, March 2, 1981, Jan. 3., 1983 and Sept. 16, 1981.

If you require any additional information contact Mrs. Egilda Witherell, 617-964-2800, Ext. 2056.

Enclosed is a check for $580.00 to process our application renewal.

Sincerely,

Jeffrey Kelly,
Senior Vice President &
Chief Operating Officer

JK/kdb

Enclosures

APPENDIX C

INSTRUMENTATION

1. Survey meters

a. Manufacturer's name: William B. Johnson & Assoc. , Inc.

Manufacturer's model number: GSM-5

Number of instruments available: one

Minimum range: 0 mr/hr to 0.2 mr/hr

Maximum range: 0 mr/hr to 20 mr/hr

b. Manufacturer's name: Victoreen Instruments Division

Manufacturer's model number: 498

Number of instruments available: one

Minimum range: 0 mr/hr to 1.0 mr/hr

Maximum range: 0 mr/hr to 1000 mr/hr

c. Manufacturer's name: Victoreen Instruments Division

Manufacturer's model number: 493

Number of instruments available: two

Minimum range: 0 mr/hr to 0.5 mr/hr

Maximum range: 0 mr/hr to 500 mr/hr

d. Manufacturer's name: Victoreen Instrument Division

Manufacturer's model number: 740F

Number of instruments available: one

Minimum range: 0 mr/hr to 25 mr/hr

Maximum range: 0 mr/hr to 1,000 mr/hr

e. Manufacturer's name: Victoreen Instruments Division

Manufacturer's model number: 470 A

Number of instruments available: one

Minimum range: 0 mr/hr to 3 mr/hr

Maximum range: 0 mr/hr to 1000 mr/hr

f. Manufacturer's name: Ludlum

Manufacturer's model number: Scintillation Probe 44-2 with Model 16 analyzer

2. Dose calibrators

a. Manufacturer's name: Capintec

Manufacturer's model number: CRC - 17 & printer

Number of instruments available: one

Manufacturer's name: _____

Manufacturer's model number: _____

Number of instruments available: _____

3. Diagnostic instruments

Type of instrument	Manufacturer's Name	Model No.
a. LFOV Maxicamera	General Electric	SM H2500G
b. Gamma Camera	Ohio Nuclear	100
c. Data System	Ohio Nuclear	150
d. Area Scan	Ohio Nuclear	100 - 08
e. Prias Automatic Gamma Counter	Hewlett Packard	PGD
f. AutoLogic - Automatic Well counter/changer	Abbott	121 - A
g. Logic series/well counter	Abbott	111 - B
h. North Star Advantage Computer	Computer Printer Epson Medical Data Systems	FX-80 A-2
i. Video Imager	Matrix Instruments	
j. Video Cassette Recorder	Sony	VO-2600
k. Wrist Scanner	Lunar Radiation Corp.	Model SP -2 1015

4. Other

Type of instrument	Manufacturer's Name	Model No.
a. Vamp Area Monitor	Victoreen Instruments	808 D
b. Pulmonex Xenon System	Atomic Products Corp.	130-500
c. Brattle Physiological Synchronizer	Brattle Instruments	202

2/19/85
NEWTON WELLESLEY HOSPITAL
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02162

APPENDIX J

WASTE DISPOSAL

Note: In view of the recent problems with shallow-land burial sites used by commercial waste disposal firms, NRC is encouraging its licensees to reduce the volume of wastes sent to these facilities. Important steps in volume reduction are to segregate radioactive from nonradioactive waste, to hold short-lived radioactive waste for decay in storage, and to release certain materials in the sanitary sewer in accordance with § 20.303 of 10 CFR Part 20.

1. Liquid waste will be disposed of (check as appropriate)

✓ In the sanitary sewer system in accordance with § 20.303 of 10 CFR Part 20.

____ By commercial waste disposal service (see also Item 4 below).

✓ Other (specify): MOST LIQUID WASTE WILL BE STORED & HELD FOR DECAY TO BACKGROUND LEVELS (MEAS. WITH LOW LEVEL SURVEY 3M METER & NO shielding) ALL RADIATION LABELS WILL BE REMOVED OR OBLITERATED BEFORE DISPOSAL INTO ROUTINE TRASH.

2. Mo-99/Tc-99m generators will be (check as appropriate)

✓ Returned to the manufacturer for disposal.

____ Held for decay* until radiation levels, as measured in a low background area with a low-level survey meter and with all shielding removed, have reached background levels. All radiation labels will be removed or obliterated, and the generators will be disposed of as normal trash.**

____ Disposed of by commercial waste disposal service (see also Item 4 below).

____ Other (specify): ____

3. Other solid waste will be (check as appropriate)

✓ Held for decay* until radiation levels, as measured in a low background area with a low-level survey meter and with all shielding removed, have reached background levels. All radiation labels will be removed or obliterated, and the waste will be disposed of in normal trash.

✓ Disposed of by commercial waste disposal service (see also Item 4 below).

✓ Other (specify): MOST WASTE WILL BE STORED & HELD FOR DECAY UNTIL RAD. LEVELS REACH BACKGND LEVELS AS MEAS. WITH LOW LEVEL 3M SURVEY METER & NO SHIELDING. ALL RAD. LABELS WILL BE REMOVED OR OBLITERATED BEFORE WASTE IS DISPOSED OF IN NORMAL TRASH.

4. The commercial waste disposal service used will be

INTEREX CORP. (Name) NATICK, Ma. 01760 (City, State)

NRC/Agreement State License No. 20-14-082-02

* Be sure that waste storage areas were described in Item 11 and that they are surveyed periodically (Item 17).

** These generators may contain long-lived radioisotopic contaminants. Therefore, the generator columns will be segregated so that they may be monitored separately to ensure decay to background levels prior to disposal.

NEWTON WELLESLEY HOSPITAL

Procedure in the Event of Radioactive Contamination within the Nuclear Medicine Department

1. Use the nearest phone to request assistance from Mrs. Witherell, Dr. Simon, , or Joanne Doherty Do not proceed unnecessarily through the corridors.
2. At either end of the "hot" lab are stacks of chux pads (absorbent material). Drop these down on floor and walking on them proceed to outer entrance section of the hot lab.
3. Remove any contaminated clothing from yourself and absorb any liquid on your person with gauze pads. At this point one of the staff listed above should be there to aid you.
4. Of paramount importance is removal of any contamination on your person and the information giving approximate radioactivity content and isotope involved. An ionization chamber will be used to determine radiation rates.

   Decontamination will proceed with all assisting wearing surgical gloves and protective clothing and stepping on fresh chux pads to avoid spread of contamination. Stainless steel buckets and long forceps and other chux pads will be used to remove contaminated waste and keep the radiation from exposing you.

   Green soap and gauze pads are very effective in removing contamination from your person.

   All persons involved in the spill will be monitored to determine adequacy of decontamination.

5. Always employ long forceps to handle contaminated equipment. Drop absorbent material on any large spills. Wash area down with water without spreading it over the entire room, and have contamination checked with a Geiger Mueller counter or other suitable detector to determine effectiveness of decontamination procedure. If there is still residual activity but no external hazard, the area should be covered and labelled so that the contamination will not be spread about.

Disposal of contaminated material must be in accord with Nuclear Regulatory commission Regulations and will be determined by the radiological safety officer.

Prepare a complete history of the accident and subsequent activity related thereto for the laboratory records.

Decontamination facilities: Use shower in Room B-62. GM COUNTERS ARE FOUND IN HOT LAB AND IN EACH SCAN ROOM.

REVIEWED 2-84

Egilda E. Witherell

Egilda D. Witherell
Radiological Physicist

Item 16
2/19/85

NEWTON WELLESLEY HOSPITAL

RULES AND REGULATIONS FOR THE USE OF RADIOISOTOPES

1. Pipetting of radioactive materials by mouth is forbidden. Propipettes or other remote methods should be utilized whenever necessary.
2. No smoking, eating or application of cosmetics is allowed in areas where procedures with radioisotopes are carried out.
3. Irrespective of the quantities of radioactive materials being used, surgical gloves or vinayl disposable gloves must be worn at all times. Protective clothing (such as lab coats) should be worn.
4. All personnel working with radioactive materials must wear film badges or dosimeters. Appropriate records must be maintained.
5. All work should be carried out on stainless steel trays covered with absorbent materials such as Chux disposable pads. Taking shipments of unshielded radioactive materials in hand without use of long forceps is prohibited. All stock radioactive isotopes should be kept in protective containers. A protective shield either platinum or Lead must be used on the syringe whenever a dose is drawn. All personnel will wear ring Dosimeters (TLD). See protocol for preparation of Doses for scans.
6. All radioactive materials must be properly labelled stating each radioisotope, the total quantity on a given date, and must have also a "Caution Radioactive Material" tape bearing the conventional radiation symbol in the correct magenta and yellow colors.
7. Records of all shipments of radioisotopes must be logged in notebooks which should be available.

18723

1. Waste disposal must be in accord with Nuclear Regulatory Commission (NRC) regulations, and records of such disposal must be kept.[1] No incineration of radioacitve materials is allowable.
2. Quantity of isotopes received must be recorded; the dosage dispensed, and to whom (patient or research worker).

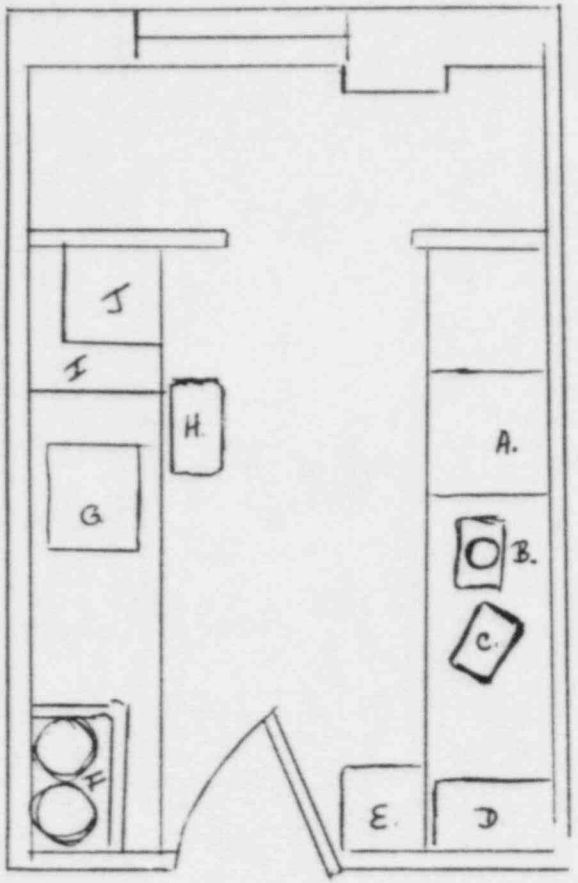
8. All laboratories using radioactive materials must be routinely monitored.
9. All contamination of real estate must be immediately reported to Mrs. Witherell, Dr. Simon, Dr. Scott and Joanne Doherty C.N.M.T.
10. Following completion of handling of radioactive materials, hands should be checked by means of a Geiger Mueller counter capable of detecting the particular isotope involved.
11. In case of an accident involving radioactive material notify Mrs. Witherell, Dr. Simon, Dr. Scott and Joanne Doherty[2], C.N.M.T., immediately, and do not travel through the building.
12. All areas where radioactive materials are stored and prepared are locked and secured as restricted areas at all times unless the room is attended by qualified personnel.

1. See procedure Radioactive Waste Disposal.
2. See procedure in event of a RAdioactive Contamination.

REVIEWED
02-84

Egilda D. Witherell
Radiological Physicist

Item 15
2/19/85



NUCLEAR MEDICINE HOT LAB

A. Dose Area

B. Dose Calibrator

C. Dose Computer/ Printee

D. Hot Plate

E. Injection Chair

F. 99 mTc Generators

G. Stainless Steel Sink

H. Bone Absorptometry source

I. Fume Hood

J. Small Lead lined refrigerator under shelf.

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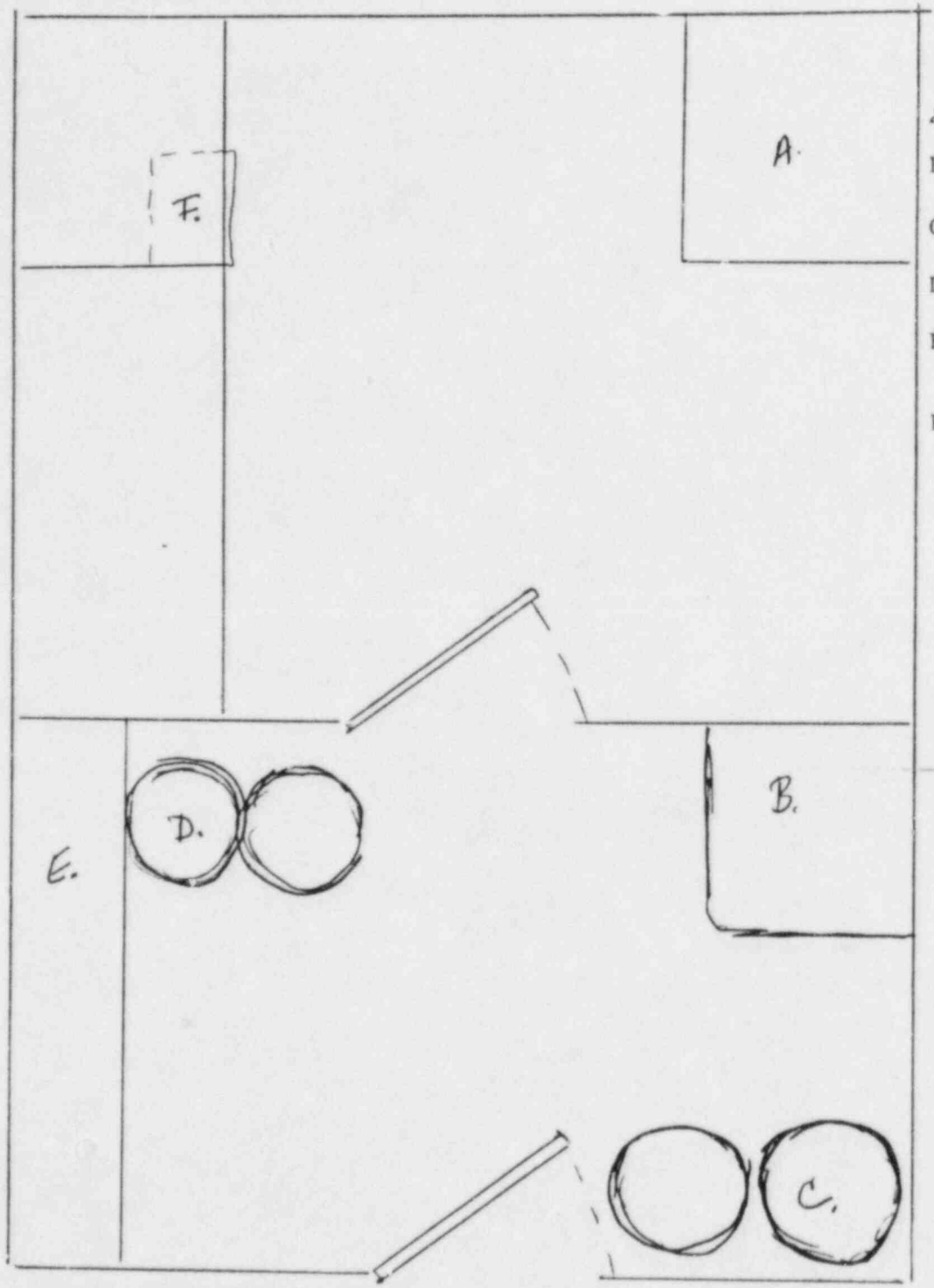
NEWTON LOWER FALLS, Ma. 02162

Item 11
2/19/85



B-60

A. Fume Hood

B. Sink

C. Barrels

D. Barrels

E. Contaminated neelde storage.

F. Concrete vault.

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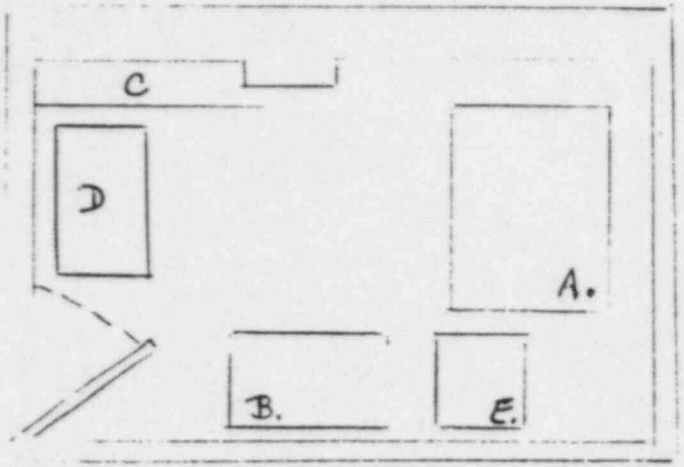
ITEM 11
2/19/85

NUCLEAR MEDICINE COMPUTER ROOM



A. Computer

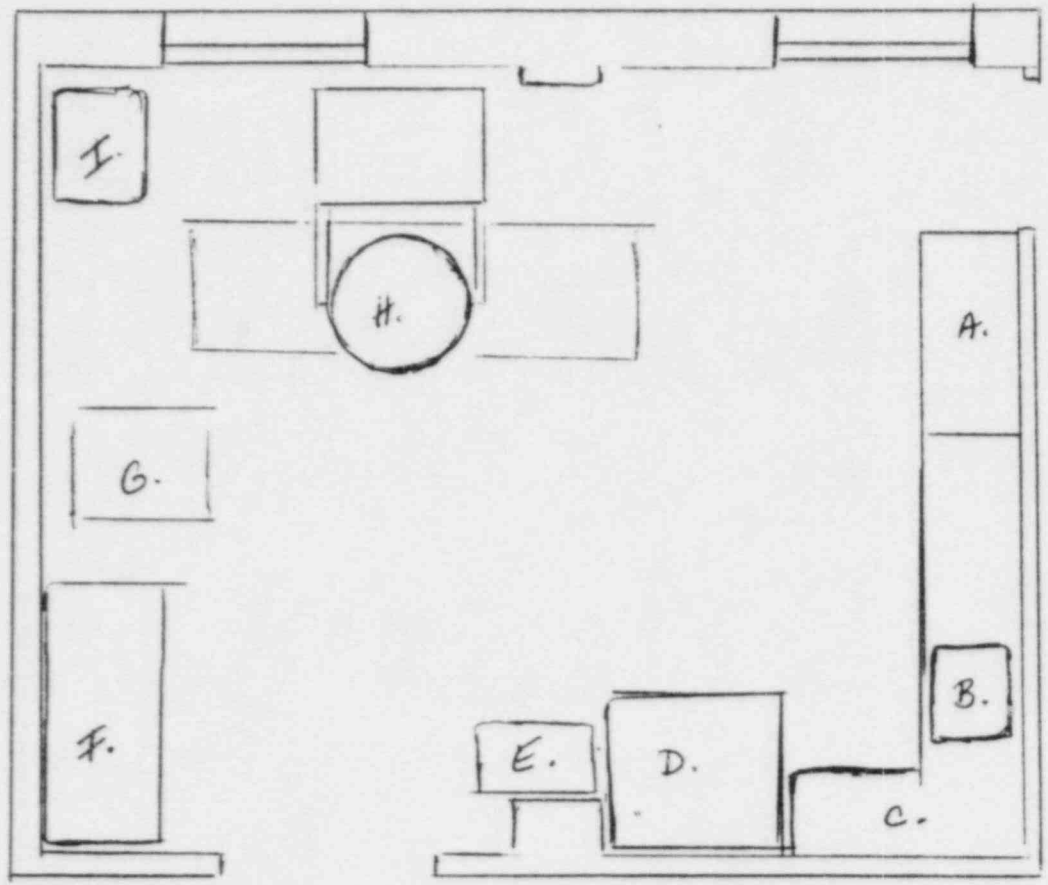
B. Terminal (Portable)

C. Disk/ Magnetic Tape Storage

D. Video Recorder (Portable)

E. Matrix Imager

NEWTON WELLESLEY HOSPITAL
NEWTON LOWER FALLS, Ma. 02162
Item 11
2.19.85



GENERAL ELECTRIC SCAN ROOM

A. File Cabinet

B. Stainless Steel Sink

C. Desk

D. Collimator Stacker

E. Dose Tray

F. Computer

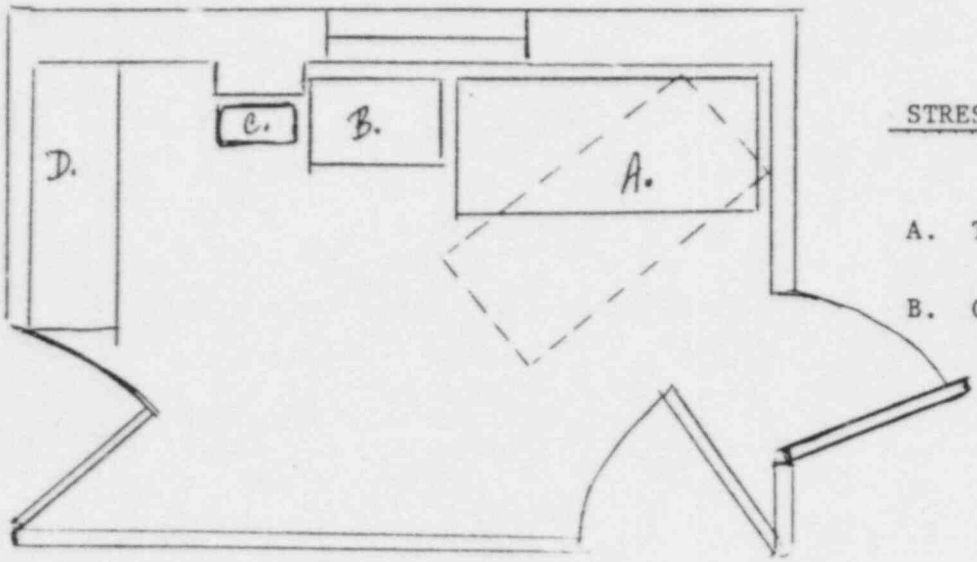
G. Camera Console

H. Gamma camera

I. Xenon administration system

NEWTON WELLESLEY HOSPITAL
NEWTON LOWER FALLS, Ma. 02162

ITEM 11
2/19/85



STRESS LAB

A. Treadmill

B. Code cart

C. Defibrillator

D. Desk

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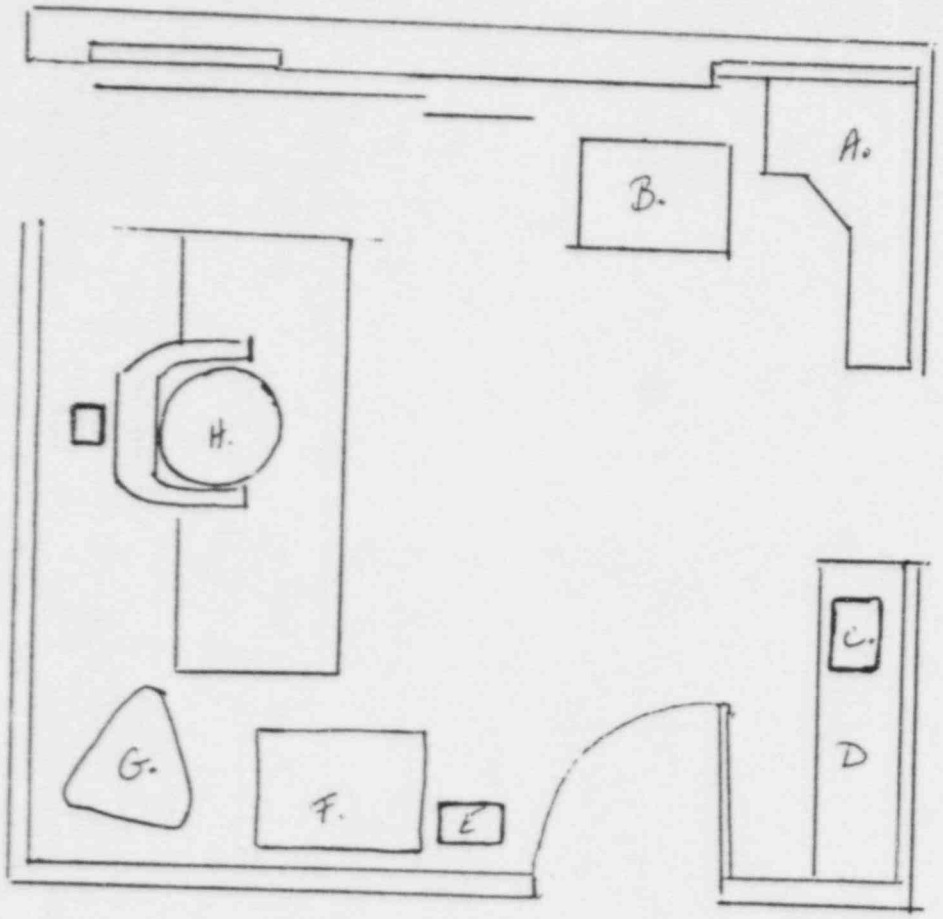
NEWTON LOWER FALLS, Ma. 02162

ITEM 11
2/19/85



OHIO ROOM

A. Desk/ shelves

B. Data system

C. Stainless steel sink

D. Shelves

E. Dose Tray

F. Gamma console

G. Collimators

H. Gamma Camera

NEWTON WELLESLEY HOSPITAL
NEWTON LOWER FALLS, Ma. 02162

ITEM 11
2/19/85

COX ENGINEERING COMPANY

FANS BLOWERS
AIR CONDITIONING
SHEET METAL WORK
MARINE INDUSTRIAL

AIR HANDLING APPARATUS & UNITS COX

COOLING
DRYING-HEATING
VENTILATING-CONVEYING
BLOW PIPE SYSTEMS

77 GUEST STREET, BOX 189, BRIGHTON, MA 02135
(617) 782-0700

February 11,1985

Newton Wellesley Hospital
2014 Washington Street
Newton, Massachusetts 02161

ATTENTION: MR. WAYNE COOK

Dear Mr. Cook,

Attached is a copy of the report of the first of four Air Balance checks of the Nuclear Medicine Area.

Thank you for the opportunity to have been of service. If I can be of any further assistance please do not hesitate to call.

Very truly yours,
COX ENGINEERING COMPANY

John Coffey
Manager, Testing & Balancing

JC/kma

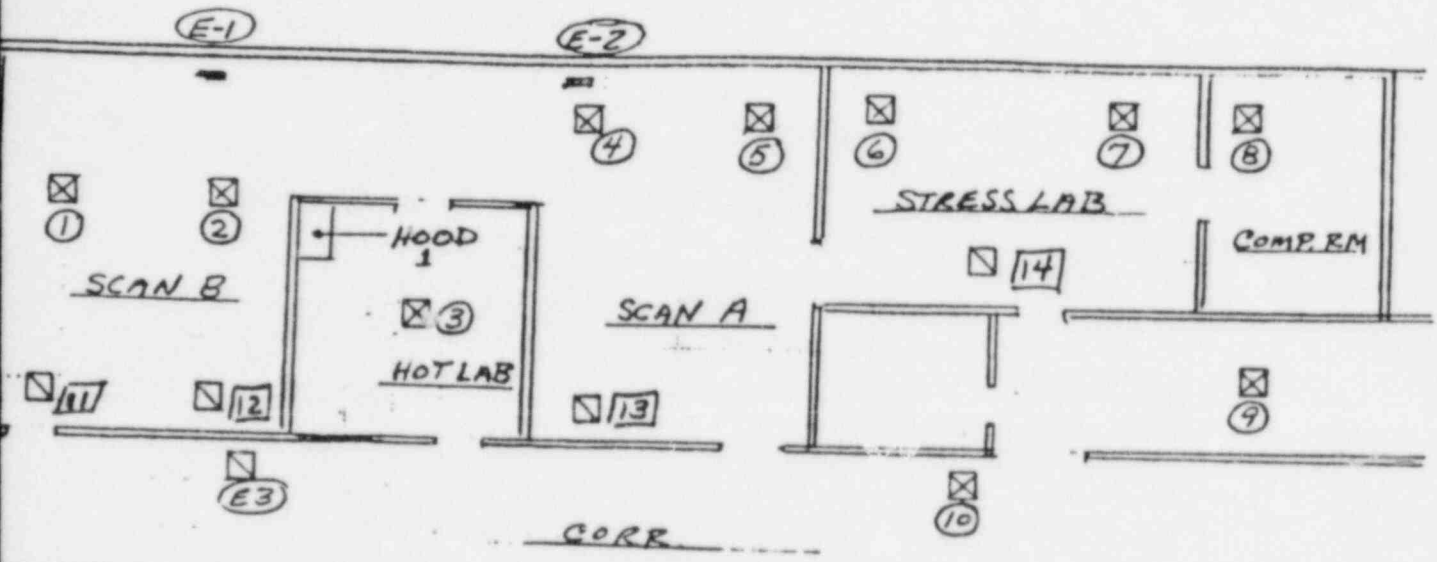
COX ENGINEERING COMPANY

77 GUEST STREET • BOX 189 • BRIGHTON MA 02135

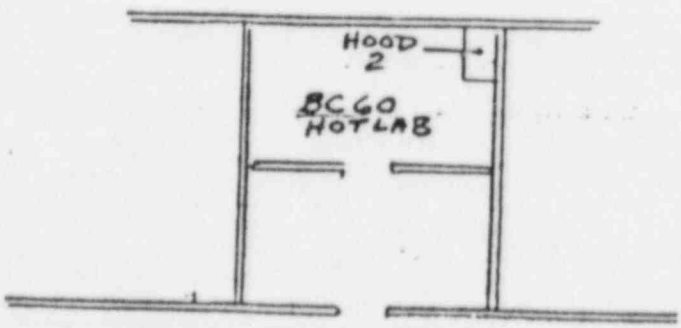
ATE:

SHEET 2 OF 2

NO.	JOB NAME
0020	NEWTON WELLESLEY HOSPITAL



PLAN NUCLEAR MEDICINE



PLAN BASMT.

COX ENGINEERING COMPANY

AIR OUTLET TEST REPORT

PROJECT NEWTON/WELLESLEY HOSPITAL SYSTEM NUCLEAR MEDICINE

OUTLET MANUFACTURER _____ TEST APPARATUS ALNOR AT CD. & RE.
FLORITE AT HOODS

AREA SERVED	OUTLET				DESIGN		PRELIMINARY		EXHAUST		NORMAL		REMARKS
	NO.	TYPE	SIZE	AK	CFM	VEL	VEL OR CFM	VEL OR CFM	VEL	CFM	VEL	CFM	
SCAN B	1	CD	12X12	.49					833	409	850	417	SUPPL
	2								775	380	787	386	
HOT LAB	3		6X6	.12					1150	138	1200	144	
SCAN A	4		12X12	.49					950	465	975	478	
	5								1033	506	1033	506	
STRESS LAB	6		6X6	.12					825	99	813	98	
	7								850	102	850	102	
COMP. RM	8		15X15	.77					1150	886	1125	867	
WAITING	9		6X6	.12					1100	132	1100	132	
CORR.	10		9X9	.28					1300	364	1225	343	
SCAN B	11	REG.	10X10	.27					—	—	1350	365	RETURN
	12								—	—	1750	473	
SCAN A	13		12X12	.40					—	—	1650	660	
STRESS LAB	14		10X10	.27					675	183	650	176	
SCAN B	E1	REG	12X12	.40					2500		—	—	EXHAUST
SCAN A	E2								2500		—	—	
CORR	E3								2500		—	—	
HOT LAB	1	HOOD	12"x24"	2.0					275	550	300	600	HOOD EXH
BC-60 HOT LAB	2	HOOD	12 3/4 x 8 3/4	.77					1250	963 *	700	539 **	HOOD EXH

REMARKS: B.C. 60 - * CFM WITH RM DOOR OPEN. ** CFM WITH DOOR SHUT.

TEST DATE 2/6/85 READINGS BY R.D. FLYNN