


**LATROBE
AREA
HOSPITAL**

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121 W. 2ND AVENUE

LATROBE, PA

15650-1096

412/537-1000

K-8
MS-16

RE: Mail Control 136397
Latrobe Area Hospital
License No:37-09463-01

03003115

6/24/05

Dear Sandy

Please note the responses to your e-mail of 5/27/05 regarding the license renewal for Latrobe Area Hospital.

1. The only dedicated waste storage area is located in the Nuclear Medicine Hot Lab. This is a lead lined box for used kit vials and syringes. The box has 1/4" on all sides and on the top and bottom. The diagram of the Hot Lab was enclosed with the renewal application and is also attached to this letter.

Unused seeds for the brachytherapy program will be returned to the vendor for disposal.

2. We do not plan to hospitalize I-131 or brachytherapy patients .
3. When the brachytherapy program begins, the seeds will be stored in the HDR vault until used. The seeds will arrive stranded and sterilized from the vendor.
4. The Nucletron Model at Latrobe Area Hospital is 105.002.
5. The emergency response equipment includes the following:
 1. a Nucletron supplied lead pig to house the Ir-192 source if the source cable needs to be cut and the source temporarily stored
 2. wire cutters to cut the source cable
 3. long handled forceps to handle the source and source wire
 4. applicator emergency removal kit
6. The detailed HDR emergency procedures from our manual are attached. Also, emergency procedures and contact personnel with phone numbers are posted,(copy of posting attached), a sign is placed outside of the treatment room door stating: "HDR is in process do not enter". Annual training by RSO was conducted in May.

Additionally, Nucletron is conducting an annual safety training on June 22,

United to Improve America's HealthSM

136397
NMSS/RGNI MATERIALS-002

We will comply with the detailed requirements of 35.610(c), (d), and (e)

7. The radiation monitors are observed to be operating with cameras on each day of treatment. Three different times up to 70 seconds are measured with a stop watch on each day of treatment, 3 additional times are measured up to 2.5 minutes monthly. The door interlock is checked on each day of treatment. Console, door, and afterloader indicator lights are checked on each day of treatment, as are viewing and intercom systems. The presence of emergency response equipment is confirmed on each day of treatment. Source position is checked on each day of treatment. The computer clock is checked on each day of treatment, as is the decayed source activity.

8. The only individual which can be removed as this time is Kurt Blodgett as an AMP. The remaining individuals are to remain on the license. We are currently reviewing the list of AU's and AMP's to determine which may be removed as they are geographically distant, but are still part of the group providing the physician and physicist services.

Sincerely

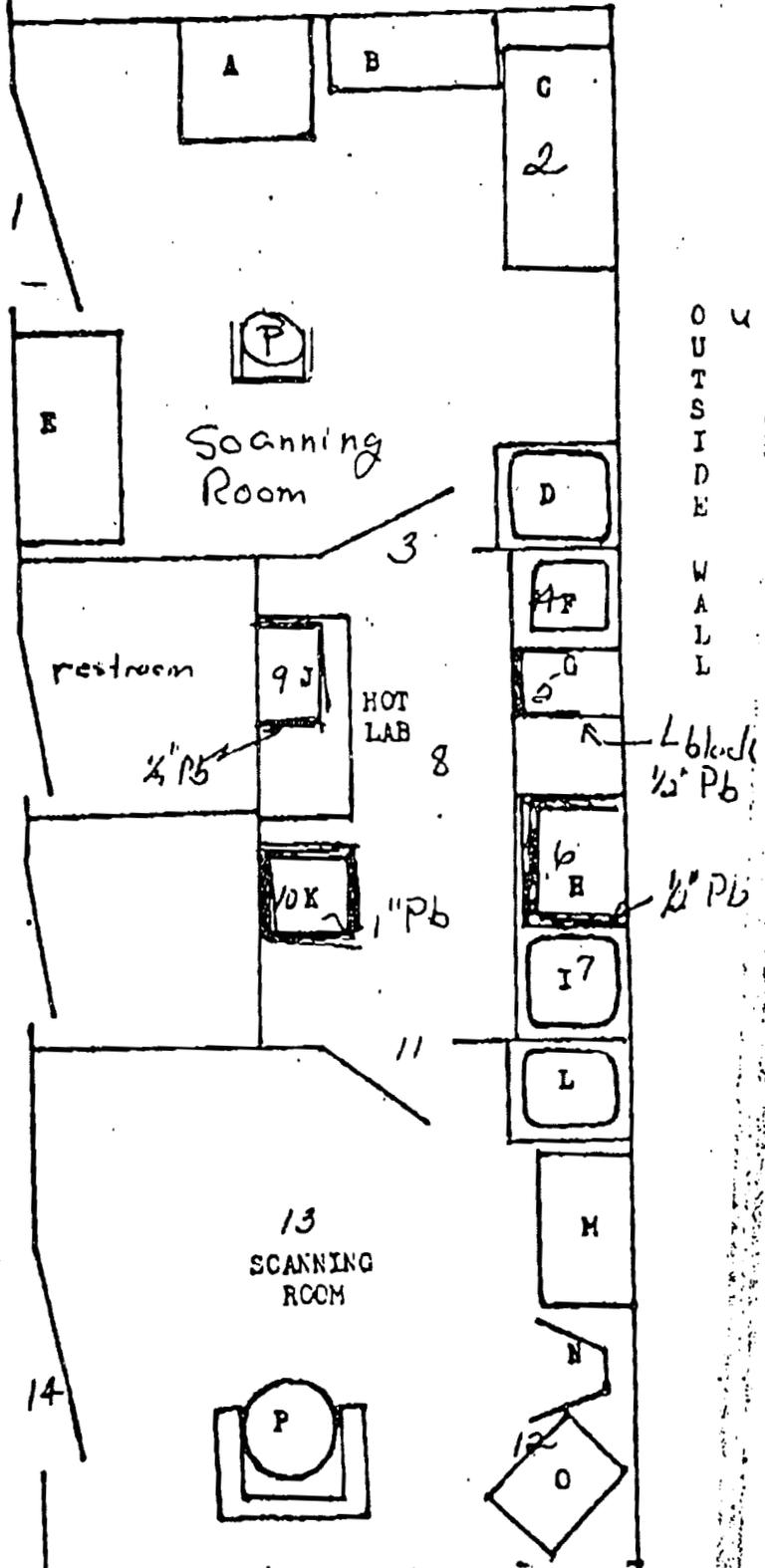


Andrew G. Bukovitz
RSO

ATT(9.1
LATROBE AREA HOSPITAL
DEPARTMENT OF NUCLEAR MEDICINE

EMERGENCY ROOM X-RAY

- A. UFTAKE PROBE & SCALER
- B. BOOK SHELVES
- C. DESK
- D. SINK
- E. DESK
- F. DOSE CALIBRATOR
- G. PROTECTIVE BARRIER
- H. HOT STORAGE (GENERATOR & STDS)
- I. SINK
- J. HOT WASTE
- K. HOT PLATE
- L. SINK
- M. WORK AREA (PAPER WORK)
- N. COLLIMATOR STANDS
- O. CAMERA CONSOLE
- P. CAMERA



ATTACHMENT V

EMERGENCY PROCEDURES

A significant safety risk of High Dose Rate remote afterloading brachytherapy procedures is the loss of the source outside of the shielded safe of the device. The HDR unit includes a measuring mechanism that measures the length of the source and cable every time the source is advanced from the shielded safe. Upon retraction, the length is verified. If a discrepancy exists an Error Code is generated indicating a possibility of an unshielded source. Due to the high intensity of radiation emitted by this source proper precautions must be taken for any actions related to retrieval of a disconnected source including removal of applicators and catheters from patients and recovery of the source into a shielded storage container. In keeping with the ALARA principle, all source recovery efforts should be conducted using time, distance, shielding with appropriate film dosimetry of the effected staff and estimated radiation dosage to the patient.

An unshielded source is considered to be an encapsulated source that has either detached from its driving cable or has not been positioned appropriately either within the shielded safe of the unit, or the shielded transport container. This condition will be apparent if the independent Radiation Monitor is activated when the unit has retracted the source cable.

If a source is determined to be in an unshielded condition, ascertain if it is detached from its drive cable. Review the Error Codes listing in the MHDR User's Manual for appropriate Error Codes for this condition. If the source cable drum is not fully against the mechanical stop and radiation is still present in the room, follow the posted Emergency Procedures titled "**If the Source fails to Return to the Safe.**" These procedures describe the use of the Emergency Stop button located at the Treatment Units, and the use of the FOLD hand crank to manually retract the source into the shielded safe of the unit. If the source cable drum is fully against the mechanical stop and radiation is still present in the room, use of a survey meter can determine if the capsule is detached and its approximate location.

If during a patient treatment, the above Emergency Procedures fail to position the source in a shielded location, the following Emergency Procedures should be followed explicitly. Only personnel involved directly in source recovery are to be in the room.

ENDOBONCHIAL - ESOPHAGEAL TREATMENT

1. Ascertain the channel number currently being treated when the Error Code is generated using the print out.
2. Enter the room with a hand held survey meter at its highest setting (>1000R/hr) and confirm that there is radiation in or near the patient's body.
3. Rapidly and smoothly remove the applicator from the patient's body maintaining its connection to the afterloading device.
4. A shielded emergency container will be available for insertion of the removed applicator.
5. After the applicator has been removed, survey the patient with the hand held survey meter to confirm that the source has indeed been removed from the patient.

INTRACAVITARY APPLICATORS

1. Ascertain the channel number currently being treated when the Error Code is generated using the print out.
2. Enter the room with a hand held survey meter at its highest setting (>1000R/hr) and confirm that there is radiation in or near the patient's body.
3. Rapidly disassemble the applicator and remove any packing material. The applicator components should be removed in the reverse order of insertion.
4. Rapidly and smoothly remove the applicator from the patient's body maintaining its connection to the afterloading device.
5. A shielded emergency container will be available for insertion of the removed applicator.
6. After the applicator has been removed, survey the patient with the hand held survey meter to confirm that the source has indeed been removed from the patient.

INTERSTITIAL IMPLANTS - FLEXIBLE

1. Ascertain the channel number currently being treated when the Error Code is generated using the Print out.
2. Enter the room with a hand held survey meter at its highest setting (>1000R/hr) and confirm that there is radiation in or near the patient's body.
3. Using a suture removal kit, sever any sutures that are retaining the implant tubes to the patient. If the distal end of the implant tube is protruding from the patient's skin and secured with a button, remove the button from the tube without severing the tube.
4. Have available sterile drapings to cover the wound left by the applicator removal.
5. A shielded emergency container will be available for insertion of the removed applicator.
6. After the applicator has been removed, survey the patient with the hand held survey meter to confirm that the source has indeed been removed from the patient.

INTERSTITIAL IMPLANTS - RIGID

1. Ascertain the channel number currently being treated when the Error Code is generated using the print out.
2. Enter the room with a hand held survey meter at its highest setting (>1000R/hr) and confirm that there is radiation in or near the patient's body.
3. Using the appropriate tool, loosen the needle clamp on the effected needle and withdraw it from the template of fixing mechanism.
4. A shielded emergency container will be available for insertion of the removed applicator.
5. After the applicator has been removed, survey the patient with the hand held survey meter to confirm that the source has indeed been removed from the patient.

Unshielded source not within the patient's body.

If after following the posted Emergency Procedures and the source is not returned to the shielded safe, or contained in the Emergency Container, the following procedure shall be followed to contain the radiation emitted by an unshielded source.

1. Remove the patient from the treatment room.
2. Survey the patient to determine if radiation is present.
3. Park the unit in a corner of the shielded room with the indexer facing the corner. The emergency storage container should be adjacent to the unit and contain as much of the applicator/treatment tube as possible.
4. Evacuate and lock the room against ingress.
5. Notify the hospital R.S.O.; Nucletron Corporation R.S.O.; and the NRC Regional Office.

Equipment kept in the room.

1. Suture kit
2. Cable cutter
3. Lead storage container
4. Long-handled tongs
5. Radiation warning labels
6. "No Entry" signs

EMERGENCY PROCEDURES FOR microSELECTRON - HDR, Ir 192 Model: V2

IF THE SOURCE FAILS TO RETURN TO THE SAFE,

1. Depress the **RED EMERGENCY STOP BUTTON** on master emergency stop switch at the console. If the source retracts, go to step 4, otherwise go to step 2.

2. Enter the treatment room.

- **OPEN** the access panel on top of the delivery system unit to access the **GOLD hand crank**. Turn it in the direction of the indicated arrows until it blocks.

- If the source retracts, go to step 4, otherwise go to step 3.

3. Disconnect the applicator from the machine. Move the machine well away from the patient.

4. Check the patient for radiation. If detected, remove the applicator from the patient, ensuring that radiation is confined to the applicator.

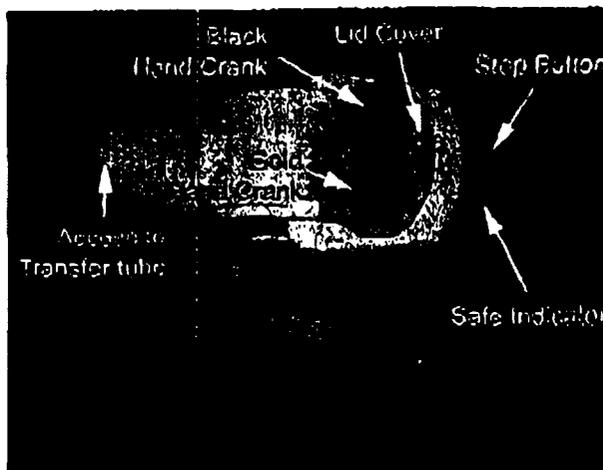


Figure 1. Nucletron Model V2

5. **IMMEDIATELY** assist the patient from the room. A suitably qualified person must now ensure that the applicator is shielded.

6. Leave the treatment room. Close the door. Mark on the treatment door **NO ENTRY**.

7. Retain the treatment data printout and contact the following:

RSO Physicist: Andy Bukowitz Tel: 724-543-8669
Page: _____

Doctor: Sanjeev Bahri Tel: 724-838-5660
Page: _____

Nucletron representative: David Glestner Tel: (814)525-1901
Page: _____

Nucletron 800-445-9295
The unintended radiation dose to which those present have been subjected should be estimated and recorded by a suitably qualified person.

Physicist Satya Bose } 724-838-5660
Edward Brandner }
Page 412-263-8615