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| DATE,TIME | 10/18 11:21 |
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**UNITED STATES**
**NUCLEAR REGULATORY COMMISSION**
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, ILLINOIS 60532-4352


# TELEFAX TRANSMITTAL

DATE: October 18, 2007 NUMBER OF PAGES: 9
*(Including this page)*

SEND TO: Mark Beanblossom- Radiation Safety Officer

LOCATION: Fitzgibbon Hospital

FAX NUMBER: ( 636 -987-2624 ) ☒ ***VERIFY BY CALLING SENDER***

FROM:
*(SENDER)* **Bill Reichhold**

TELEPHONE NUMBER **(630) 829-9839** FAX NUMBER **(630) 515-1078**

If you do not receive the complete fax transmittal, please contact the sender as soon as possible at the telephone number provided above.

**UNITED STATES**
**NUCLEAR REGULATORY COMMISSION**
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MESSAGE

Please see accompanying documents.

**The following additional information is needed to review your request.**

## Materials

**Please specify the units (microcuries, millicuries) for the material you wish to use under 10 CFR 31.11. Usually we authorize a total possession limit of 5 millicuries for materials used under 10 CFR 31.11. If you wish to use more than 5 millicuires, please provide justification.**

## Availability of the Radiation Safety Officer (RSO)

**Please described the availability of the Radiation Safety Officer (RSO):**

a. **Please describe the amount of time each week Mark Beanblossom will spend at the Fitzgibbon Hospital, performing his duties as RSO.**

b. **Please indicate the maximum amount of time it will take for Mark Beanblossom to respond to an emergency involving radioactive materials when he is not at Fitzgibbon Hospital.**

c. **Please describe any previous commitments Mark Beanblossom has as the RSO and/or authorized user at any other NRC licensed facility and describe the impact this will have on his duties as the RSO at Fitzgibbon Hospital.**

d. **Since Mark Beanblossom will be the RSO at more than one facility, please describe any adverse impact this will have on his duties as the RSO at Fitzgibbon Hospital. If there will be no adverse impact, please state so, and why.**

e. **Please describe how Mark Beanblossom will divide his time between facilities so that he will be able to adequately perform his duties as the Radiation Safety Officer at Fitzgibbon Hospital.**

## Authorized Users

**Drs. Bryer, Murrell, Westgate, Bean Liberman, Allen, Decker, and Bechtel and not authorized for the materials in 35.100, 35.200 or 31.11 on NRC license 24-01565-01. Please clarify if you still wish these physicians listed on the license as authorized users for 35.100, 35.200, and 31.11 materials. If so, you will need to submit additional information. Please see 10 CFR Part 35.**

## Facility Diagram

1. Please specify the room number(s) where radionuclides will be used or stored. If there are no room numbers, please state so.

2. Please specify what is above and below the rooms or areas where radionuclides will be used or stored.

## Radiation Monitoring Instruments

Please confirm the following:
" We reserve the right to upgrade our survey instruments as necessary as long as they are adequate to measure the type and level of radiation for which they are used".

## Safe Use of Unsealed Licensed Materials

Please clarify when you will be using radionuclide doses less than 30 microcuries that are ± 20 % from the prescribed dose. Please see accompanying document. Please confirm that you will comply with the requirements in 35.63(d).

**Please note, we will need a close-out survey and remove Fitzgibbon Hospital as a location of use from Boone Hospital Center's license, before we can issue a new license to Fitzgibbon Hospital.**

Please send a facsimile (630- 515-1078) of your response to the above within 7 days and refer to control 316450 . Please call me at 630-829-9839 if you have any questions.

From the desk of:

Bill Reichhold

Bill Reichhold

**MATERIALS LICENSE**
**SUPPLEMENTARY SHEET**

License Number
24-01565-01

Docket or Reference Number
030-02304

Amendment No. 73

| | |
|---|---|
| Charles M. Swaney, M.D. | 10 CFR 35.100, 35.200, 31.11, and iodine-131 for diagnostic procedures and the treatment of hyperthyroidism permitted by 35.300. |
| Mark Bryer, M.D. | 10 CFR 35.300 and 35.400. |
| Hugh Jerry Murrell, M.D. | 10 CFR 35.300 and 35.400. |
| Steven Westgate, M.D. | 10 CFR 35.300 and 35.400. |
| Joseph M. Bean, M.D. | 10 CFR 35.300 and 35.400. |
| Fishel Z. Liberman, M.D. | 10 CFR 35.300 and 35.400. |
| Terry J. Elwing, M.D. | 10 CFR 35.100, 35.200, iodine-131 diagnostic procedures permitted by 35.300 and 31.11. |
| Laura J. Sievert, M.D. | 10 CFR 35.100, 35.200, iodine-131 diagnostic procedures and for treatment of hyperthyroidism permitted by 35.300 and 31.11. |
| James Allen, M.D. | 10 CFR 35.300 and 35.400. |
| Maxwell Lazinger, M.D. | 10 CFR 35.100, 35.200, iodine-131 diagnostic procedures permitted by 35.300 and 31.11. |
| David Perry Brummett, M.D. | 10 CFR 35.100, 35.200, iodine-131 for diagnostic procedures and the treatment of hyperthyroidism permitted by 35.300 and 31.11. |
| William E. Decker, M.D. | 10 CFR 35.300 and 35.400. |
| John Harold Bechtel, M.D. | 10 CFR 35.300 and 35.400. |
| George Barber Dunn, M.D. | 10 CFR 35.100, 35.200, iodine-131 diagnostic procedures permitted by 35.300 and 31.11. |
| Hun Tai Lee, M.D. | 10 CFR 35.100, 35.200, iodine-131 diagnostic procedures permitted by 35.300 and 31.11. |

Not Authorized for 35.100 35.200 31.11

99

99

## 8.15 ITEM 9: FACILITY DIAGRAM

| Part 35 | Applicability |
|---|---|
| 100 | ✓ |
| 200 | ✓ |
| 300 | ✓ |
| 400 | ✓ |
| 500 | ✓ |
| 600 | ✓ |
| 1000 | ✓ |

**Regulations**: 10 CFR 20.1003; 10 CFR 20.1101; 10 CFR 20.1201; 10 CFR 20.1301; 10 CFR 20.1302; 10 CFR 20.1601; 10 CFR 20.1602; 10 CFR 20.1901; 10 CFR 20.1902; 10 CFR 20.2102; 10 CFR 30.33(a)(2); 10 CFR 35.12; 10 CFR 35.14; 10 CFR 35.18(a)(3); 10 CFR 35.75; 10 CFR 35.315(a); 10 CFR 35.415; 10 CFR 35.615.

**Criteria**: In order to issue a license, the Commission must find that facilities and equipment must be adequate to protect health and minimize danger to life or property as required under 10 CFR 30.33(a) and/or 35.18(a).

**Discussion**: Applicants must describe the proposed facilities and equipment as required by 10 CFR 35.12. The facility diagram should include the room or rooms and adjacent areas where byproduct material is prepared, used, administered, and stored at a level of detail that is sufficient to demonstrate that the facilities and equipment are adequate to protect health and minimize danger to life or property.

For types of use permitted by 10 CFR 35.100 and 35.200, applicants should provide room numbers for areas in which byproduct materials are used or prepared for use (i.e., "hot labs"). When information regarding an area or room is provided, adjacent areas and rooms, including those above and below, should be described. For types of use permitted by 10 CFR 35.300 and 35.400, applicants should provide the above information and in addition they should provide the locations where sources are stored. Describe the rooms where patients will be housed if they cannot be released under 10 CFR 35.75. The discussion should include a description of shielding, if applicable. For types of use permitted by 10 CFR 35.500, the applicant should provide the room numbers of use.

For types of use permitted by 10 CFR 35.600, the applicant should provide all of the information discussed above and the shielding calculations for the facility as described in the diagram. When preparing applications for use under 10 CFR 35.1000, applicants should review the above to determine the type of information appropriate to evaluate the adequacy of the facilities.

Licensees are required by 10 CFR 35.13 to obtain a license amendment before adding to or changing an area of use identified in the application or on the license, except for areas of use where byproduct material is used only in accordance with 10 CFR 35.100 or 10 CFR 35.200.

Licensees are required by 10 CFR 35.14 to notify NRC within 30 days following changes in areas of use for 10 CFR 35.100 and 10 CFR 35.200 byproduct material.

Regulatory requirements, the principle of ALARA, good medical care, and access control should be considered when determining the location of the therapy patient's room or a therapy treatment room.

Attachment 9.1

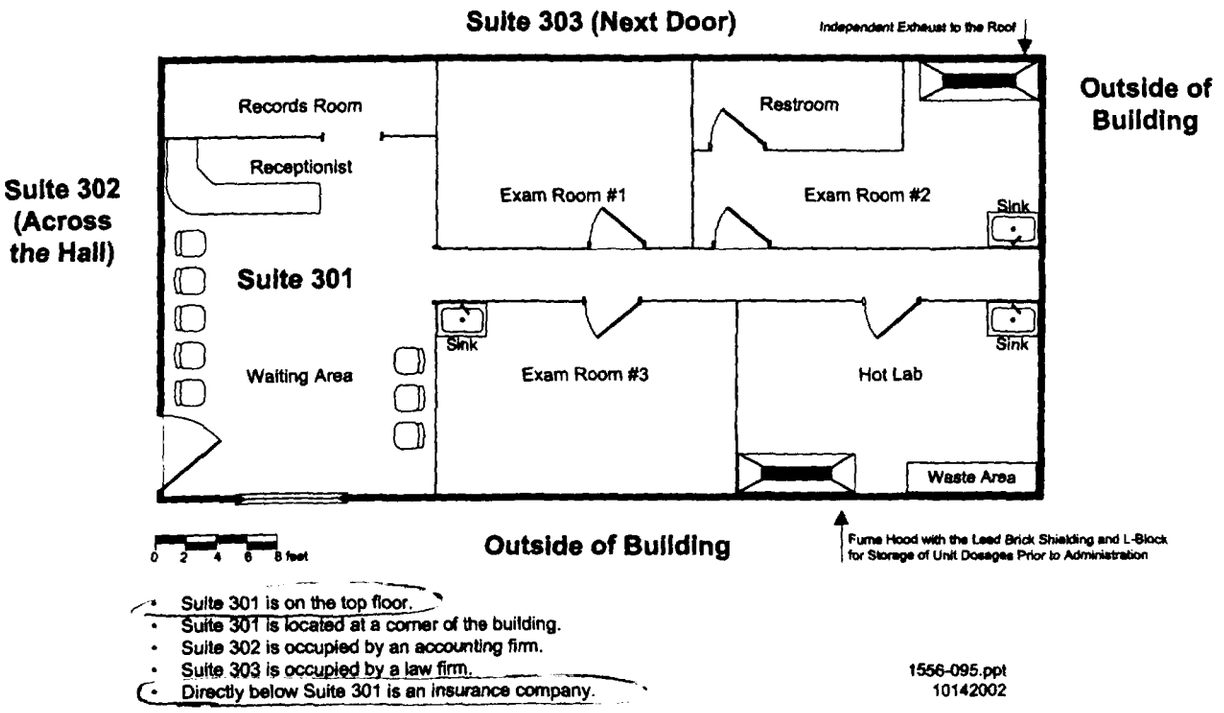


**Figure 8.1 Facility Diagram for Nuclear Medicine Suite**

The applicant should demonstrate that the limits specified in 10 CFR 20.1301(a) will not be exceeded. If the calculations demonstrate that these limits cannot be met, indicate any further steps that will be taken to limit exposure to individual members of the public. The applicant may consider the following options:

- Adding shielding to the barrier in question, with corresponding modification of the facility description if necessary.

- Requesting prior NRC authorization to operate up to an annual dose limit for an individual member of the public of 5 mSv (0.5 rem) and demonstrating that the requirements of 10 CFR 20.1301 will be met. The applicant must demonstrate the need for and the expected duration of operations that will result in an individual dose in excess of the limits specified in 10 CFR 20.1301(a). A program to assess and control dose within the 5 mSv (0.5 rem) annual limit and procedures to be followed to maintain the dose ALARA (10 CFR 20.1101) must be developed (see 10 CFR 20.1301(d)).

If applicants are proposing to use portable shielding to protect health and minimize danger to life or property, they should describe the alternative equipment and administrative procedures they propose to use for evaluation and approval by NRC. If applicants elect to use portable shielding they should commit to having administrative procedures to control configuration management to maintain dose within regulatory limits.

**Dr. Noe Directive**

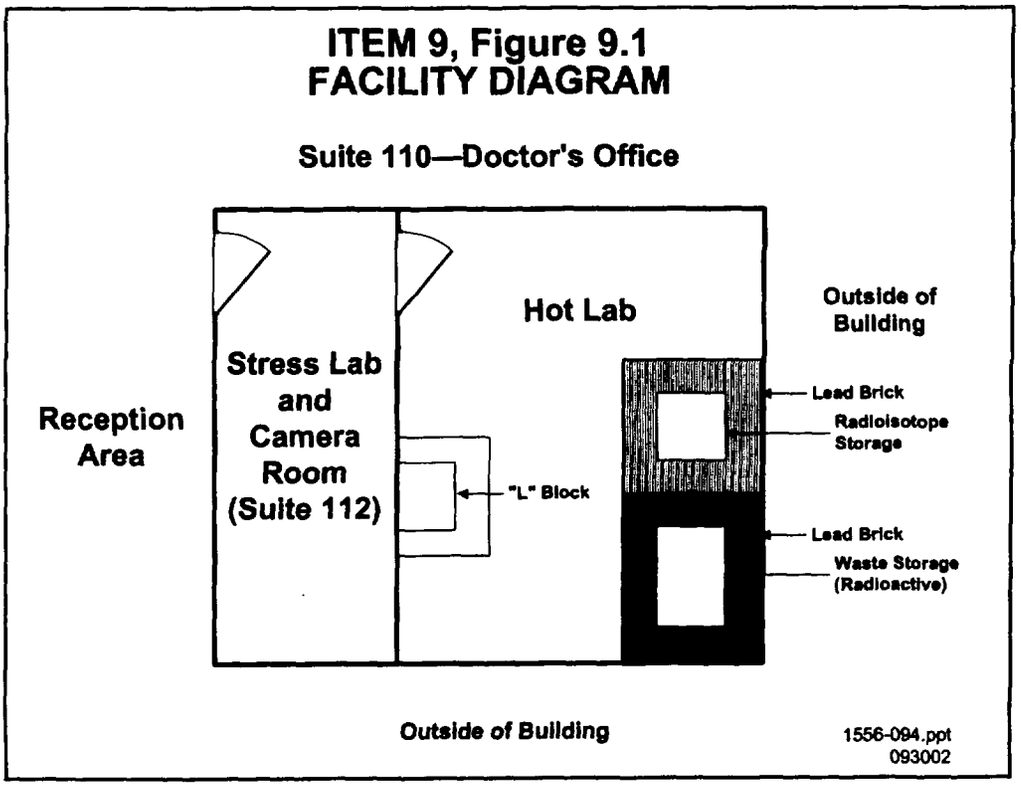


**Figure E.1 Sample License Application: Facility Diagram**

***Notes:***

*1) Radioactive material delivered to hot lab.*

*2) Counter surfaces are stainless steel and floors are seamless vinyl to facilitate cleanup and minimize permanent contamination.*

*3) Unoccupied basement located underneath facility and Suite 212 (a doctor's office) located above facility.*

**Table C.3 Items 7 through 11 on NRC Form 313: Training & Experience, Facilities & Equipment, Radiation Protection Program, and Waste Disposal**

(Check all applicable rows and fill in details and attach a copy of the checklist to the application or provide information separately.)

| Item Number and Title | Suggested Response | Check box to indicate material included in application |
|---|---|---|
| Item 9: Facility Diagram | A diagram is enclosed that describes the facilities and identifies activities conducted in all contiguous areas surrounding the area(s) of use. The following information is included: | ❒ |
| | • Drawings should be to scale, and indicate the scale used. | ❒ |
| | • Location, room numbers, and principal use of each room or area where byproduct material is prepared, used or stored, as provided above under the heading "Discussion"; | ❒ |
| | • Location, room numbers, and principal use of each adjacent room (e.g., office, file, toilet, closet, hallway), including areas above, beside, and below therapy treatment rooms; indicate whether the room is a restricted or unrestricted area as defined in 10 CFR 20.1003; and | ❒ |
| | • Provide shielding calculations and include information about the type, thickness, and density of any necessary shielding to enable independent verification of shielding calculations, including a description of any portable shields used (e.g., shielding of proposed patient rooms used for implant therapy including the dimensions of any portable shield, if one is used; source storage safe, etc.). | ❒ |
| | In addition to the above, for teletherapy and GSR facilities, applicants should provide the directions of primary beam usage for teletherapy units and, in the case of an isocentric unit, the plane of beam rotation. | ❒ |
| Item 9: Radiation Monitoring Instruments | **A statement that: "Radiation monitoring instruments will be calibrated by a person qualified to perform survey meter calibrations."**<br>**AND/OR** | ❒ |
| | **A statement that: "We have developed and will implement and maintain written survey meter calibration procedures in accordance with the requirements in 10 CFR 20.1501 and that meet the requirements of 10 CFR 35.61."**<br>**AND** | ❒ |
| | **A description of the instrumentation (e.g., gamma counter, solid state detector, portable or stationary count rate meter, portable or stationary dose rate or exposure rate meter, single or multichannel analyzer, liquid scintillation counter, proportional counter) that will be used to perform required surveys.**<br>**AND** | ❒ |
| | **A statement that: "We reserve the right to upgrade our survey instruments as necessary as long as they are adequate to measure the type and level of radiation for which they are used."** | ❒ |

(2) Combination of measurement of radioactivity and mathematical calculations; or

(3) Combination of volumetric measurements and mathematical calculations, based on the measurement made by a manufacturer or preparer licensed under § 32.72 of this chapter or equivalent Agreement State requirements.

(d) Unless otherwise directed by the authorized user, a licensee may not use a dosage if the dosage does not fall within the prescribed dosage range or if the dosage differs from the prescribed dosage by more than 20 percent.

(e) A licensee shall retain a record of the dosage determination required by this section in accordance with § 35.2063.

### § 35.65 Authorization for calibration, transmission, and reference sources.

Any person authorized by § 35.11 for medical use of byproduct material may receive, possess, and use any of the following byproduct material for check, calibration, transmission, and reference use.

(a) Sealed sources, not exceeding 1.11 GBq (30 mCi) each, manufactured and distributed by a person licensed under § 32.74 of this chapter or equivalent Agreement State regulations.

(b) Sealed sources, not exceeding 1.11 GBq (30 mCi) each, redistributed by a licensee authorized to redistribute the sealed sources manufactured and distributed by a person licensed under § 32.74 of this chapter or equivalent Agreement State regulations, providing the redistributed sealed sources are in the original packaging and shielding and are accompanied by the manufacturer's approved instructions.

(c) Any byproduct material with a half-life not longer than 120 days in individual amounts not to exceed 0.56 GBq (15 mCi).

(d) Any byproduct material with a half-life longer than 120 days in individual amounts not to exceed the smaller of 7.4 MBq (200 μCi) or 1000 times the quantities in Appendix B of Part 30 of this chapter.

(e) Technetium-99m in amounts as needed.

[67 FR 20370, Apr. 24, 2002, as amended at 71

### § 35.67 Requirements for possession of sealed sources and brachytherapy sources.

(a) A licensee in possession of any sealed source or brachytherapy source shall follow the radiation safety and handling instructions supplied by the manufacturer.

(b) A licensee in possession of a sealed source shall—

(1) Test the source for leakage before its first use unless the licensee has a certificate from the supplier indicating that the source was tested within 6 months before transfer to the licensee; and

(2) Test the source for leakage at intervals not to exceed 6 months or at other intervals approved by the Commission or an Agreement State in the Sealed Source and Device Registry.

(c) To satisfy the leak test requirements of this section, the licensee shall measure the sample so that the leak test can detect the presence of 185 Bq (0.005 μCi) of radioactive material in the sample.

(d) A licensee shall retain leak test records in accordance with § 35.2067(a).

(e) If the leak test reveals the presence of 185 Bq (0.005 μCi) or more of removable contamination, the licensee shall—

(1) Immediately withdraw the sealed source from use and store, dispose, or cause it to be repaired in accordance with the requirements in parts 20 and 30 of this chapter; and

(2) File a report within 5 days of the leak test in accordance with § 35.3067.

(f) A licensee need not perform a leak test on the following sources:

(1) Sources containing only byproduct material with a half-life of less than 30 days;

(2) Sources containing only byproduct material as a gas;

(3) Sources containing 3.7 MBq (100 μCi) or less of beta or gamma-emitting material or 0.37 MBq (10 μCi) or less of alpha-emitting material;

(4) Seeds of iridium-192 encased in nylon ribbon; and

(5) Sources stored and not being used. However, the licensee shall test each such source for leakage before any use or transfer unless it has been leak tested within 6 months before the date of