NRC Form 374A (5-84)

U.S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: 21-04109-16

Docket or Reference number: 030-02043

CORRECTED COPY

Amendment No. 33

Henry Ford Hospital
2799 W. Grand Blvd.
Detroit, MI 48202

In accordance with letter dated November 4, 1984, License Number 21-04109-16 is amended as follows:

Subitems 6.H., 7.H., 8.H., and 9.H. are amended to read:
Subitems 6.I., 7.I., 8.I., and 9.I. are added:

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
H. Uranium (depleted in uranium-235)	H. Cadmium plated metal	H. 670 kilograms
I. Iridium-192	I. Sealed source (Byk Mallinckrodt Model No. CIL B.V.)	I. 30 curies (2 sources of not more than 15 curies each)

9. Authorized Use

H. For use as shielding material in the following devices: AECL Eldorado 78 teletherapy unit, AECL Theratron 780 teletherapy unit, AECL Therac 6 linear accelerator and Gamma Med II-i afterloading irradiation device.

I. One source to be used in a Model Gamma Med II-i afterloading irradiation device, manufactured by Isotopen Technik Dr. Sauerwein Gmbh and distributed by Mick Radio-Nuclear Instruments for interstitial and intracavitary treatment of cancer. One source in its shipping container to be in the possession of the licensee as necessary for replacement of the source in the irradiation device.

Conditions 10. and 19. are amended to read:

10. Licensed material in Subitems 6.A. through 6.I. shall be used only at the licensee's facilities at 2799 West Grand Boulevard, Detroit, Michigan. Licensed material listed in Subitem 6.H. shall be used at the Henry Ford Hospital West Bloomfield Center, 6777 West Maple Road, West Bloomfield, Michigan, and at 2799 West Grand Boulevard, Detroit, Michigan. Iodine-125 as listed in Group VI, Schedule A of 10 CFR 35.100(f)(5) and (9) may be used at 2799 W. Grand Boulevard, Detroit, Michigan, 19401 Hubbard Drive, Dearborn, Michigan, or 6777 W. Maple Road, West Bloomfield, Michigan.

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19. Except as specifically provided otherwise by this license, the licensee shall possess and use licensed material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in application dated March 22, 1982; letters dated August 19, 1982, May 31, 1983, September 8, 1983, September 21, 1984, October 30, 1984, November 5, 1984 with attachments, and March 8, 1985; and ALARA Program dated January 1, 1982. The Nuclear Regulatory Commission's regulations shall govern the licensee's statements in applications or letters, unless the statements are more restrictive than the regulations.

Conditions 21., 22., 23., and 24. are added:

21. A set of written emergency instructions shall be posted at the Gamma Med II-i operator console. These instructions shall inform the device operator of the procedures to be followed if the source fails to return to the shielded position.

22. A. Access to the room housing the Gamma Med II-i irradiation device shall be controlled by a door at each entrance. Such doors shall be normally closed.

B. The entrance to the irradiation room shall be equipped with an electrical interlock system that will cause the source to return to the shielded position immediately upon opening of the entrance door. The interlock system shall be connected in such a manner that the source cannot be placed in the irradiation position until the entrance door is closed and the soruce "on-off" control is reset at the control panel.

C. Electrical interlocks on the entrance door to the irradiator room shall be tested for proper operation at least once a month. Records of test results shall be maintained for inspection by the Commission.

D. In the event of malfunction of the door interlock, the irradiator shall be locked in the "off" condition and not used, except as may be necessary for repair or replacement of the interlock system, until the interlock system is shown to be functioning properly.

23. Prior to initiation of a treatment program, and subsequent to each source exchange for the Gamma Med II-i, radiation surveys and tests shall be performed in accordance with the following:

A. A radiation survey shall be made of:

(i) The irradiator source housing, with the source in the shielded position. The maximum radiation levels at 20 centimeters from the surface of the source head shall not exceed 3 milliroentgens per hour.

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(ii) All areas adjacent to the treatment room with the source in the "irradiation" position. The survey, except Item (c), shall be performed with a phantom in the primary beam of radiation and shall clearly establish:

(a) That radiation levels in restricted areas are not likely to cause personnel exposure in excess of the limits specified in Section 20.101, Title 10, Part 20, Code of Federal Regulations, Chapter 1, "Standards for Protection Against Radiation" (10 CFR 20).

(b) That quantities of radiation in unrestricted areas do not exceed the limits specified in Section 20.105(b), 10 CFR 20.

(c) The intensity of the primary beam of radiation at a specified distance from the source.

B. Records of the survey results shall be maintained for inspection by the Commission.

24. The following shall be performed only by persons specifically authorized by the Commission or an Agreement State to perform such services:

A. Installation and replacement of sources contained in the Gamma Med II-i irradiation device.

B. Any maintenance or repair operations on the irradiator involving work on the source head, the source driving unit, or other mechanism that could expose the source, reduce the shielding around the source, or compromise the safety of the unit and result in increased radiation levels.

For the U.S. Nuclear Regulatory Commission

Original Signed
By B. J. Holt
Materials Licensing Section, Region III

Date May 15, 1985

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