



CJW Medical Center

Chippenham & Johnston-Willis

To: Donna Janda [mailto:DMJ@nrc.gov]
Health Physicist, Medical Branch
Division of Nuclear Materials Safety
U.S. NRC Region I

J-5

Ref: Additional Information to License Amendment Request
License No. 45-15249-01
Docket No. 03008805
Mail Control No. 138361

Below is a response to each of the questions regarding our application for NRC licensure.

1. The diagrams submitted for the Johnston-Willis radiation therapy facility, Figure 1, and the High Dose Rate Remote Afterloader (HDR) treatment vault, Figure 2, are not legible. Please submit legible diagrams. In addition, for Figure 2, submit a diagram which is to scale, with the scale indicated, and which depicts the location and room number where the HDR unit will be used and stored. In addition, on this diagram (Figure 2), depict the locations, room numbers and principal uses of each area adjacent to the HDR treatment room.

Figure 1 was only intended to provide an approximate location for the Radiation Therapy Department location with respect to the main hospital building. Nothing more specific in terms of dimensions was intended. Though we have no way of knowing the condition of the transmittal to you, both diagrams were legible as prepared here. In particular, Figure 2 was identified as ATREATMENT BAY I-127, @ many dimensions including wall thicknesses were specifically indicated and there was a dimension scale indicated and located beneath the label, ATREATMENT BAY PLAN@ at the bottom of the diagram. To add more clarity, jpg image files for these two figures are attached. In this larger jpg image for Figure 2, 5 feet is equal to 3/4 inch on the diagram or 20 feet is equal to 3 inches on the diagram. The area adjacent to the west wall of the treatment is a ACONNECTOR@ (corridor) and the area adjacent to the north wall is a continuation of the CONNECTOR with the northeast corner as the control area for both the accelerator and HDR. The east wall is adjacent to a second treatment bay housing an accelerator of identical energies. The south wall is adjacent to a major electrical supply and electrical control room with very limited occupancy. The actual HDR unit will be stored in a closet in the southwest corner of TREATMENT BAY I-127. That closet is fitted with a lockable door as shown in the attached picture.

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2. *The section of your application entitled "Radiation Monitoring Instruments" states that you have developed and will implement and maintain calibration procedures in accordance with the requirements in 10 CFR 20.1501 and that meet the requirements of 10 CFR 35.61. Your license renewal application submitted in 2005 did not request this authorization, but stated that radiation monitoring instruments will be calibrated by a person qualified to perform meter calibrations. If you are requesting authorization to conduct survey meter calibrations in-house, please provide the manufacturer name, model number and activity of the calibration source you will be using. In addition, provide the training and experience of the individuals who will be performing the calibrations and a diagram of the area where the calibrations will be performed. If you will not be conducting survey meter calibrations under your NRC license, please confirm that you will use a person qualified to perform survey meter calibrations for radiation monitoring instruments.*

At this time we will continue to have survey meter calibrations by a person or company qualified and licensed to perform survey meter calibrations for radiation monitoring instruments.

4. *Please describe the method used to ensure that whenever the HDR unit is not in use or is unattended, the console keys will be inaccessible to unauthorized persons (e.g., in a locked cabinet in the physics office.)*

Whenever the HDR unit is not in use or is unattended, the console keys will be inaccessible to unauthorized persons. Such keys will be kept by authorized users and/or in a secured location away from the control and known specifically to the authorized users.

5. *Please describe the steps that will be taken to ensure that the HDR unit and the high-energy accelerator, which are located in the same room, cannot be operated simultaneously (e.g., both keys will be kept on the same key ring or a two-position switch will be used to prevent dual operation.)*

Radiation therapy at our facility is performed by trained and registered therapy technologists. It is ludicrous to imagine that the authorized HDR users would be side by side with the technologists operating the accelerator and that both units would be used simultaneously. However, the HDR and accelerator will be fitted with a two-position switch to prevent dual operation.

6. *Please confirm that you will periodically test the Primalert radiation monitor backup battery. Provide the frequency (e.g., semi-annually) that you will perform this test of the backup battery.*

The Primalert radiation monitor backup battery system will be tested semi-annually.

7. *Item 6 of the Operating Procedures submitted with your application states that a physician, under the supervision of an Authorized User, may be present during the continuation of all HDR patient treatments. Please confirm that any physician, under the supervision of an Authorized User, who will be physically present during continuation of any HDR treatment will be trained in the operation and emergency response for the HDR unit.*

We will have only Authorized Physician Users present during the entire clinical treatment operation of the HDR unit.

8. Please confirm that Item 4 of the periodic spot-check procedures will also include a check of the source exposure indicator lights on the HDR unit and in the facility (i.e., HDR treatment room).

Periodic spot-check procedures will also include a check of the source exposure indicator lights on the HDR unit and in the facility (i.e., HDR treatment room).

9. Please provide the duration of source exposure for the timer accuracy spot-check described in Item 6 of the periodic spot-check procedures.

Timer accuracy and source excursion error measurements will be performed at, at least, on time below one minute and at 1, 2 and 4 minute times. Typically measurements are made at 10 or 15 seconds, 30 seconds, 1 minute (repeated 4 or 5 times), 2 minutes and 4 minutes.

10. Please confirm that Dr. Reese, your Radiation Safety Officer, will be trained in the radiation safety aspects of the operating and emergency response procedures for the HDR unit.

Doctor Reese, our Radiation Safety Officer, will be trained in the radiation safety aspects of the operating and emergency response procedures for the HDR unit.

11. Your application listed full calibrations to be performed following source exchange, repair, and relocation. Please note that full calibration measurements on the HDR unit must also be performed before the first medical use of the unit. In addition, we did not review Items 11 through 15 of your calibration procedures as these are not required to be submitted. We will review compliance with 10 CFR 35.633 at the time of inspection.

We note that full calibration measurements on the HDR unit must also be performed before the first medical use of the unit.

We hope this helps to process our application and if there remains any question, please contact me. Thank you again.



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Radiation
Therapy

EX. ADMINISTRATION

EX. MAIN
ENTRANCE

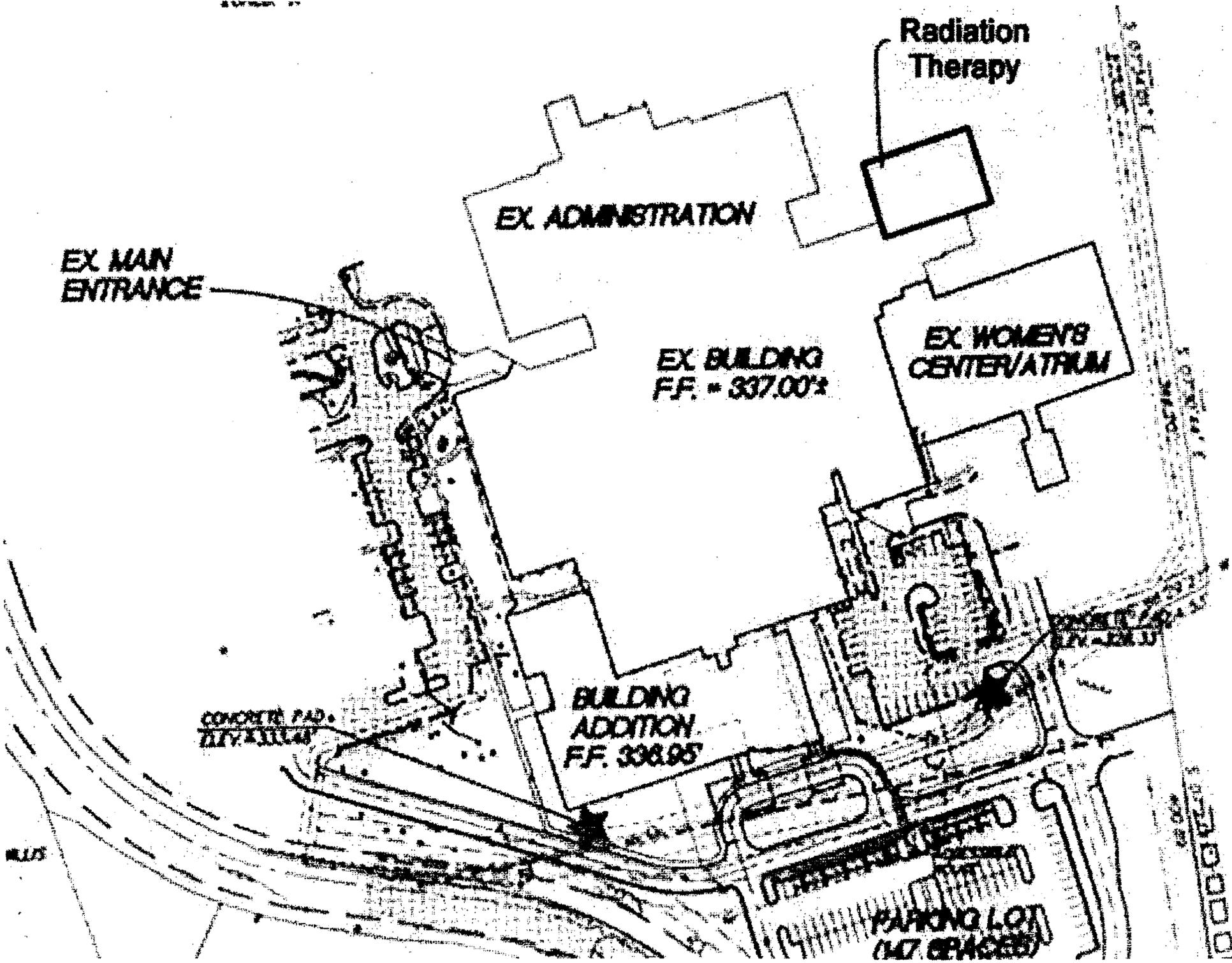
EX. BUILDING
F.F. = 337.00'

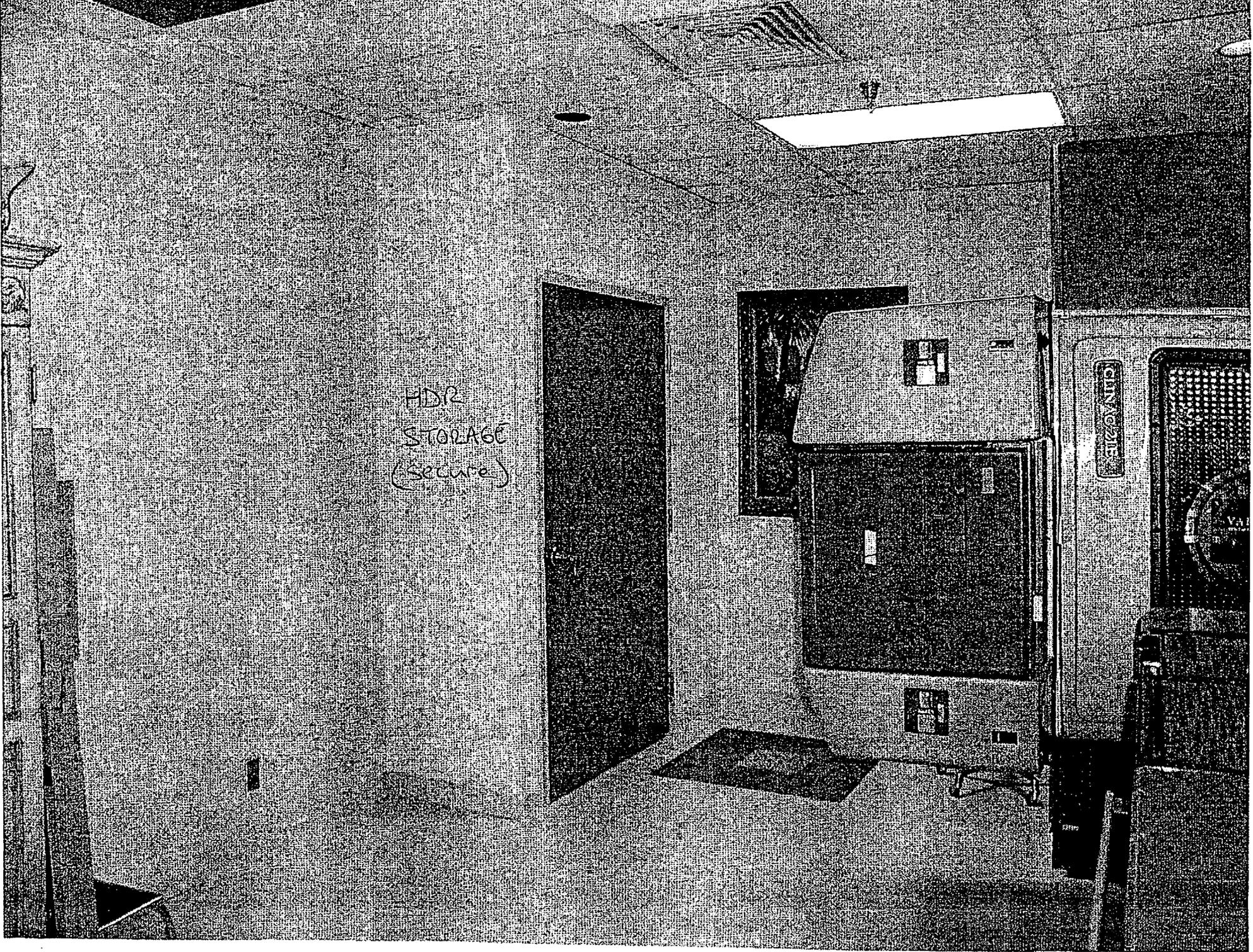
EX. WOMEN'S
CENTER/ATRIUM

CONCRETE PAD
11.7' x 33.0'

BUILDING
ADDITION
F.F. 336.95'

PARKING LOT
(47 SPACES)





HDR
STORAGE
(SECURE)

CINNOZITE