



# Georgia Institute of Technology

NEELY NUCLEAR RESEARCH CENTER  
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ATLANTA, GEORGIA 30332-0425

DOCKETED  
USNRC

'96 JUL 10 A10:17 (404) 894-3600

July 26, 1990

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

## MEMORANDUM

To: R.A.Karam

From: B. Copcutt

*B.C. - [Signature]*

Subject: facility high radiation areas

I have investigated radiation levels in the containment building and come to the conclusion that several locations meet the criteria for being posted as "High Radiation Areas" (H.R.A.). The definition of a H.R.A. in 10 CFR 20 is as follows:

"any area, accessible to personnel, in which there exists radiation (...) at such levels that a major portion of the body could receive in any one hour a dose in excess of 100 millirem."

A survey performed on 7/24/90 (copy attached) shows levels in excess of 100 mrem/hr in 4 locations which are not currently posted as "High Rad. Areas". The survey was performed with the reactor at 4 MW power level. The areas identified are...

1. reactor top
2. biomedical facility on first floor
3. outside of process equipment room door on ground floor
4. niche under biomedical room beam port on ground floor

10 CFR 20 requires that the access point to each high rad. area be controlled by either...

1. maintaining the area locked, or
2. using a device to reduce radiation levels below 100 mrem/hr if an individual enters, or
3. using a visible or audible alarm such that the individual entering the area and a supervisor are alerted to the entrance, or
4. direct surveillance to prevent unauthorized entry (only for high rad. areas established for 30 days or less).

9607180240 960520  
PDR ADOCK 05000160  
G PDR

### NUCLEAR REGULATORY COMMISSION

Docket No. 50-160-LEN EXHIBIT NO. ?  
In the matter of Ga Tech  
☐ Staff ☐ Applicant ☐ Intervenor ☐ Other  
☒ Identified ☐ Received ☐ Rejected Reporter W C W  
Date 5/20/96 Witness BC

Fax 404-894-3120 (Venty 404-894-6951)

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July 27, 1990  
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Also, all H.R.A.s must be posted as "Caution, High Radiation Area", and dosimetry must be worn by all individuals who enter.

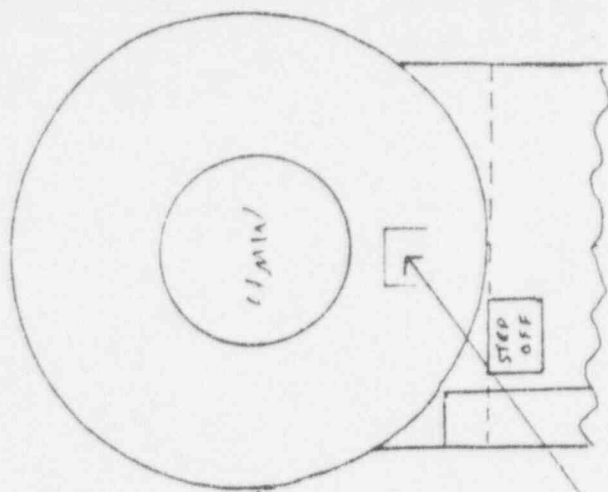
In the case of the reactor top, direct surveillance by an operator is always in place whenever the reactor is at power. However, the area must still be posted as "Caution, High Rad. Area" and "dosimetry required for entry".

The biomedical facility must be similarly posted and have access controlled by either of methods 1 (locking) or 3 (alarm) above. I would suggest that the simplest choice is to install a locking gate on the facility door.

The area below the biomedical facility on the ground floor is currently considered a contaminated area due to beamport cooling water leakage from above. I believe that constructing a simple locked enclosure around this area would solve both the problems of contamination control and access to the high radiation area. Posting the area is also required.

The area near the process equipment room door is very localized and it may be possible to reduce radiation levels by installation of further shielding in the door or around nearby equipment.

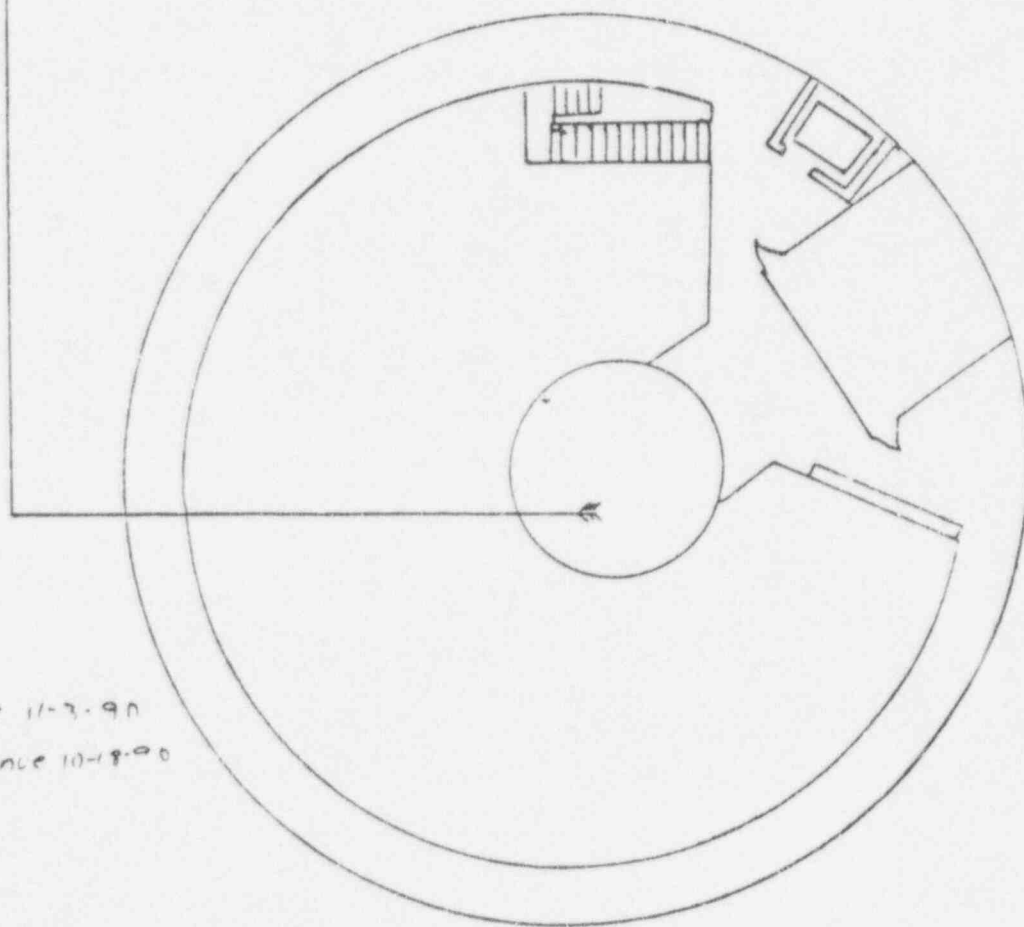
With your permission, I would like to initiate the actions outlined above in order to more fully control the facility high radiation areas.



36" FROM FLOOR  
1000R/hk X  
1500m/hk X

SECOND FLOOR

Containment



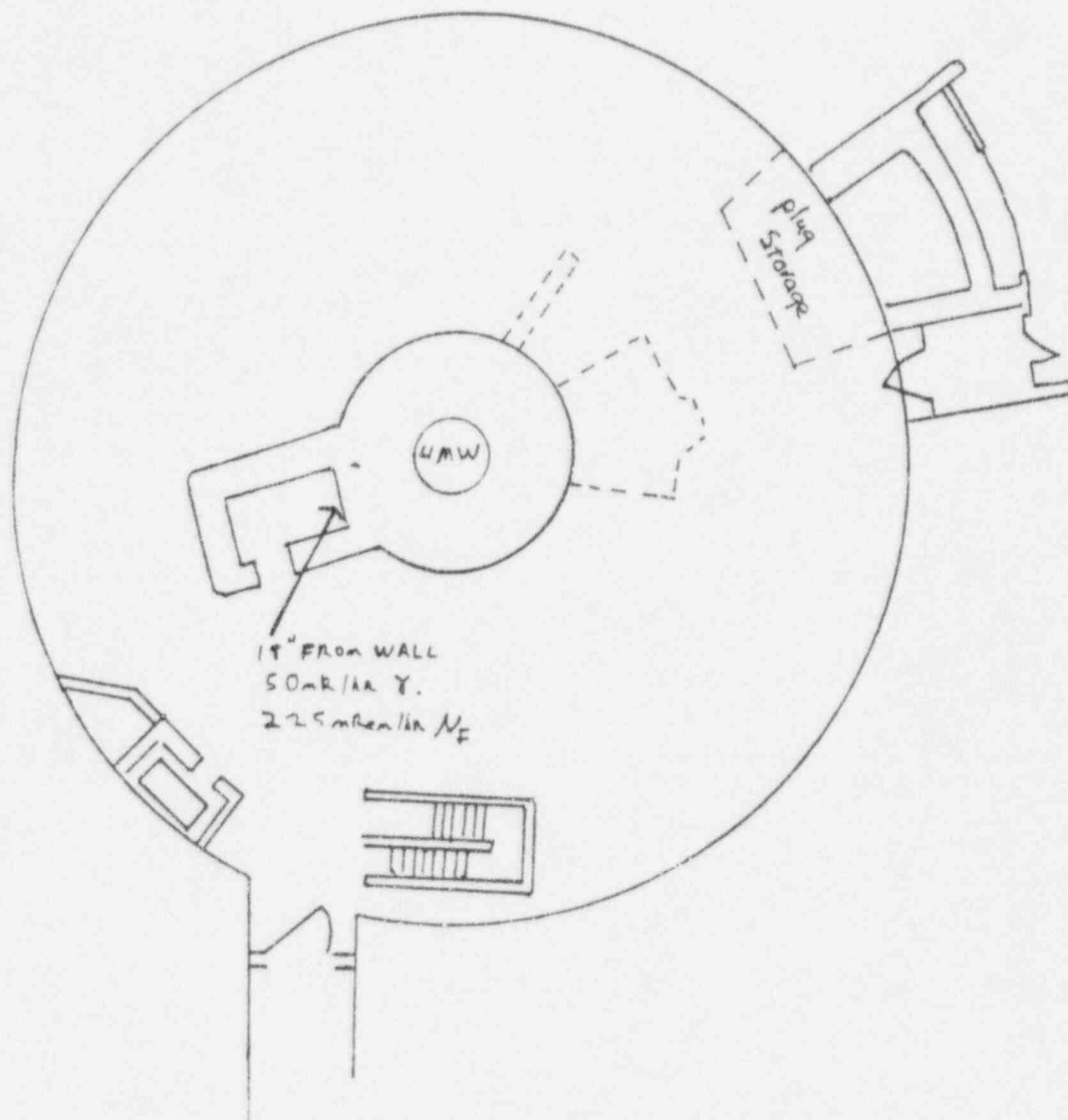
SURVEY INSTRUMENTS

RES-5 #A461W CAL DUE 11-3-90

SURVEY #3860 CAL DUE 10-18-90

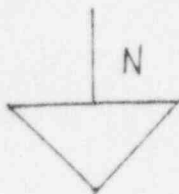
SURVEY BY R. B. B. 7-26-90

1/4"



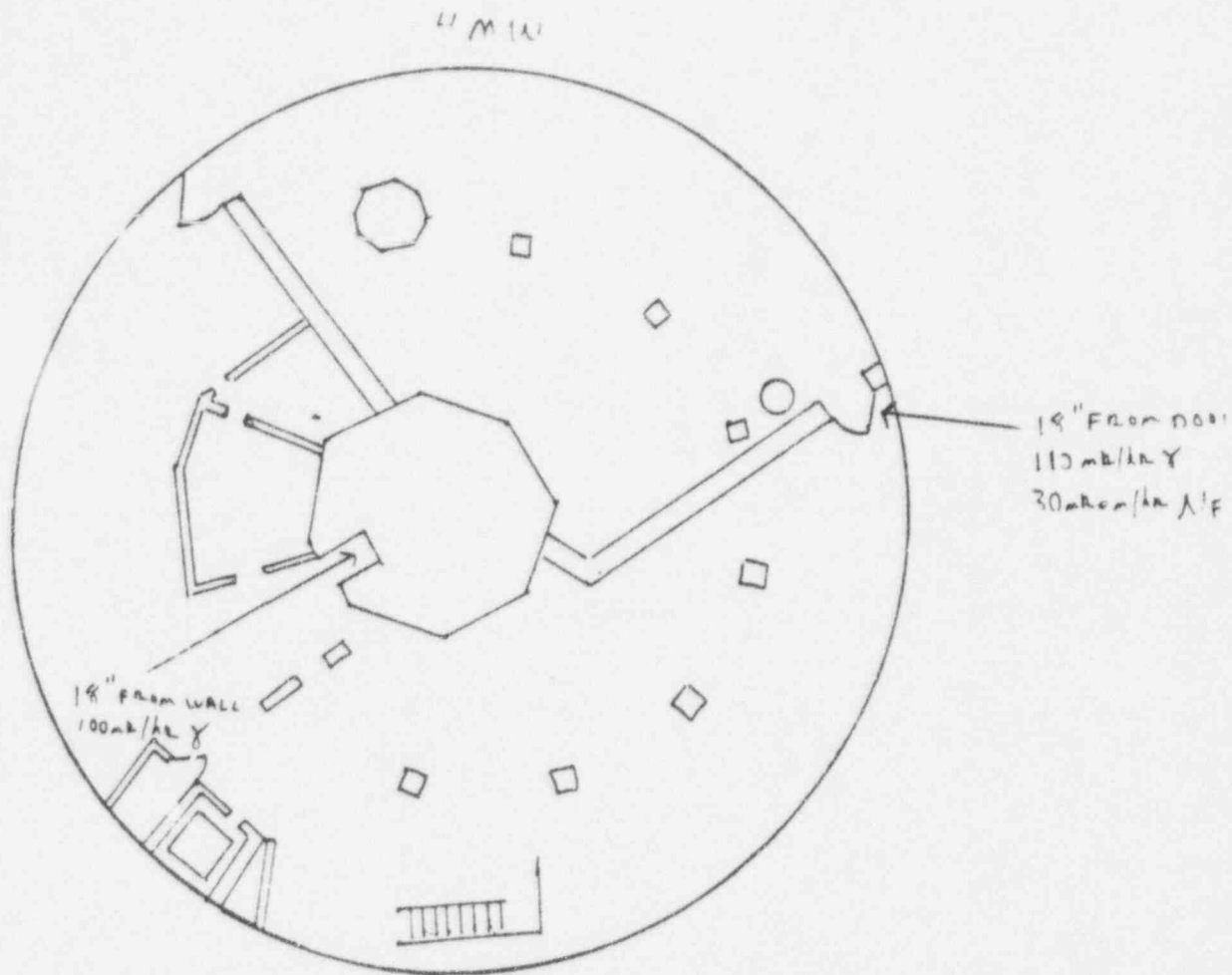
FIRST FLOOR

Containment



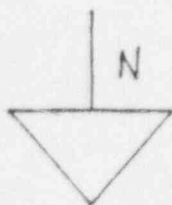
pg 2 of 3

R. Pinner 7-24-90



GROUND FLOOR

Containment



0743

12 Base 7-24-90