UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

College of Engineering
306 Engineering Hall, MC-266
1308 West Green Street
Urbana, IL 61801

Assistant to the Dean
217-244-7560
r-holm@uiuc.edu

October 26, 2004
Docket No. 50-151

Mr. Alexander Adams, Jr.
U.S. Nuclear Regulatory Commission
Mail Stop O12-G13
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

Dear Sir,

Please find enclosed the response to your Request for Additional Information dated September 30, 2004.

If there are any further questions please do not hesitate to contact me.

Sincerely,

Richard L. Holm
Reactor Administrator

A020

STATE OF ILLINOIS

COUNTY OF CHAMPAIGN

Richard L. Holm, being first duly sworn on oath, deposes and says that he has affixed his signature to the letter above in his official capacity as Reactor Administrator, University of Illinois Nuclear Reactor Laboratory\; that in accordance with the provisions of Part 50, Chapter 1, Title 10 of the Code of Federal Regulations, he is attaching this affidavit\; that the facts set forth in the within letter are true to his best information and belief.

Richard L. Holm
Reactor Administrator

Subscribed and sworn to before me, a Notary Public, in and for the County of Champaign, State of Illinois, this 26 day of OCTOBER, A.D., 2004.

Notary Public of Illinois

8-19-2008
My Commission Expires

OFFICIAL SEAL
KATHLEEN M. DYSART
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 8-19-2008

Response to Request for Additional Information Dated Sept. 30, 2004
University of Illinois – Docket No. 50-151

1. The existing technical specification (TS) 6.1.1 c. requires the Reactor Health Physicist to be responsible for assuring the day to day and routine radiological safety activities at the Nuclear Reactor Laboratory. Please describe how these activities have changed with the permanent shutdown and removal of reactor fuel from the facility such that the Reactor Administrator and Radiation Safety Office staff can perform the remaining duties. Your proposed changes to the TS 6.1.1 c. removes the entire first sentence which removes all responsibility for assuring the day to day and routine radiological safety activities. Please justify deletion of this entire sentence or replace the position of Reactor Health Physicist with Reactor Administrator and Radiation Safety Office staff to reflect the transfer of responsibility as discussed in your justification.

   Section 6.1.1.c has been revised to reflect that the responsibilities for day to day radiological safety activities belong to the Reactor Administrator with the support of the Radiation Safety Office. With the removal of the fuel from the facility the radiological support for the facility is reduced. The facility has no activities in it from researchers, etc. The building is effectively mothballed pending development and approval of a decommissioning plan. Current needs for radiological controls at the facility are commensurate with mothballing. At such time that decommissioning activities are in progress, other support for radiological safety will be required and appropriated. A revised copy of the Technical Specifications is attached.

2. You have proposed deleting TS 6.1.2 a.2. requiring the Reactor Health Physicist as part of the minimum staffing requirements. In addition to health physics duties, this position also has reactor operations responsibility as indicated by meeting the requirements for a Level Three individual as given in ANS/ANSI-15.4-1988. Please discuss how the change in activities at the facility following permanent reactor shutdown and removal of fuel justifies a minimum staffing of the Reactor Administrator. Please note that ANS/ANSI-15.1-1990, "The Development of Technical Specifications for Research Reactors," indicates the minimum staffing requirement is for periods when the reactor is not secured. If the reactor will be shut down or secured with the removal of reactor fuel complete, the need for a TS discussing minimum staffing may be eliminated given proper justification.

   It is desired to maintain the requirement for a Reactor Administrator at this time due to the need for a knowledgeable individual on the facility during the decommissioning period. With the removal of the fuel, and hence the lack of a need for licensed senior reactor operators at the facility, the need for a health physicist/SRO is negated. As described above, these duties may be fulfilled by other individuals. Current needs are minimal due to no activity in the building. At such time that decommissioning activities commence other radiological support will be determined and acquired.

3. You have proposed deleting from TS 6.1.2 b. the requirement for designated personnel to be reachable and respond to the facility within approximately one hour. Your justification is with the removal of all reactor fuel from the facility, accident scenarios are similar to laboratories that use radioactive material on campus and that response is covered by the

campus Radiation Safety Manual. Please discuss why the Radiation Safety Manual is applicable to accident scenarios at the Nuclear Reactor Laboratory. Please describe the response outlined by the Radiation Safety Manual and the ability of university staff responding in accordance with the Radiation Safety Manual to initiate the requirements of the reactor emergency plan if needed.

The potential for radiological accidents at the Nuclear Reactor Laboratory is now similar to a normal radiation laboratory on campus. The capacity for a fuel breach/release is now gone. The Campus Radiation Safety manual has response criteria in it for an accident at a radiation laboratory to determine location, isotope, extent, containment of the spill/incident and cleanup. The campus Radiation Safety Office has someone on call at all times to provide response assistance in the event of an accident at a radiation laboratory.

In addition, the Nuclear Reactor Laboratory Emergency Plan and Procedures are still in effect and provide detailed response to an incident at the laboratory. The accident criteria described in the Emergency Plan are now significantly reduced without the potential for a fission product release. The Emergency Plan/Procedures have a call list and procedures for response at the facility including Radiation Safety Office support.

6.0 ADMINISTRATIVE CONTROLS

6.1 Organization

6.1.1 Structure and Responsibility

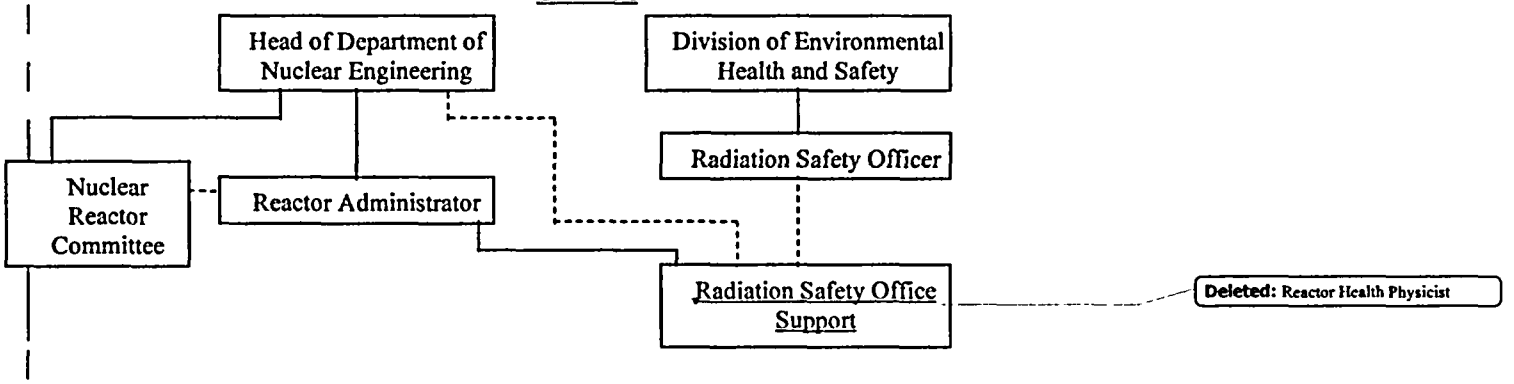
a. The reactor facility shall be an integral part of the Department of Nuclear, Plasma and Radiological Engineering of the University of Illinois. The reactor shall be related to the University structure as shown in Chart I.

b. The reactor facility shall be under the supervision of the Reactor Administrator who shall have been qualified as a licensed senior reactor operator for the reactor. He shall be responsible for assuring that all operations are conducted in a safe manner and within the limits prescribed by the facility license and the provisions of the Nuclear Reactor Committee.

c. The Reactor Administrator, with support from the Radiation Safety Office, shall be responsible for assuring the day to day and routine radiological safety activities at the Nuclear Reactor Laboratory. The University of Illinois Radiation Safety Officer shall be responsible for monitoring, planning, and promoting radiological safety at the Nuclear Reactor Laboratory. He has the responsibility and authority to stop, secure or otherwise control as necessary any operation or activity that poses an unacceptable radiological hazard.

Deleted: There shall be a Reactor Health Physicist

CHART I



Deleted: Reactor Health Physicist

CHART I: Administrative organization of the reactor facility. Dashed lines indicate reporting paths outside the operational chain of supervision, indicated by solid lines.

6.1.2 Staffing

a. The minimum staffing at the Nuclear Reactor Laboratory shall be:

1. Reactor Administrator. This individual shall meet the requirements of ANSI/ANS-15.4-1988 "American National Standard for the Selection and Training of Personnel for Research Reactors" for a Level Two individual.

Deleted: 2.Reactor Health Physicist. This individual shall meet the requirements of ANSI/ANS-15.4-1988 "American National Standard for the Selection and Training of Personnel for Research Reactors" for a Level Three individual in addition to training in health physics.¶

b. A list of reactor personnel by name and telephone number shall be readily available to the UIUC Division of Public Safety dispatcher. The list shall include:

1. Campus Radiation Safety Officer

2. Reactor Administrator

3. Head, Department of Nuclear Engineering

Deleted: One of these individuals shall be reachable and able to respond to the facility within approximately one hour.

Deleted: 4. Reactor Health Physicist¶

Deleted: 5. Licensed operators¶

c. Events requiring the presence at the facility of a Senior Reactor Operator:

1. Initial startup and approach to power.

2. All fuel or control rod relocations..

3. Relocation of any in-core experiment with a reactivity worth greater than one dollar.

4. Recovery from unplanned or unscheduled shutdown or significant power reduction (In these instances, documented verbal concurrence from the Senior Reactor Operator is required).

6.1.3 Selection and Training of Personnel

The Reactor Administrator is responsible for the training and requalification of the facility reactor operators and senior reactor operators. The selection, training, and requalification of operations personnel shall be consistent with all current regulations and guidelines.

6.2 Review and Audit

6.2.1 Charter and Rules

a. The Reactor Committee shall be composed of at least five voting members, one of whom shall be a Health Physicist designated by the campus Radiation Safety Officer for the University and, one whom shall be the Reactor Administrator. The remaining members shall be appointed by the Head of the Department of Nuclear Engineering, so as to maintain a balanced knowledge of reactor safety and regulation.

Deleted: ,

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b. The Reactor Committee shall have a written statement defining such matters as the authority of the committee, the subjects within its purview, and other such administrative provisions as are required for the effective functioning of the Reactor Committee Minutes of all meetings of the Reactor Committee shall be kept.

c. A quorum of the Reactor Committee shall be a majority of not less than one half of the members and the reactor staff shall not constitute a voting majority.

d. The Reactor Committee shall meet at least semiannually not to exceed nine months

6.2.2 Review Function

The review function of the Committee shall include, but is not limited to the following:

a. Determination that proposed changes in equipment, systems, tests, experiments, or procedures do not involve an unreviewed safety question.

b. All new procedures and major revisions thereto having safety significance, proposed changes in reactor facility equipment, or systems having safety significance.

c. All new experiments or classes of experiments for determination that an unreviewed safety question does not exist.

d. Proposed changes in the technical specifications or license.

e. Violations of technical specifications or license.

f. Operating abnormalities having safety significance.

g. Reportable occurrences as listed in 6.8.

h. Audit reports.

A written report or minutes of the findings and recommendations of the Committee shall be submitted to the Head, Department of Nuclear Engineering, and the Reactor Committee members in a timely manner after each meeting.

6.3 Radiation Safety

The Reactor Administrator shall be responsible for implementing the Radiation Protection Program at the reactor such that all regulatory requirements are met and guidelines followed as applicable.

Deleted: Health Physicist

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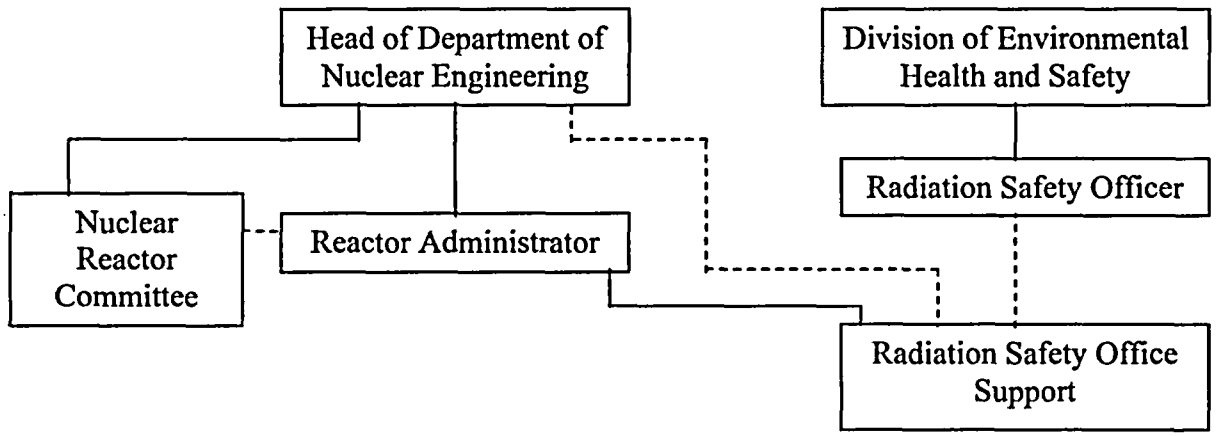
CHART I



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