UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

AUG 1 3 1979

MEMORANDUM FOR: R. F. Heishman, Chief, Reactor Operations and Nuclear Support Branch

FROM: J. A. Hind, Chief, Safeguards Branch

SUBJECT: LICENSE RENEWAL FOR CERTAIN RESEARCH REACTORS (AITS H07001937)

In response to a memorandum dated July 20, 1979 from D. C. Boyd, RPS#3, the following information is provided for the five research reactors identified in the attachment to S. E. Bryan's memo dated June 27, 1979.

Physical Protection Inspections

Iowa State University

General

This facility is required to be inspected biennially. There were 2 inspections conducted, March 1977 and February 1979. Inspector hours onsite were 24.5 resulting in total action points of 32. In the March 1977 inspection there was 1 infraction, 1 deficiency and 1 deviation. In the February 1979 inspection there was 1 infraction (repeat).

Problem Areas

The infraction during the February 1979 inspection was a repeat and involved a problem with security officers not recording or making required rounds.

Following the last inspection a member of the Security force met with the Reactor Staff, for discussion of possible solutions.

Management Attitudes

Attitude is very cooperative and responsive. The staff is open to all suggestions for operational improvement.

University of Illinois

General

This facility is required to be inspected biennially. During 1975, 1977, and 1979, there were three physical security inspections totaling approximately 40 hours onsite. These inspections developed four items of noncompliance (2 infractions and 2 deficiencies) resulting in 24 action points.

Additionally three security weakness were developed.

Problem Areas

No significant problems areas were developed in the licensee's security program or in the enforcement items.

Management Attitudes

Licensee management attitude toward security requirements appears to be adequate. The licensee has taken action to improve his security program based on inspection comments and suggestions.

University of Missouri (Rolla)

General

This facility is required to be inspected annually. Inspections were conducted during May 1978 and January 1979. The total number of onsite hours is 41. Action points total 12.

Problem Areas

May 1978 (Infraction) - Keys were issued by someone other than the authorized official.

January 1979 (Deficiency) - Persons entering facility were not monitored by CCTV as required.

Management Attitudes

Adequate. The upper management appears somewhat blase' with respect to security, but the program runs well.

Material Control/Accountability Inspections

Iowa State University

This reactor is a 10 kw, light water moderated, graphite reflected thermal reactor operated at short intervals (often less than one hour) and only during normal day operations for training purposes. No noncompliances were found on the most recent inspection of January 10-12, 1978, Inspection Report No. 50-116/78-01. However, on the recommendation of the inspection team, the Reactor Supervisor, took action to prepare additional, and separate procedures on SNM control and accounting more specific and detailed than those existing previously. These were approved by the University Radiation Safety Committee on May 15, 1978. A courtesy copy was sent to Region III for our files. It should be noted that written procedures are not a requirement for a licensee possessing less than one effective kilogram. Iowa State is in this category.

University of Illinois

This university has a TRIGA Mark II reactor with a steady state power rating of 1.5 megawatts and also a separate reactor license, No. R-117 for the Low Power Reactor Assembly (LOPRA). This licensee was cited for (infraction level) not having established written material control and accounting procedures as required by 10 CFR Part 70.51(c). This was as a result of our inspection of September 7-9, 1977, Report No. 50-151/77-05. Procedures were issued and a copy sent to Region III on October 6, 1977. This corrective action will be examined by us in our next inspection.

University of Oklahoma

This model AGN-211-102 is primarily used as a training reactor, rated capacity is 15 watts. The reactor is authorized to possess less than one effective kilogram; therefore formalized written procedures for accountability and material control are not required (10 CFR Part 70.51(c)).

This reactor is in a Group V category for material control and accountability inspections; i.e., our lowest inspection priority. No items of noncompliance were detected in the most recent inspection on August 21-22, 1978.

Annual physical inventory requirements are being made. The SNM inventory includes five Pu/Be neutron sources. The Reactor Supervisor also serves as the University Health Physicist which may not be the best arrangement from an NRC standpoint, but this is not too unusual for small training reactor utilized mainly during normal teaching hours.

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1402 008

The facility level management personnel were cooperative and almost pleased to see an NRC inspector, someone to bring them up to date on the latest 10 CFR Part 70 Code Requirements and answer their questions on whom to contact for certain reactor questions within NRC or even DOE for other university reactor information.

U.S. Veterans Administration Hospital, Omaha, Nebraska

This 18 kw (thermal) TRIGA reactor was inspected on March 15-16, 1976 for Region IV, since this region does not have a Safeguards Material Control and Accounting Section. One deficiency was found for not submitting the semi-annual Material Status Report within 30 days after the end of the period covered by the report. Another inspection is tentatively scheduled for September, 1979.

This research reactor provides irradiation services for radioisotopes to be analyzed by a multichannel GeLi scintillation counter. Reactor utilization time is quite high for this size reactor, e.g., 20-25,000 kw hrs. have been generated yearly on a one shift, five day week.

One important suggestion made by the NRC inspector to the V. A. Hospital Director at the exit interview was that someone other than the reactor supervisor should be trained in safeguards requirements including related NRC requirements. This suggestion was verbally agreed to by the Hospital Director and he indicated implementation would be forthcoming.

University of Missouri - Rolla - Training Reactor Facility

This is a 200 kw thermal, pool type teaching and research reactor. Seldom does the reactor run at a continuous full power level, since its main function is not for steady-state power generation. Reportable amounts of uranium and U-235 depletion have not yet been accumulated, i.e., one gram of either or both. Cumulative amounts are being kept by the licensee for eventual reporting when a gram quantity is reached.

The last two inspections have resulted in two infractions, one each time, plus one deficiency assessed at the inspection of August 17-18, 1977, Inspection Report No. 50-123/77-04. Our opinion is that this reactor is rather sloppily run from a material control and accountability function. We have noted improvement, however particularly after items of noncompliance were found. A good part of their accountability shortcomings was due to ignorance rather than evasiveness or negligence.

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1402 009

Written procedures for control of special nuclear material have been generated and a finalized copy sent to Region III on September 27, 1977. Prior to this a draft of these procedures was sent on September 8, 1977 to comply with the twenty day reply period.

The Director Nuclear Reactor, should be taking more direct interest in the material control and accounting safeguards requirements, rather than leaving this to the Reactor Supervisor. The Dean, School of Mines and Metallurgy, has been cooperative and responsive to our findings and has complied with our request at his level of management responsibility.

If you have any questions related to the information provided, please contact me.

J. A. Hind, Chief
Safeguards Branch