

REGION I

Results: No violations were identified.

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DETAILS

1. Persons Contacted

Col. J. J. Conklin, Director, AFFRI
Mr. N. K. Chawla, Head, AFFRI Safety
*Mr. T. Kirkwood, Head, Safety Dosimetry
*Mr. M. L. Moore, Director, Reactor Facility
*Cdr. R. I. Walker, Deputy Director, AFRRRI
*Cpt. C. R. Williamson, Reactor Operations Supervisor

The inspector also interviewed reactor operators and radiation safety personnel during the inspection.

*denotes those present at the exit meeting.

2. Facility Tour

The inspector examined the facility with a licensee representative immediately after arriving at the facility and during preparations for a reactor startup. The areas were clean, free of debris and well maintained. No deficiencies were identified.

3. Facility Operation

The AFRRRI reactor is used as a mixed neutron and gamma source for Department of Defense radiation research. The reactor is operated during dayshift, five days a week.

4. Followup on Outstanding Items

4.1 (Closed) Radiation Training for Personnel Allowed Unescorted Access (79-01-03)

Inspection Report 79-01 noted that personnel records would be examined in a subsequent inspection concerning general radiation training required for unescorted access to the reactor facility. Access to reactor operations areas such as the control room and the reactor deck is controlled by a combination of keys, number codes, and key cards as well as administrative controls. Radiation safety training is a prerequisite to obtaining a key card badge which will allow access through the doors into the reactor operations areas. The list of personnel allowed unescorted access is prominently posted. The inspector selected the names of several individuals who were not reactor operators but who were on the unescorted access list. The inspector verified that the licensee's records documented that the selected individuals had received the appropriate training. This item is closed.

4.2 (Closed) Re-definition of Controlled Area Boundary (83-02-01)

The controlled area involves the floor space around the openings into the two exposure rooms. Since the previous inspection, the licensee has painted the floor in a color coded pattern which clearly marks the areas of potential surface contamination and radiation fields. The perimeter of the area roped off, the outer floor within the area is painted yellow, and an inner zone is painted red. Prominent signs specify the potential hazards of each area. A control point is provided with survey logs, survey equipment and a portable frisker. No deficiencies were identified; this item is closed.

4.3 (Closed) Placement of Run Cards on Response Fire Engines (84-01-01)

During the observation of the licensee's annual emergency drill conducted on February 29, 1984, the inspectors recommended that the licensee consider placing Pre-Plan (Run Cards) describing the AFRRI facility on the response fire engine. This recommendation was implemented as documented in the licensee's letter dated May 21, 1984. This item is closed.

4.4 (Closed) Posting of Evacuation Routes (84-01-03)

The licensee committed to complete the posting of evacuation route diagrams in the licensee's May 21, 1984 letter with an estimated completion date of September 1, 1984. The inspector verified that the signs were posted. This item is closed.

4.5 (Closed) Facility Organization (84-05-01)

The licensee revised the structure of the reactor facility organization in response to the findings documented in Inspection Report 84-05. The inspector reviewed the modified organizational structure and verified that the requirements of ANSI 15.4 and the Technical Specifications were met. No deficiencies were identified; this item is closed.

4.6 (Closed) Procedure Control (84-05-02)

This item involved the absence of a document to control the review, approval and revision of operating procedures. The licensee created a document, identified as Procedure O, which details the manner in which Reactor Operating Procedures may be changed. The inspector reviewed the new procedure and selected examples of its implementation for examination. No deficiencies were identified; this item is closed.

4.7 (Closed) Operator Regualification Training (84-05-03)

This item involves the verification that all subjects required by the licensee's regualification program were covered in exams during the two year regualification period. The inspector reviewed the SRO regualification exams for 1984 and 1985. All subjects required by the regualification program and by 10 CFR 55 Appendix A were covered. This item is closed.

5.0 Surveillance Activities

The following surveillance requirements were selected from the Technical Specifications:

<u>Description</u>	<u>Frequency</u>	<u>Time Period</u>
Measure Control Rod drop times (4.2.1)	Semiannual	1984 to date
High-flux scram channel check (4.2.2)	Daily	July 10, 1985 to date
Power Level monitor channel calibration (4.2.2)	Annual	1984 to date
Fuel temperature measuring channel calibration (4.2.3)	Annual	1984 to date
Facility interlock system functional checks (4.2.4)	Annual	1984 to date
Area radiation monitoring channel test (4.5)	Quarterly	1985 to date
Area radiation monitoring system calibration	Annual	1984 to date
Area particulate monitoring system calibration	Annual	1984 to date

The inspector verified that the selected surveillance items had been completed as required. The licensee uses a bulletin board to depict the surveillance items which are due. A compact folder using index cards is used to document the surveillance items and the procedures to be used. The file cards have clearly labeled tabs and are cross referenced for ease of access. The system works well and is considered to be a strength by the inspector.

No deficiencies were identified.

6.0 Radiation Surveys

The inspector observed several radiation surveys conducted by Radiation Safety Department personnel. The surveys were thorough and the personnel, based on discussions with the inspector, showed good knowledge of the purposes of the surveys and expected radiation levels. Good technique was demonstrated during the survey of small cylinders containing radioactive argon gas as the cylinders were removed from the core region and placed in a shielded container. Readings were taken using an extended probe with the field strength at one meter obtained by placing the cylinder on a platform shielded on one side and with the one meter point clearly labeled on the other side. This arrangement demonstrated pre-planning and ALARA principles.

The inspector reviewed the records of the area surveys performed in the controlled area outside the two exposure rooms and the surface contamination surveys performed on the reactor deck during the period from July 1, 1985 to August 13, 1985. No deficiencies were identified.

7.0 Reactor and Radiation Facility Safety Committee (RRFSC) Activities

The composition, qualifications, functions and authority of the RRFSC are defined in section 6.2 of the Technical Specifications. The inspector reviewed the minutes for the meetings conducted in 1984 and to date in 1985. In all cases the requirements associated with quorum and frequency were met. The RRFSC meeting minutes documented the review of audit reports, Emergency Plan changes, and events reported to NRC.

No deficiencies were identified.

8.0 Exit Meeting

The NRC inspector discussed the issues and findings contained in this report throughout the course of the inspection and at an exit meeting held with Cdr. R. Walker, Mr. M. Moore, and others of the AFRRI staff on August 13, 1985. At this meeting, the representatives of the licensee indicated that the items discussed in this report did not involve proprietary information. No written material was provided to the licensee during the inspection.