

U. S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT  
REGION IV

IE Inspection Report No. 50-313/78-01

Docket No. 50-313

License No. DPR-51

Licensee: Arkansas Power & Light Company  
Sixth Line Streets  
Pine Bluff, Arkansas

Facility: Arkansas Nuclear One, Unit 1

Inspection At: Arkansas Nuclear One, Unit 1, Russellville, Arkansas

Inspection Conducted: February 27 - March 3, 1978

Inspector:

Blaine Murray  
Blaine Murray, Radiation Specialist

3/20/78  
Date

Approved By:

G. D. Brown  
G. D. Brown, Chief, Fuel Facility and  
Material Safety Branch

3/21/78  
Date

Inspection Summary

Inspection conducted during February 27-March 3, 1978 (Report No. 50-313/78-01)

Areas Inspected: Routine, unannounced inspection of the licensee's Radiation Protection Program during refueling activities including radiation protection procedures, advanced planning and preparation, radiological training, exposure control, respiratory protection program, posting and controls, audits performed by the licensee, surveys, plant tours, independent measurements made by the inspector, radioactive and contaminated material control, and follow-up action on previously identified items. The inspection involved 41 on-site hours by one NRC inspector.

Results: Two apparent items of noncompliance (deficiencies: (1) failure to submit reports of personnel exposure on termination of employment or work within the required period; and (2) failure to report whole body count results) were identified. See paragraph 12.

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DETAILS

1. Persons Contacted

- \*J. W. Anderson, Plant Superintendent
- \*C. H. Halbert, Technical Support Engineer
- \*R. G. Carroll, Health Physics Supervisor
- \*L. Alexander, QA Supervisor
- \*S. J. McWilliams, Planning and Scheduling Coordinator
- M. M. Nichols, Assistant Health Physics Supervisor

\*Attended Exit Interview

2. Scope of Inspection

The purpose of this inspection was to review the licensee's Radiation Protection Program during refueling and a partial review of the overall Radiation Protection Program for the period January 1, 1977 through March 3, 1978.

3. Advanced Planning and Preparation

The inspector examined the licensee's program for providing advanced planning and preparation by the Health Physics staff during refueling activities. The Health Physics supervisor stated that he is provided advanced information regarding work involving radiation control to enable proper planning by the Health Physics staff.

The licensee supplemented their normal plant Health Physics staff by hiring 15 contract Health Physicists to assist with refueling activities. The inspector examined the inventory of supplies and equipment on hand during refueling.

No items of noncompliance or deviations were noted.

4. Radiological Training

The inspector observed a routine radiological training session presented on March 1, 1978 and reviewed training records to determine compliance with 10 CFR 19.12 and the FSAR. Special attention was given to training of non-regular personnel involved with the refueling. The following areas were examined:

- Scope and content of training
- Initial training
- Refresher training
- Training of contract Health Physics personnel
- Documentation of training

Training records were examined for four new plant employees, 21 contract personnel, and 11 regular plant employees.

A refresher training course has not been established for contract and non-regular AP&L employees. It was noted that several individuals on-site for the 1978 refueling had also been involved with the previous January 1977 refueling. The licensee's records indicated that these individuals received initial training in 1977; however, refresher training in Health Physics and respiratory protection equipment was not conducted in 1978. See paragraph 15.d.

5. Exposure Control

The inspector examined selected records for permanent plant employees, transient workers, visitors, and terminated personnel to determine compliance with the following requirements:

- 10 CFR 20.101.a
- 10 CFR 20.101.b
- 10 CFR 20.102
- 10 CFR 20.105.a
- 10 CFR 20.202.a
- 10 CFR 20.401.a

No items of noncompliance or deviations were noted.

6. Respiratory Protection Program

The inspector reviewed the licensee's respiratory protection program to determine compliance with 10 CFR 20.103. A portion of this review included observation of a respiratory protection training session conducted on March 1, 1978. See paragraph 15.d.

No items of noncompliance or deviations were noted.

7. Posting and Control

The inspector made several visits to selected plant areas between February 27 and March 3 to observe work activities. Specific attention was given to the following items:

- Special Work Permit (SWP) and Radiation Work Permit (RWP) areas.
- Housekeeping
- Visitor control
- Access control for restricted areas

- Identification and control of high radiation areas
- Identification and control of contaminated areas
- Radioactive materials storage areas
- Laundry facilities
- Health physics supplies and equipment
- Controls for contaminated tools and equipment
- Respirator cleaning and storage areas
- Health physics counting room
- First aid supplies
- Radioactive waste handling and storage areas
- Independent measurements made by the inspector.

The above visits included a review of the licensee's program to determine compliance with the following requirements:

- 10 CFR 19.11
- 10 CFR 20.203
- 10 CFR 20.207
- SWP/RWP requirements

No items of noncompliance or deviations were noted.

8. Radioactive and Contaminated Material Control

The inspector examined procedures for controlling contaminated tools and equipment.

No items of noncompliance or deviations were noted.

9. Surveys

The inspector reviewed the licensee's survey program to determine compliance with approved procedures, 10 CFR 20.201 and 10 CFR 20.401.b.

No items of noncompliance or deviations were noted.

10. Instruments and Equipment

The inspector examined the inventory, response tests, and calibration of various Health Physics instruments and equipment to determine compliance with procedures and Technical Specification requirements. This involved a review of the following types of instruments and equipment.

- Portable survey instruments
- Fixed personnel monitoring equipment (e.g., portal monitors, friskers, hand and foot counters)
- Constant air monitors (CAM's)

- Portable air monitors
- Pocket dosimeters
- Area radiation monitors
- Personnel monitoring devices

No items of noncompliance or deviations were noted.

11. Procedures

The inspector reviewed changes and revisions to radiological procedures made between February 18, 1977 and March 1, 1978. It was noted that several procedure changes were processed during the above mentioned period. These changes were properly reviewed and approved by designated licensee personnel.

12. Notification and Reports

The inspector examined records of notifications and reports to determine compliance with the following requirements:

- 10 CFR 19.13
- 10 CFR 20.402
- 10 CFR 20.403
- 10 CFR 20.405
- 10 CFR 20.408

The following two apparent items of noncompliance were noted:

- a. 10 CFR 19.13(a) states, in part: "Radiation exposure data for an individual, and the results of any measurements, analyses, and calculations of radioactive material deposited or retained in the body of an individual, shall be reported to the individual as specified in this section . . . ."

Contrary to the above, reports required by 10 CFR 19.13(d) and 10 CFR 20.408 for the period January 1, 1977 - March 3, 1978 did not include whole body and/or bioassay results.

- b. 10 CFR 18.13(d) states: "When a licensee is required pursuant to 10 CFR 20.405 or 10 CFR 20.408 of this chapter to report to the Commission any exposure of an individual to radiation or radioactive material the licensee shall also provide the individual a report on his exposure data included therein. Such report shall be transmitted at a time not later than the transmittal to the Commission."

Contrary to the above, approximately 50 required reports to individuals and the Commission for the period January 1, 1977 - March 1, 1978, were not submitted within the required time.

13. Health Physics Logs

The inspector reviewed radiological activities documented in the licensee's Health Physics Logs for the period January 1, 1977 through March 1, 1978. It appears that the licensee does not have a well established program for maintaining a routine H.P. Log or documentation of health physics incidents. A licensee representative stated that a program will be developed for documenting health physics incidents and follow up corrective action.

14. Licensee Audits

The inspector reviewed audits performed by the licensee. Records indicated that audits of Health Physics activities were conducted on the following dates:

January 5 and 6, 1977

August 12-15, 1977

January 19-20, 1978

The above reports were reviewed for scope and timely follow-up action for items identified during the audits.

15. Exit Interview

At the conclusion of the inspection on March 3, 1978, the inspection findings were discussed with those individuals denoted in paragraph 1. The items discussed and the licensee's position with respect to these items, as applicable, follow:

a. Scope of Inspection

The inspector outlined the areas inspected.

b. Items of Noncompliance

The two apparent items of noncompliance were discussed. (See paragraph 12)

c. Radiation Levels in Reactor Building

The licensee stated that a decision will be made concerning appropriate action for certain areas in the Reactor Building where radiation levels exceed design criteria. (See Inspection Reports 50-313/74-15 and 50-313/77-04.)

d. Refresher Training for Non-Regular Personnel

The licensee stated that a radiation protection and respirator refresher training program will be established for non-regular plant employees.