



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA STREET, N.W.
 ATLANTA, GEORGIA 30303

JUN 05 1984

Report No.: 50-416/84-20

Licensee: Mississippi Power and Light Company
 Jackson, MS 39205

Docket No.: 50-416

License No.: NPF-13

Facility Name: Grand Gulf 1

Inspection Dates: May 14-18, 1984

Inspection at Grand Gulf site near Port Gibson, Mississippi

Inspector: *G. R. Jenkins*
 for R. H. Albright

6/1/84
 Date Signed

Approved by: *G. R. Jenkins*
 G. R. Jenkins, Section Chief
 Division of Radiological Safety and Safeguards

6/1/84
 Date Signed

SUMMARY

Areas Inspected

This routine, unannounced inspection involved 36 inspector-hours on site in the areas of external exposure control, training and qualifications, internal exposure control, surveys, and posting, labeling and control.

Results

No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *J. E. Cross, Plant Manager
- *M. C. Williams, Chemistry/Radiation Control Superintendent
- *L. F. Daughtery, Compliance Superintendent
- *S. M. Feith, Nuclear Site QA Manager
- *L. R. McKay, Manager of Radiological and Environmental Services
- *J. C. Vincelli, Radiation Control Supervisor
- *J. R. Comerford, Senior Radiochemist
- *B. Wedgeworth, Chemistry Staff
- *J. D. Bailey, Compliance Coordinator
- *G. M. Morrison, Radiation Protection Specialist
- J. Payton, Lead Health Physicist

Other licensee employees contacted included six technicians and three office personnel.

NRC Resident Inspector

J. Caldwell, Resident Inspector

* attended the exit interview

2. Exit Interview

The inspection scope and findings were summarized on May 18, 1987, with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Enforcement Matters

Not inspected.

4. External Exposure Control (83724)

- a. 10 CFR 20.202 requires that personnel who enter radiation areas such that they could receive in excess of 25 percent of the applicable value specified in 10 CFR 20.101(a) in a calendar quarter and personnel who enter high radiation areas shall be provided with dosimetry devices. During tours of the facility radiation control area the inspector observed that personnel were wearing dosimetry devices to monitor their exposure.

Dosimetry in use at the facility is provided by a vendor until the licensee completes testing of their on-site TLD reader. The inspector reviewed documentation which indicated the vendor TLD responds to photon, beta and neutron radiation. Neutron exposure for record purposes is calculated based on stay time in the neutron radiation area and the neutron dose rate in the work area.

- b. 10 CFR 20.101 states the quarterly personnel radiation exposure limits. The inspector discussed personnel exposure with licensee

representatives and reviewed records which indicated no overexposures had occurred during 1984. The external dosimetry program established by the licensee appears to meet the requirements of 20.101.

c. Radiation Work Permits (RWPs)

Technical Specification (TS) 6.12 requires that an RWP be completed prior to personnel entry to high radiation areas. The inspector reviewed selected RWPs for work in a high radiation area. The administrative procedure controlling the use of RWPs was reviewed.

No violations or deviations were identified.

5. Training and Qualifications (83723)

- a. Technical Specification 6.3.1 states that the Chemistry and Radiation Protection Superintendent shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975. The inspector reviewed with the Chemistry and Radiation Control Superintendent his resume and discussed how his previous experience met the requirements of TS 6.3.1. The inspector stated that this individual's previous experience has been with pressurized water reactors and BWR system training is needed to enhance his background. Licensee management stated that the need for the BWR system training had been recognized.

No violations or deviations were identified.

6. Internal Exposure Control

- a. 10 CFR 20.103 allows the use of a protection factor in estimating the exposure of individuals to airborne radioactive material when respiratory protective devices are used and the licensee respiratory protection program contains certain attributes stated in 10 CFR 20.103(c)(2). The inspector reviewed selected procedures to ensure that surveys, and bioassays as appropriate, to evaluate actual exposures are required, written procedures regarding training of personnel and issuance records are available; and that the licensee, prior to issuing a respirator and at least every 12 months thereafter, requires the determination that the individual user is physically able to use the respiratory protective equipment. Implementation of the program was discussed with licensee representatives.

Footnote (1) to 10 CFR 20, Appendix A requires that prior to using the stated protection factor for the positive pressure recirculating self contained breathing apparatus (RP-SCBA), a quantitative fit test shall be performed on each individual and no more than .02% leakage is allowed. Special training in the use of this type device is required for each user.

The inspector reviewed the respiratory protection training lesson plan and discussed this training program with a licensee representative. The fit test for the RP-SCBA was discussed with a licensee representative. Due to problems in fit testing an individual wearing

the RP-SCBA, the licensee performs the fit test using respirator filters connected to the mask. The respirator filters are not as efficient as use of the complete RP-SCBA unit would be and they allow up to .05% leakage for this test.

These devices have not been used for protection against airborne radioactive material at this facility. The inspector stated that the licensee fit test did not meet the requirements stated in 10 CFR 20, Appendix A, and would need to be modified prior to using the RP-SCBA.

- b. 10 CFR 20.103 requires the licensee to perform surveys and bioassays as appropriate to evaluate actual exposures. The inspector discussed the bioassay program with a licensee representative. The licensee has procedures in place to require initial, annual and special whole body counting. Whole body count data was analyzed by hand. The licensee expects to receive software to assist in this analysis before the end of May 1984. The inspector stated that hand analysis of data for the short term, due to low contamination levels in the plant, was acceptable. However, as contamination levels in the plant and systems increases the computer assisted data analysis would be valuable. Licensee management acknowledged the inspector's concern.
- c. During a tour of the plant, the inspector observed that fume hoods, where unencapsulated radioactive material would be handled, did not indicate the maximum height that the fume hood door could be raised and still have minimum flow into the hood of 100 ft./min. as recommended by NBS Handbook 92 and the American Conference of Governmental Industrial Hygienists publication Industrial Ventilation. The licensee, prior to the inspection, recognized the need for the flow test but the plant section responsible for the test had not been determined. During the exit interview the plant manager made a preliminary assignment in order to have the test performed in a timely manner. The inspector stated that a review of reactor coolant activity concentrations and contamination levels inside the hoods did not indicate that assurance of flow into the hood for personnel protection purposes was necessary prior to the inspection, however, as coolant activity increases this assurance would be necessary.

The RWCU sample hood does not have an exhaust, but the licensee was processing a work order to modify ventilation from the hood so that a portable ventilation unit could be installed to provide exhaust flow. The inspector expressed concern that the work order be completed as soon as possible. Plant management stated during the exit interview that the work was planned to be completed within one week.

No violations or deviations were identified.

7. Surveys (83724, 83725)

10 CFR 20.201(b) requires that the licensee perform surveys as may be required to ensure compliance with 10 CFR 20. The inspector reviewed radiation, contamination and air sample surveys for work at the facility.

No violations or deviations were identified.

8. Posting, Labeling and Control (83724, 83725)

The inspector toured various area of the Radiation Control Area (RCA) and determined by observation and independent surveys that posting, labeling, and control of these radiation areas, high radiation areas, contaminated areas, and radioactive material areas were adequate to meet 10 CFR 20 and Technical Specification requirements. No violations or deviations were identified.