



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

Report Nos.: 50-416/83-34

Licensee: Mississippi Power and Light Company
Jackson, MS 39205

Docket No.: 50-416

License No.: NPF-13

Facility Name: Grand Gulf

Inspection at Grand Gulf site near Port Gibson, Mississippi

Inspector: *J. B. Kahle* 8/10/83
for J. B. Kahle Date Signed

Approved by: *K. P. Barr* 8/10/83
K. P. Barr, Section Chief Date Signed
Operational Programs Branch
Division of Engineering and Operational Programs

SUMMARY

Inspection on July 18-22, 1983

Areas Inspected

This special, unannounced inspection involved 38 inspector-hours on site in the areas of followup on previously identified enforcement matters, followup on inspector followup items and health physics activities pertaining to NUREG 0737 items.

Results

Of the three areas inspected, no violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *C. K. McCoy, Plant Manager
- J. Cross, Assistant Plant Manager
- *J. Vincelli, Radiation Control Supervisor
- *R. Brown, Acting Chemistry and Radiation Control Superintendent
- *J. Bailey, Compliance Coordinator
- T. Tankersly, Dosimetry Specialist
- C. Gulley, Staff Health Physicist
- J. Moon, Radiological Engineering Consultant
- G. Smith, Environmental Supervisor
- P. Sudnack, Training Instructor
- J. Cotton, Health Physicist
- *K. Black, NPE Station Services Supervisor
- D. Oltmans, Startup Engineer

Other licensee employees contacted included two technicians, two operators and one office personnel.

NRC Resident Inspector

- *A. Wagner

- *Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on July 22, 1983, with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Enforcement Matters

- a. (Closed) Violation 82-53-01, Failure to sample the discharge basin hourly. The inspector observed the equipment and a licensee representative explained the operation of the newly installed automatic sampling station for collecting hourly grab samples for accumulating the monthly composites for radionuclide analyses. The inspector had no further questions.
- b. (Closed) Violation 83-04-01, Failure to post a radiological storage area. The inspector discussed the regulations pursuant to posting areas in which radioactive material (licensed material) is used or stored and labeling containers of licensed material with licensee representatives. During a tour of the plant the inspector observed that areas in which radioactive material was used or stored was properly posted. The inspector had no further questions or comments.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Licensee Action on Inspector Followup Items

- a. (Open) IFI's 81-26-02 and 81-26-03, Ventilation and contamination control in the Hot Machine Shop and the Decontamination Room. Discussions with Nuclear Plant Engineering (NPE) personnel revealed that a design change package (DCP-82/4005) has been initiated to evaluate and modify the ventilation systems in these two areas. Engineering stated that the completion target date was the first refueling outage. The inspector expressed his concern that the hot machine shop and the decon facility would very likely be needed prior to the first refueling outage and a more appropriate target date would be prior to 100 percent power licensing. Management representatives stated that priorities were being placed on work packages whose completion was essential to obtaining a license for 100 percent power. Management stated that completion of this package was not essential to licensing action and was unwilling to give a commitment for a completion target date. Their position was that the ventilatic.. system in question was not a Technical Specification and was not described in the FSAR. Further, if work on contaminated equipment was necessary prior to completion of the DCP then necessary steps and measures would be taken to provide temporary ventilation, enclosures, respiratory protection protection devices, etc., to protect the health and safety of employees. Management acknowledged that the ventilation system was important to safety for working on contaminated equipment but installation would not be completed on a high priority basis. After consultation with the Region the inspector informed licensee representatives that we will continue to follow their progress during subsequent inspections.
- b. (Closed) IFI 81-26-04, Face velocity checks for fume hoods and sample hoods. The inspector reviewed the licensee's Radiation Protection Instruction, 08-5-02-70, Revision 0, 6/24/82, "Certification Instructions For Radionuclide Designated Fume Hood Face Velocity, Safety-Related". The procedure appeared adequate to assure that the average face velocity of hoods used for radioactive samples and volatile chemicals is at least 100 linear feet per minute. The inspector had no further questions.
- c. (Closed) IFI 82-21-04, Burial allocation at Chem-Nuclear Systems, Inc. (CNSI). The licensee has been granted an allocation of 1600 cubic feet for October 1983. Allocations are negotiated on a monthly basis. The licensee is participating in monthly meetings with CNSI and other licensees to obtain "first come, first serve" allocations if necessary. If allocations at Barnwell are not sufficient, then the excess volume of waste will be sent to Washington. Licensee representatives stated that plans are being developed to construct an onsite storage facility

in the event that licensed burial sites are not available. The inspector had no further questions.

- d. (Closed) IFI 82-33-02, Post accident sampling system effluent monitor. The licensee has two effluent monitor sampling systems, a SPING 4 system and a combination system composed of a GE system for particulate, iodine and low range noble gases and an AXM system for high range noble gases. Licensee representatives stated that although the SPING 4 system was installed and accepted, they plan to use the combination system (GE and AXM) as a backup system. Data from the two systems will be used for comparison purposes. The inspector discussed the operation of the systems and examined the equipment used for sampling the Turbine Building exhaust duct. From the discussions with licensee representatives and the examination of the equipment, it appeared that both systems met the requirements for the postaccident monitoring, sampling and analysis of gaseous effluents.

During the discussion regarding the sampling equipment, it was learned that the surveillance procedure to calibrate the sampler flow rate measuring devices addressed the calibration of pressure gauges rather than the flowmeter (Rotameter). Further examination of Tables 3.3.7.12-1 and 4.3.7.2-1 of the Technical Specifications showed that sampler flow rate monitor is used except for 1.e. of Table 3.3.7.12-1, which states sampler flow rate measuring device. Apparently, the contractor who prepared the surveillance calibration procedures for Table 4.3.7.12-1 interpreted the word "monitor" to apply to the pressure gauges in the system rather than the flowmeter. The purpose of the pressure gauges are to indicate when the pressure differential across the collection media is low (ruptured media) or high (plugged media). Licensee representatives took immediate action to have surveillance calibration procedures prepared. The licensee was informed that although the Technical Specifications require that surveillance procedures be established, implemented and maintained, enforcement action was not being taken because, in response to other enforcement action, the licensee is currently shutdown to upgrade the surveillance procedures program to an acceptable level. The surveillance procedure to calibrate the effluent sampler flow rate measuring device (monitor) will be reviewed along with the other surveillance procedures which are currently being upgraded. (IFI-83-34-01).

- e. (Closed) IFI 82-33-03, Adequate shielding on liquid sample lines of the postaccident sampling system. A three inch lead wall was erected between the Auxiliary Building wall and the postaccident sampling system that will protect the operator when taking samples from the P002 panel. From a visual inspection of the installation and discussions with a licensee representatives it appeared that the lines were adequately shielded. The inspector had no further questions.

- f. (Closed) IFI 82-33-05, No test results from contractor for high efficiency filter. An examination of the test results showed that the HEPA filter systems and charcoal absorber beds were greater than 99.95 percent efficient. The inspector had no further questions.
- g. (Closed) IFI 83-02-02, Personnel dosimetry program. The inspector discussed the licensee's program to investigate pocket dosimeter and TLD discrepancy results. The licensee has an approved procedure for initiating evaluation actions by health physics personnel when pocket dosimeter and TLD results fall outside of predetermined limits. The inspector reviewed the licensee's program for making evaluations and had no further questions.
- h. (Closed) IFI 83-02-03, Installation of lead shielding. The inspector examined the licensee's procedure, "Portable Lead Shielding", 08-5-01-28, Revision 0, dated 5/13/83. It appeared that controls have been established for issuance, control and accountability of temporarily installed lead shielding on safety-related piping or systems.
- i. (Closed) IFI 83-02-04, IE Bulletin 79-19. The inspector discussed licensee training regarding the processing, packaging and transportation of radioactive material. Two supervisory personnel in the health physics section have attended the NEWC workshop relating to packaging and shipping of radioactive material. Records were examined that showed that the health physics house techs and contractor techs have completed the licensee's training program pertaining to transport and shipment of radioactive material, radioactive material control and radioactive waste control. The inspector verified that the operators were in the process of receiving the above training. The training techniques and results were discussed with the training instructor and an operator. The inspector had no further questions.
- j. (Open) IFI 83-02-05, IE Information Notice 82-49. The inspector examined the licensee's evaluation of the information and guidance provided in the notice with regard to their effluent sampling systems. Because measurement data were not available of the pressure differentials between the sampler pickup point and the sampler flow rate measuring device (Rotameter) and noble gas ionization chamber, the inspector did not accept the licensee's evaluation and conclusion that no corrections were necessary. Licensee representatives were informed that differential pressure measurement data would have to be obtained to support their position. Licensee representatives were informed that the item would remain open. Reference paragraph d, regarding calibration of the flowmeter.
- k. (Closed) IFI 83-02-06, Radwaste volume reduction program. The inspector discussed the system of management policy and support for volume reduction of radioactive waste and the program for worker awareness. The inspector verified that the training program for radiation workers addressed the issues involved in radioactive waste reduction. The inspector had no further questions.

- l. (Closed) IFI 83-20-01, Relocation of the liquid radwaste effluent monitor. The inspector verified that the liquid radwaste effluent monitor (ID17-J007) had been relocated to provide immediate isolation of the radwaste discharge upon a high radiation alarm. The inspector had no further questions.
- m. (Closed) IFI 83-20-02, Solid radwaste system modification. The licensee has modified the radwaste process piping to increase his capabilities to solidify liquid wastes directly from the evaporator bottoms collection tanks, the condensate phase separator tanks, the waste surge tanks, the phase separator decay tanks and the spent resin tank without going through the waste holding tanks. These modifications were discussed with licensee representatives. The inspector had no further questions.
- n. (Closed) IFI 83-20-03, Bioassay program software. Licensee representatives explained the body counter software problems that they had encountered with the original system purchased and explained their existing program and equipment for body counting personnel. The inspector examined their procedure for determining dose from the internal deposition of radionuclides. Licensee representatives demonstrated the workability of the body counter. The inspector had no further questions.

6. NUREG 0737 Items

a. II.B.2. Plant Shielding

An examination of NUREG 0831, Safety Evaluation Report, for the licensee's facility showed that the licensee has met the requirements of NUREG 0737 item II.B.2 for postaccident access and is acceptable. The inspector reviewed the personnel access route to the postaccident sampling system (PASS) in the Turbine Building and discussed the procedures operators would follow in collecting reactor coolant and containment atmosphere samples. The PASS and the containers for transferring samples are shielded. Licensee representatives pointed out the location of the PASS coolant sample collection and return lines in the Turbine and Auxiliary Buildings. The lines were not shielded in the Auxiliary Building because personnel are not expected to be in the Auxiliary Building during accident conditions. The inspector had no further questions.

b. II.B.3 Postaccident Sampling Capability

An examination of NUREG 0831, Safety Evaluation Report, including supplements, for the licensee's facility showed that the licensee has met the requirements of NUREG 0737 item II.B.3 for postaccident sampling capabilities to determine realistic core damage estimates except for requirements which have been made a condition of the licensee. License Condition 2.c.(44)(c) of Operating License NPF-13 will be modified to contain these requirements. Discussions with

licensee representatives stated that the procedure information required by the License Condition has been forwarded to corporate for submittal to NRR. From discussions with licensee representatives and an examination of the PASS equipment and the analytical laboratory areas, it was apparent that the equipment and shielding have been installed, that procedures for sampling, transporting samples and analyses have been established and approved, that backup capabilities exist for obtaining, transporting, storing and/or shipping grab samples, that provisions have been established for purging and flushing sample lines and that ventilation exhaust systems have been installed, tested and accepted. The inspector verified that personnel have been trained in the technical and safety aspects of collection and analyses of samples and transporting of grab samples. The inspector had no further questions.

c. II.D.4 Training For Mitigating Core Damage

The inspector verified that the health physics and chemistry personnel have received training commensurate with their responsibilities for determining reactor coolant and containment atmosphere concentrations of radionuclides which would be pertinent to mitigating core damage. An examination of NUREG 0831, Safety Evaluation Report, showed that the licensee met the requirements for training personnel in agreement with the "Guidelines For Training to Recognize and Mitigate the Consequence of Core Damage" from the Institute of Nuclear Power Operation, Document Number STG-01, Revision 1, dated January 15, 1981. The inspector had no further questions.

d. II.F.1 (1, 2.3) Accident Monitoring

(1) Noble Gas Effluent Monitor

The inspector verified that the licensee had installed high range noble gas effluent monitoring systems with extended range capabilities in the containment ventilation exhaust, the radwaste building ventilation exhaust, the turbine building ventilation exhaust, the fuel handling area ventilation exhaust and the standby gas treatment system exhaust. This equipment is also a Technical Specification requirement. Reference paragraph 5.d. for a discussion of the systems. An examination of NUREG 0831, Safety Evaluation Report, showed the SPING 4 high range noble gas monitoring system to be acceptable. The licensee has two systems, the SPING 4 and a combination system composed of a GE and AXM system. The SPING 4 system was working and licensee representatives stated that they have accepted it but plan to use the combination system as a backup. From observation of the equipment and discussions with licensee representatives, it appeared that both systems met the requirements of II.F.1(1). The inspector had no further questions.

(2) Sampling and Analysis Of Plant Effluents

An examination of NUREG 0831, Safety Evaluation Report, showed that the SPING 4 was acceptable for particule and iodine sampling and the licensee's capabilities for analysis were acceptable. The GE portion of the combination system is also used to collect particulate and iodine samples. Provisions are available to adequately collect, transport and analyze the samples. Provisions are available in the lab to purge the samples of entrapped noble gases when charcoal cartridges are used. Silver zeolyte is used in emergency conditions. Personnel have been trained in all aspects of collecting, transporting, storing and analysis of the samples. The inspector had no further questions.

(3) Containment High Range Radiation Monitor

Four high range radiation monitors which meet the specifications in Table II.F.1-3 of NUREG 0737 have been installed inside containment (2) and the drywell (2). The locations inside containment were observed by the inspector. The location, operation, readout in the control room and calibration of the monitors were discussed with licensee representatives. The inspector had no further questions.

e. III D.3.3 Improved Inplant Instrumentation Under Accident Conditions

An examination of NUREG 0831, Safety Evaluation Report, showed that the radioiodine sampling and analysis, procedures, and equipment met the requirements of NUREG 0737 item D.3.3. Licensee representatives stated that their routine air sampling equipment would be used to meet this requirement. The procedures for counting and analysis were discussed. Verification was made that the health physics technicians have been trained regarding the collecting and analysis of samples for radioiodine for both routine and emergency conditions. The inspector had no further questions.