



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA ST., N.W., SUITE 3100
 ATLANTA, GEORGIA 30303

Report No. 50-416/82-72

Licensee: Mississippi Power and Light Company
 Jackson, MS 39205

Facility Name: Grand Gulf

Docket No. 50-416

License No. NPF-13

Inspection at Grand Gulf site near Port Gibson, Mississippi

Inspector: Frank Jape 11/19/82
 for P. T. Burnett Date Signed

Approved by: Frank Jape 11/19/82
 F. Jape, Section Chief Date Signed
 Engineering Inspection Branch
 Division of Engineering and Technical Programs

SUMMARY

Inspection on November 8-10, 1982

Areas Inspected

This routine, unannounced inspection involved 24 inspector-hours on site in the areas of review of power ascension test procedures and review of low power test results.

Results

No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

C. K. McCoy, Plant Manager

*R. A. Ambrosino, Assistant Plant Manager

J. C. Roberts, Startup Manager

Other licensee employees contacted included two operators and two office personnel.

Other Organizations

T. Enright, General Electric Company

NRC Resident Inspector

*A. Wagner, Senior Resident Inspector

*D. Scott, Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on November 10, 1982, with those persons indicated in paragraph 1 above. Management acknowledged the commitment listed below (see also paragraph 6) and the need to have most licensee issues (paragraph 7) ready for closeout inspection well in advance of power escalation.

Inspector followup item (416/82-72-01): Review feasibility of incorporating RCIC turbine trip in PM program.

3. Licensee Action on Previous Enforcement Matters

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Review of Completed Low-Power Tests. (72531)

Completed procedure 1-000-SU-04-0 (Revision 2), "Fuel Core Shutdown Margin Demonstration," was reviewed. The measured value for shutdown margin was 2.93 percent ($\Delta k/k$), which compared favorably with the NSSS-vendor-predicted value of 2.8, and considerably exceeded the minimum value of 0.38

required by technical specifications. Vendor calculations predict that shutdown margin will be a minimum at zero burnup. Hence no difficulties in maintaining shutdown margin through cycle 1 are anticipated.

Completed procedure 1-C11-SU-05-0 (Revision 2), "Control Rod Drive System-Open Vessel," was reviewed. This procedure addressed three test activities: single rod functional tests, control rod drive friction tests, and gang mode functional tests. The latter test is performed only during open vessel testing. The others will be performed again at elevated pressures, including operation conditions. The licensee is following one discrepancy from the test, OV-23, which reflects rod 32-05 not staying within two notches of other rods in the gang. The problem is scheduled to be addressed when the reactor is next capable of being made critical and prior to nuclear heatup.

Completed procedure 1-C51-SU-06-0 (Revision 2), "SRM Performance," was reviewed. Step 5.2.3 was not signed off because IRM D did not respond. The licensee is tracking the problem as item 0 V-19.

Review of completed procedure 1-C51-SU-10-0 (Revision 2), "SRM/IRM Overlap" revealed only the functional problem with IRM D discussed above.

The procedures and results were discussed with licensee and vendor personnel. It was their opinion that the problem with IRM D came from a faulty connector. That conclusion cannot be confirmed until the reactor is again made critical. Except for the deficiencies listed, the four tests met all acceptance criteria. The inspector had no further questions.

6. Review of Power Ascension Procedures (72504, 72509, 72510, 72512)

Procedure 1-C11-SU-05-H, "Control Rod Drive System-Heatup" was reviewed and compared with the FSAR test description, section 14.2.12.3.5. In concert with test 1-C11-SU-05-0, which is discussed in paragraph 5 of this report, the FSAR commitments are satisfied.

Procedure 1-B21-SU-25-H (Revision 1), "Main Steam Isolation Valves-Heatup" was reviewed and compared with section 14.2.12.3.22.1 of the FSAR. Not all FSAR commitments are satisfied. Licensee personnel stated that procedure 1-B21-SU-25-1, now in the approval cycle, does address the outstanding commitments.

The following related procedures were reviewed:

- 1-B21-SU-26-H, "Relief Valves-Heatup,"
- 1-B21-SU-26-2, "Relief Valves-Test Condition 2," and
- 1-B21-SU-26-6, "Relief Valves-Test Condition 6."

Collectively, these procedures satisfy the commitments and address the acceptance criteria of FSAR section 14.2.12.3.23.

Two startup test procedures for the reactor core isolation cooling system (RCIC) were reviewed:

- 1-E51-SU-14-H, "RCIC System Heatup" and
- 1-E51-SU-14-2, "RCIC System-Test Condition 2"

Although the test procedures satisfy the commitments and acceptance criteria of FSAR section 14.2.12.3.12, the tests do not address the over speed trip of the RCIC turbine. That trip is described in FSAR section 5.4.6.2.1.3.h. A review of surveillance procedures by title did not reveal a trip test. This finding is not surprising since the surveillance procedures are keyed to technical specification surveillance requirements and the overspeed RCI turbine trip is not addressed there either. Nevertheless, to minimize the production of shrapnel in the absence of a trip function or interference with the design core cooling function from a trip set too low, testing and periodic verification of the trip function are desirable.

At the exit interview management made a commitment to review the feasibility of incorporation the RCIC turbine trip in the preventive maintenance program (inspector followup item 416/82-72-01).

7. Status of Outstanding Items (92706)

In attachment 1 to licensee, NPF-13 paragraph 2 lists NRC Bulletin items, open items, construction deficiencies and TMI-2 Action Plan items to be completed prior to exceeding five percent power. Based upon discussions with licensee personnel, the inspector concluded that no items were ready for closeout inspection. The licensee estimates that the total effort is about forty percent complete and that some items will be ready for closeout in late November, 1982.