TABLE 14.4-1

PHASE III POST CRITICALITY TESTING SUMMARY

Test	Conditions	Objectives	Comments
Nuclear Design Check Tests (1)	Hot zero power	To verify that nuclear design predictions for endpoint boron concentration, temperature coefficient and normal flux distribution are valid.	SAR criteria applicable
Rod and Boron Worth Measurements during Boron Dilution and Addition (1)	Hot zero power	a) To determine differential and integral worth of control banks b) To determine differential boron worth over range of control bank motion.	SAR criteria applicable
RCCA Pseudo Ejection at Zero Power (1)	Hot zero power	To determine worth of most reactive RCCA in the rod configuration assumed in the accident analysis.	The "just critical" boron concentration and flux distribution also obtained with the most reactive RCCA withdrawn
Minimum Shutdown Verification and Stuck Rod Worth Measurements (1)	Hot zero power	To measure the minimum shutdown boron concentration with one stuck control rod assembly and measure integral worth of all rod banks.	Verify stuck control rod assembly shutdown criteria
Calibration of Steam and Feedwater Flow Instrumentation at Power	Hot zero power and 30%, 50%, 75%, and 100%	To calibrate feedwater and steam flow instruments for proper indication.	Verify correct inputs to control systems
Natural Circulation (Unit 2 only)	<7%	To demonstrate natural circulation heat removal capability and provide plant response information, baseline data for specific plant characteristics, and supplemental operator training.	Testing successfully completed between 8/23 and 8/29/80

TABLE 14.4-1 (Cont)

Test	Conditions	Objectives	Comments
Chemistry and Radiochemistry Tests	Specific analyses at low power and 30%, 50%, 75%, and 100% power	To demonstrate ability to control water quality.	Ability to control water quality verified at each power level
Radiation Monitoring and Shielding Evaluation	Low power and during power escalation at 30%, 70%, 100%	To measure and record radiation levels in accessible areas of the nuclear plant.	Radiation levels were verified to be within the shielding design criteria
Effluent Monitoring Systems	As early in power operation as possible and repeated after operation at 30%, 50%, 75%, and 100% power	To verify calibration of effluent monitors by lab analysis of radioactive waste samples.	Verification of calibration of plant effluent monitors
Power Coefficient and Integral Power Defect Measurement(1)	Various power levels up to 100% power	To verify validity of nuclear design predictions for differential power coefficient and determine the integral power defect.	SAR criteria applicable
Dynamic Automatic Steam Dump Control	<10% power	To demonstrate proper operation of steam dump control and verify setpoints.	Steam dump operation satisfies design criteria
Automatic Steam Generator Level Control	30% power	To demonstrate satisfactory performance of the automatic steam generator level control system.	System maintained steam generator level during simulated transient
Turbine Overspeed Trip	Approximately 10% power	To verify that turbine overspeed trip setpoint is correct.	

TABLE 14.4-1 (Cont)

Test	Conditions	Objectives	Comments
Turbine Control System Checkout and Startup Adjustments of Reactor Control System	0%, 30%, 50%, 75%, 100%	Defines turbine steamline inlet pressure characteristic curve. Reprograms rod control system Tavg program for designed stm press.	Calibrated control systems in accordance with design specifications
Automatic Reactor Control temperature within design requirements	30% power	To verify reactor control system performance characteristics.	System maintained reactor average
Steam Generator Moisture Carryover	75%, 90%, and 100% power	To determine average total moisture carryover from steam generators during steady state operation.	Calculated steam moisture carryover had to be within design limits
Incore/Excore Detector Calibration(1)	75% power	To determine power distribution and excore response at various rod configurations.	Conformance with design requirements verified
Nuclear and Temperature Instrumentation Calibration and Thermal Power Measurement(1)	30%, 50%, 75%, 90%, and 100% power	a) To determine linearity of power range detectors. b) To calibrate power range channels to reflect thermal power level. c) To obtain nuclear instrument overlap data. d) To obtain temperature data for aligning and setting temperature and T instruments and setpoints.	Calibrate instruments in accordance with design specifications
Static RCCA Drop and RCCA Below Bank Position Measurements(1)	50% power	a) To verify dropped rod worth and hot channel factors assumed in SAR and evaluation of effects on DNB. b) To demonstrate detectability of a single RCCA below bank position or dropped.	SAR criteria applicable

TABLE 14.4-1 (Cont)

Test	Conditions	Objectives	Comments
RCCA Pseudo Ejection and RCCA above Bank Position Measurements(1)	50% power	a) To verify ejected-rod worth and hot channel factors assumed in SAR. b) To demonstrate detectability of a single RCCA above bank position or ejected.	SAR criteria applicable
Load Swing Tests	Design step changes at power levels of 30%, 75%, and 100%	Demonstrate plant response to design small load changes.	Plant parameter variations are within design limits
Large Load Reduction Tests	Large step (50% reduction of load at 75%, 100% power)	To demonstrate plant response to design large-load changes.	Plant parameter variations are within acceptance limits
Shutdown from outside Control Room	10% power	After plant trip from outside control room, verify ability to maintain hot shutdown conditions from outside control room.	Plant parameters can be controlled within design limits from outside control room
Loss of Offsite Power	10% power	To demonstrate plant response upon occurrence of a loss of offsite power.	Plant parameter variations are within design limits
Generator Trip	100% power	To determine any turbine overspeed and to demonstrate plant response to a trip from 100% power.	Plant parameter variations are within design limits
Rod Drop and Plant Trip (2)	50% power	To demonstrate plant response and control system behavior to a two-rod drop and subsequent plant trip; to demonstrate the functioning of the negative rate trip circuitry.	Plant parameter variations are within design limits

TABLE 14.4-1 (Cont)

Test	Conditions	Objectives	Comments
NSSS Acceptance Test	100% power	To demonstrate satisfactory operation of the NSSS during a 100 hour full power run.	Plant parameter variations are within design limits

NOTE:

(1) These tests verified that core performance is within design predictions.

(2) Salem NRC License Amendment 278-261 (Salem 1 and 2 respectively) approved the removal of the Negative Flux Rate Trip. This function was initially disabled by setting the setpoint to a greater value than the Maximum Negative Rate expected (per design change package (DCP) 80094424). The Negative Flux Rate Trip circuitry has been physically removed from both Unit 1 and 2 per DCPs 80097106 and 80099680.