ATTACHMENT 3
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Westinghouse Electric Corporation
Water Reactor Divisions
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November 16, 1983

NS-EPR-2851

Mr. C. H. Berlinger, Chief
Core Performance Branch
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: Special Dropped Rod Tests

Dear Mr. Berlinger:

In the NRC evaluation of WCAP-10297 (Proprietary), WCAP-10298 (Non-Proprietary), "Dropped Rod Methodology for Negative Flux Rate Trip Plants", it was noted that two plants with Westinghouse reactors planned to perform a more definitive test of the Negative Flux Rate Trip response to dropped rods. We would like to inform you and your staff that the more definitive test was performed on both a four loop and a three loop plant with rod worths significantly less than the maximum worth noted in WCAP-10298 resulting in analyses indicating no reactor trip. The test at each plant resulted in a reactor trip, providing some indication of the degree of conservatism in the analyses presented in the WCAP. Details concerning both the test method and results for both plants will be presented in a forthcoming topical report on a new Westinghouse Reference Test Program for Initial Startup. Based on Westinghouse review of the test data and the successful demonstration of plant trip, use of the Dropped Rod Methodology provided in WCAP-10298 is both appropriate and conservative. If you have any questions concerning this matter please feel free in contacting either D. G. Bevard, Manager, Advanced Plant and Fuel Licensing (412/374-5597), or C. R. Tuley (412/374-4172).

Very truly yours,

E. P. Rahe, Jr., Manager
Nuclear Safety Department

CRT/kk

Enclosure 3

South Texas Project Final Safety Analysis
Report, Chapter 14, pages 14.2-127 and 14.2-146

21. Rod Control System At-Power Test
22. Evaluations of Core Performance Test
23. Full Load Rejection Test — 2 Q423.
24. Loss of Offsite Power (LOOP) Test (Deleted) — 10 Q423.33 (n) | 56
25. Shutdown from Outside the Control Room Test — 10 Q423.22
26. Dynamic Rod Drop Test (Deleted)
27. Static RCCA Drop and RCCA Below-Bank Position Measurements Test
28. Pseudo Rod Ejection Test
29. Chemistry and Radiochemistry Test | 48
30. RCS Loose Parts Monitoring Test
31. Feedwater Temperature Reduction Test
32. Automatic Steam Generator Level Control Test — 29 Q640.08N
33. Control of Margin to Saturation Test

1. Moveable Incore Detector Test

a. Test Objective - This test will demonstrate proper alignment response and operation of the moveable incore detectors. A test at low power will be performed to verify detector response to actual flux. | 10 Q423.33(n)

b. Acceptance Criteria - A minimum number of detectors and thimbles, as required by the Plant Technical Specifications, are operable.

c. Prerequisites

1) Moveable micro detector thimbles are inserted into the core.

2) Upper internals are installed in the reactor vessel.

3) The reactor vessel head is installed with studs tensioned.

4) The RCS is in the cold shutdown condition or at a power level of 5 percent or less as dictated by the test requirement. | 10 Q423.33(a)

d. Method

1) With the reactor in the cold shutdown standby condition, the system is operated manually and automatically in all modes after setting the indexing and limit switches. | 10 Q423.33(a) | 4

d. Method

1) Evacuation of the main control room is simulated by dispatching personnel (not to exceed a minimum shift crew) to the safe shutdown control stations while additional operators occupy the control room to observe plant behavior. 53 10 Q423. 33(o)

2) The reactor is tripped at the reactor trip switchgear.

3) The plant is maintained in the hot standby condition by manipulation of safe shutdown controls and observation of safe shutdown indications for at least 30 minutes. During this demonstration, only that equipment for which credit would be taken for performing an actual safe shutdown will be used. 53

26. Dynamic Rod Drop Test (DELETED)

a. Test Objective - This test will verify the operation of the negative rate trip circuitry in detecting the simultaneous insertion of two RCCAs.

b. Acceptance Criteria

1) The reactor trips as a result of the negative rate trip.

2) SG and pressurizer safety valves do not lift.

3) SI is not initiated.

c. Prerequisites

1) All power-range nuclear instrumentation channels are operable.

2) The reactor is at the steady-state power level of approximately 50 percent with the controlling bank near the full-power insertion limit. 10 Q423. 32

3) Pertinent parameters to be measured are connected to recorders. 10 Q423. 22(4.t)

d. Method

1) Two of the least reactive rods from the group most difficult to detect by excore detectors due to low worth and core location are simultaneously dropped by removing voltage to both the moveable and stationary gripper coils of the designated rods.

2) Following the transient, recorded data is evaluated for system and instrumentation response.

27. Static RCCA Drop and RCCA Below-Bank Position Measurements Test

a. Test Objective - This test will obtain the differential and integral worth of the most reactive below-bank RCCA, will demonstrate the