TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

April 15, 1985

Director of Nuclear Reactor Regulation
Attention: Ms. E. Adensam, Chief
Licensing Branch No. 4
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Ms. Adensam:

In the Matter of the Application of	)	Docket Nos. 50-390
Tennessee Valley Authority	)	50-391

Please refer to your letter to H. G. Parris dated March 26, 1985 regarding the initial test program which transmitted additional concerns at Watts Bar Nuclear Plant (WBN). Enclosure 1 consists of our response to these two concerns. Enclosure 2 consists of a proposed revision to startup test SU-4.3, "RCCA or Bank Worth Measurement at Power" of table 14.2-2A of the WBN Final Safety Analysis (FSAR) as well as its corresponding justification. This FSAR revision will be incorporated into the next amendment (No. 56).

If you have any questions concerning this matter, please get in touch with K. Mali at FTS 858-2682.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

D. E. McCloud
Nuclear Engineer

Sworn to and subscribed before me
this 15th day of April 1985.

Paulette H. White
Notary Public

My Commission Expires 8-24-88

Enclosures (2)
cc: U.S. Nuclear Regulatory Commission (Enclosures)
Region II
Attn: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

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ENCLOSURE 1

Response to SER Item 14A

The setpoints on the PDIS which activates the strainer backwash has been changed from 3 psid to 4 psid on ECN 5276. Thus, the acceptance criteria for the dp across the strainers has been appropriately raised to 3.25 psid. TVA's Design organization has reviewed and approved this change to the test acceptance criteria.

RESPONSE TO ITEM 14B

In response to this question and the verbal discussions with the reviewer, the following is a current listing of the status of the tests in the preoperational test program at Watts Bar. Also included is a copy of portions of the letter TVA sent to Region II describing our readiness to load fuel. This letter described the open items against the preoperational tests that were not designated as after fuel load tests and against those tests which have portions performed both before and after fuel load.

TVA-01	EGTS	Field Complete
TVA-02A	Contmt Pressure & Leak Test	Complete
TVA-02B	Contmt Pressure & Leak Test	Complete
TVA-02C	Contmt Pressure & Leak Test	Complete
TVA-03	Airlock Leakage & Operation	Complete
TVA-04	Upper Contmt Ventilation	Complete
TVA-05	Lower Contmt Ventilation	Complete
TVA-06	Air Return Fans	Complete
TVA-07	CRDM Cooling	Complete
TVA-08	Post-LOCA Hydrogen Recombiner	Complete
TVA-09A	Aux Bldg Gas Trtmt & Access	Field Complete
TVA-09B	Reactor Building Purge	Complete
TVA-09C	Aux Bldg HVAC	Complete
TVA-10	Control Bldg HVAC	Complete
TVA-11A	Communications Sys (Emergency Sound Power Telephones)	Complete
TVA-11B	Plant Communications (Code Call, Alarms, & Paging)	All of the systems required for Unit 1 are complete
TVA-12A	TVA Offsite Power (Switchyard)	Complete
TVA-12B	Offsite Pwr 6.9kV Start Bds	Complete
TVA-12C	Offsite Pwr 6.9KV Unit Bds	Complete
TVA-12D	Offsite Pwr (RCP Bds)	Field Complete
TVA-13A	Onsite AC Pwr Distrt.(Shtdwn Bds)	Complete
TVA-13B	Onsite Load Seq & Shedding	Complete
TVA-13C	Onsite AC Distribution (Dsl Gen. Qualification Test)	Complete
TVA-14A	Dsl Gen Fuel Oil	Complete
TVA-14B	Dsl Gen & Supporting Auxiliaries (Dsl Gen Starting Air Systems)	Complete
TVA-14C	Dsl Gen & Supporting Auxiliaries (DG Bldg Heat & Vent System)	Complete
TVA-14D	Dsl Gen & Supporting Auxiliaries (125V DC Control & Field Flash Batteries)	Complete
TVA-14E	Dsl Gen & Supporting Auxiliaries (Dsl Gen Functional Tests)	Complete

TVA-15	120V DC Power System	Complete
TVA-16A	Vital 125V DC Power System (Battery Discharge Test)	Complete
TVA-16B	Vital 125V DC Power System (Battery Load Test)	(To continue after fuel load; see Readiness to Load Fuel Memo)
TVA-18A	ERCW (Component & Flow Test)	Complete
TVA-18B	ERCW (Valve Functional)	(See Readiness to Load Fuel Memo)
TVA-18C	ERCW (Flow & Heat Balance)	Complete
TVA-20A	Component Cooling (Checkout)	Complete
TVA-20B	Component Cooling (Flow)	Complete
TVA-22	Aux Feedwater	(See Readiness to Load Fuel Memo)
TVA-23A	Thermal Expansion (Main Steam)	(See Readiness to Load Fuel Memo)
TVA-23B	Thermal Expansion (Fdwt Piping)	(Performed during Heatup & at Power)
TVA-24	Fire Protection (Ventilation)	(See Readiness to Load Fuel Memo)
TVA-25A	High Pressure Fire Protection(Pumps)	Complete
TVA-25B	High Pressure Fire Protection (Hydraulic Performance)	Complete
TVA-25C	Fire Detection	(See the Readiness to Load Fuel Memo)
TVA-26A	Compressed Air	Complete
TVA-26B	Auxiliary Air Compressor	Complete
TVA-27A	Station Control Air System	Complete
TVA-27B	Auxiliary Control Air	Complete
TVA-28	Sampling System	(See Readiness to Load Fuel Memo)
TVA-29	Steam Generator Blowdown	(See Readiness to Load Fuel Memo)
TVA-30	Condenser Vent	Complete
TVA-31A	Process Radiation Monitoring (Offline Scintillation Monitors)	(See Readiness to Load Fuel Memo)
TVA-31B	Process Radiation Monitoring (Pariculate, Total Gas, and Iodine Monitors)	Complete
TVA-31C	Process Radiation Monitoring (Gaseous Monitors - Total Gas)	Complete
TVA-31D	Process Radiation Monitoring (Offline Gaseous)	Complete
TVA-32A	Area Radiation Monitoring	Complete

TVA-32B	Area Radiation Monitoring (Radiation Survey Monitors)	Complete
TVA-33	Environment Radiation Monitors	Complete
TVA-34	Nitrogen Supply System	Complete
TVA-35A	CO_2 Fire Protection (Power House)	Complete
TVA-35B	CO_2 Fire Protection (Dsl Gen.)	Complete
TVA-36	Emergency Lighting	Complete
TVA-37	Hydrogen System	Complete
TVA-38	Main Feedwater System	Complete
TVA-40	Main Steam System	Complete
TVA-41	Contmnt Isolation	Complete
TVA-42	Turbine-Gen Cntrol & Protection	Complete
TVA-43A	Cranes & Heavy Equip (175 Ton Reactor Bldg Polar Crane)	Complete
TVA-43B	Cranes & Heavy Equip (125 Ton Aux Bldg Crane)	Complete
TVA-44A	Liquid Waste	Complete
TVA-44B	Station Drainage & Water Level	Complete
TVA-45A	Station Drainage (Turb. Bldg Sumps)	Complete
TVA-45B1	Station Drainage (Serv. Bldg Sumps)	Complete
TVA-45B2	Station Drainage (Control Bldg Sumps)	Complete
TVA-45C	Station Drainage (Condensate Demineralizer Sump)	Complete
TVA-46	Primary Makeup Water	Complete
TVA-50	Reactor Coolant Bdry Leakage	Complete
TVA-51	Flood Protection Provisions (See Readiness to Load Fuel Memo)	
TVA-52	Seismic Instrumentation	Complete
TVA-53	Radwaste Filter Elements (See readiness to Load Fuel Memo)	
TVA-54	Main Control Room Meterological Tower Data	Complete
TVA-55	Loose Pars Monitoring (See readiness to Load Fuel Memo)	
TVA-63	Hydrogen Mitrogation	Complete
TVA-64	Onsite TSC Data (To be done at the first refueling outage; See SER)	
TVA-65	Post Accident Sampling	Complete

TVA-67	Onsite Testing of AC Auxiliary Power System and 120V AC Vital Plant Control System	Complete
TVA-68	Post Accident Sampling	Complete
TVA-69	Intake Pumping Station - HVAC	Complete
TVA-70	TSC Computer Control Power (To be done at first refueling outate; See SER)	
TVA-71	Post Accident Monitoring Radiation (To be complete by initial criticality)	
W-01.01	Heatup for Hot Functional (See Readiness to Load Fuel Memo)	
W-01.02	Hot Functional Testing (See Readiness to Load Fuel Memo)	
W-01.03	Cooldown from Hot Functional	Complete
W-01.04	Pressurizer Relief Tank	Complete
W-01.05	Pressure Spray & Heater Cap. (To be done during Startup)	
W-01.06	Reactor Coolant Flow Measure (To be done during Startup)	
W-01.07	Reactor Coolant Thermal Exp (See Readiness to Load Fuel Memo)	
W-01.08	Reactor Coolant Flow Coastdown (To be done during Startup)	
W-01.09	Resistance Temp. Detector Bypass Loop Flow Verification (To be done during Startup)	
W-01.10	Post Hot Functional Inspection	Field Complete
W-02.01	CVCS - Charging & Letdown	Complete
W-02.02	Boric Acid System	Field Complete
W-03.1A1	SIS-Integrated Flow Testing	Complete
W-03.1A2	SIS-Integrated Actuation	Complete
W-03.1A3	SIS-Integrated Check Valve Flow (See Readiness to Load Fuel Memo) and Integrity Test	
W-03.1B	SIS-Accumulator	Complete
W-03.1C	SIS-CCP & Related Injection	Complete
W-03.1D	SIS-Safety Injection	Complete
W-03.1E	SIS-RHR Pump & Related Injection	Complete
W-03.1F	Safeguards Actuation	Complete
W-04.01	Residual Heat Removal	Complete
W-05.01	Control Rod Drive Mechanism (To be done during Startup)	
W-05.02	Rod Control System (To be done during Startup)	
W-05.03	Rod Drop Time Measurements (To be done during Startup)	

W-05.04	Rod Position Indication (To be done during Startup)	
W-06.01	Fuel Handling Tools & Fixtures	Complete
W-06.02A	Fuel Transfer System	Complete
W-06.02B	New & Spent Fuel Pit Drag Test	Complete
W-07.01A	Reactor Prot. Time Response	Complete
W-07.01B	Reactor Prot. Time Response (See Readiness to Load Fuel Memo)	
W-07.02	Reactor Prot. Operational	Complete
W-07.03	Safeguards Operational Test	Complete
W-07.04	Control Test-Turb Runback	Complete
W-07.05	Reactor Plant System (To be done during Startup)	
W-08.01	Automatic Reactor Control (To be done during Startup)	
W-08.02	Automatic Stm Gen Level Control (To be done during Startup).	
W-08.03	Steam Dump Control	Complete
W-08.04	Initial Turbine Roll (See Readiness to Load Fuel Memo)	
W-08.05	Dynamic Automatic Steam Dump (To be done during Startup)	
W-09.01	Nuclear Instrumentation	Complete
W-09.02	Incore Thermocouple (See Readiness to Load Fuel Memo)	
W-09.03	Incore Moveable Detectors (To be done during Startup)	
W-09.04	Calibration of Stm & Fdwtr (To be done during Startup)	
W-09.05	Operational Alignment of NI (To be done during Startup)	
W-09.06	Operational Alignment of Proc. (To be done during Startup)	
W-09.07	Startup Adjustments of Reactor (To be done during Startup)	
W-09.08	Preop Testing of Computer Hardware	Complete
W-09.09	Computer Input & Data Verification	Complete
W-09.10	Preop Testing of Computer Software	Complete
W-09.11	Axial Flux Difference Instr.	To be done during Startup
W-10.1A	Spent Fuel Pit Leak Test	Complete
W-10.1B	Spent Fuel Pit Cooling Test	Complete
W-10.1C	Spent Fuel Pit Cooling (Open Core)	Complete
W-10.2	Boron Recycle System (To be completed after the Boric acid evaporators are operational)	
W-10.3	Liquid Waste Receipt & Storage	Complete
W-10.4	Liquid Waste Processing	Complete
W-10.5	Solid Waste Processing	Complete

W-10.6	Gaseous Waste Processing	Complete
W-10.7A	Containment Spray-Air Flow	Complete
W-10.7B	Containment Spray	Complete
W-10.8	Upper Head Injection (See Readiness to Load Fuel Memo)	
W-10.9	Ice Condenser	Complete
W-10.10	Annunciator Equipment	Complete
W-11.1	Reactor Vessel Head Vent	Complete
W-11.2	Reactor Vessel Lvl Instr. (To be performed during Startup)	

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500A Chestnut Street Tower II

April 5, 1985

U.S. Nuclear Regulatory Commission
Region II
Attn: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW.
Suite 2900
Atlanta, Georgia 30323

Dear Dr. Grace:

WATTS BAR NUCLEAR PLANT UNIT 1 - DOCKET NO. 50-390 - STATUS FOR FUEL LOADING

In my letter of February 20, 1985, TVA advised NRC that the design, construction, testing, and preparation for operation of Watts Bar Nuclear Plant unit 1 was essentially complete. The purpose of this letter is to update the enclosures to that letter and to respond to your March 18, 1985 letter to me requesting additional information on this subject. As you are aware, fuel loading for unit 1 is scheduled for April 23, 1985.

Enclosures 1 through 3 are updates of the same enclosures to the February 20, 1985 letter. Enclosure 4 is our response to your March 18, 1985 letter to me.

If you have any questions, please get in touch with R. H. Shell at FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

H. G. Parris
Manager of Power and Engineering

Enclosures (4)
cc: Director of Nuclear Reactor Regulation (Enclosures)
Attention: Ms. E. Adensam, Chief
Licensing Branch No. 4
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Only Enclosure 2 attached

JH:JAD:RHS:LHB
cc (Enclosures):
NUC PR RIMS, 1520 CST2-C
J. W. Anderson, 255 SPB-K
C. Bonine, 12-108 SB-K
R. W. Cantrell, W12A12 C-K
James P. Darling, 1750 CST2-C
R. M. Pierce, 9-169 SB-K
H. S. Sanger, Jr., E11B33 C-K
K. W. Whitt, 249A HBB-K
COORDINATED: PMO/RPierce, WBN/WCottle, OQA/JMcDonald, DQA RParker, OE/DWilliams, NSS/FSzczepanski (memo), NSRS/MKidd

ENCLOSURE 2

WATTS BAR NUCLEAR PLANT UNIT 1
PREOPERATIONAL TESTING

All of the Preoperational Test Program open items that have been identified as being important to safety will be satisfactorily tested before fuel loading as identified by the Office of Engineering (OE). The FSAR Chapter 14, Table 14.2-1, identifies the preoperational tests that will not be completed until after fuel load. These tests are included as attachment I.

There are remaining open items on preoperational tests that were previously identified as required for fuel load. Attachment II identifies items which will not be completed until after fuel load.

W-1.5	AFL**	By Hot Shutdown
W-1.6	AFL	By Hot Shutdown
W-1.8	AFL	By Hot Shutdown
W-1.9	AFL	By Hot Standby
W-5.1	AFL	Before Initial Criticality
W-5.2	AFL	Before Initial Criticality
W-5.3	AFL	Before Initial Criticality
W-5.4	AFL	By Hot Shutdown
W-7.5	AFL	
W-8.1	AFL	15 to 30% Power
W-8.2	AFL	50% Power
W-8.4	AFL	Hot Shutdown
W-8.5	AFL	0 to 6% Power
W-9.3	AFL	Escalation to Full Power
W-9.4	AFL	Escalation to Full Power
W-9.5	AFL	
W-9.6	AFL	Escalation to Full Power
W-9.7	AFL	Before Initial Criticality
W-9.11	AFL	75% Power
W-10.2	AFL	
W-11.2	AFL	By Hot Standby
TVA-10	AFL	
TVA-11A & B	AFL	
TVA-12A	AFL	
TVA-22	AFL	By 10% Power
TVA-23A & B*	AFL	
TVA-29	AFL	
TVA-55	AFL	
TVA-70	AFL	
TVA-71	AFL	

*The thermal expansion of the feedwater system will be checked at the various power plateaus during power ascension testing. Shimming will be performed as required to meet inspection criteria.

**After fuel loading

(a). TVA-12D - Offsite Power System (reactor coolant pump (RCP) boards) - The test is written to test the reactor coolant pump boards for both units 1 and 2. The remaining open item is on the unit 2 RCP boards.

(b). TVA-16B - Vital dc Power System - Battery Load Verification - Sections 5.4 and 5.5 of this test will be performed during Startup Tests SU-4.9B, Loss of Offsite Power, and SU-6.2, Trip from 100-percent Power. These steps observe the Vital dc system behavior during the two startup tests.

(c). TVA-18B - Essential Raw Cooling Water Flow Balance - This item has been completed on the existing carbon steel valves. The temperature control valves on upper and lower containment vent coolers, control rod drive mechanism (CRDM) coolers, and RCP motor coolers will be retested after ECNs 2756 and 4845 replace the valve bodies. This will improve system integrity.

(d). TVA-24 - Fire Protection - Ventilation System - An exception is made on testing of several dampers because construction of the Hot Shop Area has not been completed. Testing will be performed immediately after hot shop completion. Testing these fire dampers in the shop area after fuel load will have no effect on unit 1 operation. The hot shop area is not used until after initial criticality, and the dampers will be tested before area use.

(e) TVA-28 - Sampling System -

(1). A sampling capability check of the upper head injection (UHI) surge tank and water accumulator cannot be done until the accumulator is pressurized.

(2). The gross failed fuel detector (GFFD) samples cannot be obtained until the system has been placed in service. The GFFD system is not needed until initial criticality.

(3). Distillate and concentrate samples at the boric acid evaporator will be tested after construction work is complete on ECN 3815. It should be noted that plant operation without this modification will result only in an economic penalty to TVA due to increased boric acid use and waste processing requirements.

(4). Testing relative to the sodium analyzer can only be done when the steam generator reaches pressure and temperature during startup.

All of the above listed items will be completed before initial criticality.

(f). TVA-31A - Process Radiation Monitoring - Two radiation monitors on the boric acid evaporator packages will be tested when the evaporators are operational after the scheduled modifications are completed. (See item (e) concerning boric acid evaporator.)

(g). TVA-51 - Flood Mode Protection System - The test is written for both units 1 and 2. All of the unit 1 testing is complete. Unit 2 spool pieces for the HPFP connection to the unit 2 auxiliary feedwater pumps will be tested later.

(h). TVA-53 - Equipment for Replacement of Radwaste Filter Elements - Test portions concerning the spent filter storage pit will be tested when the Westinghouse drum grab lift and drum shield are available. Testing of unit 2 filter equipment will be done prior to unit 2 fuel loading. This equipment is used only in the storage area snd performs no safety function.

(i). TVA-55 - Loose Parts Monitoring System - Baseline signature data on steam generation No. 4 and the reactor coolant pumps was not obtained during Hot Functionals due to minor sensor cable problems. The cable problems have been resolved, and the signature data will be obtained during plant startup.

(j). W-1.1 - Reactor Coolant System (RCS) Heatup for Hot Functional Testing -

(1). Steam Generators 1-4 reference level controllers (L-3-231, 232,233,234) automatic response failed to meet test acceptance criteria. The controllers will be recalibrated and the data submitted to OE for review. No additional retesting is expected.

(2). The Chemical and Volume Control System (CVCS) letdown pressure control valve PCV-62-81 valve trim will be changed out because it is not properly sized (C_V is too large) to control RCS pressure automatically with the RCS system water solid. The valve trim will be replaced before solid system operation, and all testing will be complete by initial criticality.

(k). W-1.2 - RCS Heatup for Hot Functional Testing -

(1). The damaged AVMS annunciator relay (K1 on TEC Model 134 annunciator card) will be replaced and retested. Relay PRVAR which caused relay K1 to fail has already been modified by ECN 5169.

(2). Foxboro transmitters for LT-68-325C and LT-68-326C (pressurizer level) are being replaced with transmitters that have a maximum working pressure of at least 2500 psi. These transmitters will be installed and calibrated before heatup to initial criticality.

(3). Pressurizer pressure transmitter testing will be completed at normal RCS operating temperature.

(4). The air temperatures inside the steam generator enclosures will be rechecked at normal RCS operating temperature. The ventilation system ductwork has already been modified to redirect the air flow at the top of the system generator enclosures.

Test items (2) through (4) above cannot be completed until the unit reaches operating pressure and temperature but will be completed before initial criticality.

(l). W-1.7 - Reactor Coolant System Thermal Expansion - The reactor coolant pump loop 2 tie rod gaps PS 9 and PS 10 will be measured during heatup to 557°F and shims will be installed as necessary.

(m). W-7.1B - Reactor Protection System Time Response Measurement - The response time for the turbine driven auxiliary feedwater pump to reach full flow will be measured during REC heatup at normal operating temperatures before initial criticality. The response time of the containment pressure transmitters will be measured before initial criticality.

(n). W-3.1A3 - Safety Injection System (SIS) - Integrated Check Valve Flow and Integrity Test - Document the changing of FI-63-76 range according to FDR-WATM-10261. The existing flow indicator has been tested; however, it is scheduled for replacement. This will increase the ability to more accurately measure the SIS check valve back leakage.

(o). W-9.2 - Incore Thermocouple System - Performed at 250°F, 350°F, 450°F, and 557°F during heatup. Collect resistance data from spare resistance temperature detectors (RTDs) and temperature data from incore thermocouples. The test will determine T_{avg} from data collected from RTDs and compute correction factors for incore thermocouples. This test is to be reperformed due to the replacement, as a system enhancement, of the incore thermocouples and modifications to the cables and reference junction boxes before criticality.

(p). W-10.8 - UHI - The remaining after fuel load testing consists of filling, venting, and pressurizing the system and verifying that the hi-lo level and pressure alarms function properly. This system is not required to be operational until mode 3.

(q). TVA-25-C - Fire Detection System - Six additional fire detectors are being added to the North and South valve rooms by ECN 5613. Installation of these additional detectors will not be completed until after fuel loading. Testing of these detectors will be completed before entry into mode 4.

Table 14.2-1 in the FSAR identified several tests which have portions that are performed both before and after fuel load. The following open items have been identified on the portion of those tests which were to be performed before fuel load:

(a). TVA-22 - Auxiliary Feedwater System - The turbine drive auxiliary feedwater pump (AFWP 1A-S) flow data did not meet the acceptance criteria for full flow with the trip and throttle valve (FCV-1-51) throttling and pump speed less than 3950 RPMs. Recirculation and full flow time response data was questionable due to suspected problems with test equipment calibration. AFWP 1A-S will be tested before criticality at 557°F in the RCS to take additional data for pump performance and time response. At this time, the AFWP 1A-S steam seals will be observed to determine why water is leaking from the turbine shaft seals when FCV-1-51 is cracked open before pump starts. A leaky union on the AFWP 1A-S steam drain line will be replaced with a straight section of pipe. This work will be completed before the operation of the AFWP during heatup.

Our schedule testing of the AFWP 1A-S at an RCS temperature of 557°F (mode 3) is in accordance with the requirements of Technical Specifications. The Technical Specifications require that the pump be operable at the entry into mode 3 but also states that surveillance requirement 4.0.4 is not applicable to this pump for entry into mode 3. The pump performance surveillance cannot be performed with less than 1000 psig in the secondary side of the steam generators. Our planned testing activities will satisfy these requirements.

(b). TVA-23-A - Thermal Expansion of Piping Systems - As a result of modifications that were made on the main steam line hangers 01A-1MS-V128 and V64 after mini-hot functionals, these lines will have to be monitored during heatup. Hangers on the steam dump lines will have to be checked during heatup and low power operations since there was not an adequate steam supply during Hot Functionals to sufficiently heat the lines.

(c). TVA-29 - Steam Generator Blowdown (SGBD) - Listed below are actions that were taken to address problems encountered in testing during Hot Functionals. A retest will be performed during startup to ensure that the listed actions adequately address and resolve the problems.

(1). The control loop for 1-FCV-15-18 was recalibrated to allow for proper flash tank level control.

(2). The Δ P trip setpoint for the SGBD pumps 1A and 1B was revised to allow the pumps to trip out on low Δ P.

(3). Level Switch 1-LS-15-12B was recalibrated to turn off the SGBD pumps when a low level in the flash tank occurs.

(4). Flow orifice for 1-F1-15-213 was installed to allow an accurate flow measurement to be obtained.

(5). The 2-329 control loop was recalibrated to allow for adequate flow through the stacked heat exchanger to obtain an acceptable Δ P across the stacked heat exchanger.

(6). The suction piping for the SGBD pumps was increased in size to allow for adequate flow rates.

(7). Flow recorder 1-FR-15-25 has been set up properly to allow flow rates to be recorded.

(8). 1-FCV-15-212 was repaired so proper SGBD flow isolation could be obtained.

(9). Pressure indicators 1-P1-15-5 and 20 were changed to a high range to keep them from pegging out and breaking. A general exception was on the remaining portions of the test which could not be completed due to the problems that were encountered during testing. The portions of the test that are required to be completed by initial criticality will be completed by initial criticality. The other remaining portions will be completed by their scheduled power levels.

(d). W-8-4 - Initial Turbine Roll - A test deficiency was written when an unacceptable vibration level was measured at bearing numbers 4 and 6 during Hot Functionals. Rebalance of the turbine rotor at bearings 4 and 6 has been completed. Acceptable vibration levels will be verified during the turbine roll after criticality.

ENCLOSURE 2

Justification for Proposed FSAR Change

Table 14.2-2A - SU-4.3 RCCA or Bank Worth Measurement at Power

Presently, SU-4.3 uses the reactivity computer to measure rod worth while at power. This method has been proven to be inaccurate. With this change, we will have the flexibility to use a boron change method instead of the reactivity computer.

TABLE 14.2-2A

LIST OF STARTUP TESTS

Title of Test	Test Prerequisites	Test Objectives Summary of Testing and Acceptance Criteria
SU-3.9 - Natural Circulation Test	As specified in SU-1.4.	Objectives: To provide operator training during the natural circulation transient and subsequent recovery. Summary: Natural circulation will be established following a simultaneous trip of all four (4) reactor coolant pumps while at 3-percent power. The transient response will be monitored and stable conditions established. Acceptance Criteria: Stable conditions are established as per SU-1.1.
SU-4.1 - Power Coefficient Determination	As specified in SU-1.9.	Objectives: Determine the doppler coefficient verification factor for comparision to design. Summary: A load change of approximately 2% to 4% is initiated around the test plateau power. The reactor power is adjusted to match the generator load by withdrawing or inserting the controlling RCC bank. Correlative measurements of reactor coolant system temperatures and core thermal power output are used to determine the doppler coefficient verification factor. Acceptance Criteria: The measured versus predicted doppler coefficient verification factor agrees as specified in SU-1.1.
SU-4.3 - RCCA or Bank Worth Measurement at Power	As specified in SU-1.5 and SU-1.6.	Objectives: Describes a method for measuring changes in core reactivity resultant from RCCA or RCC bank movement when significant prompt reactivity feedback effects from the fuel temperature coefficient are present. Summary: This test is used in conjunction with SU-4.10A and SU-4.11, ~~and 4.1~~ as rods are inserted or withdrawn as boron is constantly added or diluted. The worth of the rods is compensated for by boron. Rod movement will cause step changes in reactivity which are measured on a reactivity computer or by changes in boron concentration

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