Technical Specification Change Request No. 101

The licensee requests that the attached changed pages replace pages 4-7, 4-8, 4-39, 4-41, 4-42, 4-44, 4-46, 4-48, 4-55 and 4-55b of the existing technical specifications. Each change is to become null and void and the specification shall revert to its prior state upon completion of that specific surveillance modified by that change. All surveillances modified herein shall be performed prior to full power operation.

Reasons for Change Request

These changes modify the surveillance requirements to allow the refueling interval to be extended to restart of TMI-1. These surveillances would exceed the time limit in August 1981 should this change not be approved. Further reasoning for requesting these extensions are discussed with each specific change.

Safety Evaluation Justifying Changes

It has been determined that these changes do not pose a threat to the health and safety of the public, in that, all postponed surveillances will be performed prior to full power operations. Further safety evaluations are included with each specific change.

License Amendment Fee (10CFR 170.22)

This change does not involve any Unreviewed Safety Questions, therefore, the licensee has enclosed the required remittance of $1200.00.

Technical Specification Change Request No. 101.1

Safety Evaluation Justifying Change

Specification 4.12.2 "Reactor Building Purge Air Treatment System" requires operability of that system be ensured at least once per refueling.

This surveillance is required to be current whenever the reactor building purge air treatment system is required to be operable. However, this system is only required to be operable when containment integrity is required.

To ensure that this condition does not occur when this surveillance is not current, the applicable operating procedures are being revised to include verification that this surveillance is current as a prerequisite for establishing containment integrity.

In addition, this surveillance is scheduled to be performed after completion of the system modifications. These modifications are tentatively scheduled for completion in April 1981. Since plant heatup for Restart requires containment integrity to be set, this surveillance must be performed prior to Restart.

It is therefore conditionally concluded that the postponement of the performance of this surveillance will not endanger the health or safety of the public, is not a safety hazard and does not constitute an Unreviewed Safety Question. The condition on which this conclusion is based prohibits the establishment of plant operating conditions which require containment integrity.

4.12.2 REACTOR BUILDING PURGE AIR TREATMENT SYSTEM

Applicability

Applies to the reactor building purge air treatment system and associated components.

Objective

To verify that this system and associated components will be able to perform its design functions.

Specification

4.12.2.1 At least once per refueling interval or once per 18 months*, whichever comes first it shall be demonstrated that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches of water at system design flow rate ($\pm$10%).

4.12.2.2 a. The tests and sample analysis required by Specification 3.15.2.2, shall be performed initially, once per refueling interval or 18 months, whichever comes first, or after each 720 hours of operation and following significant painting, steam, fire, or chemical release in any ventilation zone communicating with the system that could contaminate the HEPA filters or charcoal adsorbers.

b. DOP testing shall be performed after each complete or partial replacement of a HEPA filter bank or after any structural maintenance on the system housing which could affect HEPA frame bypass leakage.

c. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of a charcoal adsorber bank or after any structural maintenance on the system housing which could affect the charcoal adsorber bank bypass leakage.

d. The DOP and halogenated hydrocarbon testing shall be performed at the maximum available flow considering physical restrictions, i.e., purge valve position, and gaseous radioactive release criteria.

e. The Reactor Building purge exhaust fans AH-E7A and B shall be operated at least 10 hours every month, either during actual purging or using makeup air.

4.12.2.3 An air distribution test shall be performed on the HEPA filter bank initially and after any maintenance or testing that could affect the air distribution within the system. The air distribution across the HEPA filter bank shall be uniform within $\pm$20%. The test shall be performed at 25,000 cfm ($\pm$10%) flow rate.

*Surveillance to be performed prior to Cycle 5 criticality.

Bases

Pressure drop across the combined HEPA filters and charcoal adsorbers of less than 6 inches of water at the system design flow rate will indicate tha the filters and adsorbers are not clogged by excessive amounts of foreign matter. Pressure drop should be determined at least once every refueling interval to show system performance capability.

Technical Specification Change Request No. 101.2

Reasons for Change Request

Specification 4.12.1 "Emergency Control Room Air Treatment System" requires operability of that system be verified at least once per refueling.

This surveillance is required to be current whenever the control building emergency recirculation system is required to be operable. However, this system is only required to be operable when containment integrity is required and when irradiated fuel handling operations are in progress.

Safety Evaluation Justifying Change

To ensure that these conditions do not occur when this surveillance is not current, the applicable operating and refueling procedures are being revised to include verification that this surveillance is current as a prerequisite for establishing containment integrity and for the moving of irradiated fuel.

In addition, this surveillance is scheduled to be performed upon completion of the HVAC system balancing, tentatively scheduled for June 1981. Since plant heatup for Restart requires containment integrity to be set, this surveillance must be performed prior to Restart.

It is therefore conditionally concluded that the postponement of the performance of this surveillance will not endanger the health and safety of the public, is not a safety hazard and does not constitute an Unreviewed Safety Question. The conditions on which this conclusion is based prohibit the movement of irradiated fuel and the establishment of plant operating conditions requiring containment integrity.

4.12 AIR TREATMENT SYSTEMS

4.12.1 EMERGENCY CONTROL ROOM AIR TREATMENT SYSTEM

Applicability

Applies to the emergency control room air treatment system and associated components.

Objective

To verify that this system and associated components will be able to perform its design functions.

Specification

4.12.1.1 At least every refueling interval or once every 18 months*, whichever comes first, the pressure drop across the combined HEPA filters and charcoal adsorber banks of AH-F3A and 3B shall be demonstrated to be less than 6 inches of water at system design flow rate (±10%).

4.12.1.2 a. The tests and sample analysis required by Specification 3.15.1.2 shall be performed initially and at least once per year for standby service or after every 720 hours of system operation and following significant painting, steam, fire or chemical release in any ventilation zone communicating with the system that could contaminate the HEPA filters or charcoal adsorbers.

b. DOP testing shall be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing which could affect the HEPA filter bank bypass leakage.

c. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of the charcoal adsorber bank or after any structural maintenance on the system housing which could affect the charcoal adsorber bank bypass leakage.

d. Each AH-E18A and B (AH-F3A and B) fan/filter circuit shall be operating at least 10 hours every month.

4.12.1.3 At least once per refueling interval or once every 18 months, whichever comes first, automatic initiation of the Control Building isolation and recirculation Dampers AH-D28, 37, 39, and 36 shall be demonstrated as operable.

4.12.1.4 An air distribution test shall be performed on the HEPA filter bank initially, and after any maintenance or testing that could affect the air distribution within the system. The air distribution across the HEPA filter bank shall be uniform within ±20%. The test shall be performed at 40,000 cfm (±10%) flow rate.

*Surveillance to be performed prior to Cycle 5 criticality.

Technical Specification Change Request No. 101.3

Reasons for Change Request

Technical Specification Table 4.1-2 Item 4 requires the main steam safety valves be operable prior to the reactor coolant system reaching 250 degrees Farenheit. However, this surveillance cannot be performed due to present plant conditions because the plant must be at power and main steam pressure at approximately 885 psig. Therefore, we are requesting an exemption from specification 3.4.6 to allow heatup to at least 532 degrees F. for testing of the steam valves during the startup and test period.

Safety Evaluation Justifying Change

All the main steam valves are technically operable because exceeding the 24 months between tests has not degraded the valves. Since the shutdown, these valves have not been challenged and have been kept in conditions which should not promote corrosion. In addition, since the last previous surveillance test, the valves have not been subject to maintenance that would change the setpoints.

TABLE 4.1-2

MINIMUM EQUIPMENT TEST FREQUENCY

	Item	Test	Frequency
1.	Control Rods	Rod drop time of all full length rods	Each refueling shutdown
2.	Control Rod Movement	Movement of each rod	Every two weeks, when reactor is critical
3.	Pressurizer Safety Valves	Setpoint	50% each refueling period
4.	Main Steam Safety Valves	Setpoint	25% each refueling** period
5.	Refueling System Interlocks	Functional	Start of each refueling period
6.	Main Steam Isolation Valves	(See Section 4.8)	-
7.	Reactor Coolant System Leakage	Evaluate	Daily, when reactor coolant system temperature is greater than 525°F
8.	Air Treatment Systems	See Section 3.15	See Section 4.12
9.	Spent Fuel Cooling System	Functional	Each refueling period prior to fuel handling
10.	Intake Pump House Floor (Elevation 262 ft. 6 in.)	(a) Silt Accumulation-Visual inspection of Intake Pump House Floor	Each refueling period
		(b) Silt Accumulation Measurement of Pump House Flow	Quarterly

*The setpoint of the pressurizer code safety valves shall be in accordance with ASME Boiler and Pressurizer Vessel Code, Section III, Article 9, Winter, 1968.

** The required percentage of Main Steam Safety Valves will be tested prior to Cycle 5 criticality.

Technical Specification Change Request No. 101.4

Reasons for Change Request

Specification 4.7.1 "Control Rod Drive System Functional Test" requires the rods trip insertion times be measured on a refueling interval at hot shutdown conditions. This test cannot be performed due to the present plant conditions.

Safety Evaluation Justifying Change

The test shall be performed prior to criticality of the unit. Therefore, the postponement of the surveillance will not endanger the health and safety of the public, is not a safety hazard and does not constitute an Unreviewed Safety Question.

4.7 REACTOR CONTROL ROD SYSTEM TESTS

4.7.1 CONTROL ROD DRIVE SYSTEM FUNCTIONAL TESTS

Applicability

Applies to the surveillance of the control rod system.

Objective

To assure operability of the control rod system.

Specification

4.7.1.1 The control rod trip insertion time shall be measured for each control rod at either full flow or no flow conditions following each refueling outage prior to return to power.* The maximum control rod trip insertion time for an operable control rod drive mechanism, except for the axial power shapping rods (APSRs), from the fully withdrawn position to 3/4 insertion (104 inches travel) shall not exceed 1.66 seconds at hot reactor coolant full flow conditions or 1.40 seconds for the hot no flow conditions. For the APSRs it shall be demonstrated that loss of power will not cause rod movement. If the trip insertion time above is not met, the rod shall be declared inoperable.

4.7.1.2 If a control rod is misaligned with its group average by more than an indicated nine inches, the rod shall be declared inoperable and the limits of Specification 3.5.2.2 shall apply. The rod with the greatest misalignment shall be evaluated first. The position of a rod declared inoperable due to misalignment shall not be included in computing the average position of the group for determining the operability of rods with lesser misalignments.

4.7.1.3 If a control rod cannot be exercised, or if it cannot be located with absolute or relative position indications or in or out limit lights, the rod shall be declared to be inoperable.

*The control rod trip insertion times shall be verified prior to Cycle 5 criticality.

Bases

The control rod trip insertion time is the total elapsed time from power interruption at the control rod drive breakers until the control rod has actuated the 25% withdrawn reference switch during insertion from the fully withdrawn position. The specified trip time is based upon the safety analysis in FSAR, Section 14.

Each control rod drive mechanism shall be exercised by a movement of approximately two inches of travel every two weeks. This requirement shall apply to either a partial or fully withdrawn control rod at reactor operating conditions. Exercising the drive mechanisms in this manner provides assurance of reliability of the mechanisms.

Technical Specification Change Request No. 101.5

Reasons for Change Request

Specifications 4.5.2.1 and 4.5.2.2 "High Pressure Injection" and "Low Pressure Injection" require system tests be performed on at least a refueling interval basis. The HPI test must be done when the Reactor Coolant System Temperature is >320°F. The LPI test could be performed at this time except that modifications are being performed on the ESAS.

Safety Evaluation Justifying Change

The tests will be completed prior to criticality, and in the present mode neither system is required operable. Therefore, it has been determined that the postponement of these surveillances to prior to criticality will not endanger the health or safety of the public, is not a safety hazard, and does not constitute an Unreviewed Safety Question.

Technical Specification Change Request No. 101.6

Reasons for Change Request

Specification 4.5.2.3 "Core Flooding" requires a system test be performed on a refueling interval basis to ensure the check and isolation valves operate properly. This test is normally done while at a Reactor Coolant System pressure of approximately 530 psig.

Safety Analysis Justifying Change

No credible accident can be proposed that would require the operation of the Core Flooding System while in the present plant condition. The test will be performed prior to Cycle 5 criticality. It has been determined that the postponement of this surveillance will not adversely affect the health and safety of the public, is not a safety hazard, and does not constitute an Unreviewed Safety Question.

4.5.2 EMERGENCY CORE COOLING SYSTEM

Applicability

Applies to periodic testing requirement for emergency core cooling systems.

Objective

To verify that the emergency core cooling systems are operable.

Specification

4.5.2.1 High Pressure Injection

a. During each refueling interval and following maintenance or modification that affects system flow characteristics, system pumps and system high point vents shall be vented, and a system test shall be conducted to demonstrate that the system is operable.*

After a satisfactory test of the emergency loading sequence (4.5.1), the M. U. Pump and its required supporting auxiliaries will be started manually by the operator and a test signal will be applied to the high pressure injection valves MU-V-16A, B, C, D to demonstrate actuation of the high pressure injection system for emergency core cooling operation.

b. The test will be considered satisfactory if the valves have completed their travel and the M. U. Pumps are running as evidenced by the control board component operating lights. Minimum acceptable injection flow must be greater than or equal to 500 gpm per HPI pump when pump discharge pressure is 600 psig or greater (the pressure between the pump and flow limiting device) and when the RC pressure is equal to or less than 600 psig.

c. Testing which requires HPI flow thru MU-V16A, B, C, D shall be conducted only under either of the following conditions:

1) T avg. shall be greater than 320°F.

2) Head of the Reactor Vessel shall be removed.

*The High Pressure Injection Test shall be performed prior to Cycle 5 criticality.

4.5.2.2 Low Pressure Injection

a. During each refueling period and following maintenance or modification that affects system flow characteristics, system pumps and high point vents shall be vented, and a system test shall be conducted to demonstrate that the system is operable. The auxiliaries required for low pressure injection are all included in the emergency loading sequence specified in 4.5.1.**

b. The test will be considered satisfactory if the decay heat pumps listed in 4.5.1.1b have been successfully started and the decay heat injection valves and the decay heat supply valves have completed their travel as evidenced by the control board component operating lights. Flow shall be verified to be equal or greater than the flow assumed in the Safety Analysis for the single corresponding RCS pressure used in the test.

c. When the Decay Heat System is required to be operable, the correct position of DH-V-19A/B shall be verified by observation within four hours of each valve stroking operation or valve maintenance, which effects the position indicator.

**The Low Pressure System test shall be performed prior to Cycle 5 criticality.

4.5.2.3 Core Flooding

a. During each refueling period, a system test shall be conducted to demonstrate proper operation of the system. ***During depressurization of the Reactor Coolant System, verification shall be made that the check and isolation valves in the core cooling flooding tank discharge lines operate properly.

b. The test will be considered satisfactory if control board indication of core flooding tank level verifies that all valves have opened.

***The Core Flooding Test shall be performed prior to Cycle 5 criticality.

4.5.2.4 Component Tests

a. At intervals not to exceed 3 months, the components required for emergency core cooling will be tested.

b. The test will be considered satisfactory if the pumps and fans have been successfully started and the valves have completed their travel as evidenced by the control board component operating lights, and either the station computer or pressure/flow indication.

Bases

The emergency core cooling systems are the principal reactor safety features in the event of a loss of coolant accident. The removal of heat from the core provided by these systems is designed to limit core damage.

The low pressure injection pumps are tested singularly for operability by opening the borated water storage tank outlet valves and the bypass valves in the borated water storage tank fill line. This allows water to be pumped from the borated water storage tank through each of the injection lines and back to the tank.

The minimum acceptable HPI/LPI flow assures proper flow and flow split between injection legs.

With the reactor shutdown, the valves in each core flooding lines are checked for operability by reducing the reactor coolant system pressure until the indicated level in the core flood tanks verify that the check and isolation valves have opened.

Technical Specification Change Request No. 101.7

Reasons for Change Request

Specification 4.5.3.1.b "Reactor Building Cooling and Isolation System" requires on a refueling internal bases the cooling water valves be opened using an ES test signal. The Engineered Safeguards System is currently disabled for modification preventing performance of the test.

Safety Analysis Justifying Change

The reactor building emergency coolers are required when the reactor is critical to remove heat from the reactor building during a postulated high energy pipe break. The unit is currently restricted to a cold shutdown condition, therefore, the potential for a high energy pipe break does not exist. The test will be completed prior to startup, therefore, there is no adverse effects upon the health and safety of the public, it is not a safety hazard, and does not constitute an Unreviewed Safety Question.

b. Reactor Building Cooling and Isolation System

1. During each refueling period, a system test shall be conducted to demonstrate proper operation of the system.* After a satisfactory test of the emergency loading sequence, a test signal will actuate the R. B. emergency cooling system valves to demonstrate operability of the coolers.

2. The test will be considered satisfactory if the valves have completed their expected travel as evidenced by the control board component operating lights, and either the station computer or local verification.

*The system test shall be conducted prior to Cycle 5 criticality.

4.5.3.2 Component Tests

a. At intervals not to exceed three months, the components required for reactor building cooling and isolation will be tested.

b. The test will be considered satisfactory if the valves have completed their expected travel as evidenced by the control board component operating lights, and either the station computer or local verification.

Bases

The reactor building cooling and isolation systems and reactor building spray system are designed to remove the heat in the containment atmosphere to prevent the building pressure from exceeding the design pressure.

The delivery capability of one reactor building spray pump at a time can be tested by opening the valve in the line from the borated water storage tank, opening the corresponding valve in the test line, and starting the corresponding pump.

With the pumps shut down and the borated water storage tank outlet closed, the reactor building spray injection valves can each be opened and closed by the operator action. With the reactor building spray inlet valves closed, low pressure air can be blown through the test connections of the reactor building spray nozzles to demonstrate that the flow paths are open.

The equipment, piping, valves and instrumentation of the reactor building cooling system are arranged so that they can be visually inspected. The cooling units and associated piping are located outside the secondary concrete shield. Personnel can enter the reactor building during power operations to inspect and maintain this equipment.

The reactor building fans are normally operating periodically, constituting the test that these fans are operable.

Reference

(1) FSAR, Section 6

Technical Specification Change Request No. 101.8

Reasons for Change Request

Specification 4.5.1.1 and 4.6.1.b "Emergency Power System Periodic Tests" require automatic starting of each diesel generator and restoration to operation of particular vital equipment, initiated by an actual loss of normal A-C station service power supply together with a simulated engineered safeguards actuation signal. This is required each refueling interval. The engineered safeguards actuation system is currently disabled for modifications thus preventing performance of this test.

Safety Analysis Justifying Review

The test will be conducted prior to startup. High and low pressure injection systems are not required to be operable in a cold shutdown condition. The emergency power system is being tested monthly, thereby assuring that the onsite source of power is operable. Since the high and low pressure injection systems are not required to be operable during cold shutdown, there is no adverse effect upon the health and safety of the public, it is not a safety hazard, and it does not constitute an Unreviewed Safety Question.

4.5 EMERGENCY LOADING SEQUENCE AND POWER TRANSFER, EMERGENCY CORE COOLING SYSTEM AND REACTOR BUILDING COOLING SYSTEM PERIODIC TESTING

4.5.1 EMERGENCY LOADING SEQUENCE

Applicability

Applies to periodic testing requirements for safety actuation systems.

Objective

To verify that the Emergency loading sequence and automatic power transfer is operable.

Specifications

4.5.1.1* Sequence and Power Transfer Test

a. During each refueling interval, a test shall be conducted to demonstrate that the emergency loading sequence and power transfer is operable.

b. The test will be considered satisfactory if the following pumps and fans have been successfully started and the following valves have completed their travel on preferred power and transferred to the emergency power as evidenced by the control board component operating lights, and either the station computer or pressure/flow indication.
   - M. U. Pump
   - D. H. Pump and D. H. Injection Valves and D. H. Supply Valves
   - R. B. Cooling Pump
   - R. B. Ventilators
   - D. H. Closed Cycle Cooling Pump
   - N. S. Closed Cycle Cooling Pump
   - D. H. River Cooling Pump
   - N. S. River Cooling Pump
   - D. H. and N. S. Pump Area Cooling Fan
   - Screen House Area Cooling Fan
   - Spray Pump. (Initiated in coincidence with a 2 out of 3 R. B. 30 psi Pressure Test Signal.)

*This test shall be performed prior to Cycle 5 criticality.

4.5.1.2 Sequence Test

a. At intervals not to exceed 3 months, a test shall be conducted to demonstrate that the emergency loading sequence is operable, this test shall be performed on either preferred power or emergency power.

b. The test will be considered satisfactory if the pumps and fans listed in 4.5.1.1b have been successfully started and the valves listed in 4.5.1.1b have completed their travel as evidenced by the control board component operating lights, and either the station computer or pressure/flow indication.

Bases

The Emergency loading sequence and automatic power transfer controls the operation of the pumps associated with the emergency core cooling system and Reactor Building cooling system. A successful test of the emergency loading sequence and automatic power transfer is a prerequisite to any system test of the emergency core cooling system or reactor building cooling system.

4.6 EMERGENCY POWER SYSTEM PERIODIC TESTS

Applicability

Applies to periodic testing and surveillance requirement of the emergency power system.

Objective

To verify that the emergency power system will respond promptly and properly when required.

Specification

The following tests and surveillance shall be performed as stated:

4.6.1 Diesel Generators

a. Manually-initiated start of the diesel generator, followed by manual synchronization with other power sources and assumption of load by the diesel generator up to the name-plate rating (3000 kw). This test will be conducted every month on each diesel generator. Normal plant operation will not be affected.

b. Automatic start of each diesel generator and restoration to operation of particular vital equipment, initiated by an actual loss of normal a-c station service power supply together with a simulated engineered safeguards actuation signal. This test will be conducted during reactor shutdown for refueling to assure that the diesel-generator will start assuming load in ten seconds and assume the load of all safe-guards equipment listed in 4.5.1.1b within 60 seconds after the initial starting signal.*

c. Each diesel generator shall be given an inspection at least annually in accordance with the manufacturer's recommendations for this class of stand-by service.

*This testing shall be performed prior to Cycle 5 criticality.

4.6.2 Station Batteries

a. The voltage, specific gravity, and liquid level of each cell will be measured and recorded monthly.

b. The voltage and specific gravity of a pilot cell will be measured and recorded weekly.

c. Each time data are recorded, new data shall be com with old to detect signs of abuse or deterioration.

Technical Specification Change Request No. 101.9

Reasons for Change Request

Technical Specification Table 4.1-1 Item 39 "Turbine Overspeed Trip" is required to be performed on a refueling interval basis. However, the test cannot be performed due to the present plant conditions. This trip function is to protect the turbine from excessive rotational velocities which could damage it or induce a missile hazard.

Safety Analysis Justifying Change

Delay of this surveillance to prior to exceeding 20% full power will not have an adverse effect upon the health and safety of the public. Due to the present plant conditions the possibility of an overspeed accident is nil.

TABLE 4.1-1 (Continued)

	CHANNEL DESCRIPTION	CHECK	TEST	CALIBRATE	REMARKS
38.	Steam Generator Water Level	W	NA	R	
39.	Turbine Overspeed Trip	NA	R*	NA	
40.	Sodium Thiosulfate Tank Level Indicator	NA	NA	R	
41.	Sodium Hydroxide Tank Level Indicator	NA	NA	R	
42.	Diesel Generator Protective Relaying	NA	NA	R	
43.	4 KV ES Bus Undervoltage Relays (Diesel Start)	NA	M(1)	R	(1) Relay operation will be checked by local test push buttons.
44.	Reactor Coolant Pressure DH Valve Interlock Bistable	S(1)	M	R	(1) When reactor coolant system is pressurized above 300 psig of Taves is greater than 200°F.

S - Each Shift

D - Daily

W - Weekly

M - Monthly

T/W - Twice per week

B/M - Every 2 months

Q - Quarterly

P - Prior to each startup if not done previous week

R - Each Refueling Period

NA - Not Applicable

B/W - Every two weeks

*Test to be performed prior to exceeding 20% power.