ATTACHMENT I

PROPOSED TECHNICAL SPECIFICATIONS CHANGES

RELATED TO

DEFINITION OF THE TERM "OPERABLE"

POWER AUTHORITY OF THE STATE OF NEW YORK
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
DOCKET NO. 50-333
FEBRUARY 20, 1981

TECHNICAL SPECIFICATIONS

TABLE OF CONTENTS

will be started and valves operated.

7. Protective Action - An action initiated by the Protection System when a limiting safety system setting is reached. A protective action can be at a channel or system level.

8. Protective Function - A system protective action which results from the protective action of the channels monitoring a particular plant condition.

9. Simulated Automatic Actuation - Simulated automatic actuation means applying a simulated signal to the sensor to actuate the circuit in question.

10. Trip System - A trip system means an arrangement of instrument channel trip signals and auxiliary equipment required to initiate action to accomplish a protective function. A trip system may require one or more instrument channel trip signals related to one or more plant parameters in order to initiate trip system action. Initiation of protective action may require the tripping of a single trip system or the coincident tripping of two trip systems.

11. Sensor - A sensor is that part of a channel used to detect variations in a monitored variable and to provide a suitable signal to logic.

G. Limiting Conditions for Operation (LCO) - The limiting conditions for operation specify the minimum acceptable levels of system performance necessary to assure safe startup and operation of the facility. When these conditions are met, the plant can be operated safely and abnormal situations can be safely controlled.

H. Limiting Safety System Setting (LSSS) - The limiting safety system settings are settings on instrumentation which initiate the automatic protective action at a level such that the safety limits will not be exceeded. The region between the safety limit and these settings represent margin with normal operation lying below these settings. The margin has been established so that with proper operation of the instrumentation the safety limits will never be exceeded.

I. Modes of Operation (Operational Mode)

Mode - The reactor mode is established by the Mode Selector Switch. The modes include shutdown, refuel, startup/hot standby, and run which are defined as follows:

1.0 Continued

1. Refuel Mode - The reactor is in the refue mode whe the Mode Switch is in the Refuel Mode position. When the Mode Switch is in the Refuel position, the refueling interlocks are in service.

2. Run Mode - In this mode the reactor system pressure is at or above 850 psig and the Reactor Protection System is energized with APRM protection (exc uding the 15 percent high flux trip) and the RBM interlocks in service.

3. Shutdown Mode - The reactor is in the shutdown mode when the Reactor Mode Switch is in the Shutdown Mode position.

   a. Hot shutdown means conditions as above with reactor coolant temperature > 212° F.

   b. Cold shutdown means conditions as above with reactor coolant temperature ≤ 212° F. and the reactor vessel vented.

4. Startup/Hot Standby - In this mode the reactor protection scram trips initiated by main steam line isolation valve closure is bypassed when reactor pressure is less than 1,005 psig, the low pressure main steam line isolation valve closure trip is bypassed, the Reactor Protection System is energized with APRM (15 percent) and IRM neutron monitoring system trips and control rod withdrawal interlocks in service.

J. Operable - A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).

K. Operating - Operating means that a system or component is performing its intended functions in its required manner.

L. Operating Cycle - Interval between the end of one refueling outage and the end of the subsequent refueling outage.

M. Primary Containment Integrity - Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:

   1. All manual containment isolation valves on lines connected to the Reactor Coolant System or containment which are not required to be open during plant accident conditions are closed. These valves may be

3. Limiting Conditions for Operation

3.0 General

Applicability:

Applies to the general LCO requirements of Section 3.

Objective:

To specify the general requirements applicable to each Limiting Condition for Operation listed in Section 3.

Specification:

A. Limiting Conditions for Operation and ACTION requirements shall be applicable during the OPERATIONAL CONDITIONS (modes) specified for each specification.

B. Adherence to the requirements of the Limiting Condition for Operation and associated ACTION within the specified time interval shall constitute compliance with the specification. In the event the Limiting Condition for Operation is restored prior to expiration of the specified time interval, completion of the ACTION statement is not required.

C. In the event a Limiting Condition for Operation and/or associated ACTION requirements cannot be satisfied because of circumstances in excess of those addressed in the specification, the unit shall be placed in COLD SHUTDOWN within the following 24 hours unless corrective measures are completed that permit operation under the permissible ACTION or until the reactor is placed in an OPERATIONAL CONDITION (mode) in which the specification is not applicable. Exceptions to these requirements shall be stated in the individual specifications.

4. Surveillance Requirements

4.0 General

Applicability:

Applies to the general surveillance requirements of Section 4.

Objective:

To specify the general requirements applicable to each surveillance requirement in Section 4.

Specification:

A. Surveillance Requirements shall be applicable during the OPERATIONAL CONDITIONS (modes) specified for individual Limiting Condition for Operation unless otherwise stated in the individual Surveillance Requirements.

B. Each Surveillance Requirement shall be performed within the specified time interval with:

1. An allowable variation of ±25% of the surveillance interval,

2. A total maximum combined interval time for any three (3) consecutive surveillance intervals not to exceed 3.5 times the specified surveillance interval.

C. Performance of a Surveillance Requirement within the specified time interval shall constitute compliance with OPERABILITY requirements for a Limiting Condition for Operation and associated ACTION statements unless otherwise required by the specification. Surveillance requirements do not have to be performed on inoperable equipment.

3.0 Continued

D. Entry into an OPERATIONAL CONDITION (mode) shall not be made unless the conditions of the Limiting Condition for Operation are met without reliance on provisions contained in the ACTION statements unless otherwise excepted. This provision shall not prevent passage thru OPERATIONAL CONDITIONS (modes) required to comply with ACTION requirements.

E. When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant system(s), subsystem(s), train(s), component(s) and device(s) are OPERABLE, or likewise satisfy the requirements of this specification. Unless both conditions (1) and (2) are satisfied, the unit shall be placed in COLD SHUTDOWN within the following 24 hours. This specification is not applicable when in Cold Shutdown or Refuel Mode.

4.0 Continued

D. Entry into an OPERATIONAL CONDITION (mode) shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the applicable surveillance interval or as otherwise specified.

3.0 BASES

A. This specification states the applicability of each specification in terms of defined OPERATIONAL CONDITION (mode) and is provided to delineate specifically when each specification is applicable.

B. This specification defines those conditions necessary to constitute compliance with the terms of an individual Limiting Condition for Operation and associated ACTION requirement.

C. This specification delineates the ACTION to be taken for circumstances not directly provided for in the ACTION statements and whose occurrence would violate the intent of the specification. Under the terms of Specification 3.0, the facility is to be placed in COLD SHUTDOWN within the following 24 hours. It is assumed that the unit is brought to the required OPERATIONAL CONDITION (mode) within the required times by promptly initiating and carrying out the appropriate ACTION statement.

D. This specification provides that entry into an OPERABLE CONDITION (mode) must be made with (a) the full complement of required systems, equipment or components OPERABLE and (b) all other parameters as specified in the Limiting Conditions for Operation being met without regard for allowable deviations and out of service provisions contained in the ACTION statements.

D. Continued

The intent of this provision is to insure that facility operation is not initiated with either required equipment or systems inoperable or other limits being exceeded.

Exceptions to this provision may be made for a limited number of specifications when startup with inoperable equipment would not affect plant safety. These exceptions are stated in the ACTION statements of the appropriate specifications.

E. This specification delineates what additional conditions must be satisfied to permit operation to continue, consistent with the ACTION statements for power sources, when a normal or emergency power source is not OPERABLE. It specifically prohibits operation when one division is inoperable because its normal or emergency power source is inoperable and a system, subsystem, train, component or device in another division is inoperable for another reason.

The provisions of this specification permit the ACTION statements associated with individual systems, subsystems, trains, components or devices to be consistent with the ACTION statements of the associated electrical power source. It allows operation to be governed by the time

3.0 BASES - Continued

E. Continued

limits of the ACTION statement associated with the Limiting Condition for Operation for the normal or emergency power source, and not by the individual ACTION statements for each system, subsystem, train, component or device that is determined to be inoperable solely because of the inoperability of its normal or emergency power source.

For example, Specification 3.9.A. requires in part that both emergency diesel generator systems be OPERABLE. The ACTION statement provides for a 7 day out-of-service time when emergency diesel generator system A or B is not OPERABLE. If the definition of OPERABLE were applied without consideration of Specification 3.0.E., all systems, subsystems, trains, components and devices supplied by the inoperable emergency power source, diesel generator system A or B, would also be inoperable. This would dictate invoking the applicable ACTION statements for each of the applicable Limiting Conditions for Operation. However, the provisions of Specification 3.0.E. permit the time limits for continued operation to be consistent with the ACTION statement for the inoperable emergency diesel generator system instead, provided the other specified conditions are satisfied. If they are not satisfied, shutdown is required in accordance with this specification.

E. Continued

As a further example, Specification 3.9.A. requires in part that two 115KV lines and reserve station transformers be available. The ACTION statement provides a 7 day out-of-service time when both required offsite circuits are not OPERABLE. If the definition of OPERABLE were applied without consideration of Specification 3.0.E., all systems, subsystems, trains, components and devices supplied by the inoperable normal power sources, both of the offsite circuits, would also be inoperable. This would dictate invoking the applicable ACTION statements for each of the applicable LCOs. However, the provisions of Specification 3.0.E. permit the time limits for continued operation to be consistent with the ACTION statement for the inoperable normal power sources instead, provided the other specified conditions are satisfied. In this case, this would mean that for one division the emergency power source must be OPERABLE (as must be the components supplied by the emergency power source) and all redundant systems, subsystems, trains, components and devices in the other division must be OPERABLE, or likewise satisfy Specification 3.0.E. (i.e., be capable of performing their design functions and have an emergency power source OPERABLE). In other words, both emergency power sources A and B must be OPERABLE and all redundant systems, subsystems, trains, components and devices in both divisions

E. Continued

must also be OPERABLE. If these conditions are not satisfied, shutdown is required in accordance with this specification.

In Cold Shutdown and Refuel Modes, Specification 3.0.E. is not applicable, and thus the individual ACTION statement for each applicable Limiting Condition for Operation in these OPERATIONAL CONDITIONS (modes) must be adhered to.

4.0 BASES

A. This specification provides that surveillance activities necessary to insure the Limiting Conditions for Operation are met and will be performed during the OPERATIONAL CONDITIONS (modes) for which the Limiting Conditions for Operation are applicable. Provisions for additional surveillance activities to be performed without regard to the applicable OPERATIONAL CONDITIONS (modes) are provided in the individual Surveillance Requirements.

B. The provisions of this specification provide allowable tolerances for performing surveillance activities beyond those specified in the normal surveillance interval. These tolerances are necessary to provide operational flexibility because of scheduling and performance considerations.

C. The provisions of this specification set forth the criteria for determination of compliance with the OPERABILITY requirements of the Limiting Conditions for Operation. Under this criteria,

C. Continued

equipment, systems or components are assumed to be OPERABLE if the associated surveillance activities have been satisfactorily performed within the specified time interval. Nothing in this provision is to be construed as defining equipment, systems or components OPERABLE, when such items are found or known to be inoperable although still meeting the Surveillance Requirements.

D. This specification ensures that surveillance activities associated with a Limiting Condition for Operation have been performed within the specified time interval prior to entry into an applicable OPERATIONAL CONDITION (mode). The intent of this provision is to ensure that surveillance activities have been satisfactorily demonstrated on a current basis as required to meet the OPERABILITY requirements of the Limiting Condition for Operation.

Under the terms of this specification, for example, during initial plant start-up or following extended plant outage, the applicable surveillance activities must be performed within the stated surveillance interval prior to placing or returning the system or equipment into OPERABLE status.

3.1 LIMITING CONDITIONS FOR OPERATION

3.1 REACTOR PROTECTION SYSTEM

Applicability:

Applies to the instrumentation and associated devices which initiate the reactor scram.

Objective:

To assure the operability of the Reactor Protection System.

Specification:

A. The setpoints, minimum number of trip systems, minimum number of instrument channels that must be operable for each position of the reactor mode switch shall be as shown on Table 3.1-1. The design system response time from the opening of the sensor contact to and including the opening of the trip actuator contacts shall not exceed 50 msec.

B. Minimum Critical Power Ratio (MCPR)

During reactor power operation at rated power and flow, the MCPR operating limits shall not be less than those shown below:

4.1 SURVEILLANCE REQUIREMENTS

4.1 REACTOR PROTECTION SYSTEM

Applicability:

Applies to the surveillance of the instrumentation and associated devices which initiate reactor scram.

Objective:

To specify the type of frequency of surveillance to be applied to the protection instrumentation.

Specification:

A. Instrumentation systems shall be functionally tested and calibrated as indicated in Tables 4.1-1 and 4.1-2 respectively.

B. Maximum Fraction of Limiting Power Density (MFLPD)

The MFLPD shall be determined daily during reactor power operation at $\geq$ 25% rated thermal power and the APRM high flux scram and Rod Block trip settings adjusted if necessary as required by Specifications 2.1.A.1.c and 2.1.A.1.d, respectively.

9. Primary containment atmosphere shall be continuously monitored for hydrogen and oxygen when containment integrity is required. The monitoring system shall be considered operable if at least one monitor is operable.

   a) From and after the time the primary containment atmosphere monitoring instruments are found or made to be inoperable for any reason, continued reactor operation is permissible for the succeeding thirty (30) days unless one instrument monitoring each parameter is sooner made operable, provided an appropriate grab sample is obtained and analyzed at least once each twenty-four (24) hour period.

   b) If specification 3.7.A.9.a cannot be met, the reactor shall be placed in the cold condition within twenty-four (24) hours.

B. Standby Gas Treatment System

1. Except as specified in 3.7.B.2 below, both circuits of the Standby Gas Treatment System shall be operable at all time when secondary containment integrity is required.

9. Primary Containment Atmosphere Monitoring Instruments

   a. Instrumentation shall be functionally tested and calibrated as specified in Table 4.7-1.

B. Standby Gas Treatment System

1. Standby Gas Treatment System surveillance shall be performed as indicated below:

   a. At least once per operating cycle, it shall be demonstrated that:

      (1) Pressure drop across the combined high-efficiency and charcoal filters is less than 5.7 in. of water at 6,000 scfm and

      (2) 39KW heater outlet shall not have greater than 70% relative humidity at 6000 scfm.

3.9 Continued

C. Diesel Fuel

There will be a minimum of 64,000 gal. of diesel fuel on site for each operable pair of diesel generators.

1. From and after the time that the fuel oil storage tank level instrumentation is made or found to be inoperable for any reason continued reactor operation is permissible indefinitely, provided that the level in the affected storage tank is manually measured at least once/day.

4.9 Continued

6. Once within one hour and at least once per eight hours thereafter, while the reactor is being operated in accordance with Specifications 3.9.B.1, 3.9.B.3, and 3.9.B.4, the availability of the operable off-site sources shall be verified by the correct breaker alignment indicating power availability.

C. Diesel Fuel

Once a month the quantity of diesel fuel available in each storage tank shall be manually measured and compared to the reading of the local level indicators to ensure the proper operation thereof.

1. Once each month a sample of the diesel fuel in each storage tank shall be checked for quality as per the following:

Flash Point - ^{o}F	125^{o}F min.
Pour Point - ^{o}F	10^{o}F max.
Water & Sediment	0.50% max.
Ash	0.5% max.
Distillation 90% Point	540 min.
Viscosity (SSU) at 100^{o}F	40 max.
Sulfur	1% max.
Copper Strip Corrosion	No. 3 max.
Cetane #	35 min.

3.9 Continued

2. The Diesel Fuel Oil Transfer System shall be operable whenever the diesel generator it supplies is required to be operable, except as specified below:

   a. From and after the time that fuel oil transfer pump per Diesel Generator System is made or found to be inoperable for any reason, continued reactor operation is permissible for a period not to exceed 60 days; provided that the remaining fuel oil transfer pumps be demonstrated to be operable immediately and weekly thereafter.

   b. From and after the time that only two fuel oil transfer pumps per Diesel Generator System are operable, continued reactor operation is permissible for a period not to exceed 30 days total per pair of diesels, provided that the remaining fuel oil transfer pumps are demonstrated to be operable immediately and daily thereafter.

4.9 Continued

2. During the monthly diesel generator testing, the diesel fuel oil transfer systems shall be checked for proper operation.

Amendment No.

3.9 Continued

4.9 continued

c. From and after the time that only one fuel oil transfer pump in a Diesel Generator System is found to be operable, that Diesel Generator System shall be considered inoperable and continued reactor operation shall be in accordance with Specification 3.9.B.3 above.

3. Whenever the diesel fuel on site for each operable pair of Diesel Generators decreases to less than 64,000 gallons as a result of operation of the Diesel Generators "to meet Technical Specification requirements," Specification 3.0.C does not apply. 48 hours are allowed to restore fuel oil storage tank quantity to a minimum of 64,000 gallons.

D. Diesel Generator Operability

Whenever the reactor is in the cold shutdown or refueling modes, a minimum of one of the pairs of Emergency Diesel Generators, and all its associated emergency equipment shall be operable whenever any work is being done which has the potential for draining the vessel, secondary containment is required, or a core or containment cooling system is required.

D. Not Applicable