ATTACHMENT I

Proposed Technical Specification Changes Implementation of Automatic Depressurization System Logic Modifications Related to NUREG-0737 Item II.K.3.18

New York Power Authority

James A. FitzPatrick Nuclear Power Plant

Docket No. 50-333

TABLE 3.2-2 (Cont'd)

INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT COOLING SYSTEMS

Item No.	Minimum No. of Operable Instrument Channels Per Trip System (1)	Trip Function	Trip Level Setting	Total Number of Instrument Channels Provided by Design for Both Trip Systems	Remarks
5	2	Containment High Pressure	$1 < p < 2.7$ psig	4 Inst. Channels	Prevents inadvertent operation of containment spray during accident condition.
6	1	Confirmatory Low Level	$\geq$ 12.5 in. indicated level ($\geq$ 177 in. above the top of active fuel)	2 Inst. Channels	ADS Permissive in conjunction with Reactor Low-Low-Low Water Level.
7	2	High Drywell Pressure	$\leq$ 2.7 psig	HPCI Inst. Channels	Initiates Core Spray LPCI, HPCI & SGTS.
8	2	Reactor Low Pressure	$\geq$ 450 psig	4 Inst. Channels	Permissive for opening Core Spray and LPCI Admission valves.

TABLE 3.2-2 (Cont'd)

INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT COOLING SYSTEMS

Item No.	Minimum No. of Operable Instrument Channels Per Trip System (1)	Trip Function	Trip Level Setting	Total Number of Instrument Channels Provided by Design for Both Trip Systems	Remarks
9	1	Reactor Low Pressure	$50 \leq p \leq 75$ psig	2 Inst. Channels	In conjunction with PCIS signal permits closure of RHR (LPCI) injection valves.
10					
11	THIS ITEM INTENTIONALLY BLANK				
12	1 (See Note 3)	Core Spray Pump Start Timer (each loop)	11 $\pm$ 0.6 sec.	1 Inst. Channel	Initiates starting of core spray pumps. (each loop)

TABLE 3.2-2 (Cont'd)

INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT COOLING SYSTEMS

Item No.	Minimum No. of Operable Instrument Channels Per Trip System (1)	Trip Function	Trip Level Setting	Total Number of Instrument Channels Provided by Design for Both Trip Systems	Remarks
13	1 (See Note 3)	RHR Pump Start Timer			
		1st Pump (A Loop)	1.0 + 0.5 (-) 0 sec.	1 Inst. Channel	Starts 1st Pump (A Loop)
		1st Pump (B Loop)	1.0 + 0.5 (-) 0 sec.	1 Inst. Channel	Starts 1st Pump (B Loop)
		2nd Pump (A Loop)	6.0 ± 0.5 sec.	1 Inst. Channel	Starts 2nd Pump (A Loop)
		2nd Pump (B Loop)	6.0 ± 0.5 sec.	1 Inst. Channel	Starts 2nd Pump (B Loop)
14	1	Auto Blowdown Timer	120 sec ± 5 sec.	2 Inst. Channels	Initiates ADS, in conjunction with Low-Low-Low Reactor Water Level, and LPCI or Core Spray Pump discharge pressure interlock, if not inhibited by ADS override switches.
15	2	RHR (LPCI) Pump Discharge Pressure Interlock	125 psig ± 20 psig	4 Inst. Channels	Defers ADS actuation pending confirmation of low pressure core cooling system operation.

D. Automatic Depressurization System (ADS)

1. The ADS shall be operable whenever the reactor pressure is greater than 100 psig, and irradiated fuel is in the reactor vessel and prior to reactor startup from a cold condition, except as specified below:

   a. From and after the date that one of the seven relief/safety valves of the ADS is made or found to be inoperable for any reason while it is required, continued reactor operation is permissible only during the succeeding 30 days unless repairs are made and provided that during such time the HPCI System is operable.

   b. From the time that more than one of the seven relief/safety valves of the ADS are made or found to be inoperable for any reason, continued reactor operation is permissible during the succeeding 24 hrs. unless repairs are made and provided, that

D. Automatic Depressurization System (ADS)

1. Surveillance of the Automatic Depressurization System shall be performed during each operating cycle as follows:

   a. A simulated automatic initiation which opens all pilot valves.

   b. Manually open each relief/safety valve while bypassing steam to the condenser and observe a $\geq 10\%$ closure of the turbine bypass valves, to verify that the relief/safety valve has opened.

   c. A simulated automatic initiation which is inhibited by the override switches.

TABLE 3.2-2

INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT COOLING SYSTEMS

Item No.	Minimum No. of Operable Instrument Channels Per Trip System (1)	Trip Function	Trip Level Setting	Total Number of Instrument Channels Provided by Design For Both Trip Systems	Remarks
1	2	Reactor Low-Low Water Level	$\geq$ -38 in. indicated level ($\geq$ 126.5 in. above the top of active fuel)	4 HPCI & RCIC Inst. Channels	Initiates HPCI, RCIC & SGTS.
2	2	Reactor Low-Low-Low Water Level	$\geq$ -146.5 in. indicated level ($\geq$ 18 in. above the top of active fuel)	4 Core Spray & RHR Instrument Channels	Initiates Core Spray, LPCI, and Emergency Diesel Generators.
				4 ADS Instrument Channels	Initiates ADS in conjunction with confirmatory low level, 120 second time delay and LPCI or Core Spray pump discharge pressure interlock if not inhibited by ADS override switches.
3	2	Reactor High Water Level	$\leq$ +58 in. indicated level ($\leq$ 222.5 in. above the top of active fuel)	2 Inst. Channels	Trips HPCI and RCIC Turbines.
4	1	Reactor Low Level (inside shroud)	$\geq$ +352 in. above vessel zero ($\geq$ 0 in. above the top of active fuel)	2 Inst. Channels	Prevents inadvertent operation of containment spray during accident condition.

ATTACHMENT II

Safety Evaluation of Proposed Changes to Technical Specifications - Implementation of Automatic Depressurization System Logic Modifications Related to NUREG-0737 Item II.K.3.18

New York Power Authority

James A. FitzPatrick Nuclear Power Plant

Docket No. 50-333

I. Description of the Change

A new Section 4.5.D.1.c has been added on page 119 that requires surveillance testing of the Automatic Depressurization System (ADS) override switches once per operating cycle. Reference 2 specified that a surveillance plan for the manual inhibit switch (override) should be included in the Technical Specifications.

Four changes were made to Table 3.2-2 ("Instrumentation That Initiates or Controls the Core and Containment Cooling Systems") on pages 66-69:

On page 66, Item No. 2 (Reactor Low-Low-Low Water Level Trip Function) eliminates "...high drywell pressure..." from the remark associated with the ADS instrument channels and adds the phrase "if not inhibited by ADS override switches". The plant modification associated with NUREG-0737 Item II.K.3.18 removes the high drywell pressure permissive for ADS actuation.

On page 67, Item No. 6 (Confirmatory Low Level) the remarks entry is revised to clarify the remark. The phrase "in conjunction with reactor Low-Low-Low Water Level" has been added.

On page 68, Item No. 11 (High Drywell Pressure) has been deleted in its entirety since this signal has been eliminated as a permissive for ADS actuation.

On page 69, Item 14 (Auto Blowdown Timer) the phrase "...high drywell pressure..." was deleted from the remarks entry to reflect the elimination of high drywell pressure as an ADS actuation permissive. In addition, the phrase "...if not inhibited by the ADS override switches" has been added to the remark to reflect the addition of these new switches.

II. Purpose of the Change

Item II.K.3.18 of NUREG-0737 (as clarified by Reference 5) stated the NRC's position that "the ADS actuation logic should be modified to eliminate the need for manual actuation to assure adequate core cooling. A feasibility and risk assessment study is required to determine the optimum approach."

Elimination of the high drywell pressure permissive from the ADS actuation logic will ensure adequate core cooling for those transient or accident events that do not directly produce high drywell pressure (e.g. stuck open relief valve or steam line break outside containment) and are degraded by a loss of high pressure coolant systems. Elimination of the high drywell permissive for ADS actuation and the addition of manual "inhibit" or "override" switches fulfills the NRC criteria (Enclosure 1 to Reference 2, p. 3). Further, the inhibit switches permit the operator to override ADS actuation logic if the operator confirms the signals are erroneous or if reactor water level can be restored.

The installation of a new ADS actuation inhibit switches allow the operator to prevent or delay ADS actuation. This is in accordance with Emergency Procedures Guidelines (EPGs) which have been approved by the NRC staff (Reference 7). If conditions and EPGs require that the operator initiate a reactor vessel blowdown (or initiate ADS), the operator can also initiate blowdown by turning individual safety/relief valve (SRV) switches, or allow ADS to be actuated by positioning the override switches in their "normal" position.

Via Reference 4, the BWR Owners' Group (BWROG) sent to the NRC a study of alternatives to the present ADS actuation logic. This report also identified modifications that would eliminate the need for manual ADS actuation during postulated accident conditions to ensure core coverage. In Reference 6 the Authority formally endorsed this report.

The NRC evaluated the Owners' Group report and concluded that two of the seven alternatives were acceptable (Reference 3). The Authority subsequently decided to implement the first of these two acceptable alternatives - elimination of the high drywell pressure permissive and the addition of a manual inhibit switch (Reference 1).

The NRC closed the issue, finding the proposed modifications acceptable, (Reference 2) based upon the Authority's commitment to complete the modifications by April 30, 1985.

III. Impact of the Change

The Authority considers that this proposed amendment can be classified as not likely to involve significant hazards considerations since it is a change to make a license conform to regulatory criteria where the license change results in very minor changes to facility operations. This is very similar to and clearly in keeping with Example (vii), Federal Register, Vol. 48 No. 67 dated April 6, 1983, page 14870 and 10 CFR 50.92.

IV. Implementation of the Changes

Implementation of the changes, as proposed, will not impact the ALARA or fire protection programs at FitzPatrick, nor will the changes impact the environment.

V. Conclusion

The incorporation of these changes: a) will not increase the probability or the consequences of an accident or malfunction of equipment important to safety as evaluated previously in the Safety Analysis Report; b) will not increase the possibility of an accident or malfunction of a type other than that evaluated previously in the Safety Analysis Report; c) will not reduce the margin of safety as defined in the basis for any Technical Specification; d) does not constitute an unreviewed safety question, and e) involves no Significant Hazards Consideration, as defined in 10 CFR 50.92.

VI. References

1. NYPA letter, J. P. Bayne to D. B. Vassallo, dated July 25, 1984 (JPN-83-70) regarding modification of ADS Logic, NUREG-0737, Item II.K.3.18.

2. NRC letter, D. B. Vassallo to J. P. Bayne, dated June 3, 1983 regarding NUREG-0737, Item II.K.3.18, ADS Logic Modifications. Includes NRC Evaluation of BWROG Generic Response to NUREG-0737, Item No. II.K.3.18.

3. NRC letter, D. B. Vassallo to J. P. Bayne, dated June 5, 1984 regarding response to NUREG-0737, Item II.K.3.18.

4. BWR Owners' Group letter, T. J. Dente to D. G. Eisenhut, dated October 28, 1984 (BWROG-8260) transmits report "BWR Owners' Group Evaluation of NUREG-0737, Item II.K.3.18 Depressurization System Logic" February 1983, NEDE-30045.

5. NRC letter, D. G. Eisenhut to All Licensees, dated September 5, 1980 regarding Preliminary Clarification of TMI Action Plan Requirements, Item II.K.3.18 "Modification of ADS Logic - Feasibility for Increased Diversity for Some Event Sequences" of NUREG-0737.

6. PASNY letter, J. P. Bayne to D. B. Vassallo, dated March 31, 1983 (JPN-83-29).

7. NRC letter, D. G. Eisenhut to All BWR Licensees, dated February 8, 1983 regarding Safety Evaluation of "Emergency Procedure Guidelines, Revision 2", NEDO-24934, June 1982.