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SCHWENCER,A. OPERATING REACTORS BRANCH 1

SUBJECT: FORWARDS AMEND 39 TO TECH SPECS CHANGING SAFETY INJECTION ACTUATION LOGIC FROM LOW PRESSURIZER PRESSURE COINCIDENT W/LOW PRESSURIZER LEVEL,2 OUT OF 3 CHANNELS.

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WISCONSIN PUBLIC SERVICE CORPORATION

P.O. Box 1200, Green Bay, Wisconsin 54305

April 20, 1979

Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention Mr. A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Gentlemen:

Docket 50-305
Operating License DPR-43
Proposed Technical Specification Amendment No. 39
Kewaunee Nuclear Power Plant

Enclosed please find forty (40) copies of proposed Amendment No. 39 to the Kewaunee Nuclear Power Plant Technical Specifications. The amendment addresses a change of Safety Injection (SI) actuation logic from low Pressurizer Pressure coincident with low Pressurizer Level, 1 out of 3 channels, to low Pressurizer Pressure, 2 out of 3 channels. This change is being initiated because the reliability of Pressurizer Level indication under certain accident or transient conditions has been questioned. The change in SI actuation to Pressurizer Pressure actuation alone assures safety during these accident or transient conditions.

This proposed Technical Specification amendment will allow for an immediate processing of a modification to implement 2 out of 3 logic from low Pressurizer Pressure to actuate Safety Injection. The implementation of this is possible without major modification wiring changes, and can be done on-line since it involves only changes in actuation logic of the specific safeguard trains. Separation of trains will be maintained, testability will be maintained, and verification of proper actuation of the first train can be performed prior to modification of the second train.

Westinghouse Electric Corporation has reviewed this proposed design change from the standpoint of providing protection in the event of an accident or transient requiring Safety Injection actuation and has suggested that this modification be incorporated as a permanent change to the Kewaunee Plant. They have determined that the 2 out 3 low pressure actuation provides adequate redundancy in the event of a failed channel.

Implementation of the 2 out of 3 low Pressurizer Pressure SI actuation modification is preferred to the suggested tripping of Pressurizer low Level bistables in the present logic which results in a 1 out of 3 low Pressurizer Pressure SI actuation. From the standpoint of providing continued safety to the plant and general public we wish to avoid the increased probability of an inadvertant Safety Injection actuation and the resultant abnormal

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transients imposed on the plant in the event of a single channel failure.

Therefore, we request prompt review action on this proposed amendment with a return response today if possible, so that the proposed modification can be implemented prior to the required response to IE Bulletin No. 79-06A dated April 14, 1979.

In accordance with 10 CFR 170.22, we find this amendment to be a Class III amendment and have enclosed a check for $4000.00 to cover the fee associated with processing this amendment.

Sincerely,

E. R. Mathews

E. R. Mathews
Vice President
Power Supply & Engineering

dl

Enc.

Subscribed and Sworn to
Before Me This 20th Day
of April, 1979

Jerome O Tews

Notary Public, State of Wisconsin

My Commission Expires

2-6-83

Setting Limits

1. The high containment pressure limit is set at about 10% of the maximum internal pressure. Initiation of Safety Injection protects against loss-of-coolant[2] or steam line break[3] accidents as discussed in the safety analysis.

2. The Hi-Hi containment pressure limit is set at about 50% of the maximum internal containment pressure for initiation of containment spray and at about 30% for initiation of steam line isolation. Initiation of containment spray and steam line isolation protects against large loss-of-coolant or steam line break accidents as discussed in the safety analysis.

3. The pressurizer low-pressure limit is set substantially below system operating pressure limits. However, it is sufficiently high to protect against a loss-of-coolant accident as shown in the safety analysis.

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4. The steam line low-pressure signal is lead/lag compensated and its setpoint is set well above the pressure expected in the event of a large steam line break accident as shown in the safety analysis.

5. The high steam line flow limit is set at approximately 20% of nominal full-load flow at the no-load pressure and the high-high steam line flow limit is set at approximately 120% of nominal full load flow at the full load pressure in order to protect against large steam break accidents. The coincident low T_{avg} setting limit for steam line isolation initiation is set below its hot shutdown value. The safety analysis shows that these settings provide protection in the event of a large steam break.

TABLE TS 3.5-1

ENGINEERED SAFETY FEATURES INITIATION INSTRUMENT SETTING LIMITS

NO.	FUNCTIONAL UNIT	CHANNEL	SETTING LIMIT
1	High Containment Pressure (Hi)	Safety Injection*	$\leq$ 4 psig
2	High Containment Pressure (Hi-Hi)	a. Containment Spray	$\leq$ 23 psig
		b. Steam Line Isolation of Both Lines	$\leq$ 17 psig
3	Pressurizer Low Pressure	Safety Injection*	$\geq$ 1815 psig
4	Low Steam Line Pressure	Safety Injection*	$\geq$ 500 psig
		Lead Time Constant	$\geq$ 12 seconds
		Lag Time Constant	$\leq$ 2 seconds
5	High Steam Flow in a Steam Line Coincident with Safety Injection and Low T_{avg}	Steam Line Isolation of Affected Line **	d/p corresponding to < 0.745 x 10^6 lb/hr at 1005 psig
			$\geq$ 540°F
6	High-High Steam Flow in a Steam Line Coincident with Safety Injection	Steam Line Isolation of Affected Line **	< d/p corresponding to 4.5 x 10^6 lb/hr at 735 psig
7	Forebay Level	Trip circ. water pumps	

*Initiates containment isolation, feedwater line isolation, shield building ventilation, auxiliary building special vent, and starting of all containment fans. In addition, the signal overrides any bypass on the accumulator valves.

** Confirm main steam isolation valves closure within 5 seconds when tested
d/p = differential pressure

Table TS 3.5-1

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TABLE TS 3.5-3

EMERGENCY COOLING

NO.	FUNCTIONAL UNIT	1 NO. OF CHANNELS	2 NO. OF CHANNELS TO TRIP	3 MINIMUM OPERABLE CHANNELS	4 MINIMUM DEGREE OF REDUNDANCY	5 PERMISSIBLE BYPASS CONDITIONS	6 OPERATOR ACTION IF CONDITIONS OF COLUMN 3 OR 4 CANNOT BE MET
1	SAFETY INJECTION						
	a. Manual	2	1	1	-		Hot Shutdown***
	b. High Containment Pressure	3	2	2	-		Hot Shutdown***
	c. Low Steam Pressure/Line	3	2	2	-		Hot Shutdown***
	d. Pressurizer Low Pressure	3	2	2	-	Primary pressure < 2000 psig	Hot Shutdown***
2	CONTAINMENT SPRAY						
	a. Manual	2	2	2	**		Hot Shutdown***
	b. Hi-Hi Containment Pressure (Containment Spray)	3 sets of 2	1 of 2 in each set	1 per set	1/set		Hot Shutdown***

**Must actuate 2 switches.

***If minimum conditions are not met within 24 hours, steps shall be taken to place the plant in cold shutdown condition.

Table TS3.5-3

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