

NOV 06 1981

Docket No. 50-305

Mr. Eugene R. Mathews, Vice President  
Power Supply and Engineering  
Wisconsin Public Service Corporation  
Post Office Box 1200  
Green Bay, Wisconsin 54305

Dear Mr. Mathews:

DISTRIBUTION  
Docket RLicciardo  
NRC PDR SVarga  
L PDR Gray File  
TERA ASLAB  
NSIC  
ORB#1 Rdg  
DEisenhut  
OELD  
IE-4  
ACRS-10  
GDeegan-4  
BScarf-10  
DBrinkman  
OPA  
RDiggs  
CParrish

The Commission has issued the enclosed Amendment No. 38 to Facility Operating License No. DPR-43 for Kewaunee Nuclear Power Plant. The amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated October 20, 1981, as further modified by agreements reached in discussions with your staff. The Technical Specification changes are supported by the Safety Evaluation Report transmitted to the Wisconsin Public Service Corporation by letter dated April 18, 1980.

The amendment incorporates the requirements for implementation of the TMI-2 Lessons Learned Category "A" items. They specifically include the areas of emergency power supply requirements, valve position indication, instrumentation for inadequate core cooling, containment isolation, auxiliary feedwater systems, and shift technical advisor, and require the implementation of programs to reduce leakage outside containment and to accurately determine airborne iodine concentrations.

We have determined that this amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that this amendment involves an action which is insignificant from the standpoint of environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

We have concluded, based on the considerations referenced above, that: (1) because this amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

8112110106 811106  
PDR ADDCK 05000305  
P PDR

OFFICE							
SURNAME							
DATE							

Mr. Eugene R. Mathews

-2-

A copy of the Notice of Issuance is also enclosed.

Sincerely,

Steven A. Varga, Chief  
Operating Reactors Branch #1  
Division of Licensing

Enclosures:

1. Amendment No. 38 to DPR-43
2. Notice of Issuance

cc w/enclosures:  
See next page

OFFICE	ORB#1:DL	ORB#1:DL	ORB#1:DL	AD/ORB#1	QELD		
SURNAME	CParrish	RLicciardo	SVarga:ds.	TNovak			
DATE	11/6/81	11/6/81	11/6/81	11/6/81	11/6/81		

Mr. Eugene R. Mathews  
Wisconsin Public Service Corporation

cc: Steven E. Keane, Esquire  
Foley and Lardner  
777 East Wisconsin Avenue  
Milwaukee, Wisconsin 53202

Kewaunee Public Library  
822 Juneau Street  
Kewaunee, Wisconsin 54216

Stanley LaCrosse, Chairman  
Town of Carlton  
Route 1  
Kewaunee, Wisconsin 54216

Mr. Donald L. Quistroff, Chairman  
Kewaunee County Board  
Kewaunee County Courthouse  
Kewaunee, Wisconsin 54216

Chairman  
Public Service Commission of Wisconsin  
Hill Farms State Office Building  
Madison, Wisconsin 53702

Mr. Patrick Walsh  
Assistant Attorney General  
114 East, State Capitol  
Madison, Wisconsin 53702

U. S. Nuclear Regulatory Commission  
Resident Inspectors Office  
Route #1, Box 999  
Kewaunee, Wisconsin 54216

Regional Radiation Representative  
EPA Region V  
230 South Dearborn Street  
Chicago, Illinois 60604



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

WISCONSIN PUBLIC SERVICE CORPORATION  
WISCONSIN POWER AND LIGHT COMPANY  
MADISON GAS AND ELECTRIC COMPANY

DOCKET NO. 50-305

KEWAUNEE NUCLEAR PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 38  
License No. DPR-43

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Wisconsin Public Service Corporation, Wisconsin Power and Light Company and Madison Gas and Electric Company (the licensees) dated October 20, 1981, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

8112110109 811106  
PDR ADDCK 05000305  
PDR

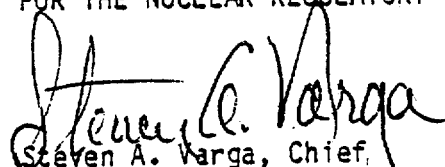
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-43 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 38, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Steven A. Varga, Chief  
Operating Reactors Branch #1  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 6, 1981

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 38 TO FACILITY OPERATING LICENSE NO. DPR-43

DOCKET NO. 50-305

Revise Appendix A as follows:

Remove Pages

TS 3.1-2a  
TS 3.1-2b  
-----  
TS 3.5-1  
TS 3.5-5  
Table TS 3.5-1 (Page 1 of 2)  
-----  
Table TS 3.5-3 (Page 1 of 2)  
-----  
Table TS 3.5-4 (Page 1 of 2)  
-----  
-----  
Table TS 4.1-1 (Page 1 of 4)  
Table TS 4.1-1 (Page 2 of 4)  
Table TS 4.1-1 (Page 3 of 4)  
-----  
Table TS 4.1-3  
-----  
TS 6-2  
TS 6-2a  
TS 6-24  
-----

Insert Pages

TS 3.1-2a  
TS 3.1-2b  
TS 3.1-2c  
TS 3.5-1  
TS 3.5-5  
Table TS 3.5-1 (Page 1 of 2)  
Table TS 3.5-1 (Page 2 of 2)  
Table TS 3.5-3 (Page 1 of 2)  
Table TS 3.5-3 (Page 2 of 2)  
Table TS 3.5-4 (Page 1 of 2)  
Table TS 3.5-4 (Page 2 of 2)  
Table TS 3.5-5  
Table 4.1-1 (Page 1 of 4)  
Table 4.1-1 (Page 2 of 4)  
Table 4.1-1 (Page 3 of 4)  
Table 4.1-1 (Page 4 of 4)  
Table TS 4.1-3 (Page 1 of 2)  
Table TS 4.1-3 (Page 2 of 2)  
TS 6-2  
TS 6-2a  
TS 6-24  
TS 6-24a

5. Pressurizer Power Operated Relief Valves (PORV) and PORV Block Valves.

a. Two PORV's and their associated block valves shall be operable during hot standby and operating modes.

1. If a pressurizer PORV is inoperable, the PORV shall be restored to an operable condition within one hour or the associated block valve shall be closed and maintained closed by administrative procedures to prevent inadvertent opening.
2. If a PORV block valve is inoperable, the block valve shall be restored to an operable condition within one hour or the block valve shall be closed with power removed from the valve; otherwise the unit shall be placed in the hot shutdown condition using normal operating procedures.

38

### Basis

When the boron concentration of the Reactor Coolant System is to be reduced, the process must be uniform to prevent sudden reactivity changes in the reactor. Mixing of the reactor coolant will be sufficient to maintain a uniform boron concentration if at least one reactor coolant pump or one residual heat removal pump is running while the change is taking place. The residual heat removal pump will circulate the equivalent of the primary system volume in approximately one-half hour.

Part 1 of the specification requires that both reactor coolant pumps be operating when the reactor is in power operation to provide core cooling in the event that a loss of flow occurs. Planned power operation with one loop out of service is not allowed in the present design because the system does not meet the single failure (locked rotor) criteria requirement for this mode of operation. The flow provided in each case in Part 1 will keep DNBR well above 1.30. Therefore, cladding damage and release of fission products to the reactor coolant will not occur. One pump operation is not permitted for any length of time except for tests. Upon loss of one pump below 10% full power the core power shall be reduced to a level below the maximum power determined for zero power testing. Natural circulation will remove decay heat up to 10% power. Above 10% power, an automatic reactor trip will occur if flow from either pump is lost.<sup>(1)</sup>

Each of the pressurizer safety valves is designed to relieve 325,000 lbs per hour of saturated steam at set point. Below 350°F and 350 psig, the Residual Heat Removal System can remove decay heat and thereby control system temperature and pressure. If no residual heat were removed by any of the means available, the amount of steam which could be generated at safety valve relief pressure would be less than half the valves' capacity. One valve therefore provides adequate protection against over-pressurization.

The Basis for the Pressure Isolation Valves is contained with Reference 2.



The pressurizer power operated relief valves (PORV's) operate as part of the pressurizer pressure control system. They are intended to relieve RCS pressure below the setting of the code safety valves. These relief valves have remotely operated block valves to provide a positive shutoff capability should a relief valve become inoperable.

38

References:

- (1) FSAR Section 7.2.2
- (2) Order for Modification of License dated 4/20/81.

### 3.5 INSTRUMENTATION SYSTEM

#### Applicability

Applies to reactor protection and engineered safety features instrumentation systems.

#### Objective

To provide for automatic initiation of the engineered safety features in the event that principal process variable limits are exceeded, and to delineate the conditions of the reactor protection instrumentation and engineered safety features circuits necessary to ensure reactor safety.

#### Specification

- a. Setting limits for instrumentation which initiate operation of the engineered safety features shall be as stated in Table TS 3.5-1.
- b. For on-line testing or in the event of failure of a sub-system instrumentation channel, plant operation shall be permitted to continue at rated power in accordance with Tables TS 3.5-2 through TS 3.5-4.
- c. If for Tables TS 3.5-2 through TS 3.5-4 the number of channels of a particular sub-system in service falls below the limits given in Column Three, or if the values in Column Four cannot be achieved, operation shall be limited according to the requirement shown in Column 6, as soon as practicable.
- d. In the event of sub-system instrumentation channel failure permitted by Specification 3.5.b, Tables TS 3.5-2 through TS 3.5-4 need not be observed during the short period of time (approximately 4 hours) the operable sub-system channels are tested, where the failed channel must be blocked to prevent unnecessary reactor trip.
- e. The instrumentation in Table 3.5-5 shall be operable. In the event the limits given in column 1 and 2 cannot be maintained, operator action will be in accordance with the respective notes.

## Instrument Operating Conditions

During plant operations, the complete protective instrumentation systems will normally be in service. Reactor safety is provided by the Reactor Protection Systems, which automatically initiates appropriate action to prevent exceeding established limits. Safety is not compromised, however, by continuing operation with certain instrumentation channels out of service since provisions were made for this in the plant design. This specification outlines limiting conditions for operation necessary to preserve the effectiveness of the Reactor Control and Protection System when any one or more of the channels is out of service.

Almost all reactor protection channels are supplied with sufficient redundancy to provide the capability for channel calibration and test at power. Exceptions are backup channels such as reactor coolant pump breakers. The removal of one trip channel on process control equipment is accomplished by placing that channel bistable in a tripped mode: e.g., a two-out-of-three circuit becomes a one-out-of-two circuit. The source and intermediate range nuclear instrumentation system channels are not intentionally placed in a tripped mode since these are one-out-of-two trips, and the trips are therefore bypassed during testing. Testing does not trip the system unless a trip condition exists in another channel.

The operability of the instrumentation noted in Table 3.5-5 assures that sufficient information is available on these selected plant parameters to aid the operator in identification of an accident and assessment of plant conditions during and following an accident. In the event the instrumentation noted in Table 3.5-5 is not operable, the operator is given instruction on compensatory actions.

### References:

- (1) FSAR Section 7.5
- (2) FSAR Section 14.3
- (3) FSAR Section 14.2.5

## ENGINEERED SAFETY FEATURES INITIATION, INSTRUMENT SETTING LIMITS

<u>NO.</u>	<u>FUNCTIONAL UNIT</u>	<u>CHANNEL</u>	<u>SETTING LIMIT</u>
1	High Containment Pressure (H1)	Safety Injection*	$\leq 4$ psig
2	High Containment Pressure (H1-H1)	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 $< 0.745 \times 10^6$ lb/hr at 1005 psig $\geq 540^\circ\text{F}$
6	High-High Steam Flow in a Steam Line Coincident with Safety Injection	Steam Line Isolation of Affected Line **	$< d/p$ corresponding to $4.5 \times 10^6$ lb/hr at 735 psig
7	Forebay Level	Trip circ. water pumps	

## ENGINEERED SAFETY FEATURES INITIATION, INSTRUMENT SETTING LIMITS

<u>NO.</u>	<u>FUNCTIONAL UNIT</u>	<u>CHANNEL</u>	<u>SETTING LIMIT</u>	
8	Containment Purge and Vent System, Radiation Particulate Detector Radioactive Gas Detector	Containment Ventilation Isolation	< value of Radiation Levels in exhaust duct as defined in Note ***	
9	Safeguards Bus Undervoltage	Loss of Power	> 87.5% + 2% nominal bus voltage ≤ 2.5 second time delay	38
<p>* 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.</p> <p>** Confirm main steam isolation valves closure within 5 seconds when tested d/p = differential pressure</p> <p>*** The setting limits for max radiation levels are derived from the technical specification allowable release rates found in Technical Specification 3.9.b.</p>				

## EMERGENCY COOLING

NO.	FUNCTIONAL UNIT	1	2	3	4	5	6
		NO. OF CHANNELS	NO. OF CHANNELS TO TRIP	MINIMUM OPERABLE CHANNELS	MINIMUM DEGREE OF REUNDANCY	PERMISSIBLE BYPASS CONDITIONS	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 pres- sure < 2000 psig	Hot Shutdown***
2	CONTAINMENT SPRAY						
	a. Manual	2	2	2	**		Hot Shutdown***
	b. H1-H1 Containment Pressure (Containment Spray)	3 sets of 2	1 of 2 in each set	1 per set	1/set		Hot Shutdown***

(Deleted)

## INSTRUMENT OPERATING CONDITIONS FOR ISOLATION FUNCTIONS

NO.	FUNCTIONAL UNIT	1	2	3	4	5	6
		NO. OF CHANNELS	NO. OF CHANNELS TO TRIP	MINIMUM OPERABLE CHANNELS	MINIMUM DEGREE OF REDUNDANCY	PERMISSIBLE BYPASS CONDITIONS	OPERATOR ACTION IF CONDITIONS OF COLUMN 3 OR 4 CANNOT BE MET
1	CONTAINMENT ISOLATION						
	a. Safety Injection		See Item No. 1 of Table TS 3.5-3				Hot Shutdown***
	b. Manual	2	1	1	-		Hot Shutdown
2	STEAM LINE ISOLATION						
	a. Hi-Hi Steam Flow with Safety Injection	2/loop	1	1	-		Hot Shutdown***
	b. Hi Steam Flow and 2 of 4 Low T <sub>avg</sub> with Safety In- jection	2/loop	1	1	-		Hot Shutdown***
	c. Hi Containment Pressure	3	2	2	-		Hot Shutdown***
	d. Manual	1/loop	1/loop	1/loop	-		Hot Shutdown

TABLE TS 3.5-3 Page 2 of 2

## 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
3	MOTOR DRIVEN AUXILIARY FEEDWATER PUMPS						
	a. Either Steam Generator Lo-Lo Level	3/loop	2/loop	2/loop	-		Maintain hot shutdown
	b. Loss of Main Feed- water ****	1	1	1			Maintain hot shutdown
	c. Safety Injection	(Refer to Item 1 of this Table)					
	d. 4 KV Buses 1-5 and 1-6 under voltage	2/Bus*	1/Bus	1/Bus*****			Maintain hot shutdown or operate diesel generators.
4	TURBINE DRIVEN AUXILIARY FEEDWATER PUMPS						
	a. Both Steam Generator Lo-Lo Level	3/loop	2/loop	2/loop	-		Maintain hot shutdown
	b. 4 KV Buses 1-1 and 1-2 under voltage	(Refer to Item 13 of Table TS 3.5-2)					

\* Each channel consists of one instantaneous and one-time relay connected in series.

\*\* 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.

\*\*\*\* Tripping of both Main Feedwater Pump Breakers starts both motor driven auxiliary feedwater pumps.

\*\*\*\*\* When one component of a channel is taken out of service, that component shall be in the tripped condition.



TABLE TS 3.5-4 Page 2 of 2

INSTRUMENT OPERATING CONDITIONS FOR ISOLATION FUNCTIONS							
		1	2	3	4	5	6
<u>NO.</u>	<u>FUNCTIONAL UNIT</u>	<u>NO. OF CHANNELS</u>	<u>NO. OF CHANNELS TO TRIP</u>	<u>MINIMUM OPERABLE CHANNELS</u>	<u>MINIMUM DEGREE OF REDUNDANCY</u>	<u>PERMISSIBLE BYPASS CONDITIONS</u>	<u>OPERATOR ACTION IF CONDITIONS OF COLUMN 3 OR 4 CANNOT BE MET</u>
3	CONTAINMENT VENTILATION ISOLATION						
	a. High Containment Radiation	2	1	1	-	-	Operation may continue provided containment purge and ventilation system isolation valves are maintained closed. ****
	b. Safety Injection	(Refer to Item 1 of Table TS 3.5-3)					
	c. Containment Spray	(Refer to Item 2 of Table TS 3.5-3)					

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

\*\*\*\* Technical Specification 3.1.d.5 limits operation to 12 hours when all containment radiation monitors are inoperable.

TABLE TS 3.5-5

## INSTRUMENTATION OPERATING CONDITIONS FOR INDICATION

<u>NO.</u>	<u>FUNCTIONAL UNIT</u>	<u>REQUIRED TOTAL NO. OF CHANNELS*</u>	<u>MINIMUM CHANNELS OPERABLE**</u>
1	Auxiliary Feedwater Flow to Steam Generators (Narrow Range Level Indication already required operable by Tech Spec Table TS 3.5-2 Item 12).	1/steam gen	1/steam gen
2	Reactor Coolant System Subcooling Margin	2	1
3	Pressurizer Power Operated Relief Valve Position (One Common Channel Temperature, One Channel Limit Switch per Valve)	2/valve	1/valve
4	Pressurizer Power Operated Relief Block Valve Position (One Common Channel Temperature, One Channel Limit Switch per Valve)	2/valve	1/valve
5	Pressurizer Safety Valve Position (One Channel Temperature, and one Acoustic Sensor per valve)	2/valve	1/valve

\* With the number of Operable monitoring instrumentation channels less than the Required Total Number of Channels shown, either restore the inoperable channels to Operable status within fourteen days, or be in at least Hot Shutdown within the next 12 hours.

\*\*With the number of Operable event monitoring instrumentation channels less than the Minimum Channels Operable requirements, either restore the minimum number of channels to Operable status within 72 hours or be in at least Hot Shutdown within the next 12 hours.

NOTE: Technical Specification 6.9.b.2 applies only when MINIMUM CHANNELS OPERABLE are less than shown.

TABLE TS 4.1-1

**MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND  
TEST OF INSTRUMENT CHANNELS**  
(Page 1 of 4)

38

<u>Channel Description</u>	<u>Check</u>	<u>Calibrate</u>	<u>Test</u>	<u>Remarks</u>
1. Nuclear Power Range	S (1) EPPM (3)****	D (1) EFPQ (3)****	(M) (2) ***	1) Heat balance 2) Signal to $\Delta T$ ; bistable action (permissive, rod stop, trips) 3) Upper and lower chambers for axial off-set using in-core detectors
2. Nuclear Intermediate Range	*S (1)	N.A.	P (2)	1) Once/shift when in service 2) Log level; bistable action (permissive, rod stop, trips)
3. Nuclear Source Range	*S (1)	N.A.	P (2)	1) Once/shift when in service 2) Bistable action (alarm, trips)
4. Reactor Coolant Temperature	*S	R	M (1) M (2)	1) Overtemperature $\Delta T$ 2) Overpower $\Delta T$
5. Reactor Coolant Flow	S	R **	M	
6. Pressurizer Water Level	S	R **	M	
7. Pressurizer Pressure	S	R **	M	
8A. 4-KV Voltage & Frequency	N.A.	R	M	Reactor protection circuits only Safeguards buses only
8B. 4-KV Voltage	N.A.	R	R	

Table TS4.1-1 (1 of 4)

Amendment No. 38

TABLE TS 4.1-1

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND  
TEST OF INSTRUMENT CHANNELS  
(Page 2 of 4)

38

<u>Channel Description</u>	<u>Check</u>	<u>Calibrate</u>	<u>Test</u>	<u>Remarks</u>
9. Analog Rod Position	S (1,2)	R **	R	1) With step counters 2) Following rod motion in excess of six in. when computer is out of service
10. Rod Position Bank Counters	S (1,2)	N.A.	R	1) With analog rod position 2) Following rod motion in excess of six in. when computer is out of service
11. Steam Generator Level	S	R **	M	
12. Steam Generator Flow Mismatch	S	R **	M	
13. Charging Flow	S	R	N.A.	
14. Residual Heat Removal Pump Flow	S (when in operation)	R	N.A.	
15. Boric Acid Tank Level	D	R	M	
16. Refueling Water Storage Tank Level	W	A	N.A.	
17. Volume Control Tank Level	S	R	N.A.	
18A. Containment Pressure (SIS signal)	S	R **	M (1)	1) Isolation valve signal
18B. Containment Pressure (Steamline Isol)	S	R **	M	Narrow range containment pressure (-3.0, +3.0 psig excluded)
18C. Containment Pressure (Cont. Spray Act)	S	R **	M	
18D. Annulus Pressure (Vacuum Breaker)	N.A.	R **	R	

Table TS4.1-1 (2 of 4)  
Amendment No. 38

TABLE TS 4.1-1  
MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND  
TEST OF INSTRUMENT CHANNELS  
(Page 3 of 4)

<u>Channel Description</u>	<u>Check</u>	<u>Calibrate</u>	<u>Test</u>	<u>Remarks</u>
19. Radiation Monitoring System	*D	R	M	Includes all 24 channels
20. Boric Acid Make-Up Flow Channel	N.A.	R	N.A.	
21. Containment Sump Level	N.A.	N.A.	R	
22. Accumulator Level and Pressure	S	R	N.A.	
23. Steam Generator Pressure	S	R	M	
24. Turbine First Stage Pressure	S	A**	M	
25. Portable Radiation Survey Instruments	*M	A	Q	
26. Protective System Logic Channel Testing	N.A.	N.A.	M	Includes auto load sequencer
27. Environmental Monitors	*M	N.A.	N.A.	
28. Turbine Overspeed Protection Trip Channel	N.A.	R	M	
29. Seismic Monitoring System	R	R	N.A.	
30. Fore Bay Water Level	N.A.	R**	R	

## MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TEST OF INSTRUMENT CHANNELS

	<u>CHANNEL DESCRIPTION</u>	<u>CHECK</u>	<u>CALIBRATE</u>	<u>TEST</u>	<u>REMARKS</u>
31	AFW Flow Rate	See Remarks	R	N.A.	Flow Rate Indication will be checked at each unit startup and shut-down
32	PORV Position Indication	M	R	N.A.	
32a	Back-up (Temperature)	M	R	N.A.	
33	PORV Block Valve Position Indicator	M	R	N.A.	
34	Safety Valve Position Indicator (Acoustic)	M	R	N.A.	
34a	Back-up (Temperature)	M	R	N.A.	
35	FW Pump Trip (AFW Initiation)	M	N.A.	R	
36	Reactor Coolant System Subcooling Monitor	M	R**	R	
	A - Annually				R - Each refueling cycle not to exceed 18 mos.
	D - Daily				S - Each shift
	M - Monthly				B/W - Every two weeks
	P - Prior to each startup if not done previous week				N.A.- Not applicable
	Q - Quarterly				W - Weekly
					EFPM - Effective Full Power Month
					EFPQ - Effective Full Power Quarter

\* See Specification 4.1.d

\*\* Only if test indicates calibration required

\*\*\* Permissives P8 and P10 and the 25% reactor trip are tested quarterly

\*\*\*\* The check and calibration for axial offset shall also be performed prior to exceeding 75 percent power following any core alteration.

## MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

<u>Equipment Tests***</u>	<u>Test</u>	<u>Frequency</u>	<u>Maximum Time Between Test (Days)</u>
1. Control Rods	Rod drop times of all full length rods	Each refueling outage	N.A.
	Partial movement of all rods	Every 2 weeks	17
1a. Reactor Trip Breakers	Open trip	Monthly	37
1b. Reactor Coolant Pump Breakers-Open-Reactor Trip	Operability	Each refueling outage	N.A.
2. Pressurizer Safety Valves	Set point	One each refueling	N.A.
3. Main Steam Safety Valves	Set point	Two each refueling outage	N.A.
4. Containment Isolation Trip	Operability	Each refueling outage	N.A.
5. Refueling System Interlocks	Operability	Prior to each refueling outage	N.A.
6. Ventilation System	Halide, DOP and Methyl Iodide Pressure Drop Test	During each refueling outage except as specified in Note**	N.A.
a. Shield Building	Visual Inspection		
b. Auxiliary Building			
c. Spent Fuel Pool			
7. Fire Protection Pump and Power Supply	*Operability	Monthly	37
8. RCS Leak Detection	Operability	Weekly	8
9. Diesel Fuel Supply	*Fuel inventory	Weekly	8
10. Turbine Stop and Governor Valves	Operability	Monthly <sup>(1)(2)</sup>	37 <sup>(1)(2)</sup>
11. Fuel Assemblies	Visual Inspection	Each refueling outage	N.A.
12. Guard Pipes	Visual Inspection	Each refueling outage	N.A.

## MINIMUM FREQUENCIES FOR EQUIPMENT TESTS

<u>EQUIPMENT TEST</u>	<u>TEST</u>	<u>FREQUENCY</u>	<u>MAXIMUM TIME BETWEEN TESTS (DAYS)</u>
13. Pressurizer PORV's	Operability	Each Refueling Cycle	NA
14. Pressurize PORV Block Valves	Operability	Quarterly*****	NA
15. Pressurizer Heaters	Continuity	Each Refueling Cycle	NA
16. Containment Purge and Vent Isolation Valves	Operability****	Each Refueling Cycle	NA

NOTES

- \* See Specification 4.1.d
- \*\* Tests and frequency shall be in accordance with Specifications 4.4.d and 4.12.
- \*\*\* Following maintenance on the above equipment that could affect the operation of the equipment tests should be performed to verify operability.
- \*\*\*\* This test shall demonstrate that the valve(s) close in less than or equal to 5 seconds.
- \*\*\*\*\* Not required when valve is administratively closed.

(1) This test may be waived for end of cycle operations when boron concentrations are less than 150 ppm, due to operational limitations.



- c. At least one licensed operator shall be in the control room when fuel is in the reactor.
- d. At least two licensed operators shall be present in the control room during reactor startup, turbine generator synchronization to the grid, and during recovery from reactor trips.
- e. An individual qualified in radiation protection procedures shall be on site when fuel is in the reactor. This individual may be one of the shift operators.
- f. Refueling operations shall be directed by a licensed Senior Reactor Operator assigned to the refueling operation who has no other concurrent responsibilities during the refueling operation.
- g. A Fire Brigade of at least three members shall be maintained at all times. The Fire Brigade shall not include a minimum crew of two control operators necessary for safe shutdown of the unit during a fire emergency. This change is effective 90 days after issuance of this amendment.
- h. When the reactor is above the cold shutdown condition, a qualified Shift Technical Advisor shall be within 10 minutes of the control room.

38

### 6.3 PLANT STAFF QUALIFICATIONS

- 6.3.1 Qualifications of each member of the Plant Staff shall meet or exceed the minimum acceptable levels of ANSI-N18.1-1971 for comparable positions.
- 6.3.2 The Shift Technical Advisor shall have a bachelors degree or equivalent in a scientific or engineering discipline with specific training in the design of the Kewaunee Plant and plant transient and accident analysis.

38

#### 6.4 TRAINING

6.4.1 A retraining and replacement training program for the Plant Staff shall be maintained under the direction of the Training Supervisor and shall meet or exceed the requirements and recommendations of Section 5.5 of ANSI-N18.1-1971 and Appendix A of 10 CFR Part 55.

6.4.2 A training program for the Fire Brigade shall be maintained under the direction of the Fire Marshall and shall meet or exceed the requirements of Section 27 of the NFPA Code-1975, except that training sessions shall be held quarterly.

#### 6.5 REVIEW AND AUDIT

##### 6.5.1 PLANT OPERATIONS REVIEW COMMITTEE (PORC)

##### FUNCTION

6.5.1.1 The PORC shall function to advise the Plant

6.10.2 The following records shall be retained for the duration of the Plant Operating License.

- a. Records of a complete set of as-built drawings for the plant as originally licensed and all print changes showing modifications made to the plant.
- b. Records of new and spent fuel inventory, fuel transfers, and assembly burnup histories.
- c. Records of plant radiation and contamination surveys.
- d. Records of radiation exposure of all plant personnel, and others who enter radiation control areas.
- e. Records of radioactivity in liquid and gaseous wastes released to the environment.
- f. Records of transient or operational cycles for these facility components.
- g. Records of training and qualification for current members of the plant staff.
- h. Records of in-service inspections performed pursuant to these Technical Specifications.
- i. Records of meetings of the NSRAC and PORC.
- j. Records for Environmental Qualification which are covered under the provisions of paragraph 6.14.

#### 6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

6.11 Continued

IODINE MONITORING

The licensee shall implement a program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1. Training of personnel,
2. Procedures for monitoring, and
3. Provisions for maintenance of sampling and analysis equipment.

6.12 SYSTEM INTEGRITY

The licensee shall implement a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. This program shall include the following:

1. Provisions establishing preventive maintenance and periodic visual inspection requirements, and
2. Integrated leak test requirements for each system at a frequency not to exceed refueling cycle intervals.

38

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-305WISCONSIN PUBLIC SERVICE CORPORATIONWISCONSIN POWER AND LIGHT COMPANYMADISON GAS AND ELECTRIC COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 38 to Facility Operating License No. DPR-43, issued to Wisconsin Public Service Corporation, Wisconsin Power and Light Company, and Madison Gas and Electric Company (the licensees), which revised Technical Specifications for operation of the Kewaunee Nuclear Plant (the facility) located in Kewaunee, Wisconsin. The amendment is effective as of the date of issuance.

The amendment incorporates the requirements for implementation of the TMI-2 Lessons Learned Category "A" items. It specifically includes the areas of emergency power supply requirements, valve position indication, instrumentation for inadequate core cooling, containment isolation, auxiliary feedwater systems, and shift technical advisor, and requires the implementation of programs to reduce leakage outside containment and to accurately determine airborne iodine concentrations.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in

-2-

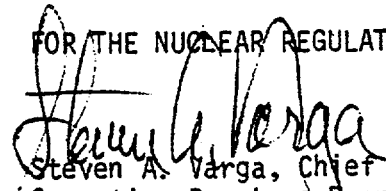
10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since this amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated October 20, 1981, (2) Amendment No. 38 to License No. DPR-43, (3) the Commission related Safety Evaluation transmitted to the licensee dated April 18, 1980, and (4) the Commission's letter dated November 6, 1981. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. and at the Kewaunee Public Library, 314 Milwaukee Street, Kewaunee, Wisconsin 54216. A copy of items (2), (3) and (4) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 6th day of November, 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Steven A. Varga, Chief  
/ Operating Reactors Branch #1  
Division of Licensing