

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

#### DAIRYLAND POWER COOPERATIVE

## DOCKET NO. 50-409

## LA CROSSE BOILING WATER REACTOR

## AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 25 License No. DPR-45

- 1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Dairyland Power Cooperative (the licensee) dated September 12, 1980, 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.

8110300402 811023 PDR ADDCK 05000409 PDR PDR

- 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 Provisional Operating License No. DPR-45 is hereby amended to read as follows:
  - (2) Technical Specifications

The Technical Specifications contained in Appendix A issued October 31, 1969, with Authorization No. DPRA-6, as revised through Amendment No. 25, 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

romas l

Dennis M. Crutchfield, Chief Operating Reactors Branch #5 Division of Licensing

Attachment: Changes to the Technical Specifications

Date of Issuance: October 23, 1981

ATTA	CHME	NT	TO L	ICENSE	AMENDME	NT I	NO. 25	
LACRO	SSE	BOI	LING	WATER	REACTOR	(L/	ACBWR)	
PROVI	SION	AL	OPER	ATING	LICENSE	NO.	DPR-45	

Revise Appendix A by replacing the following pages with the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT		
i (23-27x) 	i 23 24 25 26 27a 27b 27c 27d 27c 27d 27e 27f 27g 27h		
	27i 27i		
28 44 47 48 49 49a 50 51 52 6-1	27k-27x 28 44 47 48 49 49a 50 51 52 6-1	(Intentionally	Blank

	1.4	4		-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-	- 1	TAB	LE	G	F	100	TE	NT	rs.	N. K.	-		. :.	See					1		-	-	1.4.5
			24				. *							1	11 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4							-		4	14.0		14	1.1	Pa	oe
۱.	SITE														i,															1
	1.1 1.2 1.3	LOU EXI PR	CAT: CLUS	ION SION IPAL	AA	ND CTI	RES	TR	1C S	TED	) A (	RE	ÀS •	•				•	•	•	•				:	:	•			1 1 1
2.	DESI	GN	AND	PE	RFO	RM/	ANCE	E R	EQ	UIF	REM	1EN	ITS							•										۱
	2.1 2.2 2.3 2.4 2.5 2.7 2.8 2.10 2.11 2.11	RE FO REA ELECCOSA WA	ACT RCE ACT IN ECT NTF NTF AFET ASTE	OR DC OR STE RIC OR OL OL Y A STC	BUI VES IRC AU) AM AL COF ROI SYS	LD) SEI (IL AN PO D D STE MO OSA GE	ING ATI( IAR D F R WER AND NIT L AND	ON Y SI VI SI VI SI VI SI VI SI VI SI	SY SYS DWA JPP SSS SYS	STI TELY ELL STE	MS I M . YS . NG	NTI	DP		· · · · · · · · · · · ·															1 4 5 11 12 13 16 17 18 21 22
З.	APPL	ICA	BIL	ITY																										23
4.	OPER	ITA	NG	LIMI	ITA	TIO	NS																							27d
	4.0. 4.1 4.2	1	DEF GEN OPE	INIT ERAL RATI	TIO ION	NS S L	 імі	TS	•	•				• • •	•••••	• • •	•			•	•	•	• •		•	••••	• • •			27d 28 28
5.	MAI	NTE	NAN	CE			. :																							37
	5.2	G	ENE EST NSE	RAL ING RVI	CE	IN	 SPE			P	RO	GRJ				•					•	•			•	•	•			37 39 53

10.65 .

Change No. 7, Amendment No. 73, 25

## LIMITING CONDITION FOR OPERATION

3.0.1 Limiting Conditions for Operation and ACTION requirements shall be applicable during the OPERATIONAL CONDITIONS or other specified applicable condition for each specification.

3.0.2 Adherence to the requirements of the Limiting Condition for Operation and/or 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.

3.0.3 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 at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the following 30 hours unless corrective measures are completed that formit operation under the permissible ACTION statements for the specified time interval as measured from initial discovery or until the reactor is placed in an OPERATIONAL CONDITION in which the specification is not applicable. Exceptions to these requirements shall be stated in the individual specifications.

3.0.4 Entry into an OPERATIONAL CONDITION or other specified applicibility state 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 through OPERATIONAL CONDITIONS required to comply with ACTION requirements.

3.0.5 When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is incperable, 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), components(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 at least HOT SHUTDOWN within 12 hours, and in at least COLD SHUTDOWN within the following 30 hours. This specification is not applicable in Conditions 4 or 5.

#### SURVEILLANCE REQUIREMENTS

3.0.6 Surveillance Requirements shall be applicable during the OPERATIONAL CONDITIONS or other specified applicable conditions for individual Limiting Conditions for Operation unless otherwise stated in an individual Surveillance Requirement.

Change No. 13 Amendment Nos. 3, 9, 70, 23, 25

## SURVEILLANCE REQUIREMENTS - (Cort'd)

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

- A maximum allowable extension not to exceed 25% of the surveillance interval.
- b. A total maximum combined interval time for any 3 consecutive surveillance intervals not to exceed 3.25 times the specified surveillance interval.

3.0.8 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 or on equipment not required to be OPERABLE.

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

This page intentionally blank

:

•. 1

Liange No. 13 Amendment No. 2, 9, 10, 23, 25

#### BASES

The specifications of this section provide the general requirements applicable to each of the Limiting Conditions for Operation and Surveillance Requirements within Section 3.0.

3.0.1 This specification defines the applicability of each specification in terms of defined OPERATIONAL CONDITIONS or other specified applicability conditions and is provided to delineate specifically when each specification is applicable.

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

3.0.3 This specification delineater the ACTION to be taken for circumstances not directly provided for in the ACTION statements and whose occurrence would violate the intent of specification. For example, Specification 4.2.5.8, requires all three rod position indicator systems to be available for indication of individual rod positions, and provides for one of these systems to be removed for maintenance for a time period of up to 24 hours. Under the terms of Specification 3.0.3, if more than one rod position indication system is out of service, the unit is to be placed in HOT SHUTDOWN within 12 hours and in COLD. SHUTDOWN within the next thirty hours. It is assumed that the unit is brought to the required OPERATIONAL CONDITION within the required times by promptly initiating and carrying out the appropriate ACTION statemers.

3.0.4 This specification provides that entry into an OPERATIONAL CONDITION or other specified applicability condition 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 stateme ".

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

Exceptions to this provision have been provided 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.

## BASES - (Cont'd)

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

For example, Specification 3.8.1.1 requires in part that both emergency diesel generators be OPERABLE. The ACTION statement provides for a 72-hour out-of-service time when emergency diesel generator (1A) or (1B) is not OPERABLE. If the definition of OPERABLE were applied without consideration of Specification 3.0.5, all systems, subsystems, trains, components, and devices supplied by the inoperable emergency power source, deisel generator (1A) or (1B), would also be inoperable. This would dictate making the applicable ACTION statements for each of the applicable Limiting Conditions for Operation. However, the provisions of Specification 3.0.5 permit the time limits for continued operation to be consistent wich the ACTION statement for the inoperable emergency di sel generator instead, provided the other specified conditions are satisfied. In this case, this would mean that the corresponding normal power source must be OPERABLE, and all redundant systems, subsystems, trains, components, and devices must be OPERABLE, or otherwise satisfy Specification 3.0.5 (i.e., be capable of performing their design function and have at least one normal or one emergency power source OPERABLE). If they are not satisfied, shutdown is required in accordance with this specification.

In Condition 4 or 5, Specification 3.0.5 is not applicable, and thus the individual ACTION statements for each applicable Limiting Condition for Operation in these Conditions must be adhered to.

3.0.6 This specification provides that surveillance activities necessary to ensure that the Limiting Conditions for Operation are met and will be performed during the OPERATIONAL CONDITIONS or other specified applicability conditions for which the Limiting Conditions for Operation are applicable. Provisions for additional surveillance activities to be performed without regard to the applicable OPERATIONAL CONDITIONS or other specified applicability conditions are provided in the individual Surveillance Requirements. Surveillance Requirements for Special Test Exceptions need only be performed when the Special Test Exception is being utilized as an exception to an individual specification.

## BASES - (Cont'd)

3.0.7 The provisions of this specification provide allowable tolerances for performing surveillance activities beyond those specified in the nominal surveillance interval. These tolerances are necessary to provide operational flexibility because of scheduling and performance consideration. The phrase "at least" associated with a surveillance frequency requirement does not negate these allowable tolerances for performing surveillance activities; instead it permits more frequent performance of surveillance activities than required by the specification.

The tolerance values, taken either individually or consecutively over three test intervals, are sufficiently restrictive to ensure that the reliability associated with the surveillance activity is not significantly degraded beyond that obtained from the nominal specified interval.

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

3.0.9 This specification ensures that the surveillance activities associated with a Limiting Condition for Operation have been performed within the specified time interval prior to entry into an OPERATIONA' CONDITION or other specified applicablity condition. 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, following extended plant outages, the applicable surveillance activities must be performed within the stated surveillance interval prior to placing or returning the system or equipment into OPERABLE status. THIS PAGE INTENTIONALLY LEFT BLANK

2

\*

Amendment No. 3, 9, 10, 23, 25

\*. T

## 4.0.1 DEFINITIONS

For purposes of the Safety Limits and Limiting Safety Systems Settings, Section 4.0.2; Reactor Coolant Activity, Specification 4.2.2.22; Electrical Power Systems, Section 4.2.3; Power Distribution 'imits, Section 4.2.4.2; Fire Detection Instrumentation, Section 4/5.2.17; 'ire Suppression Systems, Section 4/5.2.18; and Penetration Fire Barriers, Section 4/5.2.19: Technical Specifications only, the following terms are defined and appear in capitalized type so that uniform interpretation may be achieved.

#### ACTION

ACTION shall be those additional requirements specified as corollary statements to each principle specification and shall be part of the specifications.

#### AVERAGE PLANAR EXPOSURE

The AVERAGE PLANAR EXPOSURE shall be applicable to a specific planar height and is equal to the sum of the exposure of all the fuel rods in the specified bundle at the specified height divided by the number of fuel rods in the fuel bundle.

#### AVERAGE PLANAR LINEAR HEAT GENERATION RATE

The AVERAGE PLANAR LINEAR HEAT GENERATION RATE (ALPHGR) shall be applicable to a specific planar height and is equal to the sum of the LINEAR HEAT GENERATION RATES for all the fuel rods in the specified bundle at the specified height divided by the number of fuel rods in the fuel bundle.

#### CHANNEL CALIBRATION

A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that is responds with the necessary range and accuracy to known values of the parameter which the channel monitors. The CHANNEL CALIBRATION shall encompass the entire channel including the sensor and alarm and/or trip functions, and shall include the CHANNEL FUNCTIONAL TEST. The CHANNEL CALIBRATION may be performed by any series of sequential, overlapping or total channel steps such that the entire channel is calibrated.

#### CHANNEL CHECK

A CHANNEL CHECK shall be the qualitative assessment of channel behavior during operation by observation. This determination shall include, where possible, comparison of the channel indication and/or status with other indicating and/or status derived from independent instrument channels measuring the same parameter.

- 27d -

## 4.0.1 DEFINITIONS - (Cont'd)

#### CHANNEL FUNCTIONAL TEST

A CHANNEL FUNCTIONAL T 1 be:

- a. Analog channel. injection of a simulated signal into the channel as close to the sense. s practicable to verify OPERABILITY including alarm and/or trip functions and channel failure trips.
- b. Bistable channels the injection of a real or simulated signal into the sensor to verify OPERABILITY including alarm and/or trip functions.

#### CONTAINMENT INTEGRITY

CONTAINMENT INTEGRITY shall exist when:

- a. All penetrations required to be isolated during accident conditions are either:
  - Capable of being closed by an OPERABLE containment automatic isolation valve system, or
  - Closed by at least one manual valve, blind flange, or deactivated automatic valve secured in its closed position.
- b. The freight door is closed,
- c. Each air lock is OPERABLE,
- d. The containment leakage rates are within the limit, and
- e. The sealing mechanism associated with each penetration (e.g., welds, bellows, o-rings) is OPERABLE.

#### CORE ALT: ATION

CORE ALTERATION shall be the addition, removal, relocation or movement of fuel, sources, incore instrumentation or reactivity controls within the reactor pressure vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe conservative position.

#### CRITICAL POWER RATIO

The CRITICAL POWER RATIO (CPR) shall be the ratio of that power in a fuel assembly which is calculated by application of the XN-2 correlation to cause some point in the assembly to experience boiling transition, divided by the actual assembly operating power.

## 4.0.1 DEFINITIONS - (Cont'd)

## DOSE EQUIVALENT I-131

DOSE EQUIVALENT I-131 shall be that concentration of I-131 µCi/gram, which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in Table III of TID-14844, "Calculation of Distance Factors for Power and Test Reactor Sites."

## E - AVERAGE DISINTEGRATION ENERGY

E shall be the average, weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling, of the sum of the average beta and gamma energies per disintegration, in MeV, for isotopes other than iodines with half lives greater than 15 minutes, making up at least 95% of the total non-iodine activity in the coolant.

#### FREQUENCY NOTATION

The FREQUENCY NOTATION specified for the performance of Surveillance Requirements shall correspond to the intervals defined in Table of Surveillance Frequency Notation.

#### IDENTIFIED LEAKAGE

IDENTIFIED LEAKAGE shall be:

- a. Leakage into collection systems, such as pump seal or valve packing leaks, that are captured and conducted to a sump or collecting tank, or
- b. Leakage into the containment atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be PRESSURE BOUNDARY LEAKAGE.

#### LIMITING CONTROL ROD PATTERN

A LIMITING CONTROL ROD PATTERN shall be pattern which results in the core being on a thermal hydraulic limit, i.e., operating on a limiting value for APLHGR, LHGR, or MCPR.

## LINEAR HEAT GENERATION RATE

LINEAR HEAT GENERATION RATE (LGHR) shall be the power generation in an arbitrary length of fuel rod, usually one foot. It is the integral of the heat flux over the heat transfer area associated with the unit length.

## 4.0.1 DEFINITIONS - (Cont'd)

## MINIMUM CRITICAL POWER RATIO

The MINIMUM CRITICAL POWER RATIO (MCPR) shall be the smallest CPR which exists in the core.

#### OPERABLE-OPERABILITY

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

## OPERATIONAL CONDITION - CONDITION

An OPERATIONAL CONDITION, i.e. CONDITION, shall correspond to any one inclusive combination of power level and average reactor coolant temperature specified in Table of OPERATIONAL CONDITIONS.

#### PARTIAL SCRAM

A PARTIAL SCRAM signal shall cause the electric and hydraulic scram motors for 13 preselected control rod drive mechanisms to be actuated for control rod insertion. Full insertion of PARTIAL SCRAM control rods during POWER OPERATION shall render the reactor subcritical.

#### PHYSICS TESTS

PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation and 1) described in Chapter 13 of the Safeguards Report, 2) authorized under the provisions of 10 CFR 50.59, or 3) otherwise approved by the Commission.

#### PRESSURE BOUNDARY LEAKAGE

PRESSURE BOUNDARY LEAKAGE shall be leakage through a non-isolable fault in a Reactor Coolant System component body, pipe wall or vessel wall.

#### RATED THERMAL POWER

RATED THERMAL POWER shall be a total reactor core heat transfer rate to the reactor coolant and reactor components of 165 MWt.

## 4.0.1 DEFINITIONS - (Cont'd)

## REPORTABLE CCCURRENCE

A REPORTABLE OCCURRENCE shall be any of those conditions specified in Specification 6.9.1.7 of Technical Specifications.

#### SHUTDOWN MARGIN

SHUTDOWN MARGIN shall be the amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming all control rods are fully inserted, except for the single control rod of highest reactivity worth which is assumed to be fully withdrawn, and the reactor is in the shutdown condition, cold, i.e. < 80°F, and Xenon free.

#### STAGGERED TEST BASIS

A STAGGERED TEST BASIS shall consist of:

- a. A test schedule for n systems, subsystems, trains or other designated components obtained by dividing the specified test interval into n equal subintervals.
- b. The testing of one system, subsystem, train or other designated component at the beginning of each subinterval.

#### THERMAL POWER

THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant and reactor components.

#### UNIDENTIFIED LEAKAGE

UNIDENTIFIED LEAKAGE shall be all leakage which is not IDENTIFIED LEAKAGE.

Amendment No. 3', 9, 10, 23, 25

## SURVEILLANCE FREQUENCY NOTATION

NOTATION	FREQUENCY
S	At least once per 12 hours.
D	At least once per 24 hours.
W	At least once per 7 days.
М	At least once per 31 days.
Q	At least once per 92 days.
SA	At least once per 6 months.
A	At least once per 12 months.
R	At least once per 18 months.
S/U	Prior to each reactor startup.
N.A.	Not Applicable.

Amendment No. 2, 9, 10, 23, 25

TABLE	OF	OPERATIONAL	_ CONDITIONS
And the second se		the same of the same state of	stands on one other and the second state of the second state state of the

	OPERATIONAL CONDITION	% RA THERMAL	TED POWER*	AVERAGE COOLANT TEMPERATURE		
1.	POWER OPERATION	> 3	0/ 10	Any temperature		
2.	STARTUP	<u>&lt;</u> 3	a/	Any temperature		
3.	HOT SHUTDOWN	0		> 212°F		
4.	COLD SHUTDOWN	. 0		< 2120F		
5.	REFUELING**	0		< 212°F		

\*Excluding decay heat.

\*\*Reactor vessel head unbolted or removed and fuel in the vessel.

THIS PAGE INTENTIONALLY LEFT BLANK

(Pages 27k - 27x) Amendment No. 8, 9, 10, 23, 25

. .

## 4.1 GENERAL

- 4.1.3 During periods when the reactor is in Condition 3, 4, or 5, either Channel 1 or 2 of the Nuclear Instrumentation System shall be in operation and shall be monitored by the operator.
- 4.1.4 Whenever the reactor contains one or more fuel elements, any operations from points outside the control room of equipment which may affect the reactor shall be conducted under the direction, or with the knowledge, of the control room operator.
- 4.1.5 If the plant is operational during a tornado warning, the shift supervisor on duty shall keep informed of the actual tornado activity which may approach the plant. In the event that reports indicate an imminent tornado strikr at or near the LACBWR plant, the shift supervisor shall reduce reactor power to a level which permits prompt reduction of power generation to station load. However, the shift supervisor shall be instructed to discontinue plant operation if, in his judgment, this action is required to ensure plant safety.
- 4.2.1 Reactor Building
  - 4.2.1.1 CONTAINMENT INTEGRITY shall be maintained in Conditions 1, 2, 3 and during:
    - (a) CORE ALTERATIONS,
    - (b) handling of irradiated fuel, or
    - (c) moving a spent fuel shipping cask in the Containment Building.
    - (d) there is fuel in the reactor and any control rod is withdrawn

Amendment No. 23, 25

	CHECKIN	G OF INSTRUMENTAT	ION
	Channels	Action	Minimum Frequency
1.	Reactor Water Level	Calibration	At each refueling shutdown.
		*Test	Monthly when in service and prior to each reactor startup if test has not been performed within 30 days.
		Check	Daily
2.	Reactor Pressure	Calibration	At each refueling shutdown.
		*Test	Monthly when in service and prior to each reactor startup if test has not been performed within 30 days.
		Check	Daily
з.	Reactor Power - Flow	Calibration	At each refueling shutdown.
		*Test	Monthly when in service and prior to each reactor startup if test has not been performed within 30 days.
		Check	Daily
4.	Reactor Coolant Flow	Calibration	At each refueling shutdown.
		*Test	Monthly when in service and prior to each reactor startup if test has not been performed within 30 days.
		Check	Daily
5.	Source Range (Channels 1 and 2)	Test (60 cycles er sec)	Prior to each reactor startup if test has not been performed within 30 days.

Change No 1 Amendment No. 25

- 44 -

٠.

. .

	Channels	Action		Minimum Frequency
22.	CRD accumulators low gas pressure scram relay		Test	Prior to each plant startup if test has not been performed within 30 days.
		**	Check pressure indication	Weekly
23.	Turbine stop valve		Test	Prior to each plant startup if test has not been performed within 30 days.
24.	Reactor Pressure (RPTS)		Calibration	At each refueling shutdown
25.	Reactor Water Level (RPTS)	•	Calibration	At each refueling shutdown
26.	Reactor Safety Valve Position Indication		Check	Monthly
			Calibration .	At each refueling shutdown -

\*Test shall include tripping of the scram relays K-114.

5.2.16 Corrosion test coupons shall be inserted in the forced circulation loop to evaluate the corrosion deterioration of chronic ium-molybdenum piping; and that piping shall be replaced if the reduction on pipe wall thickness, as indicated by weight loss and metallographic evaluation of the test coupons, is greater than 0.190 inches. The replacement piping shall be stainless steel or shall be clad internally with stainless steel and shall meet the design requirements of Section 2.3.2.

- 47 -

## TABLE 1

# (Operating Limits)

NO.	CONDITION CHANNEL OR SENSOR		SET POINT	ACTION	KEYSWITCH BYPASS PROVISIONS			
1	reactor power high	two of four nuclear channels 5, 6, 7, and 8 if power level is $\geq 5^{\%}$ of full power	Table 4.0.2.2.1-1	full scram	none .			
		either nuclear channel 5 or 6 if power level is < 5% of full power	Table 4.0.2.2.1-1	full scram	one channel may be bypassed for calibration and testing			
2	reactor period short	nuclear channel 3 or 4	Table 4.0.2.2.1-1	full scram	<ul> <li>(1) both channels may be bypassed only when reactor power exceeds 3 Mwt</li> <li>(2) one channel may be by- passed for calibration and testing</li> </ul>			
3	reactor pressure high	pressure safety channel 1 or 2	<u>&lt;</u> 1325 psig	<ol> <li>full scram</li> <li>shutdown condenser operates</li> <li>closure of ventilation inlet and outlet dampers</li> <li>Closure of containment off-gas yent header value</li> </ol>	one channel may be bypassed for calibration and testing			
4	reactor power - flow rate abnormal	power-flow safety channel 1 or 2	Table 4.0.2.2.1-1	full scram	one channel may be bypassed for calibration and testing			
5 5	reactor coolant flow rate low	power-flow safety channel 1 or 2	Table 4.0.2.2.1-1	full scram	one channel may be bypassed for calibration and testing			

No. 7. 25

TABLE 1 -	(Operating	Limits)	-	(Cont'd)
-----------	------------	---------	---	----------

ITEM	CONDITION	CHANNEL OR SENSOR	SET POINT	ACTION	KEYSWITCH BYPASS PROVISIONS
6	reactor water level	water level safety channel 1 or 2	Table 4.0.2.2.1-1	full scram	one channel may be bypassed for calibration and testing
	(Nominal indicated un above the fuel to up	nvoided saturated water 1 to 4'6" above the fuel o	level shall be permitte during reactor heatup a	ed to vary from 2'9" and operation)	
7	reactor water level low	water level safety channel 1 or 2	<pre>&lt; 12" below nomi- nal indicated level</pre>	<ol> <li>full scram</li> <li>initiation of high pressure core spray pumps</li> <li>closure of reactor building steam isolation valve and its bypass</li> <li>Closure of reactor blowdown through decay hea removal valve</li> </ol>	one channel of Item No. 7 or channel 3 of Item No. 7A may be bypassed for calibra- tion and testing
			.,	<ul> <li>(5) start 1A and 1B diesel generators</li> <li>(6) closure of shutdor condenser condens drain valve</li> <li>(7) closure of venti-</li> </ul>	wn ate
	Amendment No. &. X.			<ul> <li>(7) closure of ventraliation inlet and outlet dampers</li> <li>(8) closure of contai</li> <li>ment offgas vent. header valve</li> <li>(9) closure of heatin steam condensate return valve</li> <li>(10) closure of retent tank pump dischar valve</li> </ul>	n- g tion tge
	2 5				

# TABLE 1 - OPERATING LIMITS - (Cont'd)

ITEM NO.	CONDITION	CHANNEL OR SENSOR	SET POINT	ACTION	KEYSWITCH BYPASS PROVISIONS
7A	reactor water level low	water level safety channel 3 ·	<pre>&lt; 12" below nomi- nal indicated level</pre>	<ul> <li>(1) full scram</li> <li>(2) initiation of high pressure core spray pumps</li> </ul>	one channel of Item No. 7 or channel 3 of Item No. 7A may be bypassed for calibra- tion and testing
8	main condenser vacuum low	vacuum switches 1 or 2	≥ 19" hg	<ol> <li>full scram</li> <li>closure of reac- tor building steam isolation valve</li> </ol>	<ol> <li>one channel may be by- passed during calibration and testing</li> <li>may be bypassed during plant startup and shut- down</li> </ol>
9	reactor building steam isolation valve not fully open	reactor building steam isolation valve closure relays 1 or 2	> 90% full open travel	<pre>(1) full scram (2) shutdown conden-     ser operates</pre>	<ul> <li>(1) may be bypassed during testing</li> <li>(2) may be bypassed during plant startup or shut- down</li> </ul>
10	turbine building steam isolation valve not fully open	turbine building steam isolation valve closure relays 1 or 2	<pre>&gt; 90% full open travel</pre>	<ul><li>(1) full scram</li><li>(2) shutdown conden- ser operates</li></ul>	<ol> <li>may be bypassed during testing</li> <li>may be bypassed during plant startup or shut- down</li> </ol>
11	turbine stop valve not fully open	limit switch	Table 4.0.2.2.1-1	partial scram	<ul> <li>(1) may be bypassed during testing</li> <li>(2) may be bypassed whenever the turbine load is less than 10 Mwe</li> </ul>
12 Amendm	low oil level in any control rod drive accumulator	limit switches	Table 4.0.2.2.1-1	partial scram	<ol> <li>may be bypassed during testing</li> <li>may be bypassed prior to withdrawing control rods in order to charge accumulators</li> </ol>

endment No., 8, 25

## TABLE 1 - OPERATING LIMITS - (Cont'd)

ITEM NO.	CONDITION	CHANNEL OR SENSOR	SET POINT	ACTION	KEYSWITCH BYPASS PROVISIONS
13	low gas pressure in any control rod drive accumulator	pressure switches	Table 4.0.2.2.1-1	partial scram	<ol> <li>may be bypassed during calibration and testing</li> <li>may be bypassed prior to withdrawing control rods in order to charge accumulators</li> </ol>
14	low voltage (for a time longer than required for reserve feed breakers to operate automati- cally)	2400 v bus 1A under- voltage relay 1 or 2 or 2400 v bus 1B under- voltage relay 1 or 2	Table 4.0.2.2.1-1	partial scram	none
50		2400 v bus 1A under- voltage relay 1 and 2400 v bus 1B under- voltage relay 1 or 2400 v bus 1A under- voltage relay 2 and 2400 v bus 1B under- voltage relay 2	Table 4.0.2.2.1-1	full scram	none
		reactor building motor control center 1A relay 1 or 2	Table 4.0.2.2.1-1	full scram	none . ·
		turbine building motor control center 1A relay 1 or 2	Table 4.0.2.2.1-1	full scram	none
Amendmen	low main steam pressure	main steam pressure transmitter	<u>&gt;</u> 1000 psig	closure of reactor building steam isolation valve	may be bypassed during plant startup and shutdown

Amendment

23

Item No.	<u>Condition</u>	Channel or Sensor	Set Point		Action	Keyswitch Bypass Provision
16	reactor building pressure high	reactor building pressure transmitter 1 or 2	≤ 5 pøig	<ul> <li>(1)</li> <li>(2)</li> <li>(3)</li> <li>(4)</li> <li>(5)</li> <li>(6)</li> <li>(7)</li> <li>(8)</li> <li>(9)</li> <li>(10)</li> <li>s</li> </ul>	initiation of high pressure core spray pumps initiation of altern core spray pumps closure of vent inle outlet dampers closure of containme off-gas vent header closure of retention oump discharge valve closure of shutdown condensate drain valve closure of reactor b chrough decay heat re alve closure of containment ressure service water losure of containment ralized water valve closure of containment reteam condensate valve	none ate t & nt valves tank condenser ve lowdown emoval at high er valve at demin- it heating ve.
				·		49.0
17	off-gas holdup tank effluent activity high	radiation monitor	<pre>&lt; gaseous ity level</pre>	activ-	diversion effluent gas	<del>.</del>

Amendment No. X, 25

5

.

gaseous activ- di
 ity levels which ef
 correspond to to
 Column 2'of the ta
 limitations
 given in Sec.
 4.2.7.2

effluent gas to the storage tanks

 $\mathcal{R}^{\prime}$ 

.

## TABLE 1 - OPERATING LIMITS - (Cont'd)

**ITEM** 

NO.	CONDITION	CHANNEL OR SENSOR	SET POINT	ACTION KEYSWITCH BYPASS PROVISIONS
18	reactor building ventilation exhaust	radiation monitors	<pre>&lt; radiation levels which correspond to Column 2 of the limitations given in Sec. 4.2.7.2</pre>	<ul> <li>(1) closure of ventilation, none inlet and outlet dampers</li> <li>(2) closure of containment off-gas vent header valve</li> </ul>
19	simultaneous low reactor pressure and low water level	pressure transmitter and water level safety channel 1 or 2	25-30 psig and < 12" below nomi- nal indicated level	opening of diaphragm valve allowing water to flow directly from overhead storage tank to core spray nozzles
20	simultaneous high reactor building pressure and reactor low water level	reactor building pres- sure transmitter 1 or 2 and reactor water level safety channel 1 or 2	<pre>&lt; 5 psig and &lt; 12" below nomi- nal indicated level</pre>	opening of motor operating valves and start of engine driven pumps of alternate core spray system
21 Amendment No. JA	high reactor pressure or low reactor water level	3 reactor pressure or 3 reactor level transmitters	< 1350 psig or < 30 inches below nominal indicated level.	trip of both recirc- ulation pump breakers the protective function can be bypassed whenever the reactor is shutdown or recirculation pump operation is required for safety reasons.
222	steam safety valves not fully closed	position switches on each of the three inservice safety valves	open-close	none - post accident none indication only

٠

- f. A Fire Brigade of at least 5 members shall be maintained on site at all times.<sup>\*</sup> The Fire Brigade shall not include the two LACEWR Plant Operators necessary for safe shutdown of the unit or any other personnel required for other essential functions during a fire emergency.
- g. At all times when the peactor is critical, or when its controls are being manipulated with fuel in the reactor, the control room shall be attended by a minimum of two persons, one of whom shall have a valid Operators License and shall have full responsibility for operation of the facility.
- h. A Shift Technical Advisor shall be onsite in OPERATIONAL CONDITIONS 1, 2, and 3.

#### 6.2.3 SHIFT TECHNICAL ADVISOR

The Shift Technical Advisor shall serve in an advisory capacity to the Shift Supervisor on matters pertaining to the engineering aspects assuring safe operation of the unit.

Amendment No. 10, 28, 25

Fire Brigade composition may be less than the minimum requirements for a period of time not to exceed 2 hours in order to accommodate unexpected absence of lire Brigade members provided immediate action is taken to restore the Fire Brigade to within the minimum requirements. This provision does not permit any lire Brigade position to be unmanned upon shift change due to an oncoming Brigade member being late or absent.