



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

NIAGARA MOHAWK POWER CORPORATION

DOCKET NO. 50-220

NINE MILE POINT NUCLEAR STATION, UNIT NO. 1

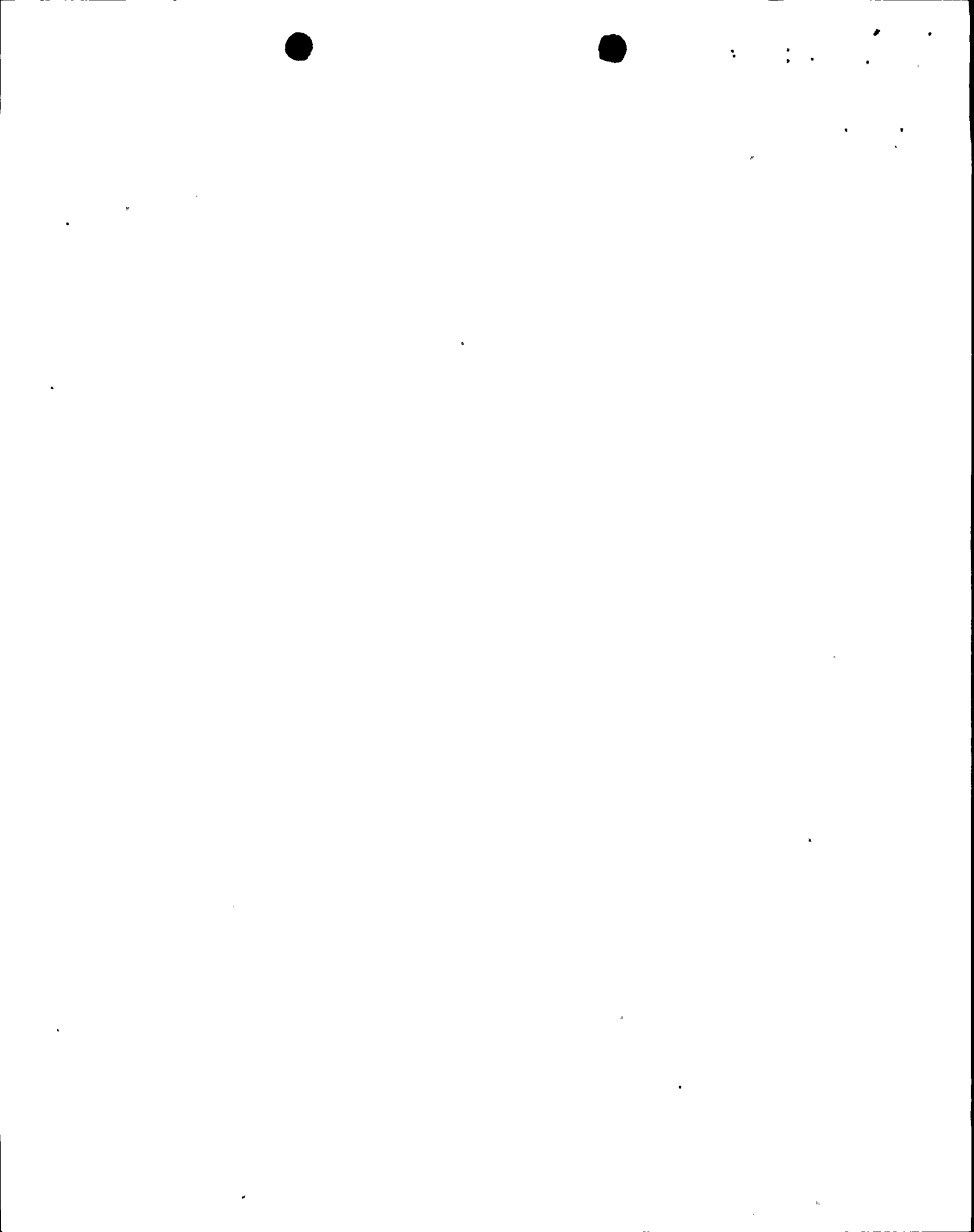
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 55  
License No. DPR-63

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Niagara Mohawk Power Corporation (the licensee) dated August 5, 1980 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's 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.
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 License No. DPR-63 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 55, 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.

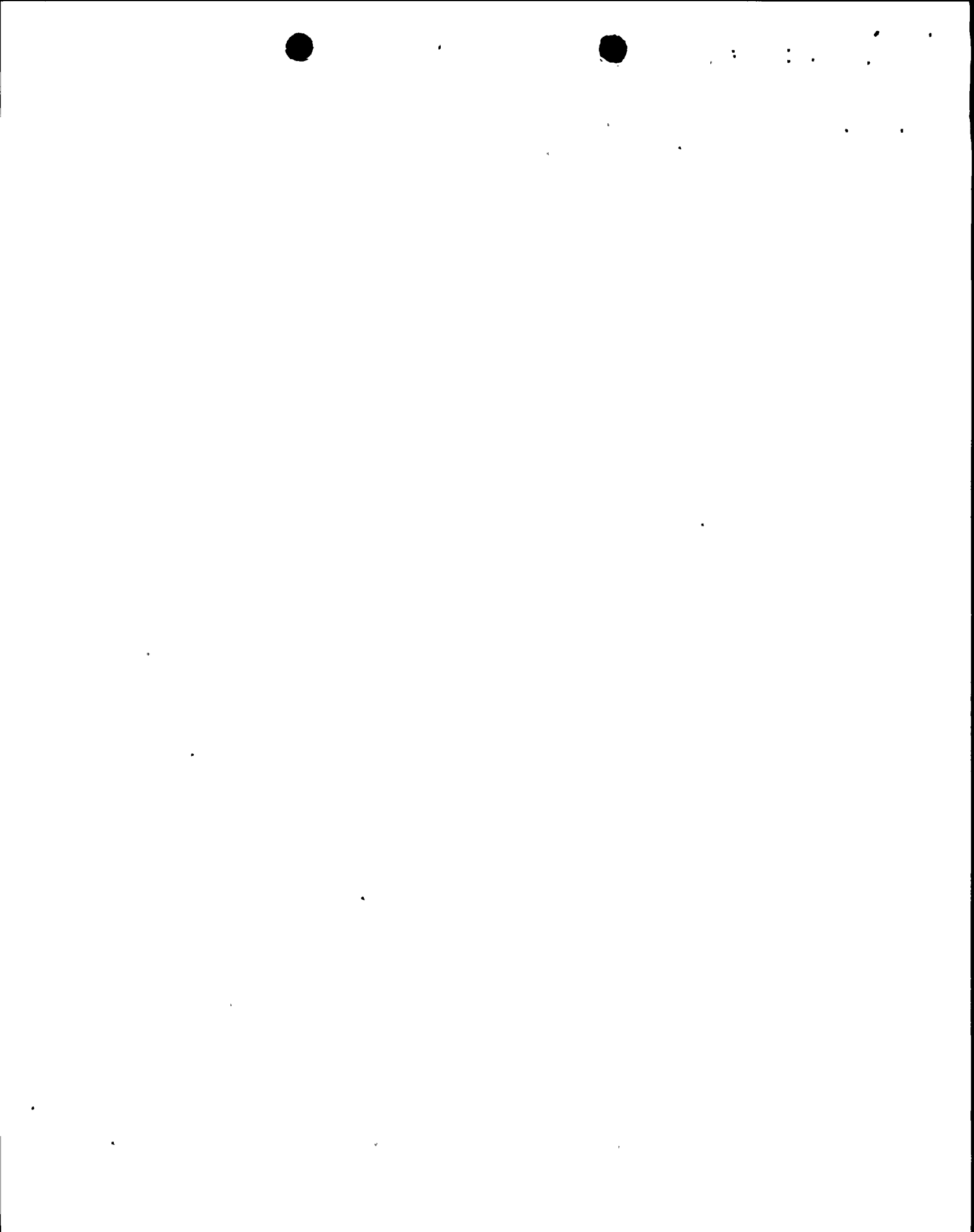
FOR THE NUCLEAR REGULATORY COMMISSION



Thomas A. Ippolito, Chief  
Operating Reactors Branch #2  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: June 1, 1981



ATTACHMENT TO LICENSE AMENDMENT NO. 55

FACILITY OPERATING LICENSE NO. DPR-63

DOCKET NO. 50-220

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## SAFETY LIMIT

- c. The neutron flux shall not exceed its scram setting for longer than 1.5 seconds as indicated by the process computer. When the process computer is out of service, a safety limit violation shall be assumed if the neutron flux exceeds the scram setting and control rod scram does not occur.

To ensure that the Safety Limit established in Specifications 2.1.1a and 2.1.1b is not exceeded, each required scram shall be initiated by its expected scram signal. The Safety Limit shall be assumed to be exceeded when scram is accomplished by a means other than the expected scram signal.

- d. Whenever the reactor is in the shutdown condition with irradiated fuel in the reactor vessel, the water level shall not be more than 7 feet 11 inches (-30 inches indicator scale) below minimum normal water level (Elevation 302'9"), except as specified "e" below.
- e. For the purpose of performing major maintenance (not to exceed 12 weeks in duration) on the reactor vessel; the reactor water level may be lowered 9' below the minimum normal water level (Elevation 302'9"). Whenever the reactor water level is to be lowered below the low-low-low level set point redundant instrumentation will be provided to monitor the reactor water level.

## LIMITING SAFETY SYSTEM SETTING

- d. The reactor water low level scram trip setting shall be no lower than -12 inches (53 inches indicator scale) relative to the minimum normal water level (302'9").
- e. The reactor water low-low level setting for core spray initiation shall be no less than -5 feet (5 inches indicator scale) relative to the minimum normal water level (Elevation 302'9").
- f. The flow biased APRM rod block trip settings shall be less than or equal to that shown in Figure 2.1.1.



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## BASES FOR 2.1.1 FUEL CLADDING - SAFETY LIMIT

During periods when the reactor is shut down, consideration must also be given to water level requirements, due to the effect of decay heat. If reactor water level should drop below the top of the active fuel during this time, the ability to cool the core is reduced. This reduction in core cooling capability could lead to elevated cladding temperatures and clad perforation. The core will be cooled sufficiently to prevent clad melting should the water level be reduced to two-thirds of the core height.

The lowest point at which the water level can normally be monitored is approximately 4 feet 8 inches above the top of the active fuel. This is the low-low-low water level trip point, which is 7 feet 11 inches (-30 inches indicator scale) below minimum normal water level (Elevation 302'9"). The safety limit has been established here to provide a point which can be monitored and also can provide adequate margin. However, for performing major maintenance as specified in Specification 2.1.1.e, redundant instrumentation will be provided for monitoring reactor water level below the low-low-low water level set point. (For example, by installing temporary instrument lines and reference pots to redundant level transmitters, so that the reactor water level may be monitored over the required range.) In addition written procedures, which identify all the valves which have the potential of lowering the water level inadvertently, are established to prevent their operation during the major maintenance, which requires the water level to be below the low-low level set point.

The thermal power transient resulting when a scram is accomplished other than by the expected scram signal (e.g., scram from neutron flux following closure of the main turbine stop valves) does not necessarily cause fuel damage. However, for this specification a safety limit violation will be assumed when a scram is only accomplished by means of a backup feature of the plant design. The concept of not approaching a safety limit provided scram signals are operable is supported by the extensive plant safety analysis.



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LIMITING CONDITION FOR OPERATION

- c. If a redundant component in each of the core spray systems becomes inoperable, both systems shall be considered operable provided that the component is returned to an operable condition within 7 days and the additional surveillance required is performed.
- d. If a copy spray system becomes inoperable and all the components are operable in the other system, the reactor may remain in operation for a period not to exceed 7 days.
- e. If Specifications a, b, c and d are not met, a normal orderly shutdown shall be initiated within one hour and the reactor shall be in the cold shutdown condition within ten hours.  
  
If both core spray systems become inoperable the reactor shall be in the cold shutdown condition within ten hours and no work (except as specified in "f" and "h" below) shall be performed on the reactor or its connected systems which could result in lowering the reactor water level to more than seven feet eleven inches below minimum normal water level (-30 inches indicator scale).

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SURVEILLANCE REQUIREMENT

- d. Core spray header  $\Delta P$  instrumentation
 

check	Once/day
calibrate	Once/3 months
test	Once/3 months

e. Surveillance with Inoperable Components

When a component or system becomes inoperable its redundant component or system shall be demonstrated to be operable immediately and daily thereafter.

- f. Surveillance during control rod drive maintenance which is simultaneous with the suppression chamber unwatered shall include at least hourly checks that the conditions listed in 3.1.4f are met.



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## LIMITING CONDITION FOR OPERATION

- h. For the purpose of performing major maintenance (not to exceed 12 weeks in duration) on the reactor vessel, the reactor water level may be lowered to 9' below the minimum normal water level (elevation 302'9"). Whenever the reactor water level is to be lowered below the low-low-low level set point redundant instrumentation will be provided to monitor the reactor water level and written procedures will be developed and followed whenever the reactor water level is lowered below the low-low level set point. The procedures will define the valves that will be used to lower the vessel water level. All other valves that have the potential of lowering the vessel water level will be identified by valve number in the procedures and these valves will be red tagged to preclude their operation during the major maintenance with the water level below the low-low level set point.

During the period of major maintenance requiring lowering the water level to more than 7 feet 11 inches below minimum normal water level (-30 inches indicator scale), either both Core Spray Systems must be operable or, if one Core Spray System is inoperable because of the maintenance, all of the redundant components of the other Core Spray System must be operable.

## SURVEILLANCE REQUIREMENTS



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## BASES FOR 3.1.5 AND 4.1.5 SOLENOID-ACTUATED PRESSURE RELIEF VALVES

### Pressure Blowdown

In the event of a small line break, substantial coolant loss could occur from the reactor vessel while it was still at relatively high pressures. A pressure blowdown system is provided which in conjunction with the core spray system will prevent significant fuel damage for all sized line breaks (Appendix E-11.2.0\*).

Operation of three solenoid-actuated pressure relief valves is sufficient to depressurize the primary system to 110 psig which will permit full flow of the core spray system within required time limits (Appendix E-11.2\*). Requiring all six of the relief valves to be operable, therefore, provides twice the minimum number required. Prior to or following refueling at low reactor pressure, each valve will be manually opened to verify valve operability. The malfunction analysis (Section II.XV, "Technical Supplement to Petition to Increase Power Level, "dated April 1970) demonstrates that no serious consequences result if one valve fails to close since the resulting blowdown is well within design limits.

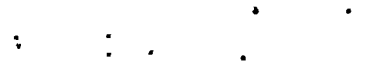
In the event of a small line break, considerable time is available for the operator to permit core spray operation by manually depressurizing the vessel using the solenoid-actuated valves. However, to ensure that the depressurization will be accomplished, automatic features are provided. The relief valves shall be capable of automatic initiation from simultaneous low-low-low water level (7'-11" below minimum normal water level at Elevation 302'9", -30 inches indicator scale) and high containment pressure (3.5 psig). The system response to small breaks requiring depressurization is discussed in Section VII-A.3.3\* and the time available to take operator action is summarized in Table VII-1\*. Additional information is included in the answers to Questions III-1 and III-5 of the First Supplement.

Steam from the reactor vessel is discharged to the suppression chamber during valve testing. Conducting the tests with the reactor at low pressure such as just prior to or just after refueling minimizes the stress on the reactor coolant system.

The test interval of once per operating cycle results in a system failure probability of  $7.0 \times 10^{-7}$  (Fifth Supplement, p. 115)\* and is consistent with practical consideration.

\*FSAR

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LIMITING CONDITION FOR OPERATION

- c. If a redundant component in each of the containment spray systems or their associated raw water systems become inoperable, both systems shall be considered operable provided that the component is returned to an operable condition within 7 days and that the additional surveillance required is performed.
- d. If a containment spray system or its associated raw water system becomes inoperable and all the components are operable in the other systems, the reactor may remain in operation for a period not to exceed 7 days.
- e. If Specifications "a" or "b" are not met, shutdown shall begin within one hour and the reactor coolant shall be below 215F within ten hours.

If both containment spray systems become inoperable the reactor shall be in the cold shutdown condition within ten hours and no work (except as specified in "f" below) shall be performed on the reactor which could result in lowering the reactor water level to more than seven feet eleven inches (-30 inches indicator scale) below minimum normal water level (Elevation 302'9").

SURVEILLANCE REQUIREMENT

- c. Raw Water Cooling Pumps  
At least once per quarter manual startup and operability of the raw water cooling pumps shall be demonstrated.
- d. Surveillance with Inoperable Components  
When a component or system becomes inoperable its redundant component or system shall be demonstrated to be operable immediately and daily thereafter.
- e. Surveillance during control rod drive maintenance which is simultaneous with the suppression chamber unwatered shall include at least hourly checks that the conditions listed in 3.3.7.f are met.



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Table 3.6.2f

INSTRUMENTATION THAT INITIATES AUTO DEPRESSURIZATION

Limiting Condition for Operation

<u>Parameter</u>	<u>Minimum No. of Tripped or Operable Trip Systems</u>	<u>Minimum No. of Operable Instrument Channels per Operable Trip System</u>	<u>Set-Point</u>	<u>Reactor Mode Switch Position in Which Function Must Be Operable</u>			
				<u>Shutdown</u>	<u>Refuel</u>	<u>Startup</u>	<u>Run</u>
<u>INITIATION</u>							
(1) a. Low-Low-Low Reactor Water Level	2 (a)	2 (a)	$\geq -30$ inches (indicator scale)	(b)	(b)	x	
and							
b. High Drywell Pressure	2 (a)	2 (a)	$\leq 3.5$ psig	(b)	(b)	x	



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