B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 219 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. Records

ENO shall keep facility operating records in accordance with the requirements of the Technical Specifications.

D. Equalizer Valve Restriction - DELETED

E. Recirculation Loop Inoperable - DELETED

F. Fire Protection

ENO shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility and as approved in the SER dated December 21, 1978 as supplemented subject to the following provision:

ENO may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

G. Physical Protection

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Pilgrim Nuclear Power Station Physical Security, Training and Qualification, and Safeguards Contingency Plan, Revision 0" submitted by letter dated October 13, 2004.

2.0 SAFETY LIMITS

2.1 Safety Limits

2.1.1 With the reactor steam dome pressure < 785 psig or core flow < 10% of rated core flow:

THERMAL POWER shall be ≤ 25% of RATED THERMAL POWER.

2.1.2 With the reactor steam dome pressure ≥ 785 psig and core flow ≥ 10% of rated core flow:

MINIMUM CRITICAL POWER RATIO shall be ≥ 1.06 for two recirculation loop operation or ≥ 1.08 for single recirculation loop operation.

2.1.3 Whenever the reactor is in the cold shutdown condition with irradiated fuel in the reactor vessel, the water level shall not be less than 12 inches above the top of the normal active fuel zone.

2.1.4 Reactor steam dome pressure shall be ≤ 1325 psig at any time when irradiated fuel is present in the reactor vessel.

2.2 Safety Limit Violation

With any Safety Limit not met the following actions shall be met:

2.2.1 Within one hour notify the NRC Operations Center in accordance with 10CFR50.72.

2.2.2 Within two hours:

A. Restore compliance with all Safety Limits, and

B. Insert all insertable control rods.

2.2.3 The Station Director and Senior Vice President - Nuclear and the Nuclear Safety Review and Audit Committee (NSRAC) shall be notified within 24 hours.

2.2.4 A Licensee Event Report shall be prepared pursuant to 10CFR50.73. The Licensee Event Report shall be submitted to the Commission, the Operations Review Committee (ORC), the NSRAC and the Station Director and Senior Vice President - Nuclear within 30 days of the violation.

2.2.5 Critical operation of the unit shall not be resumed until authorized by the Commission.

NOTES FOR TABLE 3.1.1 (Cont)

2. Permissible to bypass, with control rod block, for reactor protection system reset in refuel and shutdown positions of the reactor mode switch.
3. Permissible to bypass when reactor pressure is < 576 psig.
4. Permissible to bypass when turbine first stage pressure is less than ≤ 112 psig.
5. IRM's are bypassed when APRM's are onscale and the reactor mode switch is in the run position.
6. The design permits closure of any two lines without a scram being initiated.
7. When the reactor mode switch is in the Refuel position, the reactor vessel head is removed, and control rods are inserted in all core cells containing one or more fuel assemblies, these scram functions are not required.
8. Not required to be operable when primary containment integrity is not required.
9. Not required while performing low power physics tests at atmospheric pressure during or after refueling at power levels not to exceed 5 MW(t).
10. Not required to be operable when the reactor pressure vessel head is not bolted to the vessel.
11. Deleted
12. Deleted
13. An APRM will be considered inoperable if there are less than 2 LPRM inputs per level or there is less than 50% of the normal complement of LPRM's to an APRM.
14. Deleted
15. The APRM high flux trip level setting for the flow bias function shall be as specified in the CORE OPERATING LIMITS REPORT. The APRM high flux trip level setting shall in no case exceed 120% of rated thermal power.
16. The APRM (15%) high flux scram is bypassed when in the run mode.
17. The APRM flow biased high flux scram is bypassed when in the refuel or startup/hot standby modes.
18. Deleted.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.6 PRIMARY SYSTEM BOUNDARY (Cont)	4.6 PRIMARY SYSTEM BOUNDARY (Cont)
A. Thermal and Pressurization Limitations (Cont)	A. Thermal and Pressurization Limitations (Cont)
In the event this requirement is not met, achieve stable reactor conditions with reactor vessel temperature above that defined by the appropriate curve and obtain an engineering evaluation to determine the appropriate course of action to take.	
3. The reactor vessel head bolting studs shall not be under tension unless the temperature of the vessel head flange and the head is greater than 55°F.	3. When the reactor vessel head bolting studs are tensioned and the reactor is in a Cold Condition, the reactor vessel shell temperature immediately below the head flange shall be permanently recorded.
4. The pump in an idle recirculation loop shall not be started unless the temperatures of the coolant within the idle and operating recirculation loops are within 50°F of each other.	4. Prior to and during startup of an idle recirculation loop, the temperature of the reactor coolant in the operating and idle loops shall be permanently logged.
5. The reactor recirculation pumps shall not be started unless the coolant temperatures between the dome and the bottom head drain are within 145°F.	5. Prior to starting a recirculation pump, the reactor coolant temperatures in the dome and in the bottom head drain shall be compared and permanently logged.

LIMITING CONDITIONS FOR OPERATION

3.6 PRIMARY SYSTEM BOUNDARY (Cont)

D. Safety Relief Valves (Con't)

4. Any safety relief valve whose discharge pipe temperature exceeds 212°F for 24 hours or more shall be removed at the next cold shutdown of 72 hours or more, tested in the as-found condition, and recalibrated as necessary prior to reinstallation. Power operation shall not continue beyond 90 days from the initial discovery of discharge pipe temperatures in excess of 212°F for more than 24 hours without prior NRC approval of the engineering evaluation delineated in 3.6.D.3.

5. The limiting conditions of operation for the instrumentation that monitors tail pipe temperature are given in Table 3.2-F.

E. Jet Pumps

1. Whenever the reactor is in the Startup or Run Modes, all jet pumps shall be Operable. If it is determined that a jet pump is inoperable, the reactor shall be in Hot Shutdown within 12 hours.

SURVEILLANCE REQUIREMENTS

4.6 PRIMARY SYSTEM BOUNDARY (Cont)

E. Jet Pumps

NOTES
1. Not required to be performed until 4 hours after the associated recirculation loop is in operation.
2. Not required to be performed until 24 hours after >25% Rated Thermal Power.

Whenever there is recirculation flow with the reactor in the Startup or Run Modes, jet pump operability shall be checked daily by verifying at least one of the following criteria (1, 2, or 3) is satisfied for each operating recirculation loop:

1. Recirculation pump flow to speed ratio differs by ≤ 5% from established patterns, and jet pump loop flow to recirculation pump speed ratio differs by ≤ 5% from established patterns.
2. Each jet pump diffuser to lower plenum differential pressure differs by ≤ 20% from established patterns.
3. Each jet pump flow differs by ≤ 10% from established patterns.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.6 PRIMARY SYSTEM BOUNDARY (Cont)	4.6 PRIMARY SYSTEM BOUNDARY (Cont)
F. Recirculation Loops Operating	F. Recirculation Loops Operating
During operation in the Run and Startup Modes, at least one recirculation pump shall be operating.	Recirculation pump speeds shall be checked and logged at least once per day.
1. Whenever both recirculation pumps are in operation, pump speeds shall be maintained within 10% of each other when power level is greater than 80% and within 15% of each other when power level is less than or equal to 80%.	
2. Whenever a single recirculation loop is operating, the following limits are applied when the associated LCO is applicable:	
a) LCO 3.11.A, "Average Planar Linear Heat Generation Rate (APLHGR)," single loop operation limits specified in the COLR,	
b) LCO 3.11.C, "Minimum Critical Power Ratio (MCPR)," single loop operation limits specified in the COLR, and	
c) LCO 3.1, "Reactor Protection System," Average Power Range Monitor High Flux function, trip level setting for the flow bias function is reset for single loop operation per Table 3.1.1.	
3. If the requirements of Specification 3.6.F.1 or 3.6.F.2 are not met, restore compliance within 24 hours. If compliance is not restored or with no recirculation pumps in operation the reactor shall be in Hot Shutdown within 12 hours.	
G. Structural Integrity	G. Structural Integrity
1. The structural integrity of the primary system boundary shall be maintained at the level required by the ASME Boiler and Pressure Vessel Code, Section XI "Rules for Inservice Inspection of Nuclear Power Plant Components," Articles IWA, IWB, IWC, IWD and IWF and mandatory appendices as required by 10CFR50.55a(g), except where specific relief has been granted by the NRC pursuant to 10CFR50.55a(g)(6)(i).	Inservice inspection of components shall be performed in accordance with the PNPS Inservice Inspection Program. The results obtained from compliance with this program will be evaluated at the completion of each ten year interval. The conclusions of this evaluation will be reviewed with the NRC.

LIMITING CONDITIONS FOR OPERATION

3.11 REACTOR FUEL ASSEMBLY

Applicability:

The Limiting Conditions for Operation associated with fuel rods apply to those parameters which monitor the fuel rod operating conditions.

Objective:

The Objective of Limiting Conditions for Operation is to assure the performance of the fuel rods.

Specifications:

A. Average Planar Linear Heat Generation Rate (APLHGR)

During operation at ≥ 25% rated thermal power, the APLHGR for each type of fuel as a function of average planar exposure shall not exceed the applicable limiting value specified in the CORE OPERATING LIMITS REPORT.

If at any time during operation at ≥ 25% rated thermal power the limiting value for APLHGR is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. If the APLHGR is not returned to within the prescribed limits within two (2) hours, reduce thermal power to < 25% within four (4) hours.

SURVEILLANCE REQUIREMENTS

4.11 REACTOR FUEL ASSEMBLY

Applicability:

The surveillance requirements apply to the parameters which monitor the fuel rod operating conditions.

Objective:

The Objective of the Surveillance Requirements is to specify the type and frequency of surveillance to be applied to the fuel rods.

Specifications:

A. Average Planar Linear Heat Generation Rate (APLHGR)

The APLHGR for each type of fuel as a function of average planar exposure shall be determined daily during reactor operation at ≥ 25% rated thermal power.

LIMITING CONDITIONS FOR OPERATION

3.11 REACTOR FUEL ASSEMBLY (Cont)

B. Linear Heat Generation Rate (LHGR)

During operation at ≥ 25% rated thermal power, the LHGR shall not exceed the limits specified in the CORE OPERATING LIMITS REPORT.

If at any time during operation at ≥ 25% rated thermal power, the limiting value for LHGR is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. If the LHGR is not returned to within the prescribed limits within two (2) hours, reduce thermal power to < 25% within four (4) hours.

C. Minimum Critical Power Ratio (MCPR)

1. During operation at ≥ 25% rated thermal power, MCPR shall be ≥ the MCPR operating limit specified in the Core Operating Limits Report. If at any time during operation at ≥ 25% rated thermal power, the limiting value for MCPR is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. If the steady state MCPR is not returned to within the prescribed limits within two (2) hours, reduce thermal power to < 25% within four (4) hours.

SURVEILLANCE REQUIREMENTS

4.11 REACTOR FUEL ASSEMBLY (Cont)

B. Linear Heat Generation Rate (LHGR)

The LHGR as a function of core height shall be checked daily during reactor operation at ≥ 25% rated thermal power.

C. Minimum Critical Power Ratio (MCPR)

1. MCPR shall be determined daily during reactor power operation at ≥ 25% rated thermal power and following any change in power level or distribution that would cause operation with a limiting control rod pattern as specified in Table 3.2.C.1 Note 5.

2. The value of τ in Specification 3.11.C.2. shall be equal to 1.0 unless determined from the result of surveillance testing of Specification 4.3.C as follows:

a) τ is defined as

$$\tau = \frac{\tau_{ave} - \tau_B}{1.252 - \tau_B}$$