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Attachment 1

Summary of Tech. Spec. Change Request No. 117

No.	Current Tech. Spec.	Proposed Tech. Spec.	Extent of Change	Justification
7.	-	Bases Statement paragraph 4 page 2.3-5	Maintaining a minimum recirculation flow of $39.65x10^6$ lb/hr in range 10 will preclude violating the fuel cladding safety limit even in the face of a complete rod withdrawal initiated at 35% of rated power.	See Extent of Change for Change 10.
8.	Bases Statement paragraph 2 page 2.3-6	Bases Statement paragraph 2 page 2.3-6	Operation of the reactor at pressures lower than 825 psig requires that the reactor mode switch be in the Startup position and the IRMs be in range 9, or lower, where protection of the fuel cladding integrity safety limit is provided by the IRM high neutron flux scram.	See Extent of Change for Changes 2 and 5.

Section 3.1 Protective Instrumentation

No.	Current Tech. Spec.	Proposed Tech. Spec.	Extent of Change	Justification
9.	Table 3.1.1 Section B Line 5	Table 3.1.1 Section B Line 5	Indication of Lo-Pressure in Main Steamline Reactor Isolation function being operable in startup mode.	See Extent of Change for Change 2

Section 3.3 Reactor Coolant

No.	Current Tech. Spec.	Proposed Tech. Spec.	Extent of Change	Justification
10.	-	Specification 3.3.H page 3.3-2a	Minimum flow for operation in IRM range 10 39.65×10^6 lb/hr listed	See Bases Statement paragraph 4 page 2.3-5

G. Primary Coolant System Pressure Isolation Valves

Applicability:

Operational Conditions - Startup and Run Modes; applies to the operational status of the primary coolant system pressure isolation valves.

Objective:

To increase the reliability of primary coolant system pressure isolation valves thereby reducing the potential of an intersystem loss of coolant accident.

Specification:

1. During reactor power operating conditions, the integrity of all pressure isolation valves listed in Table 3.3.1 shall be demonstrated. Valve leakage shall not exceed the amounts indicated.

2. If Specification 1 cannot be met, an orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours.

H. Required Minimum Recirculation Flow Rate for Operation in IRM Range 10

1. During STARTUP mode operation, a minimum recirculation flow rate is required before operating in IRM range 10 to insure that technical specification transient MCPR limits for operation are not exceeded. This minimum flow rate is no longer required once the reactor is in the RUN mode.

2. 39.65×10^6 lb/hr is the minimum recirculation flow rate necessary for operation in IRM range 10 at this time. This flow rate leaves sufficient margin between the minimum flow required by the RWE analysis performed and the minimum flow used while operating in IRM range 10.

Oyster Creek Nuclear Generating Station
Provisional Operating License No. DPR-16
Docket No. 50-219
Technical Specification Change Request No. 117

Applicant hereby requests the Commission to change the above mentioned Technical Specification Change Request as follows:

1. Section to be Changed:

   Technical Specification section 3.3.H

2. Extent of Change:

   This Technical Specification Change Request revision specifies that there is a minimum recirculation flow rate necessary for operation in IRM range 10.

3. Changes Requested:

   The licensee requests that section 3.3.H of Technical Specification Change Request No. 117 be changed to read as follows:

   "H. Required Minimum Recirculation Flow Rate for Operation in IRM Range 10

   1. During STARTUP mode operation, a minimum recirculation flow rate is required before operating in IRM range 10 to insure that technical specification transient MCPR limits for operation are not exceeded. This minimum flow rate is no longer required once the reactor is in the RUN mode.

   2. 39.65×10^6 lb/hr is the minimum recirculation flow rate necessary for operation in IRM range 10 at this time. This flow rate leaves sufficient margin between the minimum flow required by the RWE analysis performed and the minimum flow used while operating in IRM range 10."

4. Discussion:

This revised Technical Specification Change Request is made in response to further GPUN review carried out after the original submittal. This review discovered the discrepancy between the original submittal and the actual intent of the submittal. The discrepancy has been rectified with this revision.

OYSTER CREEK GENERATING STATION
PROVISIONAL OPERATING LICENSE NO. DPR-16
DOCKET NO. 50-219
TECHNICAL SPECIFICATION CHANGE REQUEST NO. 117

Pursuant to 10 CFR 50.91, an analysis concerning significant hazards considerations is provided below:

1. Sections to be changed:

   Sections 2.3.1, 2.3.7, 3.3, Tables 3.1.1 and 4.1.1

2. Extent of Changes:

   See Attachment 1

3. Changes Requested:

   See Attachment 1

4. Discussion:

   Oyster Creek has been experiencing difficulty in switching from the STARTUP mode to the RUN mode without getting a rod withdrawal block. The switch from the STARTUP mode to the RUN mode is made when the IRMs are reading about 100 (0 to 125 scale) on range 9, at approximately 10% of reactor power. In going to RUN mode, neutron monitoring is switched from the IRM's to LPRM/APRM's. The problem occurs at this time due to LPRM's reading downscale which causes a rod block. A sufficient number of LPRM's are downscale, due to the physical location of the LPRMs in the core and the skewed axial flux distribution in the core during a reactor startup, that they cannot all be bypassed within operability limits of Oyster Creek Technical specifications.

   The proposed change will add a tenth range to the IRMs, increasing the neutron monitoring with the IRMs from 10% to approximately 40% of rated power. This will significantly increase the IRM/APRM system overlap and allow for a smooth transition from STARTUP to RUN mode. The switch from STARTUP to RUN mode can be performed at a higher power level when the LPRM downscale rod blocks have cleared.

   A technical evaluation of the proposed change was performed to insure that the affected systems would perform their required safety function.

   A rod withdrawal error (RWE) analysis was performed to evaluate the adequacy of the IRM rod block. The RWE transient was initiated at 35% power. Reactor power is just at the IRM rod block, but the rod block is

not initiated. Since the APRM system response was assumed to be degraded and the IRMs do not provide as much core coverage as LPRM/APRMs, the RWE analysis was performed under a conservation assumption that no nuclear instrumentation would terminate the event. The analysis was performed at peak cycle reactivity and with a xenon free core. A control rod pattern consistent with analyzed power and flow conditions was established. Each control rod was separately withdrawn to the full out position. A final power level was determined for each control rod. A minimum flow of 14.0 Mlb/hr (23% of rated flow) was found necessary to insure that a RWE at 35% power or less would not exceed technical specification transient MCPR limits for operation in range 10. The minimum flow is required to insure the technical specification limit is not violated. Therefore, the minimum flow value itself should be a technical specification limit. The analysis was Cycle 9 specific and does not necessarily bound future cycle operating conditions. The analysis did not include the uncertainties in the heat balance at low power or in the ability of the IRMs to track core average power. In order to insure that the uncertainties above are accounted for and that the RWE in the IRM range will be bounded for future cycles, a minimum recirculation flow of 39.65 Mlb/hr has been established for operation in IRM range 10. Critical Power Ratio (CPR) calculations at this flow indicate that a bundle power of 3.36 MW would be required to give the same initial CPR used in the RWE analysis. This is close to twice the power for the limiting bundle in the RWE analysis at 35% of rated thermal power. With design peaking factors this corresponds to approximately a core thermal power at 60% of rated. Thus, a minimum recirculation flow of 39.65 Mlb/hr for operation in IRM 10 will be conservative. The core flow of 39.65 Mlb/hr is set as a Technical Specification limit by this change request.

The adequacy of the IRM scram was determined by comparing the scram level on the IRM range 10 to the scram level on the APRMs at 30% of rated flow. The IRM scram is at 38.4% of rated power while the APRM scram is at 52.7% of rated power. The minimum flow for Oyster Creek is at 30% of rated and this would be the lowest APRM scram point. The increased recirculation flow to 65% of flow will provide additional margin to CPR limits. The APRM scram at 65% of rated flow is 87.1% of rated power, while the IRM range 10 scram remains at 38.4% of rated power. Therefore, transients requiring a scram based on flux excursion will be terminated sooner with a IRM range 10 scram then with an APRM scram. The transients requiring a scram by nuclear instrumentation are the loss of feedwater heating and the improper startup of an idle recirculation loop. The loss of feedwater heating transient is not affected by the range 10 IRM since the feedwater heaters will not be put into service until after the LPRM downscales have cleared, thus insuring the operability of the APRM system. This will be administratively controlled. The improper startup of an idle recirculation loop becomes less severe at lower power level and the IRM scram would be adequate to terminate the flux excursion.

5. Determination

We have determined that the subject change request involves no significant hazards in that operation of the Oyster Creek Nuclear Generating Station in

accordance with Technical Specification Change Request No. 117 would not:

1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or

3) Involve a significant reduction in a margin of safety.