

DESCRIPTION OF PROPOSED CHANGES
NPF-10-179 AND NPF-15-179, REVISION 1
AND SAFETY ANALYSIS

This is a request to revise Technical Specification 3.9.10 to lower the required Reactor Vessel water level to move the four finger CEA's, couple and uncouple CEA's or to verify the coupling or uncoupling.

Existing Specifications

Unit 2: See Attachment "A"

Unit 3: See Attachment "B"

Proposed Specifications

Units 2 and 3: See Attachment "C"

Description

The amendment would change Technical Specification 3/4.9.10 (Refueling) Water Level - Reactor Vessel. Specification 3/4.9.10 requires that a minimum water level of 23 feet be maintained above the reactor vessel flange during movements of Control Element Assemblies (CEA's) or fuel assemblies in the reactor vessel.

During refueling, the four finger CEA's are removed by latching them to the upper guide structure lift rig work platform and lifting them with the upper guide structure. The design of the upper guide structure lift rig and work platform requires the water level to be less than 23 feet above the reactor vessel flange when latching the four finger CEA's to the work platform and lifting them into the upper guide structure.

Additionally, during refueling, the Control Element Drive Mechanism (CEDM) extension shafts are uncoupled and recoupled to the CEA's. Coupling or uncoupling of the CEDM extension shafts involve small movements of the CEA's as does the verification of coupling/uncoupling. The staff has interpreted that these small movements of the CEA's are within the applicability of Specification 3/4.9.10. Therefore under the current Technical Specification the water level of 23 feet must be maintained during these operations. The design of the tools used to couple and uncouple the CEA's from the CEDM extension shafts require that the work platform be positioned less than 23 feet above the reactor vessel flange. Verification of CEA coupling/uncoupling is most efficiently accomplished when the CEA's are coupled/uncoupled.

The proposed change adds a note to the applicability for Specification 3/4.9.10 which allows the water level to be lowered to 23 feet above the fuel assemblies during movement of four finger CEA's, CEA coupling and uncoupling and verification of coupling/uncoupling.

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Safety Analysis

The proposed changes discussed shall be deemed to involve a significant hazards consideration if there is a positive finding in any one of the following areas:

1. Will operation of the facility in accordance with this proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The basis for requiring 23 feet of water above the reactor vessel flange is to ensure that sufficient water depth is available to remove 99% of the assumed 10% iodine gas activity released by an irradiated fuel assembly striking the reactor vessel flange and rupturing. During movement of the four finger CEAs, coupling and uncoupling the CEAs or verifying the coupling or uncoupling, the fuel will be seated in the reactor pressure vessel. With the fuel seated in the pressure vessel, no fuel damage could occur above the top of the fuel. Thus requiring 23 feet of water above the top of the fuel will ensure sufficient water depth is available to remove 99% of the assumed 10% iodine gas activity released from any conceivable accident and this proposed change will not increase the probability or consequences of an accident previously evaluated.

2. Will operation of the facility in accordance with this proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

Operation of the facility will be in accordance with the assumption made in the safety analysis and the bases of the Technical Specification that 23 feet of water will be available over any fuel damaged in a fuel handling accident. Thus, operation of the facility in accordance with this proposed change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Will operation of the facility in accordance with the proposed change involve a significant reduction in a margin of safety?

Response: No

Operation of the facility will be in accordance with the assumption made in the safety analysis and the bases of the Technical Specification that 23 feet of water will be available over any fuel damaged in a fuel handling accident. Thus, operation of the facility in accordance with the proposed change will not involve a reduction in a margin of safety.

The Commission has provided guidance for determining whether a significant hazards consideration exists by providing certain examples (48 FR 14870) of amendments that are considered not likely to involve significant hazards considerations.

Example (vi) relates to a change which either may result in some increase in the probability or consequences of a previously-analyzed accident or may in some way reduce a safety margin, but where the results of the change are clearly within all acceptance criteria with respect to the system or component specified in the Standard Review Plan (SRP).

In this case, the acceptance criteria relating to refueling water level are delineated in the Bases Section of NUREG-0212, Revision 2, Standard Technical Specifications (STS) for Combustion Engineering Pressurized Water Reactors. Specifically, Bases Sections B 3/4.9.10, requires that sufficient water depth (23 feet) is available to remove 99% of the assumed 10% iodine gap activity which would be released by an irradiated fuel assembly striking the reactor vessel flange and rupturing. With fuel seated in the reactor vessel, as is the case with the proposed change, no fuel damage could occur above the top of the fuel. The proposed change's requirement to maintain 23 feet of water above the top of the fuel will ensure that sufficient water depth is available to remove 99% of the assumed 10% iodine gap activity released from a fuel assembly damaged by any conceivable accident. Therefore, the proposed change meets the acceptance criteria delineated in the Bases of the STS and is similar to example (vi).

Safety and Significant Hazards Determination

Based on the above Safety Analysis it is concluded that; (1) the proposed change does not constitute a significant hazards consideration as defined by 10 CFR 50.92; and (2) there is reasonable assurance that the health and safety of the public will not be endangered by the proposed change; and (3) this action will not result in a condition which significantly alters the impact of the station on the environment as described in the NRC Final Environmental Statement.