



Boston Edison

Pilgrim Nuclear Power Station
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May 1, 1996
BECo Ltr. #96-045

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Docket No. 50-293
License No. DPR-35

Proposed Technical Specification Changes

In accordance with the requirements of 10CFR50.90, Boston Edison Company (BECo) proposes changes to the Pilgrim Nuclear Power Station (PNPS) Technical Specifications. Changes are proposed to the definition of "Core Alteration" and to the LCO and Surveillance conditions associated with secondary containment.

The proposed changes are described in Attachment A. Amended Technical Specification pages are provided in Attachment B. Attachment C provides the marked-up pages.

These proposed changes have been reviewed and recommended for approval by the Operations Review Committee and reviewed by the Nuclear Safety Review and Audit Committee.

This request is submitted as part of the outage performance improvement Technical Specification changes discussed in our letter dated April 25, 1996. We request these changes be given a level III priority of review and approval be granted no later than October 1996 with an implementation date effective within 90 days of approval.

E. T. Boulette
E. T. Boulette, PhD

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ETE/Rap96/jdk/corealt

Commonwealth of Massachusetts)
County of Plymouth)

Then personally appeared before me, E. T. Boulette, who being duly sworn, did state that he is Senior Vice President - Nuclear of Boston Edison Company and that he is duly authorized to execute and file the submittal contained herein in the name and on behalf of Boston Edison Company and that the statements in said submittal are true to the best of his knowledge and belief.

My commission expires: March 25, 1999
DATE

James D. Keys
NOTARY PUBLIC



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Attachment A: Description of Proposed Changes
Attachment B: Amended Pages from Current Technical Specifications
Attachment C: Marked-up Technical Specification Pages

Original plus 37 copies

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Attachment A

Proposed Change #1: Definition of "Alteration of the Reactor Core"

The existing definition 1.0.Q, "Alteration of the Reactor Core", is being modified so that the term will apply only to those activities that create the potential for a reactivity excursion and, therefore, warrant special precautions such as: secondary containment operable, control room emergency ventilation operable, minimum number of AC and DC power supplies operable, and refueling interlocks operable. The title is changed to "Core Alteration".

Discussion:

The "Alteration of the Reactor Core" definition is being revised so that the term will apply only to those activities that create the potential for a reactivity excursion and, therefore, warrant special precautions such as: secondary containment operable, control room emergency ventilation operable, minimum number of AC and DC power supplies operable, and refueling interlocks operable. Defining core alterations as the movement of components which can affect core reactivity provides greater scheduling flexibility during outages.

Currently, an "Alteration of the Reactor Core" is defined as the act of moving any component in the region above the core support plate, below the upper grid and within the shroud. The movement of control rods (using the control rod hydraulic system), and the movement of in-core instrumentation are specifically exempted from the definition. The reason an activity should be exempted from the definition is that the activity does not create the potential for a reactivity excursion and special precautions or controls are not warranted. However, movement of control rods with the control rod hydraulic system, even though exempted from the current definition, does create the potential for a reactivity excursion and is an activity that warrants special precautions. Therefore, the proposed definition is intended to identify those activities that affect reactivity within the reactor vessel, with the vessel head removed and fuel in the vessel. As a result, the term "Core Alterations" will identify those activities that create the potential for a reactivity excursion and warrant special controls and precautions.

Under the revised definition, in-vessel movement of instruments, cameras, lights, tools, etc. will not be classified as core alterations since special controls needed to prevent reactivity excursions are not warranted. Control rod movement when the vessel head is removed is included in the proposed definition because the potential for a reactivity excursion exists. However, this is not the case provided there are no fuel assemblies in the associated core cell. The removal of the four fuel bundles surrounding a control rod significantly reduces the reactivity worth of the associated control rod to the point where removal of that rod no longer has the potential to cause a reactivity excursion. Therefore, removal from the core of a control rod is not considered a core alteration provided there are no fuel assemblies in the associate core cell. This fact is recognized in the design of the control rod velocity limiter which precludes removal of a rod prior to the removal of the four adjacent bundles.

Proposed Change # 2: Secondary Containment

Specifications 3.7.C.1 and 3.7.C.2 are re-written to specify more clearly, the conditions under which secondary containment is required.

Surveillance requirements 4.7.C.1. a and b are deleted because they are no longer applicable.

Surveillance 4.7.C.1.c is renumbered to 4.7.C.1 and reworded for clarity.

Attachment A

Discussion:

The current requirements for secondary containment are written in the negative sense, i.e., when secondary containment is not required. The revised wording is more definitive and encompasses the conditions specified which require secondary containment. These include when the plant is in the Run, Startup, and Hot Shutdown modes, during movement of irradiated fuel assemblies in secondary containment, during movement of new fuel over the spent fuel pool, during core alterations, and during operations with a potential for draining the reactor vessel (OPDRVs).

The current Technical Specifications (TS) require bringing the plant to a condition where the secondary containment condition is not required. New LCO actions and completion times are added specifying the actions to take if secondary containment is not operable.

Surveillances 4.7.C.1.a and b are being deleted because they applied to initial and Cycle 1 plant operations only. Renumbering is a consequence of the deletions. The remaining surveillance is re-arranged to make it easier to read.

NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Code of Federal Regulations (10 CFR 50.91) requires licensees requesting an amendment to provide an analysis, using the standards in 10 CFR 50.92, that determines whether a significant hazards consideration exists. The following analysis is provided in accordance with 10 CFR 50.91 and 10 CFR 50.92 for the proposed amendment.

- (a) The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Operation of PNPS in accordance with the proposed license amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated because of the following:

Proposed Change #1: Definition of "Alteration of the Reactor Core"

The definition, "Alteration of the Reactor Core", is being revised so that the term will apply only to those activities that create the potential for a reactivity excursion and, therefore, warrant special precautions or controls in the TS. The proposed definition includes normal control rod movement in the definition, but excludes control rod drive movement (such as rod removal from the core) when all four fuel bundles surrounding a control rod are removed. The proposed change does not increase the probability or consequences of an accident because the proposed definition, by identifying activities with the potential for causing a reactivity excursion, ensures that the additional precautions and controls in the TS are implemented at all appropriate times. In addition, the movement of components excluded by this definition is not assumed in the initiation of any analyzed event. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Attachment A

Proposed Change #2: Secondary Containment

The current specifications are revised to specify more clearly when secondary containment is required, what actions to take if secondary containment is inoperable, and time frames for completing the actions. These revisions enhance the existing specification and serve to make it more definitive by encompassing the conditions currently specified by TS and supplementing them to specify other conditions when secondary containment is required.

Surveillances 4.7.C.1.a and b were only necessary during initial and Cycle 1 operations. Removing obsolete information from the existing specifications, re-numbering and re-arranging the wording is an administrative change.

These changes are administrative in nature and do not impact initiators of analyzed events, accident mitigation capabilities, or transient events. Therefore, the changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

- (b) The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The operation of PNPS in accordance with the proposed license amendment will not create the possibility of a new or different kind of accident from any accident previously evaluated because of the following:

Proposed Change #1: Definition of "Alteration of the Reactor Core"

The definition change specifies more accurately which component movements constitute a "Core Alteration". This change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or changes in methods governing normal plant operation. The proposed changes will allow movement of some components (camera, lights, etc.) during times when "Core Alterations" have been halted since these components will not affect core reactivity. Removal of a control rod involves unlatching and withdrawal/insertion from over-vessel handling equipment. These activities necessitate, by design, the removal of the adjacent four fuel assemblies. With this configuration (no fuel in the cell; handling the associated control rod), the proposed change will allow movement of a "reactivity control component" while not imposing requirements unique to "Core Alterations" (note: other requirements, such as those for handling loads over irradiated fuel, will remain applicable). The reactivity effects of this control rod movement are more than compensated for by the initial removal of the fuel assemblies. Therefore, this change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

Proposed Change #2: Secondary Containment

The proposed change does not eliminate or relax any existing TS condition. Rather, it better defines when secondary containment is required, provides action statements for inoperability and removes obsolete requirements (from first operating cycle). This change does not involve a physical change to structures, systems or components, and the safety design bases for the accident mitigating function of the secondary containment is maintained. Therefore, these changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

Attachment A

- (c) The proposed amendment does not involve a significant reduction in a margin of safety.

The operation of PNPS in accordance with the proposed license amendment will not involve a significant reduction in a margin of safety because of the following:

Proposed Change #1: Definition of "Alteration of the Reactor Core"

The proposed definition more accurately identifies those activities with the potential for causing a reactivity excursion. The more accurate identification of "Core Alterations" will ensure that when there is a potential for reactivity excursions, appropriate precautions are applied. The components now excluded from the proposed definition are those that do not have the capability for adversely impacting core reactivity. The proposed change has no impact on safety analysis assumptions. Therefore, the change will not involve a significant reduction in a margin of safety.

Proposed Change #2: Secondary Containment

The proposed additions of applicability conditions provide a more precise understanding of when secondary containment integrity is required and what actions to take if it becomes inoperable. The change does not eliminate any existing conditions. The deletion of surveillances applicable only for the first operating cycle and re-numbering and re-arranging the remaining surveillance wording is an administrative change and has no impact on the operation of the plant or mitigation of accidents. Therefore, the operation of the facility in accordance with this proposed amendment would not involve a significant reduction in a margin of safety.