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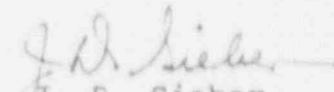
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Reference: Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, License No. DPR-66
Request for Temporary Waiver of Compliance

This letter provides our request for NRC approval of a temporary waiver of compliance from the requirements of Technical Specification 3.9.2. Additional details supporting this request are located in the enclosure which addresses the current understanding of the level of detail required with respect to requesting a temporary waiver of compliance. This request has been reviewed by our Onsite Safety Committee (OSC) and is determined to be safe. This request is characterized as a regional waiver of compliance since the relief is temporary and non-recurring such that a permanent license amendment is not appropriate.

Questions regarding this submittal may be directed to members of my staff.

Very truly yours,


J. D. Sieber
Vice President
Nuclear Group

Enclosure

cc: Mr. J. Beall, Sr. Resident Inspector
Mr. T. T. Martin, NRC Region I Administrator
Mr. A. W. DeAgazio, Project Manager
Mr. M. L. Bowling (VEPCO)

Evaluation Supporting a Temporary Waiver of Compliance
(Inoperable Source Range Detector - Technical Specification 3.9.2)
Beaver Valley Power Station - Unit No. 1

1. Discuss the requirements for which a waiver is requested:

This is a temporary waiver of compliance concerning two aspects of the source range detector operability requirement. The first aspect of Technical Specification 3.9.2 requires two source range monitors each with continuous visual indication in the control room and one audible indication in the containment and control room. A temporary waiver of compliance is requested to allow the use of a portable submersible source range detector in place of inoperable source range detector N31 for the purpose of fuel loading. This portable submersible detector would have a visual indication in the containment only and would be continuously monitored by an individual in constant communication with the control room and the manipulator crane operator. The requirements of this specification are applicable in Mode 6 during core alterations or positive reactivity changes.

The second aspect concerns having only one operable source range detector during movement of the upper internals. Our present interpretation of "Core Alterations" includes movement of the upper internals and as such Technical Specification 3.9.2 remains in affect. Placement of the upper internals in the reactor vessel cannot be done with the portable source range monitor positioned in the vessel.

Therefore, this waiver is also needed to allow use of the portable neutron flux detector while reloading the fuel, after which the detector would be removed from the vessel. The upper internals would then be positioned in the vessel with only the one operable source range detector. The water level in the reactor vessel cavity would then be lowered, the retracted incore thimbles would be inserted into the core to reduce the radiation field under the reactor vessel thus permitting access to repair the source range detector.

2. Discuss the circumstances surrounding the situation including the need for prompt action, and why the situation could not have been avoided:

The source range detector failed after the core was completely off loaded. The incore flux thimbles are retracted from the reactor vessel as part of normal refueling sequence to prevent discharge during fuel movement. Due to this evolution, the radiation field in the area of the source range detectors is 3R/hr at 20 feet and is estimated to be 50R/hr at the location of the inoperable source range detector. Repair activities would require a

team of four plant personnel working three eight hour shifts at the detector location. The use of shielding in the area of the inoperable detector is considered highly impractical due to the size and layout of the area in which the inoperable detector is located. This radiation field is too high to conduct repair activities with the incore flux thimbles withdrawn and they cannot be re-inserted fully into the vessel until the fuel is reloaded.

Regarding two operable detectors during placement of the upper internals; this cannot be accomplished while the submersible detector is placed inside the reactor vessel. The remaining operable source range detector will be relied upon when placing the upper internals into the reactor vessel. Therefore, plant refueling activities cannot proceed without a temporary waiver from the requirements of Specification 3.9.2.

3. Discuss compensatory actions (if any):

A portable submersible detector will be used to perform the flux monitoring function in place of the inoperable source range detector. The monitoring of neutron flux via the temporary detector will be performed locally in containment by plant personnel. Constant communications will be maintained during core alterations or positive reactivity changes between the plant personnel monitoring neutron flux in containment and control room personnel. Connecting the temporary detector to allow control room indication is not practical as it is a self-contained system. A reliable indication of neutron flux will be obtained by plant personnel who are monitoring detector response locally on the containment operating deck and in constant communication with the control room.

No additional compensatory actions will be performed during placement of the upper internals since this involves no positive reactivity changes and the operable source range detector is available to monitor the core.

4. Provide a preliminary evaluation of the safety significance and potential consequences of the proposed request:

The function of the source range detectors is to provide direct neutron flux monitoring of the core to detect positive reactivity additions which would result in a loss of the required shutdown margin for E de 6. The portable detector will provide neutron flux monitoring in place of the inoperable source range detector during fuel movement, thus assuring core monitoring at a level consistent with Technical Specification 3.9.2.

During placement of the upper internals, one operable source range detector adequately provides the required core flux monitoring. This evolution will not result in a positive reactivity addition, therefore, the required shutdown margin will be maintained.

5. Discuss justification for the duration of the request:

It is requested that approval of this temporary waiver be granted as soon as possible and remain in effect for up to 7 days or until the inoperable detector has been repaired and is verified operable. This will allow the core to be refueled, the upper internals installed, the incore detector thimbles inserted, and the source range detector repaired.

6. Provide a basis for the conclusion that the request does not involve a significant hazards consideration:

The first aspect of the temporary waiver will allow use of a submersible portable flux monitor when refueling the core. Using this monitor will not increase the probability of an accident previously evaluated. The required core shutdown margin is assured through maintaining the required refueling boron concentration per T.S. 3.9.1 and control rods fully inserted in the fuel at all times. The required shutdown margin is sufficient to accommodate these activities and preclude a criticality event during the refueling.

No changes are being made that would act to increase the probability of a positive reactivity addition event. Therefore, there will be no impact on any accident previously analyzed and no significant hazard created.

The second aspect of the temporary waiver, which allows installation of the upper internals with one operable source range detector, will not increase the probability of an accident previously evaluated. The operable source range detector N32 will provide the required continuous visual indication in the control room and audible indication in the containment and control room. The installation of the upper internals with one source range detector operable will not increase the probability of a positive reactivity event occurring in the core.

Therefore, there will be no impact on any accident previously analyzed and no significant hazard created.

7. Provide a basis for the conclusion that the request does not involve irreversible environmental consequences:

The portable monitor will provide adequate neutron flux monitoring to ensure the core is loaded correctly. There is no credible mode of malfunction by which the use of this submersible flux monitor can affect the conclusions of the previously analyzed accidents or create a new accident.

The offsite dose analyses and accident analyses are not affected by this temporary waiver. No radioactive release to the environment and no change in the core flux levels is expected. The waiver does not provide any changes to the core licensed power level or act to increase radioactive effluents.

Therefore, this request for temporary waiver does not involve irreversible environmental consequences.