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*AmerGen Energy Company, LLC, Docket No. 50-461, Clinton Power Station, Unit 1, DeWitt County, Illinois*

*Date of amendment request:* April 2, 2001, as supplemented by letters dated January 15, August 23, 2002, and March 28, 2003.

*Description of amendment request:* The proposed amendment would add operational restrictions when the inclined fuel transfer system (IFTS) blind flange is removed during Modes 1, "Power Operation," 2, "Startup," or 3, "Hot Shutdown." The proposed changes would (1) include a limitation on the duration that the IFTS blind flange can be removed while primary containment integrity is required, (2) include a limitation on the duration that the IFTS blind flange can remain in the unbolted configuration, (3) specify the need to install the steam dryer pool to reactor cavity pool gate prior to opening the blind flange, and (4) provide the flexibility to remove the IFTS blind flange for other than maintenance and testing purposes only.

*Basis for proposed no significant hazards consideration determination:* As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration which is presented below:

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed changes allow operation of the IFTS while primary containment operability is required. The proposed changes result in a change to the primary containment boundary. A loss of primary containment integrity is not an accident initiator. The proposed changes do not involve any modifications to plant systems or design parameters or conditions that contribute to the initiation of any accidents previously evaluated. Therefore, the proposed changes do not increase the probability of any accident previously evaluated.

The proposed changes potentially affect the allowable leakage of the containment structure which is designed to mitigate the consequences of a loss-of-coolant accident (LOCA). The function of the primary

containment is to maintain functional integrity during and following the peak transient pressures and temperatures that result from any LOCA. The primary containment is designed to limit fission product leakage following the design basis LOCA. Because the proposed changes do not alter the plant design, only the extent of the boundaries that provide primary containment isolation for the IFTS penetration, the proposed changes do not result in an increase in primary containment leakage. In addition, a time limit for IFTS blind flange removal of 40 days per cycle and a 12 hour limit for the unbolted configuration of the IFTS flange have been established as conservative measures to limit the associated risk to the containment boundary for all accident conditions. Once the blind flange is removed the IFTS transfer tube and its appurtenances become part of the primary containment boundary. As part of the primary containment boundary these subject components would be exposed to LOCA pressures. While these components have not been fabricated or installed to meet the acceptance criteria for a containment penetration, they have been built to withstand the rigors of a commercial nuclear application. This includes, but is not limited to, consideration of adequate seismic support, inertial forces imparted to the fuel, appropriate cooling and shielding for the spent nuclear fuel, integrity of the fluid system pressure boundary, and a safety analysis, including a failure modes and effects evaluation which assumes that credible events and credible combinations of events have been considered and mitigated against by either a fail safe design or redundancy. They are judged to be an acceptable barrier to prevent the uncontrolled release of post-accident fission products for the purposes of this amendment request.

Further, it has been shown that the largest potential leakage pathway, the IFTS transfer tube itself, would remain sealed by the depth of water required by the proposed [technical specification] TS change to be maintained in the fuel building fuel transfer pool. The transfer tube drain line constitutes the other possible leakage pathway, and will be required to be capable of being isolated via administrative control of the manual isolation valve in the drain line. Additionally, due to the physical relationships of the buildings and components involved, any leakage from either of these pathways is fully contained within the boundaries of the secondary containment and would be filtered by the Standby Gas Treatment System prior to release to the environment.

Leakage from the containment upper pool through the open IFTS transfer tube could potentially result in the excessive loss of water from the volume intended to provide post-LOCA makeup water to the suppression pool. The upper pool dump volume is maintained by requiring the installation of the steam dryer pool to reactor cavity pool gate with the seal inflated and a backup air supply provided. Maintaining the upper pool dump volume ensures proper suppression pool level can be achieved following a LOCA

which provides for long-term steam condensation.

Based on the above, the proposed changes do not increase the consequences of an accident previously evaluated.

In summary, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed changes do not involve a change to the plant design or operation except for when IFTS is operated. As a result, the proposed changes do not affect any of the parameters or conditions that could contribute to the initiation of any accidents. No new accident modes or equipment failure modes are created by these changes. Extending the primary containment boundary to include portions of the IFTS has no influence on, nor does it contribute to the possibility of a new or different kind of accident or malfunction from those previously evaluated. Furthermore, operation of IFTS is unrelated to the operation of the reactor. There is no mishap in the process that can lead or contribute to the possibility of losing any coolant in the reactor or introducing the chance for positive or negative reactivity or other accidents different from and not bounded by those previously evaluated. Therefore, these proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the change involve a significant reduction in a margin of safety?

The proposed changes only affect the extent of a portion of the primary containment boundary. The time that the IFTS is in the seismically indeterminate configuration with the flange unbolted will be limited to 12 hours per operating cycle. The time the IFTS blind flange will be removed will be limited to 40 days per operating cycle. These restrictions will limit the risk from the potential leakage through the primary containment boundary. Having IFTS in operation does not affect the reliability of equipment used for core cooling. In addition, precautions will be taken to administratively control the IFTS transfer tube drain path so that the proposed change will not increase the probability that an increase in leakage from the primary containment to the secondary containment could occur. Precautions will also be taken to ensure that the steam dryer pool to reactor cavity pool gate is installed prior to removing the IFTS flange when primary containment is required to be operable. Installation of this gate will ensure that an adequate containment upper pool dump volume is maintained to support post-LOCA suppression pool makeup water volume requirements.

The margin of safety that has the potential of being impacted by the proposed changes involve the offsite dose consequences of postulated accidents which are directly related to containment leakage rate. The containment isolation system is designed to limit leakage to  $L_a$  which is defined by the