ATTACHMENT 1

PROPOSED LICENSE CONDITION FOR
OPERATING LICENSE NOS. DPR-32 AND DPR-37

The following condition should be added to page 6 of Operating License Nos. DPR-32 and DPR-37.

"K. The design of the reactor coolant pump and steam generator supports may be revised in accordance with the licensee's submittals dated November 5, 1985 (Serial No. 85-136), December 3, 1985 (Serial No. 85-136A), and January 14, 1986 (Serial No. 85-136C)."

ATTACHMENT 2

DISCUSSION OF PROPOSED LICENSE AMENDMENT

Discussion

Approval of this request will eliminate the need for consideration of postulated breaks in the RCS primary loop piping and its associated dynamic and other effects such as pipe whip, jet impingement, asymmetric pressure loading, and primary component sub-compartment pressurization.

Approval of this request will allow us to eliminate snubbers which are required solely to mitigate a pipe rupture event. Specifically:

- Eliminate two snubbers per loop which are parallel to the reactor coolant cold leg at the reactor coolant pump support.

- Eliminate four snubbers per loop which are parallel to the reactor coolant hot legs at the steam generator lower support ring.

- Eliminate the LOCA pipe rupture loads postulated for the four snubbers per loop which are at the Steam Generator upper support rings.

Granting this request would not affect:

- ECCS Design Basis.

- Reactor containment building and compartment design basis.

- Equipment qualification basis.

- Engineered safety feature systems response.

It has been and continues to be our intent to implement these changes during the 1986 Surry refueling outages. This request is based on the information previously submitted to NRC in our letters dated November 5, 1985 (Serial No. 85-136), December 3, 1985 (Serial No. 85-136A) and January 14, 1986 (Serial No. 85-136C). This information consists of the scope and justification for the request, detailed loading evaluations, an assessment of Surry's leakage detection systems, a safety balance assessment, and responses to five specific questions raised by NRC as a result of our December 19, 1985 meeting.

Unreviewed Safety Question Evaluation

The proposed change does not involve an unreviewed safety question, because operation of Surry 1 and 2 in accordance with this change would not:

(1) increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report.

As recognized in the GDC-4 revision, the probability of occurrence of an accident is not increased when leak before break technology is properly applied. Our application of the GDC-4 revision is in accordance with approved guidance. The consequences of an accident previously evaluated are not increased (other than the dynamic effects of a postulated loop rupture, which are now deleted from the design basis by application of leak before break technology) because the revision does not affect the ECCS design bases, reactor containment building and compartment design basis, equipment qualification basis, or engineered safety feature systems response from that previously evaluated. Malfunctions of equipment may actually be reduced. Elimination of 18 large bore snubbers per unit reduces the number of snubbers that could potentially fail and also eliminates the corresponding maintenance problems associated with maintaining large bore snubbers. Access to other components for inspection and maintenance purposes is also enhanced and total man-Rem exposure is substantially reduced.

(2) create a possibility for an accident or malfunction of a different type than any previously evaluated in the safety analysis report.

It has now been demonstrated that one type of accident - the double ended pipe rupture - has been eliminated from the design basis through application of leak before break technology. More specifically, our submittals have established that the snubbers we propose to eliminate are required only to mitigate the effects of pipe rupture. Our analyses have demonstrated that with the snubbers eliminated, (a) the loading of the primary loop is still enveloped by the generic analyses submitted by Westinghouse on behalf of the Unresolved Safety Issue (USI) A-2 Owners Group, and approved by the NRC staff in Generic Letter 84-04; and (b) the reactor coolant system equipment, piping, and supports continue to have acceptable margins of safety under licensed loading conditions other than the now-eliminated RCS main loop rupture. The snubbers which we propose to eliminate have been demonstrated to serve only as pipe whip restraints.

(3) reduce the margin of safety as defined in the basis for any technical specification.

Our loading evaluation with the revised support load path configuration (i.e. snubbers removed) establishes that the piping components and supports are stressed within UFSAR acceptable limits. Adequate safety margins exist in a seismic event (in excess of code allowables) and the maximum moment in the reactor coolant loop piping is within the envelope moment taken as a limit for acceptance of leak before break in Westinghouse PWRs in the NRC Safety Evaluation dated February 1, 1984, which is applicable to all plants in the USI A-2 Owners Group, including Surry.

Therefore, pursuant to the criteria specified in 10CFR50.59, we conclude that no unreviewed safety question exists.

No Significant Hazards Consideration Determination

The proposed change does not involve a significant hazards consideration because operation of Surry Units 1 and 2 in accordance with this change would not:

(1) involve a significant increase in the probability or consequence of an accident previously evaluated.

We have determined that the probability or consequences of an accident previously evaluated are not increased by our application of leak before break technology. Through proper application, we have demonstrated that: a) advanced fracture mechanics analysis is an acceptable alternative to maintaining systems or features solely to mitigate the consequences of postulated pipe ruptures; b) that high safety margins are maintained for the remaining snubbers as shown in our loading evaluation to mitigate the effects of all postulated events (except the now eliminated pipe rupture); c) that our leakage detection systems are capable of detecting leakage from postulated through-walls flows and allow operating personnel to take appropriate responses in a timely fashion, and d) the ECCS design basis, reactor containment and compartment design basis, equipment qualification basis, and engineered safety feature system response are unaffected by this change.

(2) create the possibility of a new or different kind of accident from any accident previously evaluated.

It has been demonstrated that one type of accident - a postulated RCS pipe rupture - has been eliminated from the design basis through application of leak before break technology. More specifically, our submittals have established that the snubbers we propose to eliminate are required only to mitigate the effects of pipe rupture. Our analyses have demonstrated that with the snubbers eliminated, (a) the loading of the primary loop is still enveloped by the generic analyses submitted by Westinghouse on behalf of the USI A-2 Owners Group, and approved by the NRC staff in Generic Letter 84-04; and (b) the reactor coolant system equipment, piping, and supports continue to have acceptable margins of safety under licensed loading conditions other than the now-eliminated RCS main loop rupture. The snubbers which we propose to eliminate have been demonstrated to serve only as pipe whip restraints.

(3) involve a significant reduction in a margin of safety.

Our loading evaluation with the revised support load path configuration (i.e. snubbers removed) establishes that the piping components and supports are stressed within UFSAR acceptable limits.

Adequate safety margins exist in a seismic event in excess of code allowables and the maximum moment in the reactor coolant loop piping is within the envelope moment taken as a limit in the NRC Safety Evaluation dated February 1, 1984, which is applicable to Surry.

To better illustrate this determination, the Commission has provided examples (51FR7751) of amendments not likely to involve significant hazards considerations. Example (iv) states: "A relief granted upon demonstration of acceptable operation from an operating restriction that was imposed because acceptable operation was not yet demonstrated. This assumes that the operating restriction and the criteria to be applied to a request for relief have been established in a prior review and that it is justified in a satisfactory way that the criteria have been met."

The proposed amendment is similar to the example as follows: The installation of pipe whip restraints and other devices (i.e. snubbers) to protect against the dynamic effects of a postulated pipe break is equivalent to the operating restriction in the example. Acceptable operation had not yet been demonstrated. With the advent of leak before break technology, acceptable operation without this restriction can be demonstrated. The criteria for accepting leak before break technology have been previously accepted by the NRC in their February 1, 1984, Safety Evaluation as documented in Generic Letter 84-04, as well as the analyses referenced in the supplementary information which supports the Commission action to modify General Design Criterion 4 to eliminate this "operating restriction" from the design basis.

Therefore, pursuant to the standards in 10 CFR 50.92 we have determined that this change involves no significant hazards consideration.

Possibility For Exigent Request

Surry 1 is currently scheduled to shutdown on May 9, 1986, to began a 48 day refueling outage. Because the core is at End of Life for this cycle of operation, any unplanned shutdown earlier than May 9 could result in initiating the refueling outage earlier than planned. We also note that we have recently been able to better our planned outage duration by several days, for example, the 1986 North Anna 2 outage. This could result in restart of the unit earlier than June 26, 1986. Although our planned restart date is currently June 26, 1986, exigent handling of this license amendment request may become necessary for the reasons stated above to support an earlier restart date.