



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

December 22, 1992

NOTE TO: Jack Duncan, GE

FROM: Glenn Kelly, SPSB, DSSA, NRR

SUBJECT: CLARIFICATION OF SUBMITTAL ON LOCAS OUTSIDE OF CONTAINMENT

I have enclosed a list of clarifications that the staff needs to complete its review of LOCAs Outside Containment for the ABWR PRA. These clarifications refer to your November 5, 1992 submittal and your December 17, 1992 draft SSAR submittal (Section 19E.2.3.3). If you have any questions, please contact myself or Bob Palla.

Enclosure: as stated

cc: Don Knecht, GE

## CLARIFICATION OF LOCAs OUTSIDE CONTAINMENT

December 22, 1992

### Concern 1

1. Table 19E.2-21 - (a) Is this table complete in its evaluation of all possible bypass paths? (b) If not, do we know what has not been evaluated here? (c) Do we know the limitations?
2. (a) When estimating the conditional bypass probability, explain how EQ was taken into account. (b) Address GE assured that potentially affected equipment was qualified? (c) If equipment was not known to be qualified, how was it handled?
3. (a) For Figures 1, 2, and 3 in the December 17, 1992 GE draft SSAR submittal, explain how each value of  $X_1$  is calculated. It is unacceptable merely to state that the calculation is similar to other calculations in the staff's possession, although identical calculations can be referenced. (b) Similarly, provide the calculations for  $Q_0$ .
4. For medium and large breaks, GE claims that because of the depressurization caused by such break sizes, the rate of loss of inventory from the break (after some unspecified time) is compensated for by available makeup sources outside of containment, such as firewater. No basis is given for this claim. (a) How much time does an operator have to switch over to an outside source if a break occurs outside of containment? (b) Explain how this makeup will be provided at a dry site (perhaps one with cooling towers or a spray pond). (c) Provide further information/commitments to assure that makeup will be available until the plant can be brought to a safe, stable state.

### Concern 2

1. GE's response to concern 2 (whether GE's analysis was exhaustive in searching for and discovering potential bypass lines) is not satisfactory. Provide a judgement on bypass potential based on up-to-date P&IDs, not those from 1988.

### Concern 3

1. It appears that the value of  $Q_1$  (failure of another division) was estimated to be  $1E-3$  if the LOCA in the secondary containment occurred near another division wall. (a) Please amplify on how this was determined and what was the basis for deciding which LOCAs were or were not  $1E-3$  events. (b) Also please explain the how the values of  $Q_1$  and  $Q_0$  in Figure 2 (Medium LOCA Outside of Containment) were determined.
2. Please explain the assumed effect that LOCAs outside of secondary containment will have on ac or dc power circuits that power divisions inside of containment.