



Additional Event Description

The system inspections were being conducted to verify plant "as built" design drawings. The affected safety related systems, Control Room Ventilation, Emergency Core Cooling Systems Area Ventilation (including portions of the Reactor Auxiliary Building Ventilation supply system), and Shield Building Ventilation are only required in the event of a LOCA. In order for them to possibly fail to fulfill their functions an earthquake would also have to occur. The probability of these two events occurring in the near future is extremely low. An engineering evaluation performed by the AE has determined that the ventilation duct restraint system existing at the time of the occurrence on the safety related system in question was capable of sustaining the additional loads imposed upon it due to the absence of the 66 missing longitudinal braces during a design basis seismic event. Other ventilation systems in containment and shield building do not require the longitudinal braces so are not a concern.

Additional Cause Description and Corrective Action

We have concluded that a unique combination of factors involved in the contracting, drawings and quality control for these ventilation braces resulted in their not being installed as required. A description of the circumstances is as follows:

- a. It was not until late into the St. Lucie Unit 1 project that the ventilation system installer, an independent contractor, was to be assigned the additional scope of work of installing the permanent restraints and braces for ventilation system ducting, which included the 66 braces in question. A communication error between the AE and the ventilation system installer apparently contributed to the installer not including these 66 braces on the installation drawings, even though these braces appeared on the Architect-Engineer's (A-E's) design engineering drawings which were used as a source for the installation drawings.
- b. The installer was also responsible for the quality control inspections associated with the ventilation system installation; consequently the "as-built" condition was inspected to the installation drawings, which, as noted above, did not include these 66 braces. Had the ventilation system been inspected by our A-E's QC, who did most of the other inspecting, or had the installer used the A-E's design drawings for inspection, the missing braces probably would have been identified during the construction phase.

Additional Cause Description and Corrective Action (continued)

Although there were several other contractors participating in the St. Lucie Unit 1 construction who performed their own quality control, it has been determined that none of these contractors used other than design drawings for installations and inspections.

Installation of the previously missing braces in PSL-1 was completed on October 5, 1978.

Measures are being established to prevent a similar omission from occurring on our St. Lucie Unit 2. These measures include:

- a. More effective comparison of installation drawings against design drawings for accuracy and completeness prior to site approval of installation drawings.
- b. Performing a walkdown by FPL Quality Control personnel of seismic duct supports to verify that the "as-built" is in accordance with the design drawings.