Ron J. DeGregorio
Vice President

AmerGen
A PECO Energy/British Energy Company

AmerGen Energy Company, LLC
Oyster Creek
U.S. Route 9 South
P.O. Box 388
Forked River, NJ 08731-0388
Telephone: 609 971 2300

2130-00-20240
September 15, 2000

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 25555

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Facility License No. DPR-16
Technical Specification Change Request (TSCR) No. 273
Response to Request for Additional Information

Reference: GPU Nuclear Letter 1940-99-20026 to the USNRC dated March 7, 2000, "Technical Specification Change Request No. 273, Surveillance Frequency of Excess Flow Check Valves (EFCV)"

Attachment 1 to this letter responds to the NRC staff verbal request for additional information concerning the referenced license amendment application as discussed in telephone calls on August 31, 2000 and September 11, 2000. Attachment 2 contains a revised Technical Specification bases page related to the subject application as discussed in Attachment 1.

If additional information is required, please contact Paul F. Czaya of Oyster Creek Licensing at (609) 971-4139.

Very truly yours,

Ron J. DeGregorio
Vice President
Oyster Creek

Sworn to and subscribed before me this 15th day of September, 2000.

Notary Public

c: Administrator, USNRC Region I
USNRC Oyster Creek Senior Project Manager
USNRC Oyster Creek Senior Resident Inspector

GEORGE W. BUSCH
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires Aug. 8, 2009

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1. The SER for Topical Report B21-00658-01 (DAEC SER or Topical SER) states that each licensee is required to develop EFCV minimum performance acceptance criteria and the basis to ensure that their corrective action program can provide meaningful feedback for evaluation and response to failure trends of the EFCVs. Please state the performance acceptance criteria and provide a discussion of the performance acceptance criteria including, equipment failure evaluation, root-cause evaluation, evaluation of testing intervals, and the risk analysis of the failure.

   Response:

   AmerGen Energy will revise the 10 CFR 50.65 Maintenance Rule Performance Criteria for Oyster Creek to ensure EFCV performance remains consistent with the bases for the extended test interval. The component level performance criterion for Oyster Creek Generating Station is less than or equal to 2 failures on a 24-month rolling average. The two-year rolling average was chosen to be consistent with the current Oyster Creek Generating Station Maintenance Rule Program and the 24-month refueling cycle. When the performance criterion is exceeded, a 10 CFR 50.65(a)(1) determination will be performed in accordance with station procedures.

2. Can "representative sample" include the same valves for different outage surveillance?

   Response:

   It is not the intent of the representative sample to include the same valves for different outage surveillance. The following sentence has been added to the bases page and is included as Attachment 2. "In addition, the EFCVs on the sample are representative of the various plant configurations, models, sizes and operating environments. This ensures that any potentially common problem with a specific type or application of EFCV is detected at the earliest possible time." This sentence is consistent with TSTF-334.

3. For radiological consequences the submittal states that no credit is taken for the EFCVs. Confirm that no credit is taken for EFCV flow restriction or separate flow orifice. It also states that release to the environment will be low. Please confirm.

   Response:

   The Oyster Creek reactor coolant pressure boundary instrument line break analysis does not take any credit for internal EFCV flow restrictions (⅜ inch inlet and ¼ inch outlet) or separate orifice. It assumes the break is in a 1 inch diameter instrument line. In support

of the amendment request the BWR Owners Group Topical Report B21-00658-01 was reviewed and it was determined that an element of the Attachment B dose evaluation is not conservative as it applies to Oyster Creek. As a result, radiological dose consequences were analyzed consistent with Attachment B of the BWR Owners Group Topical Report B21-00658-01 (NEDO-32977-A). The results support the conclusion that doses at the exclusion area boundary and low population zone are a small fraction of 10 CFR Part 100 limits, bounded by the current licensing basis and the maximum dose is bounded by the generic analysis.

The analysis did not take credit for filtration by the standby gas treatment system or any plate-out or other removal processes for the entire release. The reactor building is assumed to be unable to be maintained < -0.25 inches H_2O and, therefore, a ground level release from the reactor building is used for the duration of the assumed event until the reactor would be <212°F following a 100 degree per hour cooldown. Following termination of flashing (at 4 hours) an elevated release is used. The thermal-hydraulic aspects of the analysis are consistent with the current licensing basis.

4. The topical report concluded that a release through an instrument line would be within the pressure control capacity of the reactor building ventilation systems and the integrity and functional performance of secondary containment would be met. Confirm this is also the case for Oyster Creek.

Response:

The impact of an instrument line release of steam into the reactor building is within the pressure control capacity of the reactor building ventilation system. The operational consequences of failure of an EFCV to close is bounded by the existing licensing basis analysis and the integrity and functional performance of secondary containment is maintained.

5. For a release inside secondary containment provide a discussion on the operational impact of an instrument line release including jet impingement and equipment separation.

Response:

Separation of equipment within the reactor building minimizes the operational impact of an instrument line break on other equipment due to jet impingement. Nevertheless, the presence of an unisolated steam leak into the reactor building would likely require a reactor shutdown and depressurization to allow access to manually isolate the line.

Attachment 2

Revised Section 4.5 Bases
Page 4.5-15

The surveillance program is being conducted to demonstrate that the Firebar D will maintain its integrity and not deteriorate throughout plant life. The surveillance frequency is adequate to detect any deterioration tendency of the material. [8]

The operability of the instrument line flow check valves are demonstrated to assure isolation capability for excess flow and to assure the operability of the instrument sensor when required. The representative sample consists of an approximately equal number of EFCV's, such that each EFCV is tested at least every 10 years (nominal). In addition, the EFCVs in the sample are representative of the various plant configurations, models, sizes and operating environments. This ensures that any potentially common problem with a specific type or application of EFCV is detected at the earliest possible time. The nominal 10 year interval is based on other performance-based testing programs, such as Inservice Testing (snubbers) and Option B to 10 CFR 50, Appendix J. EFCV test failures will be evaluated to determine if additional testing in that test interval is warranted to ensure overall reliability is maintained. Operating experience has demonstrated that these components are highly reliable and that failures to isolate are very infrequent. Therefore, testing of a representative sample was concluded to be acceptable from a reliability standpoint. [9]

Because of the large volume and thermal capacity of the suppression pool, the volume and temperature normally changes very slowly and monitoring these parameters daily is sufficient to establish any temperature trends. By requiring the suppression pool temperature to be continually monitored and also observed during periods of significant heat addition, the temperature trends will be closely followed so that appropriate action can be taken. The requirement for an external visual examination following any event where potentially high loadings could occur provides assurance that no significant damage was encountered. Particular attention should be focused on structural discontinuities in the vicinity of the relief valve discharge since these are expected to be the points of highest stress.

References

(1) Licensing Application, Amendment 32, Question 3
(2) FDSAR, Volume I, Section V-1.1
(3) GE-NE 770-07-1090, "Oyster Creek LOCA Drywell Pressure Response," February 1991
(4) Deleted
(5) FDSAR, Volume I, Sections V-1.5 and V-1.6
(6) FDSAR, Volume I, Sections V-1.6 and XIII-3.4
(7) FDSAR, Volume I, Section XIII-2
(8) Licensing Application, Amendment 11, Question III-18
(9) GE BWROG B21-00658-01, "Excess Flow Check Valve Testing Relaxation," dated November 1998