PHILADELPHIA ELECTRIC COMPANY

NUCLEAR GROUP HEADQUARTERS

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U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: Peach Bottom Atomic Power Station, Units 2 and 3
Limerick Generating Station, Units 1 and 2
Request for Approval to Use General Electric Company
Reactor Analysis Methods - Supplemental Information

Gentlemen:

As a follow-up to a July 7, 1992 conference call between Messrs. Shea and Kendrick of the NRC and representatives of Philadelphia Electric Company (PECo), this letter supplements our letter to the NRC dated June 16, 1992 requesting NRC approval to use General Electric (GE) Company reload methodology, and provides a discussion of PECo's intended method of performing reactor analysis calculations as required to design and manage Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3 and Limerick Generating Station (LGS), Units 1 and 2 reload cores.

As a result of several factors, including the introduction of the GE-11 product line into the PBAPS, Units 2 and 3 cores and LGS, Units 1 and 2 cores, we have altered our reactor analysis strategy for both PBAPS Units 2 and 3 and LGS Units 1 and 2. PECo will continue to perform all production reload design and cycle management evaluations in-house, including the Technical Specifications related cold shutdown margin (CSDM) demonstration and reactivity anomaly calculation sequences. However, beginning with the introduction of GE-11 reloads, the methodology used by PECo to perform these calculations will be the NRC approved GE GENIE computer code system. We expect that the GENIE computer code system will eventually be applied to GE-13 and other GE fuel designs at such time as GE receives NRC approval to apply GENIE to these designs. Furthermore, PECo will rely exclusively on GE generated databases (e.g., nuclide cross section sets, reactor hydraulics parameters) when performing production reload design

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hydraulics parameters) when performing production reload design and cycle management calculations. PECo has previously provided information which demonstrated proficiency in the application of the GE methodology and models for nodal analysis applications in our letter dated November 18, 1992, specifically addressing CSDM and reactivity anomaly calculations. The NRC has approved this scope of application by NRC letter dated February 21, 1992 for LGS Unit 1 reload 4 only. We now request NRC approval for PECo personnel to apply these GE reactor analysis methods to any future PBAPS, Unit 2 and Unit 3, and LGS, Unit 1 and Unit 2 core reload designs and cycle management evaluations. We will continue to assure that the GENIE system is subjected to appropriate ongoing benchmark evaluations such that PECo can maintain an adequate basis for confidence in the continuing applicability of this computer code system to current fuel technology and operating strategies. We would appreciate receiving your approval as soon as possible.

With regard to reload system transient calculations, PECo intends to have GE continue to perform these calculations, at this time. We are currently evaluating our longer term options with regard to this need, and will advise the NRC of the direction to be taken at a later date.

Please note that PECo will continue support for the existing, licensed PECo reload analysis methodology as described in NRC approved topical reports PECo-FMS-0001-A through PECo-FMS-0006 A. Current plans call for upgrading this computer code system to explicitly and accurately represent advanced fuel designs, and to ultimately apply the computer code system to independent in-house "case study" calculations. We expect that this methodology will, for example, be used to evaluate alternate vendor/mixed core scenarios, respond to specific system related questions originated at the plant sites and to provide a basis for plant simulator benchmarks.

If you have any questions or need additional information, please contact us.

Very truly yours,

George J. Beck, Manager
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