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AUTH.NAME AUTHOR AFFILIATION
JONES,G.T. Pennsylvania Power & Light Co.
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SUBJECT: Provides suppl info to proposed changes to SSES Unit 1 & 2 TS submitted on 980619 & 0805,based on 980929 telcon.

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George T. Jones
Vice President
Nuclear Engineering and Support
Tel. 610.774.7602 Fax 610.774.7797
E-mail: gtjones@papl.com

PP&L, Inc.
Two North Ninth Street
Allentown, PA 18101-1179
Tel. 610.774.5151
http://www.ppl-inc.com/

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SUSQUEHANNA STEAM ELECTRIC STATION
REVISED PROPOSED AMENDMENT NO. 221 TO
LICENSE NPF-14 AND NO. 186 TO LICENSE NPF-22:
FINAL RESPONSE TO GL 94-02:
LONG-TERM STABILITY SOLUTION
PLA-4990

Docket Nos. 50-387
and 50-388

References: 1) *PLA-4925, R.G. Byram to USNRC, "Proposed Amendment No. 221 to License NPF-14: Final Response to GL 94-02: Long Term Stability Solution," dated 6/19/98.*
2) *PLA-4956, Byram to USNRC, "Proposed Amendment No. 186 to License NPF-22: Final Response to GL 94-02: Long Term Stability Solution," dated 8/5/98.*

The purpose of this letter is to provide supplemental information to the proposed changes to the SSES Unit 1 and 2 Technical Specifications submitted by references 1 and 2 based on a teleconference held on 9/29/98 between NRC (Victor Nerses and Michael Waterman) and PPL (Michael Crowthers and David Bockstanz).

The proposed Technical Specification changes (submitted by references 1 and 2) incorporate the long term SSES stability solution into SSES Technical Specifications. The proposed changes to the Technical Specifications include a new Section 3.3.1.3 to be entitled "Oscillation Power Range Monitoring (OPRM) Instrumentation" and revisions to 3.4.1 "Recirculation Loops Operating" to remove the specifications related to current stability specifications which will no longer be required.

Presently, SSES is operating under Interim Corrective Actions (ICAs) defined in Technical Specification Section 3.4.1 that define restrictions to plant operation and define operator response to instability events. These actions are the interim actions accepted by the NRC for core protection until a permanent protection system is installed. The subject proposed changes implement the permanent protection system.

A001

During the referenced teleconference, it was requested that PPL provide additional information to that provided in Attachment 4 of references 1 and 2 related to equipment qualification\channel integrity. Specifically additional information related to the following was requested:

1. analysis performed by ABB-CE related to relative humidity,
2. testing performed related to electromagnetic interference (EMI),
3. seismic qualification of the PRNMS panels (1C608 and 2C608).

The information is contained in Attachment 1.

In addition, an exception to a referenced Topical Report CENPD-400-P-A was discussed. A software change has removed a built in self-health test for the OPRM module that is described in §2.3.10 of the Topical Report. This test, which performed an LPRM validity check for a "noiseless" signal, was determined to be unnecessary. Although it is described in the Topical Report, no specific credit for its performance has been claimed, and its function is not credited in the SER. Its removal does not affect the design function of the OPRM Instrumentation or affect the bases for the requested Technical Specifications.

Reference 1 contains markup's of the proposed changes for Unit 1 on an early version of the proposed ITS pages. Attachment 2 herein contains markup's reflecting the same proposed changes but on the approved ITS Unit 1 Amendment 178 Technical Specification pages.

Reference 2 contains markup's reflecting the Unit 2 proposed changes on the approved ITS Unit 2 Amendment 151 Technical Specification.

IMPLEMENTATION:

The PP&L, Inc. OPRM equipment supplier issued on 10/30/98 a Service Bulletin (OPRM-98-01) detailing the need for "mandatory" rework of all the SSES installed OPRM modules. The modules must be returned to the supplier for this mandatory rework. The rework is necessary to assure operability of the OPRM modules. PP&L, Inc. is working with the supplier to assure that SSES modules receive the best possible schedule priority that is supportive of a timely implementation at SSES yet does not compromise quality.

Unit 1:

In order to allow time for supplier rework\post-rework testing and reinstallation\post-installation testing of the reworked modules at SSES, it is requested that approval be conditioned to be effective no later than 90 days after startup from the Unit 2 9th RIO scheduled for the spring of 1999. This would allow implementation of the changes on both Unit 1 and Unit 2 concurrently.

Concurrent implementation on both units is desirable from a human factors aspect for the SSES operations staff.

Unit 2:

As identified in reference 2, to support our planning for the Unit 2 9th RIO, it is requested that the NRC review and approval be completed by 1/15/99 and that the approval be conditioned to become effective no later than 90 days after startup from the Unit 2 9th RIO scheduled for the spring of 1999.

If you have any additional questions, please contact Mr. M. H. Crowthers at (610) 774-7766.

Sincerely,

G. T. Jones

Attachments

copy: NRC Region I
Mr. S. L. Hansell, NRC Acting Sr. Resident Inspector
Mr. V. Nerses, NRC Sr. Project Manager
Mr. K. Kerns, Pennsylvania DEP/BRP

1. Relative Humidity

The OPRM modules were type tested to 40% relative humidity (the practical limit of the testing facility). Operation at lower humidity levels has been justified as follows:

a. The primary concern at low humidity levels is the chance of damage from electrostatic discharge. All equipment has been tested for electrostatic discharge, 8kV for contact discharge, 15kV for air discharge.

b. All OPRM circuit cards are coated with CONAP (OPRM, DIB boards), or an acrylic urethane, that effectively isolates any electronic component from a direct contact with a low humidity environment.

2. EMI Testing

The OPRM was evaluated for EMI emissions and corresponding immunity (susceptibility) requirements based on EPRI guidelines TR-102323-R1. The evaluation found that the OPRM has sufficient margin between the point of installation emissions and the OPRM test levels to be compatible with its electromagnetic environment at the point of installation.

The OPRM system was tested for conducted and radiated emissions, conducted and radiated susceptibility, electrostatic discharge, and electrical fast transients. Plant emission measurements were performed at the point of installation and were found to be significantly less than the EPRI Allowable Plant Level emissions.

3. Seismic Qualification

The OPRM components, including modules, digital isolator blocks, external relay boards, analog signal isolators, replacement power supplies and voltage regulators, and additional mounting hardware and separation barriers are accounted for in approved Seismic Qualification data file records. The total weight increase is less than 100lbs in panels that weigh approximately 4500lbs.

The conclusion that there is no impact on the seismic qualification of the Power Range Neutron Monitoring System Panel was reviewed and approved in accordance with the requirements of the PP&L design control program.

ATTACHMENT 2 TO PLA-4990

MARK-UP's

ATTACHMENT 2 TO PLA-4990

MARK-UP's