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MAY 15 2008

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Stop OP1-17
Washington, DC 20555

SUSQUEHANNA STEAM ELECTRIC STATION
UNIT 1 OPERATING LICENSE NO. NPF-14
LICENSE CONDITION 2.C. (36) (a) 3 **Docket Nos. 50-387**
PLA-6358 **and 50-388**

The purpose of this letter is to docket the attached evaluation of steam dryer performance based on the data collected at the 3.5% power ascension step that was provided via electronic submission to the NRC on May 1, 2008 as required by the License Condition.

License Condition 2.C. (36) (a) 3 requires:

> "PPL shall hold the facility at each 3.5% ascension step to collect data from License Condition 2.C. (36) (a) and conduct plant inspections and walk-downs, and evaluate steam dryer performance based on the data; shall provide the evaluation to the NRC Staff by facsimile or electronic transmission to the NRC project manager upon completion of the evaluation; and shall not increase power above each hold point until 96 hours after the NRC project manager confirms receipt of the transmission."

Enclosure 1 contains the proprietary version of "SSES Replacement Dryer Test Condition '1.I' Results." The information in Enclosure 1 contains proprietary information as defined by 10CFR2.390. GEH and PPL, as the owners of the proprietary information, have executed the enclosed affidavits, which identify that the enclosed proprietary information has been handled and classified as proprietary, is customarily held in confidence, and has been withheld from public disclosure. The proprietary information was provided to PPL in a GEH transmittal that is referenced by the affidavit. The proprietary information has been faithfully reproduced in the enclosed information such that the affidavit remains applicable. GEH and PPL hereby request that the enclosed proprietary information be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390 and 9.17.

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The header of each page in this enclosure carries the notation "GEH Proprietary Information" or "GEH and PPL Proprietary Information." GEH proprietary information is identified by a dotted underline inside double square brackets. [[This sentence is an example.{3}]] In each case, the superscript notation{3} refers to Paragraph (3) of the GEH affidavit, which provides the basis for the proprietary determination. Specific information that is not so marked is not GEH proprietary. PPL proprietary information is identified inside triple brackets. {{{This sentence is an example.{2}}}} In each case, the superscript notation{2} refers to Paragraph (2) of the PPL affidavit, which provides the basis for the proprietary determination. Specific information that is not so marked is not PPL proprietary.

The following is in response to a question from the NRC on the references provided in Enclosure 1:

Reference 3:

GE-NE-0000-0080-2994-R2, which provided the designed Dryer Instrumentation Acceptance Criteria, was transmitted to the NRC in PLA-6332 on February 22, 2008. During the installation of the instrumentation, one of the instruments was not installed in the exact location assumed in GE-NE-0000-0080-2994-R2. Therefore, a new set of acceptance criteria was developed for that one instrument. The revised acceptance criteria was transmitted to the NRC in PLA-6349 dated April 11, 2008. PLA-6332 and PLA-6349 contain the same acceptance criteria that are in GE-NE-0000-0080-2994-R4 (Reference 3).

Reference 4:

This reference was transmitted to the NRC in PLA-6323 dated January 25, 2008.

Enclosure 2 contains the non-proprietary version of "SSES Replacement Dryer Test Condition '1.I' Results." Enclosure 3 contains the signed affidavits. Enclosure 4 contains the steam dryer data log sheet.

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

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 5-13-08

B. T. McKinney

Enclosure 1 - SSES Replacement Dryer Test Condition "1.I" Results – PPL and GEH Proprietary Information
Enclosure 2 - SSES Replacement Dryer Test Condition "1.I" Results - Non-Proprietary Information
Enclosure 3 - Affidavits
Enclosure 4 – Steam Dryer Data Log Sheets

Copy: NRC Region I
Mr. R. R. Janati, DEP/BRP
Mr. F. W. Jaxheimer, NRC Sr. Resident Inspector
Mr. B. K. Vaidya, NRC Project Manager

Enclosure 2 to PLA-6358

Non-Proprietary Version of SSES Replacement Dryer Test Condition "1.I" Results

ENCLOSURE 2

102992-PPL-381591-C-001

SSES Replacement Dryer Test Condition "1.I" Results

Non-Proprietary Information

This is a non-proprietary version of the Enclosure 1 of 102992-PPL-381591-C-001, which has the proprietary information removed. Portions of the document that have been removed are indicated by an open and closed bracket as shown here [[ ]].

This enclosure provides a summary of the SSES Unit 1 replacement steam dryer instrumentation measurements at Test Condition "1.I". Test Condition "1.I" was performed at a power level of 3612 MWth (91.4% of the licensed EPU power level). The dryer instrumentation locations are documented in Appendix A of this enclosure. Table 1 shows the maximum strain and acceleration amplitudes as a percent of the acceptance limits provided in Reference 3. All values of strain and acceleration are below the Level 2 acceptance limits for Test Condition "1.I".

{{{ [[

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Figures 1 through 10 [[

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Figures 11 through 20 provide [[

]]

References:

1. Steam Dryer Instrumentation for PPL-Susquehanna Unit 1
Contract # 381591-C
2. PPL Susquehanna LLC, Susquehanna Steam Electric Station Units 1 and 2, Extended Power Uprate Phase III, GE Proposal No. 1208- 1JMZL -KR0, Revision 1, submitted March 29, 2005.
3. GE-NE-0000-0080-2994-R4, "Susquehanna Replacement Steam Dryer Instrumentation Acceptance Criteria – Dryer Mounted Instrumentation" April 2008.
4. GE-NE-0000-0079-2250-P-R0, "Susquehanna Replacement Steam Dryer Stress Analysis at Extended Power Uprate Conditions," January 2008.

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ENCLOSURE 2

102992-PPL-381591-C-001

Appendix A: SSES Replacement Dryer Instrumentation Locations

Table A-1: Description of [[ ]]

[[	

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[[

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Figure A-1 Dryer Top View

[[

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Figure A-2 Elevation Ninety Degree View

* Dimension measured along circumference.

*** This [[ ]] is vertical, all others horizontal

[[

]]

Figure A-3 Elevation Zero Degree View

** Dimension measured along circumference.

[[

]]

Figure A-4 Elevation 270 Degree View

Enclosure 3 to PLA-6358

Affidavits

GE-Hitachi Nuclear Energy Americas LLC

AFFIDAVIT

I, Richard E. Kingston, state as follows:

(1) I am Vice President, Methods Licensing, Regulatory Affairs, GE-Hitachi Nuclear Energy-Americas LLC ("GEH"). I have been delegated the function of reviewing the information described in paragraph (2) which is sought to be withheld, and have been authorized to apply for its withholding.

(2) The information sought to be withheld is contained in GEH letter, 102992-PPL-381591-C-001, dated May 1, 2008. GEH proprietary information is identified by a dotted underline inside double square brackets [[This sentence is an example.{3}]]. In each case, the superscript notation {3} refers to Paragraph (3) of this affidavit, which provides the basis for the proprietary determination.

(3) In making this application for withholding of proprietary information of which it is the owner or licensee, GEH relies upon the exemption from disclosure set forth in the Freedom of Information Act ("FOIA"), 5 USC Sec. 552(b)(4), and the Trade Secrets Act, 18 USC Sec. 1905, and NRC regulations 10 CFR 9.17(a)(4), and 2.390(a)(4) for "trade secrets" (Exemption 4). The material for which exemption from disclosure is here sought also qualify under the narrower definition of "trade secret", within the meanings assigned to those terms for purposes of FOIA Exemption 4 in, respectively, Critical Mass Energy Project v. Nuclear Regulatory Commission, 975F2d871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704F2d1280 (DC Cir. 1983).

(4) Some examples of categories of information which fit into the definition of proprietary information are:

a. Information that discloses a process, method, or apparatus, including supporting data and analyses, where prevention of its use by GEH's competitors without license from GEH constitutes a competitive economic advantage over other companies;

b. Information which, if used by a competitor, would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product;

c. Information which reveals aspects of past, present, or future GEH customer-funded development plans and programs, resulting in potential products to GEH;

d. Information which discloses patentable subject matter for which it may be desirable to obtain patent protection.

The information sought to be withheld is considered to be proprietary for the reasons set forth in paragraphs (4)a. and (4)b. above.

(5) To address 10 CFR 2.390(b)(4), the information sought to be withheld is being submitted to NRC in confidence. The information is of a sort customarily held in confidence by GEH, and is in fact so held. The information sought to be withheld has, to the best of my knowledge and belief, consistently been held in confidence by GEH, no public disclosure has been made, and it is not available in public sources. All disclosures to third parties, including any required transmittals to NRC, have been made, or must be made, pursuant to regulatory provisions or proprietary agreements which provide for maintenance of the information in confidence. Its initial designation as proprietary information, and the subsequent steps taken to prevent its unauthorized disclosure, are as set forth in paragraphs (6) and (7) following.

(6) Initial approval of proprietary treatment of a document is made by the manager of the originating component, the person most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge, or subject to the terms under which it was licensed to GEH. Access to such documents within GEH is limited on a "need to know" basis.

(7) The procedure for approval of external release of such a document typically requires review by the staff manager, project manager, principal scientist, or other equivalent authority for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside GEH are limited to regulatory bodies, customers, and potential customers, and their agents, suppliers, and licensees, and others with a legitimate need for the information, and then only in accordance with appropriate regulatory provisions or proprietary agreements.

(8) The information identified in paragraph (2) above is classified as proprietary because it contains results and details of structural analysis methods and techniques developed by GEH for evaluations of a BWR Steam Dryer and of other reactor internals, including separators. Development of these methods, techniques, and information and their application for the design, modification, and analyses methodologies and processes for the Steam Dryer Program and to the design and manufacturing of other BWR internal hardware was achieved at a significant cost to GEH, on the order of approximately several million dollars.

The development of the evaluation process along with the interpretation and application of the analytical results is derived from the extensive experience database that constitutes a major GEH asset.

(9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GEH's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of GEH's comprehensive BWR safety and technology base, and its commercial value extends beyond the original development cost. The value of the technology base goes beyond the extensive physical database and analytical methodology and includes development of the expertise to determine and apply the appropriate evaluation process. In addition, the technology base includes the value derived from providing analyses done with NRC-approved methods.

The research, development, engineering, analytical and NRC review costs comprise a substantial investment of time and money by GEH.

The precise value of the expertise to devise an evaluation process and apply the correct analytical methodology is difficult to quantify, but it clearly is substantial.

GEH's competitive advantage will be lost if its competitors are able to use the results of the GEH experience to normalize or verify their own process or if they are able to claim an equivalent understanding by demonstrating that they can arrive at the same or similar conclusions.

The value of this information to GEH would be lost if the information were disclosed to the public. Making such information available to competitors without their having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall, and deprive GEH of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing and obtaining these very valuable analytical tools.

I declare under penalty of perjury that the foregoing affidavit and the matters stated therein are true and correct to the best of my knowledge, information, and belief.

Executed on this 30th day of April 2008.

Richard E. Kingston

Richard E. Kingston
GE-Hitachi Nuclear Energy Americas LLC

CONFIDENTIAL INFORMATION
SUBMITTED UNDER 10 C.F.R. §2.390

AFFIDAVIT OF RICHARD D. PAGODIN

I, Richard D. Pagodin General Manager-Nuclear Engineering PPL Susquehanna, LLC, do hereby affirm and state:

1. I am authorized to execute this affidavit on behalf of PPL Susquehanna, LLC (hereinafter referred to as "PPL").

2. PPL requests that the information attached and identified inside triple brackets {{{This sentence is an example.}}} be withheld from public disclosure under the provisions of 10 C.F.R. 2.390(a)(4).

3. The PPL Documents contain confidential commercial information, the disclosure of which would adversely affect PPL.

4. This information has been held in confidence by PPL. To the extent that PPL has shared this information with others, it has done so on a confidential basis.

5. PPL customarily keeps such information in confidence and there is a rational basis for holding such information in confidence. The information is not available from public sources and could not be gathered readily from other publicly available information.

6. Public disclosure of this information would cause substantial harm to the competitive position of PPL, because such information has significant commercial value to PPL.

7. The information identified in paragraph (2) above is classified as proprietary because it details the results of test data derived from test instrumentation installed specifically to collect this data. This instrumentation was installed at a significant cost to PPL.

The data and the conditions under which it was collected constitute a major PPL asset.

8. Public disclosure of the information sought to be withheld is likely to cause substantial harm to PPL by foreclosing or reducing the availability of profit-making opportunities. The information is of value to other BWR Licensee's and would support evaluations and analyses associated with extended power uprate license amendment submittals. Making this information available to other BWR Licensee's would represent a windfall and deprive PPL the opportunity to recover a portion of its large investment in the test instrumentation from which this data is derived.

PPL SUSQUEHANNA, LLC

Richard D. Pagodin

Subscribed and sworn before me,
a Notary Public in and for the
Commonwealth of Pennsylvania
This 1st day of May, 2008

Laurie Minto
Notary Public

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Laurie M. Minto, Notary Public
Salem Twp., Luzerne County
My Commission Expires July 24, 2010
Member, Pennsylvania Association of Notaries

Enclosure 4 to PLA-6358

Steam Dryer Data Log Sheets

Steam Dryer Data Log Sheets

1I

Start

Date/Time	4/30/2008 11:37	(Start)

	Computer ID	Value	Units
Thermal Power (Instantaneous)	u01.nba01	3606.94	MWth
Thermal Power (15 min Ave.)	u01.nba101	3611.20	MWth
Electrical Power	u01.tra178	1209.28	Mwe
Total Core Flow	u01.tra026	100.16	M lbm/hr
Recirc Loop Flow A	u01.tra028	50.20	M lbm/hr
Reclrc Loop Flow B	u01.tra029	49.51	M lbm/hr
Recirc Loop A Suction Temperature	u01.nrt01	526.71	°F
Recirc Loop B Suction Temperature	u01.nrt02	527.33	°F
Core Plate D/P	u01.tra027	15.98	PSI
Indicated Steam Flow Line A	u01.tra153	3.78	M lbm/hr
Indicated Steam Flow Line B	u01.tra154	3.97	M lbm/hr
Indicated Steam Flow Line C	u01.tra155	3.97	M lbm/hr
Indicated Steam Flow Line D	u01.tra156	3.83	M lbm/hr
Indicated Total Steam Flow	u01.tra097	15.42	M lbm/hr
Indicated Feedwater Flow	u01.tra098	15.15	M lbm/hr
Feedwater Temperature Line A	u01.tra102	396.37	°F
Feedwater Temperature Line B	u01.tra103	394.51	°F
Feedwater Temperature Line C	u01.tra104	395.84	°F
Rx Dome Pressure Narrow Range	u01.tra208	1019.51	PSIG
Rx Dome Pressure Wide Range	u01.tra209	1020.86	PSIG
Steam Dome Temperature	u01.nfa05	548.92	°F
Reclrculation Pump A Speed	vm.1p401a/1a_rrp_tac	1463.00	RPM
Recirculation Pump B Speed	vm.1p401b/1b_rrp_tac	1467.00	RPM
Reclrculation Pump A Power	u01.nrj51	3.92	MWe
Recirculation Pump B Power	u01.nrj52	3.94	MWe
CRD Cooling Header Flow	u01.nef03	63.39	GPM
CRD System Flow	u01.nef01	62.52	GPM
CRD System Temperature	u01.ndt05	122.52	°F
Bottom Head Drain Temp	u01.tra206	533.71	°F
Reactor Water Level Narrow Range	u01.tra142	34.03	Inches H2O
Reactor Water Level Narrow Range	u01.nfl02	35.01	Inches H2O
Reactor Water Level Narrow Range	u01.nfl03	33.80	Inches H2O
Reactor Water Level Wide Range	u01.tra143	34.86	Inches H2O
Recirculation Pump A Vane Passing Freq.	n/a	121.92	Hz
Reclrculation Pump B Vane Passing Freq.	n/a	122.25	Hz
Recirculation Pump A Motor Frequency	n/a	49.26	Hz
Recirculation Pump B Motor Frequency	n/a	49.39	Hz

Enhanced Steam Flow Calculations

Feed Flow Line A (LEFM)	u01.nff77	4.98	M lbm/hr
Feed Flow Line B (LEFM)	u01.nff78	5.06	M lbm/hr
Feed Flow Line C (LEFM)	u01.nff79	4.92	M lbm/hr
CRD Flow	u01.ndf01	0.03	M lbm/hr
Total Feedwater Flow	n/a	14.99	M lbm/hr
Steam Flow Line A	n/a	*3.65*	M lbm/hr
Steam Flow Line B	n/a	*3.82*	M lbm/hr
Steam Flow Line C	n/a	*3.83*	M lbm/hr
Steam Flow Line D	n/a	*3.69*	M lbm/hr
Total Steam Flow	n/a	*14.99*	M lbm/hr

Steam Dryer Data Log Sheets

11

Finish

Date/Time	4/30/2008 11:42	(Finish)

	Computer ID	Value	Units
Thermal Power (Instantaneous)	u01.nba01	3608.21	MWth
Thermal Power (15 min Ave.)	u01.nba101	3610.55	MWth
Electrical Power	u01.tra178	1203.45	Mwe
Total Core Flow	u01.tra026	100.54	M lbm/hr
Recirc Loop Flow A	u01.tra028	50.44	M lbm/hr
Recirc Loop Flow B	u01.tra029	49.61	M lbm/hr
Recirc Loop A Suction Temperature	u01.nrt01	526.56	°F
Recirc Loop B Suction Temperature	u01.nrt02	527.17	°F
Core Plate D/P	u01.tra027	16.03	PSI
Steam Flow Line A	u01.tra153	3.77	M lbm/hr
Steam Flow Line B	u01.tra154	3.95	M lbm/hr
Steam Flow Line C	u01.tra155	3.98	M lbm/hr
Steam Flow Line D	u01.tra156	3.83	M lbm/hr
Total Steam Flow	u01.tra097	15.42	M lbm/hr
Feedwater Flow	u01.tra098	15.18	M lbm/hr
Feedwater Temperature Line A	u01.tra102	396.41	°F
Feedwater Temperature Line B	u01.tra103	394.58	°F
Feedwater Temperature Line C	u01.tra104	395.86	°F
Rx Dome Pressure Narrow Range	u01.tra208	1019.51	PSIG
Rx Dome Pressure Wide Range	u01.tra209	1020.13	PSIG
Steam Dome Temperature	u01.nfa05	548.92	°F
Recirculation Pump A Speed	vm.1p401a/1a_rrp_tac	1462.00	RPM
Recirculation Pump B Speed	vm.1p401b/1b_rrp_tac	1467.00	RPM
Recirculation Pump A Power	u01.nrj51	3.94	MWe
Recirculation Pump B Power	u01.nrj52	3.96	MWe
CRD Cooling Header Flow	u01.nef03	63.40	GPM
CRD System Flow	u01.nef01	62.53	GPM
CRD System Temperature	u01.ndt05	122.61	°F
Bottom Head Drain Temp	u01.tra206	533.92	°F
Reactor Water Level Narrow Range	u01.tra142	34.83	Inches H2O
Reactor Water Level Narrow Range	u01.nfl02	35.15	Inches H2O
Reactor Water Level Narrow Range	u01.nfl03	34.77	Inches H2O
Reactor Water Level Wide Range	u01.tra143	35.80	Inches H2O
Recirculation Pump A Vane Passing Freq.	n/a	121.83	Hz
Recirculation Pump B Vane Passing Freq.	n/a	122.25	Hz
Recirculation Pump A Motor Frequency	n/a	49.23	Hz
Recirculation Pump B Motor Frequency	n/a	49.39	Hz

Enhanced Steam Flow Calculations

Feed Flow Line A (LEFM)	u01.nff77	5.00	M lbm/hr
Feed Flow Line B (LEFM)	u01.nff78	5.06	M lbm/hr
Feed Flow Line C (LEFM)	u01.nff79	4.92	M lbm/hr
CRD Flow	u01.ndf01	0.03	M lbm/hr
Total Feedwater Flow	n/a	15.01	M lbm/hr
Steam Flow Line A	n/a	3.65	M lbm/hr
Steam Flow Line B	n/a	3.82	M lbm/hr
Steam Flow Line C	n/a	3.85	M lbm/hr
Steam Flow Line D	n/a	3.70	M lbm/hr
Total Steam Flow	n/a	15.01	M lbm/hr