Britt T. McKinney
Sr. Vice President & Chief Nuclear Officer

PPL Susquehanna, LLC
769 Salem Boulevard
Berwick, PA 18603
Tel. 570.542.3149 Fax 570.542.1504
btmckinney@pplweb.com

DEC 1 0 2007

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

SUSQUEHANNA STEAM ELECTRIC STATION
PROPOSED LICENSE AMENDMENT NO. 285 FOR
UNIT 1 OPERATING LICENSE NO. NPF-14 AND
PROPOSED LICENSE AMENDMENT NO. 253 FOR
UNIT 2 OPERATING LICENSE NO. NPF-22
CONSTANT PRESSURE POWER UPRATE APPLICATION – SUPPLEMENT
PLA-6315

Docket Nos. 50-387 and 50-388

Reference: 1) PLA-6076, B. T. McKinney (PPL) to USNRC, "Proposed License Amendment Numbers 285 for Unit 1 Operating License No. NPF-14 and 253 for Unit 2 Operating License No. NPF-22 Constant Pressure Power Uprate," dated October 11, 2006.

Pursuant to 10 CFR 50.90, PPL Susquehanna LLC (PPL) requested in Reference 1 approval of amendments to the Susquehanna Steam Electric Station (SSES) Unit 1 and Unit 2 Operating Licenses and Technical Specifications to increase the maximum power level authorized from 3489 Megawatts Thermal (MWt) to 3952 MWt, an approximate 13% increase in thermal power. The proposed Constant Pressure Power Uprate (CPPU) represents an increase of approximately 20% above the Original Licensed Thermal Power.

The purpose of this letter is to provide additional information requested by the Nuclear Regulatory Commission (NRC) based on a discussion held with the staff on November 28, 2007. The supplement addresses a recently identified analytical error.

Attachment 1 contains GE-Hitachi Nuclear Energy Americas, LLC (GEH) proprietary information. As such, GEH requests that the proprietary information be withheld from public disclosure in accordance with 10 CFR 2.390 (a) 4 and 9.17 (a) 4. Attachment 2 contains the non-proprietary version of the information contained in Attachment 1.

Attachment 3 contains an affidavit supporting the GEH request for withholding Attachment 1 from public disclosure.

The Attachment 4 to this letter contains two (2) new regulatory commitments.

A001

PPL has reviewed the "No Significant Hazards Consideration" and the "Environmental Consideration" submitted with Reference 1 relative to the responses. We have determined that there are no changes required to either of these documents.

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: 12-10-07

B. T. McKinney

Attachment 1: Proprietary Version of the Supplemental Information
Attachment 2: Non-Proprietary Version of the Supplemental Information
Attachment 3: GE-Hitachi Nuclear Energy Americas, LLC Affidavit
Attachment 4: List of Regulatory Commitments

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

Attachment 2 to PLA-6315
Non-Proprietary Version of the Supplemental Information

Introduction

Based on a teleconference held November 28, 2007, PPL is submitting the information that follows to assist the NRC staff in their review of the PPL Constant Pressure Power Uprate (CPPU) License Amendment Application. A description of the issue is provided, and the GE-Hitachi Nuclear Energy Americas, LLC (GEH) root cause analysis, extent of condition review and corrective actions are discussed. In addition, the effect on the proposed CPPU dryer licensing basis is provided and follow-up actions and commitments are detailed.

PPL has concluded that this issue has no impact on the proposed CPPU dryer licensing basis.

Issue Description

GEH identified an error in the boundary constraints assumed in the Susquehanna as-built replacement steam dryer analysis. This error does not affect the finite element model or the load definition. The error also exists in the licensing basis analysis of Reference A.

During review of the final as-built dryer stress analysis in November 2007, GEH discovered that the dryer lug reaction forces were not in the analysis results file as expected. Further investigation revealed that the constraint locations in the finite element model files were not present in the time history analysis load step files. This condition existed in both the submitted licensing basis analysis (Reference A) and the as-built analysis for the replacement dryer. GEH corrected the condition in the as-built analysis and found that while the stresses remained below the licensing basis ASME Code limit of 13,600 psi, the stress intensities increased for some dryer components as compared to those reported in Reference A. Verification of the corrected as-built dryer analysis has not yet been completed.

As a result, the Reference A licensing basis dryer analysis was reviewed to determine if it had been run without boundary constraints and thus could have reported different stress results. This review determined that the error was included in that analysis.

Earlier this year, GEH identified that the Susquehanna dryer finite element model contained incorrect locations for the mounting lugs on the support ring. This required the finite element model to be revised with the correct locations and the analysis re-performed. During the analysis, a GEH engineer identified what was believed to be a potential process improvement that would allow completion of the analysis in a more efficient manner. This perceived process improvement involved deleting the generation of the constraint locations in each of the load step files since the constraints are included in the finite element model files. Load step files are used to apply the dynamic loads to the dryer finite element model for the time history dynamic solution. There are approximately 2500 load step files in the analysis. Deleting the generation of the constraint locations in each load step file was more efficient since load steps would not

have to be regenerated if there was a small change in the model that did not affect the load application geometry, e.g. a material property or shell element plate thickness. Other GEH engineers involved in the project reviewed this approach and considered it to be a reasonable process improvement. This perceived process improvement did not affect the finite element model or the load definition used in the analysis. The process improvement was incorporated and the analysis re-performed. The resulting analysis report was submitted to NRC in Reference A.

The method used for generating the load step files for the licensing basis dryer analysis report submitted in Reference A was carried over for the analysis of the as-built dryer. Therefore, the constraint boundaries were also excluded in the analyses for the Susquehanna as-built replacement dryers.

GEH Root Cause Analysis, Extent of Condition Review, Corrective Actions

GEH entered the issue in its corrective action program. The root cause investigation is nearing completion. The results to date indicate that this error was caused by the perceived process improvement implemented in the analysis as described above. This involved deleting the steps in the ANSYS finite element code that generate the constraint locations in each load step file. It was believed that this was redundant since the constraint locations were contained in the finite element model file. The root cause investigation found that the LLSOLVE macro command in the ANSYS finite element code includes a command to delete the constraints contained in the finite element model file between load steps if the load step files do not specifically include the constraints. This operation of the LLSOLVE macro command in the ANSYS finite element code is not discussed in the documentation. This was discovered by discussions with engineers at ANSYS Inc. ANSYS engineers also explained that a static load case would not run with this condition. However, since the analysis was a dynamic load case, the ANSYS finite element code executed and the error was not self-revealing.

The root cause was inadequate verification of the process improvement. Contributing causes were the GEH engineers' lack of understanding of the LLSOLVE macro command and lack of documentation in the ANSYS finite element code documentation.

To assess the extent of condition, GEH reviewed the dryer analysis provided to NRC in Reference A and the as-built dryer analysis for other process changes. This review concluded that no other changes were made. Thus, the condition is limited to the error introduced by the process improvement as described above.

Corrective actions include:

- The ANSYS finite element code load step file for the as-built dryer was corrected and the analysis re-performed.

- Additional peer review of the re-analysis by qualified analysts was conducted.
- Based on the re-analysis, a design improvement will be implemented on the as-built dryer to reduce the stress levels to below those reported in Reference A.
- GEH will conduct an independent design review of the design improvement and supporting analyses prior to releasing the design improvement for production. This independent design review will include PPL.

Effect on the proposed CPPU Application:

The proposed licensing basis addressing the potential adverse flow affects of operation at the proposed CPPU on the new dryers is contained in prior PPL correspondence. None of these conclusions have changed, for the reasons described below.

The licensing basis considers the design input parameters, the design-basis loads and load combinations for the dryers for normal operation, upset, emergency, and faulted conditions. The proposed licensing basis includes comparison of the resulting stresses against applicable ASME Code limits.

Summary of the Proposed Licensing Basis:

Reference B Attachment 10, "Steam Dryer Structural Evaluation," describes the dryer design and defines the overall dryer stress assessment approach, summarizing the information provided in the Appendices (scale model assessments of projected dryer loading at CPPU conditions, acoustic circuit models, finite element stress analyses), and includes a bias error and uncertainty assessment. In response to NRC RAIs, PPL provided supplemental information in Reference C that explained that new dryers will be installed in both SSES units. In the replacement dryers, [[

]].

The estimated dryer stresses at CPPU conditions were calculated, including weld factors, the stress underprediction factor (SUPF), and a scale factor to estimate loads at CPPU conditions (120% OLTP). PPL will be installing strain gages on the new dryer in Unit 1 at locations of high stress. The ACM dryer load underpredictions are accounted for using the SUPF, which addresses the end-to-end bias error of the stress analysis procedure. The finite element (FE) model uncertainty is included by performing several analyses with different time shifting [[ ]], and that the worst case FE uncertainty is compared to the stress margin at nominal conditions. Frequency dependent bias and uncertainties based on instrumented dryer measurements

will be assessed. How loads at specific frequencies increase during power ascension will be monitored to confirm the acceptability of the SUPF.

Two scale model testing (SMT) methods were used to model acoustic resonance in the steam lines under CPPU conditions (Continuum Dynamics Incorporated (CDI) SMT and GEH SMT). The CDI and GEH SMT shows that no flow-excited resonances in the safety relief valves (SRVs) are expected at CPPU conditions, and that 15 Hz pressure fluctuations due to interaction of Reactor Pressure Vessel (RPV) flow and the dead legs in the A and D MSLs should not increase between Current Licensed Thermal Power (CLTP) and CPPU conditions.

The SMT results provide supporting evidence that (1) SRV acoustic resonances are not expected in the CPPU operating range for SSES; and (2) the low frequency pressure loads are expected to increase proportionally to the square of the steam flow velocity at power levels above CLTP.

During SSES Unit 1 MSL strain gage testing at 85% OLTP, one main steam isolation valve (MSIV) on one MSL was slowly closed, leaving the other three MSIVs open. This increased the steam flow in the three open lines to 113% of OLTP. Since a complete set of MSL measurements (all four lines) was not possible during the MSIV slow closure test, the strain gage time histories from each group of three MSLs were combined with one time history from another group, adjusting the phasing of the single time history to maximize dryer loads. The worst-case combination was used for the load and stress analysis.

CDI Report 06-22, Rev. 0 (provided in Reference B) uses the signals of strain gages on the MSLs of SSES Unit 1 to predict the loading function on the dryer by means of the ACM methodology. The in-plant measurements were performed at 113% OLTP to predict the dryer load at this power level. Reference D details that the bounding peak pressure ACM is used. [[

]].

Table 4-13 of Attachment 10 to Reference B lists all bias errors and uncertainties associated with PPL's dryer stress assessment approach. The bias associated with the ACM and the FE model is accounted for in the SUPF.

In GENE-0057-4166-R1-P, Rev. 1, "Susquehanna Steam Dryer Fatigue Analysis," September 2006 (provided in Reference B), PPL presents the finite element stress analysis results for the original steam dryers installed at SSES 1 and 2. In this report, PPL found that the fatigue stresses in some steam dryer components would exceed fatigue limits under CPPU conditions. Therefore, PPL decided to install replacement dryers at both SSES units. The fatigue stress analysis results for the replacement dryer are presented in GENE-0000-0061-0595-P-R0, "Susquehanna Replacement Steam Dryer Fatigue Analysis," December 2006 (provided in Reference F). PPL later found that the

finite element model for the replacement dryers used incorrect boundary conditions. This error was corrected in the stress analysis results presented in Reference A.

In GENE-0057-4166-R1-P, Rev. 1, the pressure loading on the steam dryer at 113% OLTP was estimated with the aid of a CDI ACM model, which used the MSL strain gage measurements. In Section 5.3 of the report, the predicted pressure time histories at the maximum pressure locations on the outer hoods are compared with the measured time histories on the cover plate of 1985 steam dryer (Figures 5-21 and 5-22). This comparison concluded that the frequency content [[
]] of these two time histories compare reasonably well.

Scaling to CPPU was accomplished by extrapolating the dynamic pressure measurements available from three sources of data: (1) 1985 in-plant instrumented dryer measurements, (2) the MSL pressure measurements, and (3) SSES-specific scale model testing. Based on these extrapolations, [[ ]] was determined for scaling the dynamic pressure on the dryer from OLTP to CPPU conditions.

The SSES steam dryer is modeled with shell finite elements, which are not capable of predicting the stress concentration in the welds. Therefore, weld factors are applied to the maximum stress intensities calculated at the weld locations by the shell model. These stresses are then multiplied by the appropriate scaling factor and SUPF to determine fatigue margin for different dryer components. For a given dryer component, this margin should be greater than the corresponding structural uncertainty margin for the component so that the component can be considered acceptable based on fatigue consideration. Structural uncertainty margins are calculated by [[
]].

The finite element analyses were performed using the loads developed by CDI derived from the steam flow conditions representative of 113% power. The calculated finite element stresses were multiplied by a SUPF of [[ ]] and appropriate weld factors to determine the fatigue stresses at 113% OLTP. The stresses at 113% OLTP were then extrapolated to 120% OLTP using the scaling factor of [[ ]], which was determined in the GEH Report GENE-0057-4166-R1-P, Rev. 1.

PPL provided a summary of the stress analysis report (bounding licensing case) for the replacement dryer. In Attachment 1 of Reference E, PPL states that there are several improvements in the fabrication of the Susquehanna replacement dryers beyond those assumed in the fatigue analysis presented in Reference A. The improvements include increased thicknesses for the components susceptible to high fatigue stresses, modified design of components, modified weldment designs replacing the fillet welds with full penetration welds and placing welds away from high stress locations, and solution annealing of several components and weldments having high residual stresses. In addition, some welds are eliminated. As a result, the maximum stress intensities in the replacement steam dryer would be lower than those reported in Reference A and would satisfy the licensing basis ASME Code fatigue limit of 13,600 psi. In Appendix 3 to

Attachment 1 to Reference E, twenty (20) components having [[
]] design as compared to the original dryer are listed.

In an RAI, PPL was asked to provide validation of the finite element model of the replacement dryer. In Attachment 1 to Reference D, it was explained that hammer tests on one dryer will be used to validate the FE model (in non-reactor conditions) by comparing simulated and measured modal and frequency response functions. If necessary, the FE model will be revised to better match experiments. Testing will be performed at four different water levels around the skirt.

Based on the above licensing basis summary, reasonable assurance that the flow-induced effects on the steam dryer are within the structural limits at CLTP conditions and extrapolated CPPU conditions has been provided. Therefore, the proposed license amendment to operate SSES 1 and 2 with the new dryers at CPPU conditions is acceptable.

Impact of the Error on the Proposed Licensing Basis:

The error has no impact on the proposed licensing basis. This issue does not change any of the licensing bases or the basis for the staff approval of the SSES CPPU application as described at the ACRS meetings of October 10 and November 1, 2007. The error only affects the dryer stress results originally reported in Reference A.

What was discussed in Reference E is unaffected by the error. Reference E stated that the analysis documented in Reference A provides a conservative assessment of the Susquehanna replacement steam dryers for operation at CPPU conditions. Additional design improvements are being incorporated into the replacement dryers that increase the margin to structural limits and reduce the susceptibility to stress corrosion cracking. All fabrication improvements have been and will continue to be evaluated with detailed finite element modeling and full dryer analysis to ensure they increase the fatigue design margin. The dryer will be dynamically tested prior to installation (hammer tested) and the finite element model and associated modeling assumptions benchmarked against the measured response. Finally, the replacement dryer will be instrumented with pressure transmitters, accelerometers and strain gages to allow benchmarking of dynamic loads and the structural analysis.

As a result, the final as-built replacement dryer maximum stress intensities will be lower than the maximum stress intensity reported for the licensing basis dryer in Reference A and thus will satisfy the licensing basis ASME Code fatigue limit of 13,600 psi.

The revised analysis is expected to result in additional design improvements to the replacement dryer. These improvements will be designed to provide maximum stress intensities lower than the maximum stress intensity reported for the licensing basis dryer.

This approach is no different from what was previously proposed and was discussed in Reference E.

The licensing basis analysis provided the finite element model, load definition, and established structural stress limits for the as-built replacement dryer. The finite element model and load definition have not changed as a result of the error in the analysis. While the stress values could change if the licensing basis analysis were re-performed, the previous licensing basis analysis defined acceptable stress limits for the as-built replacement dryer. Since the existing stress limits are acceptable, the licensing basis analysis remains acceptable.

Since the final, as-built replacement dryer will meet the same requirements, there is no change in the power ascension test program. The power ascension test program and associated License Conditions will provide additional assurance of the dryer integrity at full CPPU conditions.

Accordingly, the License Conditions proposed in Reference E are not affected. The License Conditions provide confirmation of the adequacy of the final as-built dryer design. The License Conditions require PPL to provide the as-built dryer stress reconciliation and load limit curves to NRC forty-five (45) days prior to operation above 3489 MWt. They also require the benchmark results and updated MSL limit curves to be provided to the NRC ninety (90) days prior to operation above 107% of 3489 MWt after the dryer stress analysis is benchmarked to the Unit 1 startup test data.

Summary:

In summary, this error does not affect the proposed CPPU dryer licensing basis. The existing proposed licensing basis analysis includes the finite element model, the load definition, establishes structural stress limits for the as-built replacement dryer and includes a comprehensive dryer power ascension test plan and License Conditions.

- The final as-built dryer design will still result in maximum stress intensities below the maximum stress intensity reported in the licensing basis analysis contained in Reference A and will satisfy the licensing basis ASME Code fatigue limit of 13,600 psi.

- The proposed power ascension test program will benchmark the final as-built replacement dryer to the stress analysis, and assure the structural integrity of the replacement dryer under CPPU conditions.

- The proposed License Conditions will provide the final as-built dryer stress analysis and the stress analysis benchmark data from the test program to the NRC staff.

The basis for NRC approval as presented at the ACRS meetings of October 10 and November 1, 2007 can continue to be based on the acceptance of the licensing basis methods described above, recognizing that the final as-built dryer stress analysis results will be different (i.e., lower than the maximum licensing basis analysis results). Additionally, License Conditions regarding the power ascension test plan provide additional information to the staff to assure appropriate actions are taken.

Actions and commitments:

PPL commits to take the following actions:

- Verified stress tables for the final as-built dryer will be provided to NRC by January 09, 2008 demonstrating that the maximum stress intensities in the replacement steam dryer are lower than the maximum stress intensity reported in Reference A and thus would satisfy the licensing basis ASME Code fatigue limit of 13,600 psi.

- The complete verified stress report (including the results of all Flow Induced Vibration (FIV) and ASME load case analyses) will be provided to NRC by February 4, 2008. This will also serve to satisfy the currently proposed License Condition to submit the report forty-five (45) days prior to operation above CLTP conditions.

References:

A. PLA-6237, B. T. McKinney (PPL) to USNRC, "Proposed License Amendment Numbers 285 for Unit 1 Operating License No. NPF-14 and 253 for Unit 2 Operating License No. NPF-22 Constant Pressure Power Uprate - Supplement," dated July 6, 2007.
B. PLA-6076, B. T. McKinney (PPL) to USNRC, "Proposed License Amendment Numbers 285 for Unit 1 Operating License No. NPF-14 and 253 for Unit 2 Operating License No. NPF-22 Constant Pressure Power Uprate," dated October 11, 2006.
C. PLA-6138, B. T. McKinney (PPL) to USNRC, "Proposed License Amendment No. 285 for Unit 1 Operating License No. NPF-14 and Proposed License Amendment No. 253 for Unit 2 Operating License No. NPF-22 Constant Pressure Power Uprate – Supplement," dated December 4, 2006.
D. PLA-6176, B. T. McKinney (PPL) to USNRC, "Proposed License Amendment No. 285 for Unit 1 Operating License No. NPF-14 and Proposed License Amendment No. 253 for Unit 2 Operating License No. NPF-22 Extended Power Uprate Application Regarding Steam Dryer and Flow Effects Request for Additional Information Responses," dated April 27, 2007.
E. PLA-6242, B. T. McKinney (PPL) to USNRC, "Proposed License Amendment No. 285 for Unit 1 Operating License No. NPF-14 and Proposed License Amendment No. 253 for Unit 2 Operating License No. NPF-22 Extended Power Uprate Application

Regarding Steam Dryer and Flow Effects Request for Additional Information Responses," dated July 31, 2007.

F. PLA-6146, B. T. McKinney (PPL) to USNRC, "Proposed License Amendment No. 285 for Unit 1 Operating License No. NPF-14 and Proposed License Amendment No. 253 for Unit 2 Operating License No. NPF-22 Constant Pressure Power Uprate – Supplement," dated December 26, 2006.

Attachment 3 to PLA-6315
GE- Hitachi Nuclear Energy Americas, LLC
Affidavit

GE-Hitachi Nuclear Energy Americas LLC

AFFIDAVIT

I, Tim E. Abney, state as follows:

(1) I am Vice President, Services Licensing, GE-Hitachi Nuclear Energy Americas LLC ("GHNEA"), and 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 Attachment 1 to PPL letter PLA-6315 to NRC, Susquehanna Steam Electric Station Proposed License Amendment No. 285 For Unit 1 Operating License No. NPF-14 And Proposed License Amendment No. 253 For Unit 2 Operating License No. NPF-22 Constant Pressure Power Uprate Application – Supplement. The proprietary information, is delineated by a [[dotted underline inside double square brackets.$^{\{3\}}$]]. 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, GHNEA 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 GHNEA's competitors without license from GHNEA 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 GHNEA customer-funded development plans and programs, resulting in potential products to GHNEA;

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 GHNEA, 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 GHNEA, 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 GHNEA. Access to such documents within GHNEA 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 GHNEA 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 design details and results of structural analyses and techniques developed by GHNEA for evaluations of a BWR Steam Dryer. This information was developed at a significant cost to GHNEA.

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

(9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GHNEA's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of GHNEA's comprehensive BWR safety and technology base, and its commercial value extends beyond the original development cost. The value of the technology base goes

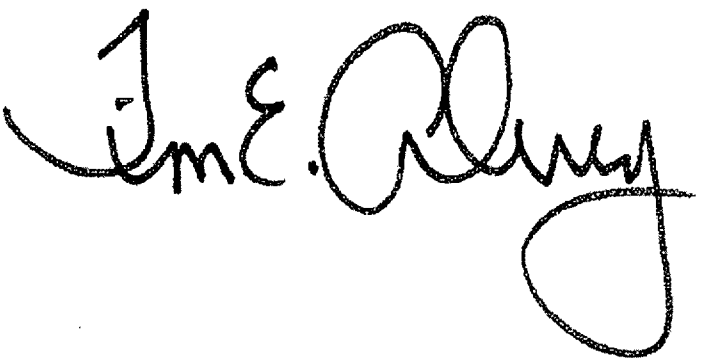
beyond the analytical methodology and includes development of the expertise to determine and apply the appropriate evaluation process.

GHNEA's competitive advantage will be lost if its competitors are able to use the design details and results of the structural analyses and techniques 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 GHNEA 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 GHNEA 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 and results.

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 5th day of December, 2007



Tim E. Abney
GE-Hitachi Nuclear Energy Americas LLC

Attachment 4 to PLA-6315

List of Regulatory Commitments

List of Regulatory Commitments

The following table identifies the regulatory commitments in this document. Any other statements in this submittal represent intended or planned actions, are provided for information purposes, and are not considered to be regulatory commitments.

COMMITMENT	TYPE		SCHEDULED COMPLETION DATE
	One-time	Continuing Compliance	
1. Verified stress tables for the final as-built dryer will be provided to NRC by January 09, 2008 demonstrating that the maximum stress intensities in the replacement steam dryer are lower than the maximum stress intensity reported in Reference A and thus would satisfy the licensing basis ASME Code fatigue limit of 13,600 psi.	X		01/09/2008
2. The complete verified stress report (including the results of all Flow Induced Vibration (FIV) and ASME load case analyses) will be provided to NRC by February 04, 2008. This will also serve to satisfy the currently proposed License Condition to submit the report forty-five (45) days prior to operation above CLTP conditions.	X		02/04/2008