



LR-N08-0033  
LCR H05-01, Rev. 1  
January 30, 2008

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Hope Creek Generating Station  
Facility Operating License No. NPF-57  
NRC Docket No. 50-354

Subject: Responses to Requests for Additional Information  
Request for License Amendment - Extended Power Uprate

Reference: 1) Letter from George P. Barnes (PSEG Nuclear LLC) to USNRC,  
September 18, 2006  
2) Letter from USNRC to William Levis (PSEG Nuclear LLC),  
January 25, 2008  
3) Letter from George P. Barnes (PSEG Nuclear LLC) to USNRC,  
January 25, 2008

In Reference 1, PSEG Nuclear LLC (PSEG) requested an amendment to Facility Operating License NPF-57 and the Technical Specifications (TS) for the Hope Creek Generating Station (HCGS) to increase the maximum authorized power level to 3840 megawatts thermal (MWt).

In Reference 2, the NRC requested additional information concerning PSEG's request. PSEG provided responses to two of the NRC questions in Reference 3. Attachment 1 to this letter provides PSEG's response to the remaining NRC question. Attachment 1 also provides provides additional information on the differences between measured and inferred finite element model damping values, as discussed in Reference 3.

Attachment 1 contains information proprietary to Continuum Dynamics, Inc. (C.D.I.). C.D.I. requests that the proprietary information in Attachment 1 be withheld from public disclosure in accordance with 10 CFR 2.390(a)(4). An affidavit supporting this request is included with Attachment 1. A non-proprietary version of PSEG's Attachment 1 responses is provided in Attachment 2.

ADD  
NRK

C.D.I. Report 07-17P, Revision 4, "Stress Assessment of Hope Creek Unit 1 Steam Dryer Based on Revision 4 Loads Model," is provided in Attachment 3 to this letter. The report contains information which C.D.I. considers to be proprietary. C.D.I. requests that the proprietary information be withheld from public disclosure in accordance with 10 CFR 2.390(a)(4). An affidavit supporting this request is provided in Attachment 3. A non-proprietary version of the document in C.D.I. report is provided in Attachment 4.

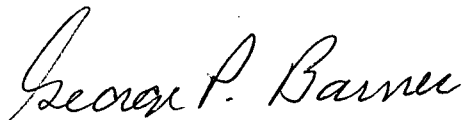
There are no regulatory commitments contained within this letter.

Should you have any questions regarding this submittal, please contact Mr. Paul Duke at 856-339-1466.

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

Executed on 1/30/08  
(date)

Sincerely,



George P. Barnes  
Site Vice President  
Hope Creek Generating Station

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Attachments (4)

1. Response to Request for Additional Information (proprietary)
2. Response to Request for Additional Information (non-proprietary)
3. C.D.I. Report 07-17P, Revision 4
4. C.D.I. Report 07-17NP, Revision 4

cc: S. Collins, Regional Administrator – NRC Region I  
J. Lamb, Project Manager - USNRC  
NRC Senior Resident Inspector - Hope Creek  
P. Mulligan, Manager IV, NJBNE



Continuum Dynamics, Inc.

(609) 538-0444 (609) 538-0464 fax

34 Lexington Avenue Ewing, NJ 08618-2302

### AFFIDAVIT

Re: Revised Response to RAI 14.66 2<sup>nd</sup> Follow-Up

I, Alan J. Bilanin, being duly sworn, depose and state as follows:

1. I hold the position of President and Senior Associate of Continuum Dynamics, Inc. (hereinafter referred to as C.D.I.), and I am authorized to make the request for withholding from Public Record the Information contained in the documents described in Paragraph 2. This Affidavit is submitted to the Nuclear Regulatory Commission (NRC) pursuant to 10 CFR 2.390(a)(4) based on the fact that the attached information consists of trade secret(s) of C.D.I. and that the NRC will receive the information from C.D.I. under privilege and in confidence.
2. The Information sought to be withheld, as transmitted to PSEG Nuclear LLC as attachment to C.D.I. Letter No. 08020 dated 30 January 2008, Revised Response to RAI 14.66 2<sup>nd</sup> Follow-Up.
3. The Information summarizes:
  - (a) a process or method, including supporting data and analysis, where prevention of its use by C.D.I.'s competitors without license from C.D.I. constitutes a competitive 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 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 3(a), 3(b) and 3(c) above.

4. The Information has been held in confidence by C.D.I., its owner. The Information has consistently been held in confidence by C.D.I. and no public disclosure has been made and it is not available to the public. All disclosures to third parties, which have been limited, have been made pursuant to the terms and conditions contained in C.D.I.'s Nondisclosure Secrecy Agreement which must be fully executed prior to disclosure.

5. The Information is a type customarily held in confidence by C.D.I. and there is a rational basis therefore. The Information is a type, which C.D.I. considers trade secret and is held in confidence by C.D.I. because it constitutes a source of competitive advantage in the competition and performance of such work in the industry. Public disclosure of the Information is likely to cause substantial harm to C.D.I.'s competitive position and foreclose or reduce the availability of profit-making opportunities.

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

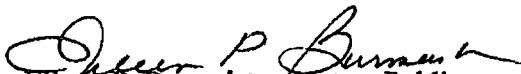
Executed on this 30<sup>th</sup> day of JANUARY 2008.



Alan J. Bilanin  
Continuum Dynamics, Inc.

Subscribed and sworn before me this day:

January 30, 2008



Eileen P. Burmeister, Notary Public

EILEEN P. BURMEISTER  
NOTARY PUBLIC OF NEW JERSEY  
MY COMM. EXPIRES MAY 6, 2012

**ATTACHMENT 2****Hope Creek Generating Station****Facility Operating License NPF-57  
Docket No. 50-354****Extended Power Uprate****Response to Request for Additional Information**

In Reference 1, PSEG Nuclear LLC (PSEG) requested an amendment to Facility Operating License NPF-57 and the Technical Specifications (TS) for the Hope Creek Generating Station (HCGS) to increase the maximum authorized power level to 3840 megawatts thermal (MWt).

In Reference 2, the NRC requested additional information concerning PSEG's request. PSEG provided responses to two of the NRC questions in Reference 3. PSEG's response to the remaining NRC question is provided below. Additional information on the differences between measured and inferred finite element model damping values, as discussed in Reference 3, is also provided below.

**RAI 14.66 2nd Follow-Up - I**

Page 22 of Continuum Dynamics, Inc. (CDI) Report 07-27P, "Finite Element Modeling Bias and Uncertainty Estimates Derived from the Hope Creek Unit 2 Dryer Shaker Test, Rev. 0," presents damping values computed for the finite element (FE) model to best match FE and measured acceleration response function peaks. CDI states that the inferred FE damping values are consistent with measured damping values in STI Technologies Report PA2168, "Hope Creek Steam Dryer Vibration Test." However, no damping values (other than those for low frequency rigid body modes) are presented in the STI report.

- (c) Reconcile the differences between the measured and inferred FE damping values, and provide the resulting FE bias and uncertainty.

**Revised Response**

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The resulting FE bias and uncertainty is included in the stress margin reported in C.D.I. report 07-17P, Rev. 4 (Attachment 3 to this letter).

Reference

14.66-1 Letter from STI Technologies to S. Kugler (PSEG Nuclear LLC),  
January 28, 2008

**RAI 14.120(e) – 2<sup>nd</sup> Follow-up**

PSEG states that the final dryer stress margin is provided in CDI report 07-17P, Rev. 3. The final dryer alternating stress margin with all bias errors and uncertainties included is 3.22 at CLTP. Since PSEG is currently responding to the two staff RAI items on CDI Report 07-27P, "Finite Element Modeling Bias and Uncertainty Estimates Derived from the Hope Creek Unit 2 Dryer Shaker Test, Rev. 0", and will soon respond to RAI 14.79 – 3<sup>rd</sup> follow-up, it should update CDI Report 07-17P, Rev. 3, with the final bias and uncertainties along with the final stress margin. The revised report should also include a summary table of the final values of the bias errors and uncertainties along with references to the derivations.

Response

C.D.I. Report 07-17P, Rev. 4, is provided in Attachment 3 to this letter. Biases and uncertainties are included with references in Tables 11 and 12 in the C.D.I. Report.

**References**

- 1) Letter from George P. Barnes (PSEG Nuclear LLC) to USNRC, September 18, 2006
- 2) Letter from USNRC to William Levis (PSEG Nuclear LLC), January 25, 2008
- 3) Letter from George P. Barnes (PSEG Nuclear LLC) to USNRC, January 25, 2008