

**This letter forwards proprietary information in accordance with 10 CFR 2.390. The balance of this letter may be considered non-proprietary upon removal of Attachment 5.**

Sam Belcher  
Vice President-Nine Mile Point

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**CENG**<sup>SM</sup>

a joint venture of



**NINE MILE POINT  
NUCLEAR STATION**

August 5, 2011

U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**ATTENTION:** Document Control Desk

**SUBJECT:** Nine Mile Point Nuclear Station  
Unit No. 2; Docket No. 50-410

Response to Requests for Additional Information Regarding Nine Mile Point Nuclear Station, Unit No. 2 – Re: The License Amendment Request for Extended Power Uprate Operation (TAC No. ME1476) – Limit Curves and Power Ascension Test Plan

- REFERENCES:**
- (a) Letter from K. J. Polson (NMPNS) to Document Control Desk (NRC), dated May 27, 2009, License Amendment Request (LAR) Pursuant to 10 CFR 50.90: Extended Power Uprate
  - (b) E-mail from R. Guzman (NRC) to J. J. Dosa (NMPNS), dated July 14, 2011, EPU Steam Dryer Analysis – Request for Revised Limit Curves
  - (c) E-mail from R. Guzman (NRC) to J. J. Dosa (NMPNS), dated July 14, 2011, Re: EPU Steam Dryer Analysis – Request for Revised Limit Curves

Nine Mile Point Nuclear Station, LLC (NMPNS) hereby transmits supplemental information in support of a previously submitted request for amendment to Nine Mile Point Unit 2 (NMP2) Renewed Operating License (OL) NPF-69. The request, dated May 27, 2009 (Reference a), proposed an amendment to increase the power level authorized by OL Section 2.C.(1), Maximum Power Level, from 3467 megawatts-thermal (MWt) to 3988 MWt.

By e-mails dated July 14, 2011 (References b and c), the NRC staff requested additional information (RAI) regarding the steam dryer limit curves and power ascension test plan. Attachment 1 provides the NMPNS response to the RAIs. Attachment 2 provides the new regulatory commitments in this submittal.

**This letter forwards proprietary information in accordance with 10 CFR 2.390. The balance of this letter may be considered non-proprietary upon removal of Attachment 5.**

ADD  
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Attachment 3 (non-proprietary) and Attachment 5 (proprietary) provide Continuum Dynamics, Inc. (CDI) Technical Note No. 11-17, "Limit Curve Analysis with ACM Rev. 4.1 for Power Ascension at Nine Mile Point Unit 2," Revision 1, to support the response to the RAI provided via Reference (b).

Attachment 5 is considered to contain proprietary information exempt from disclosure pursuant to 10 CFR 2.390. Therefore, on behalf of CDI, NMPNS hereby makes application to withhold this attachment from public disclosure in accordance with 10 CFR 2.390(b)(1). The affidavit from CDI detailing the reasons for the request to withhold the proprietary information is provided in Attachment 4.

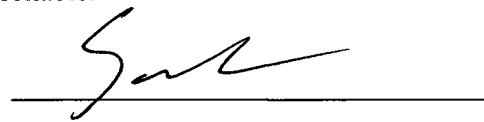
Should you have any questions regarding the information in this submittal, please contact John J. Dosa, Director Licensing, at (315) 349-5219.

Very truly yours,




STATE OF NEW YORK :  
: TO WIT:  
COUNTY OF OSWEGO :

I, Sam Belcher, being duly sworn, state that I am Vice President – Nine Mile Point, and that I am duly authorized to execute and file these responses on behalf of Nine Mile Point Nuclear Station, LLC. To the best of my knowledge and belief, the statements contained in this document are true and correct. To the extent that these statements are not based on my personal knowledge, they are based upon information provided by other Nine Mile Point employees and/or consultants. Such information has been reviewed in accordance with company practice and I believe it to be reliable.



Subscribed and sworn before me, a Notary Public in and for the State of New York and County of Oswego, this 5<sup>th</sup> day of August, 2011.

WITNESS my Hand and Notarial Seal:

  
Notary Public

My Commission Expires:

9/12/2013  
Date

SB/STD

**Lisa M. Doran**  
**Notary Public in the State of New York**  
**Oswego County Reg. No. 01DO6029220**  
**My Commission Expires 9/12/2013**

Attachments:

1. Response to Requests for Additional Information Regarding License Amendment Request for Extended Power Uprate Operation
2. List of Regulatory Commitments
3. Continuum Dynamics, Inc Technical Note No. 11-17NP, "Limit Curve Analysis with ACM Rev. 4.1 for Power Ascension at Nine Mile Point Unit 2," Revision 1 (Non-Proprietary)
4. Affidavit from Continuum Dynamics, Inc Justifying Withholding Proprietary Information
5. Continuum Dynamics, Inc Technical Note No. 11-17P, "Limit Curve Analysis with ACM Rev. 4.1 for Power Ascension at Nine Mile Point Unit 2," Revision 1 (Proprietary)

cc: NRC Regional Administrator, Region I  
NRC Resident Inspector  
NRC Project Manager  
A. L. Peterson, NYSERDA (w/o Attachment 5)

**ATTACHMENT 1**

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**RESPONSE TO REQUESTS FOR ADDITIONAL INFORMATION  
REGARDING LICENSE AMENDMENT REQUEST FOR  
EXTENDED POWER UPRATE OPERATION**

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**ATTACHMENT 1**  
**RESPONSE TO REQUESTS FOR ADDITIONAL INFORMATION REGARDING LICENSE**  
**AMENDMENT REQUEST FOR EXTENDED POWER UPRATE OPERATION**

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By letter dated May 27, 2009, as supplemented on August 28, 2009, December 23, 2009, February 19, 2010, April 16, 2010, May 7, 2010, June 3, 2010, June 30, 2010, July 9, 2010, July 30, 2010, October 8, 2010, October 28, 2010, November 5, 2010, December 10, 2010, December 13, 2010, January 19, 2011, January 31, 2011, February 4, 2011, March 23, 2011, May 9, 2011, June 13, 2011, and July 15, 2011, Nine Mile Point Nuclear Station, LLC (NMPNS) submitted for Nuclear Regulatory Commission (NRC) review and approval, a proposed license amendment requesting an increase in the maximum steady-state power level from 3467 megawatts thermal (MWt) to 3988 MWt for Nine Mile Point Unit 2 (NMP2).

By e-mails dated July 14, 2011, the NRC staff requested additional information (RAI) regarding the steam dryer limit curves and the power ascension test plan. This attachment provides the NMPNS responses to the RAIs. Each NRC request is repeated (in italics), followed by the NMPNS response.

**ATTACHMENT 1**  
**RESPONSE TO REQUESTS FOR ADDITIONAL INFORMATION REGARDING LICENSE**  
**AMENDMENT REQUEST FOR EXTENDED POWER UPRATE OPERATION**

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**RAI from E-mail dated July 14, 2011 – Request for Revised Limit Curves**

*In order for the staff to complete its review, the NRC staff requests that the applicant submit the revised limit curves based on the latest dryer stress analysis results establishing the current reference limit curves. Due to the significant changes made in the stress report because of the development of ACM 4.1 and the need for the applicant to establish a baseline reference for comparing changes in the limit curves, as they are updated during power ascension, the NRC staff requests that the revised limit curves be submitted for staff review. The staff understands that there may be changes made to the curves based on the final strain gage configuration, noise level, etc, and will be updated during power ascension; however, it has been the staff's position to review these curves to ensure reasonable assurance prior to completing its review.*

**NMPNS Response**

Continuum Dynamics, Inc. (CDI) Technical Note No. 11-17 (Attachment 3 (non-proprietary) and Attachment 5 (proprietary)) provides the plant specific sample limit curves based on Revision 4.1 of CDI's Acoustic Circuit Model. Prior to power ascension, NMPNS plans to update the sample limit curves using the power ascension strain gage data from the Current Licensed Thermal Power (CLTP). This approach is a lesson learned from the Hope Creek EPU power ascension where plant noise profiles and refurbished strain gauges impacted the limit curves, requiring the regeneration of the curves. The regenerated limit curves will be submitted to the NRC prior to commencing power operations above CLTP.

**ATTACHMENT 1**  
**RESPONSE TO REQUESTS FOR ADDITIONAL INFORMATION REGARDING LICENSE**  
**AMENDMENT REQUEST FOR EXTENDED POWER UPRATE OPERATION**

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**RAI from E-mail dated July 14, 2011 – Request for Ascension Test Plan Information**

*...The licensee (in its docketed response) should confirm that the power ascension and testing plan as well as the limit curve analysis/methodology is still valid and remains applicable to ACM 4.1.*

**NMPNS Response**

Attachment 7 of the original NMP2 EPU License Amendment Request submitted on May 27, 2009, provides the EPU Test Plan. It addresses steam dryer performance testing and main steam system vibration testing. However, it did not define the plan to monitor and evaluate steam dryer stresses. The following provides the EPU test plan for monitoring and evaluating steam dryer stresses.

During the ascent to EPU conditions from 100% CLTP, data from the strain gages on the main steam lines will be collected at 1% intervals and evaluated every 2.5% increase. Hold points will be established every 5% above CLTP for Plant Operations Review Committee (PORC) and NRC reviews. NMPNS will not increase power above each hold point until 96 hours after submittal of the applicable evaluation to the NRC.

Continuum Dynamics, Inc. (CDI) Technical Note No. 11-17 (Attachment 3 (non-proprietary) and Attachment 5 (proprietary)) provides the plant specific sample limit curves based on Revision 4.1 of CDI's Acoustic Circuit Model. The sample limit curves have been prepared with Level 1 and Level 2 criteria. The planned action to be taken at Level 1 and Level 2 is as follows: If Level 2 criteria are reached, reactor power ascension is to be suspended until an engineering evaluation concludes that further power ascension is justified. Should Level 1 be reached or exceeded, reactor power is returned to a previously acceptable power level that satisfies Level 2 criteria while an engineering evaluation is undertaken.

If Level 1 or 2 criteria are reached, NMPNS would perform a real time stress analysis based on the strain gage data, regenerate the limit curves, and submit them to the NRC. Similar to the hold points, power would not be increased until 96 hours after submittal to the NRC.

**ATTACHMENT 2**

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**LIST OF REGULATORY COMMITMENTS**

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**ATTACHMENT 2  
LIST OF REGULATORY COMMITMENTS**

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

<b>REGULATORY COMMITMENT</b>	<b>DUE DATE</b>
<p>Prior to power ascension, NMPNS plans to update the sample limit curves using the power ascension strain gage data from the Current Licensed Thermal Power (CLTP). This approach is a lesson learned from the Hope Creek EPU power ascension where plant noise profiles and refurbished strain gauges impacted the limit curves, requiring the regeneration of the curves. The regenerated limit curves will be submitted to the NRC prior to commencing power operations above CLTP.</p>	<p>Prior to commencing power operations above CLTP</p>
<p>During the ascent to EPU conditions from 100% CLTP, data from the strain gages on the main steam lines will be collected at 1% intervals and evaluated every 2.5% increase. Hold points will be established every 5% above CLTP for Plant Operations Review Committee (PORC) and NRC reviews. NMPNS will not increase power above each hold point until 96 hours after submittal of the applicable evaluation to the NRC.</p>	<p>During the ascent to EPU conditions from 100% CLTP</p>
<p>The planned action to be taken at Level 1 and Level 2 is as follows: If Level 2 criteria are reached, reactor power ascension is to be suspended until an engineering evaluation concludes that further power ascension is justified. Should Level 1 be reached or exceeded, reactor power is returned to a previously acceptable power level that satisfies Level 2 criteria while an engineering evaluation is undertaken.</p> <p>If Level 1 or 2 criteria are reached, NMPNS would perform a real time stress analysis based on the strain gage data, regenerate the limit curves, and submit them to the NRC. Similar to the hold points, power would not be increased until 96 hours after submittal to the NRC.</p>	<p>If Level 1 or Level 2 criteria are reached</p>

**ATTACHMENT 4**

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**AFFIDAVIT FROM CONTINUUM DYNAMICS, INC  
JUSTIFYING WITHHOLDING PROPRIETARY INFORMATION**

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# Continuum Dynamics, Inc.

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

34 Lexington Avenue Ewing, NJ 08618-2302

## AFFIDAVIT

Re: C.D.I. Technical Note No. 11-17P "Limit Curve Analysis with ACM Rev. 4.1 for Power Ascension at Nine Mile Point Unit 2," Revision 1

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 Constellation Energy Group as attachment to C.D.I. Letter No. 11102 dated 1 August 2011, C.D.I. Technical Note No. 11-17P "Limit Curve Analysis with ACM Rev. 4.1 for Power Ascension at Nine Mile Point Unit 2," Revision 1.
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.

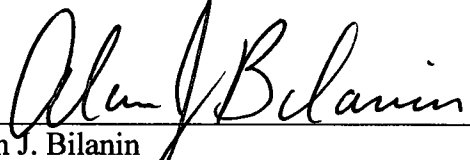
The information sought to be withheld is considered to be proprietary for the reasons set forth in paragraphs 3(a), 3(b) and 3(c) above.

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.

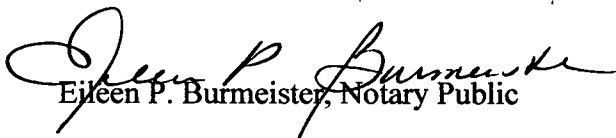
5. The Information is a type customarily held in confidence by C.D.I. and there is a rational basis therefore. The Information is a type, which C.D.I. considers trade secret and is held in confidence by C.D.I. because it constitutes a source of competitive advantage in the competition and performance 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 1<sup>st</sup> day of August 2011.

  
\_\_\_\_\_  
Alan J. Bilanin  
Continuum Dynamics, Inc.

Subscribed and sworn before me this day: August 1, 2011

  
Eileen P. Burmeister, Notary Public

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