### ENCLOSURE 3 CONTAINS PROPRIETARY INFORMATION – WITHHOLD FROM PUBLIC DISCLOSURE IN ACCORDANCE WITH 10 CFR 2.390



Monticello Nuclear Generating Plant 2807 W County Rd 75 Monticello, MN 55362

June 26, 2013

L-MT-13-059 10 CFR 50.90

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

Monticello Nuclear Generating Plant Docket 50-263 Renewed License No. DPR-22

Monticello Extended Power Uprate and Maximum Extended Load Line Limit Analysis Plus License Amendment Requests: Response to Request for Additional Information Reactor Systems Branch And Vessel & Internals Integrity Branch and Supplemental Information (TAC Nos. MD9990 and ME3145)

- References: 1) Letter from T J O'Connor (NSPM) to Document Control Desk (NRC), "License Amendment Request: Extended Power Uprate (TAC MD9990)," L-MT-08-052, dated November 5, 2008. (ADAMS Accession No. ML083230111)
  - Letter from T J O'Connor (NSPM) to Document Control Desk (NRC), "License Amendment Request: Maximum Extended Load Line Limit Analysis Plus," TAC ME3145, L-MT-10-003, dated January 21, 2010. (ADAMS Accession No. ML100280558)
  - Letter from J G Giitter (NRC) to T J O'Connor (NSPM), "Subject: Monticello Nuclear Generating Plant - Linking of the Proposed Extended Power Uprate Amendment and the MELLLA+ Amendment (TAC NOS. MD9990 and ME2449)," dated November 23, 2009. -(ADAMS Accession No. ML093160816)
  - 4) Letter from M A Schimmel (NSPM) to Document Control Desk (NRC), "Monticello Extended Power Uprate and Maximum Extended Load Line Limit Analysis Plus License Amendment Requests: Supplement for Application of License Amendment 172 (TAC Nos. MD9990 and ME3145)," L-MT-13-036, dated May 13, 2013. (ADAMS Accession No. ML13134A301)

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- 5) Email from T Beltz (NRC) to J Fields (NSPM), "Monticello Nuclear Generating Plant – Draft Request for Additional Information (SRXB & EVIB) in Support of EPU LAR Review (TAC No. MD9990)," dated May 17, 2013. (ADAMS Accession No. ML13150A255)
- Letter from T J O'Connor (NSPM) to Document Control Desk (NRC), "Monticello Extended Power Uprate: Updates to Docketed Information (TAC MD9990)," L-MT-10-072, dated December 21, 2010. (ADAMS Accession No. ML103570026)
- Letter from M A Schimmel (NSPM) to Document Control Desk (NRC), "Monticello Extended Power Uprate: Supplement to Revise Technical Specification Setpoint for the Automatic Depressurization System Bypass Timer (TAC MD9990)," L-MT-12-091, dated October 30, 2012. (ADAMS Accession No. ML12307A036)

Pursuant to 10 CFR 50.90, the Northern States Power Company, a Minnesota corporation (NSPM), doing business as Xcel Energy, requested in Reference 1 an amendment to the Monticello Nuclear Generating Plant (MNGP) Renewed Operating License (OL) and Technical Specifications (TS) to increase the maximum authorized power level from 1775 megawatts thermal (MWt) to 2004 MWt.

Also, pursuant to 10 CFR 50.90, NSPM requested in Reference 2 an amendment to the MNGP Renewed OL and TS to allow operation within the Maximum Extended Load Line Limit Analysis Plus (MELLLA+) operating domain.

The Nuclear Regulatory Commission (NRC) permitted these two license amendment requests to be linked in Reference 3.

In Reference 4, NSPM evaluated the effects of the proposed EPU change on the Pressure and Temperature (P-T) limits for the plant and addressed changes in neutron fluence and their effects on P-T limits. In Reference 4, NSPM reviewed License Amendment (LA) 172, dated February 27, 2013 (ADAMS Accession No. ML13025A155) and demonstrated that this LA changed the MNGP TS to incorporate a Reactor Coolant System Pressure–Temperature (P-T) Limits Report and modified the P-T limits using the methodology documented in SIR-05-044-A, "Pressure-Temperature Limits Report (PTLR) Methodology for Boiling Water Reactors." NSPM concluded that these changes satisfactorily addressed the fluence and P-T limits at EPU and MELLLA+ conditions.

In Reference 5, the NRC issued three Requests for Additional Information (RAIs) concerning fluence as it related to upper shelf energy (USE) at EPU conditions. A conference call was held with NRC staff on May 22, 2013, to discuss the RAIs. In an e-mail from the NRC Project Manager dated May 29, 2013, the NRC staff indicated that RAI #2 is withdrawn, but a response is still required for RAI #s 1 and 3.

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The purpose of this letter is to provide the NRC with the responses for RAI #s 1 and 3. Enclosure 1 provides the responses to NRC RAI #s 1 and 3.c. Enclosure 2 provides the remainder of the responses to NRC RAI #3.

Enclosure 3 provides an analysis of changes in USE applicable to the Monticello EPU and MELLLA+ projects. This report, NEDC-33820P, Revision 0, entitled, "Monticello Nuclear Generating Plant Upper Shelf Energy Evaluation for Plate C2220 Material for 54 EFPY" (Effective Full Power Years) is provided by General Electric-Hitachi (GEH). This analysis provides supporting information for statements made in response to the RAIs. This report contains proprietary information from GEH and the Electric Power Research Institute (EPRI).

Enclosure 4 contains affidavits (one from GEH and one from EPRI) executed to support withholding Enclosure 3 from public disclosure. The affidavits set forth the basis on which the information may be withheld from public disclosure by the NRC and addresses with specificity the considerations listed in 10 CFR 2.390(b)(4). Accordingly NSPM respectfully requests that the information which is proprietary to GEH and EPRI in Enclosure 3 be withheld from public disclosure in accordance with 10 CFR 2.390(a)4, as authorized by 10 CFR 9.17(a)4.

Correspondence with respect to the copyright or proprietary aspects of GEH information or the supporting GEH affidavit in Enclosure 4 should be addressed to Linda C. Dolan, Manager, Regulatory Compliance, GE Hitachi Nuclear Energy Americas LLC, 3901 Castle Hayne Road, Wilmington, NC 28401. Likewise, correspondence with respect to the copyright or proprietary aspects of EPRI information or the supporting EPRI affidavit in Enclosure 4 should be addressed to Kurt Edsinger, Director of PWR and BWR Materials, Electric Power Research Institute, Inc, 3420 Hillview Ave, Palo Alto, CA 94304.

Enclosure 5 contains a non-proprietary version of the report provided in Enclosure 3. The nonproprietary report is being provided based on the NRC's expectation that the submitter of the proprietary information should provide, if possible, a nonproprietary version of the document with brackets showing where the proprietary information has been deleted.

Enclosure 6 provides supplemental information regarding the replacement of transmitters to address Equipment Qualification (EQ) considerations, as requested during recent discussions with the NRC Staff. This discussion clarifies that two pressure transmitters identified for replacement in Reference 1 are actually torus level transmitters, and that this replacement has been completed. A markup of the Power Uprate Safety Analysis Report (PUSAR) is also included.

The supplemental information provided herein does not change the conclusions of the No Significant Hazards Consideration and the Environmental Consideration evaluations provided in Reference 1 as revised by References 6 and 7 for the Extended Power

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Uprate LAR. Further, the supplemental information provided herein does not change the conclusions of the No Significant Hazards Consideration and the Environmental Consideration evaluations provided in Reference 2 for the MELLLA+ LAR.

In accordance with 10 CFR 50.91(b), a copy of this application supplement, without enclosures, is being provided to the designated Minnesota Official.

### Summary of Commitments

This letter makes no new commitments and no revisions to existing commitments.

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

Executed on: June 26, 2013

Mark A. Schimmel Site Vice-President Monticello Nuclear Generating Plant Northern States Power Company-Minnesota

Enclosures (6)

cc: Administrator, Region III, USNRC (w/o enclosures) Project Manager, Monticello Nuclear Generating Plant, USNRC Resident Inspector, Monticello Nuclear Generating Plant, USNRC (w/o enclosures) Minnesota Department of Commerce (w/o enclosures)

## **RESPONSES TO REQUESTS FOR ADDITIONAL INFORMATION**

# GEH RESPONSE TO RAI #s 1 AND 3.C

# GE-MNGP-AEP-3293, REVISION 0, ENCLOSURE 1

4 pages follow

# GE-MNGP-AEP-3293

# GEH Response to RAIs 1 and 3.c

GEH Non-proprietary - Class I (Public)

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### RAI-1

Section 2.1.2 of the NEDO-33322, "Safety Analysis Report for Monticello Constant Pressure Power Uprate," Revision (Rev.) 3, October 2008 (the non-proprietary version of the power uprate safety analysis report (PUSAR)) dispositions the upper shelf energy (USE) for the reactor pressure vessel (RPV) beltline materials by stating that "[t]he USE remains bounded by the [Boiling Water Reactor Vessel and Internals Project (BWRVIP)] equivalent margins analysis [EMA], thereby demonstrating compliance with [10 CFR Part 50,] Appendix G."

Section 4.2.1.2 of NUREG-1865, "Safety Evaluation Report [SER] Related to the License Renewal of the Monticello Nuclear Generating Plant," October 2006 (ADAMS Accession No. ML063050414)) documents the staff's evaluation of the 54 effective full power year (EFPY) USE projections for three RPV beltline materials. Table 4.2.1-1 of the SER summarizes the staff's review and acceptance of these USE projections. All three 54 EFPY USE projections were found to be acceptable because they exceed the 50 ft-lbs acceptance criterion specified in 10 CFR Part 50, Appendix G.

Key points from the staff's license renewal evaluation are summarized below:

- The staff issued an RAI requesting that the applicant determine the impact of surveillance data on the USE for the limiting RPV beltline plate (Heat No. C2220). In its RAI response, the applicant calculated an adjusted percentage USE decrease of 33.5 percent using the procedures in Position 2.2 of Regulatory Guide (RG) 1.99, "Radiation Embrittlement of Reactor Vessel Materials," Rev. 2, May 1988. The 33.5 percent adjusted decrease in USE was found to exceed the BWRVIP EMA acceptance criterion for BWR Type 3 through 6 plate materials. However, a 54 EFPY USE projection of 57.5 ft-lbs was calculated, based on the 33.5 percent adjusted decrease and a transverse unirradiated USE value of 86.5 ft-lbs for the limiting plate, as documented in the SER.
- The staff also requested that the applicant provide a direct projection of the 54 EFPY USE for the RPV beltline shielded metal arc welds (SMAWs). The applicant calculated a 54 EFPY USE value of 68 ft-lbs using the procedures in Position 1.2 of RG 1.99, Rev. 2, based on a lower 95/95 confidence unirradiated USE value from the BWRVIP SMAW database, as documented in the SER.
- The BWRVIP EMAs are not applicable to RPV nozzles, nozzle-to-shell welds, or other structural discontinuities, due to the effects of stress concentration in these components. Therefore, the staff requested that the applicant provide a direct projection of the 54 EFPY USE for the RPV beltline recirculation inlet nozzle forgings (N2 nozzles). The applicant calculated a 54 EFPY USE value of 52 ft-lbs using the procedures in Position 1.2 of RG 1.99, Rev. 2, based on a generic unirradiated USE of 60 ft-lbs (lower 95/95 confidence value) for the SA-508, Class 2 forging data set, as documented in the SER.

Please update the 54 EFPY USE projections for the above materials based on the consideration of EPU conditions. In addition, please provide a 54 EFPY USE projection or valid EMA for the

GE-MNGP-AEP-3293 GEH Non-proprietary Information- Class I (Public) Enclosure 1 Page 3 of 4

N2 nozzle-to-shell beltline welds for EPU conditions. As indicated in part b. of Question 3 below, USE projections for EPU conditions should account for any credible plant-specific and BWRVIP integrated surveillance program (ISP) surveillance data that result in non-conservative adjustments to the projected percentage decrease in USE at 54 EFPY, based on the procedures in Position 2.2 of RG 1.99, Rev. 2.

### **Response:**

The 54 EFPY USE EMA projections for the limiting weld material were updated to incorporate one additional data set for the ISP weld heat applicable to MNGP. This material is not the identical heat to that in the MNGP vessel. In addition, the USE increased for this final data set, and therefore has no impact to the USE EMA previously provided.

Similarly, there is no additional information applicable to the N2 nozzle with respect to USE EMA. Therefore, there is no change to the USE EMA evaluation previously provided.

However, for plate heat C2220, one additional ISP data set is available that does cause a change to the USE EMA evaluation. The previously submitted USE EMA demonstrated that the measured USE decrease exceeded the RG 1.99 predicted USE decrease. Because there are now two (2) data sets and the measured USE decrease exceeds the RG1.99 decrease, the use of the fitted chemistry factor (CF) is necessary for calculation of the ART. With inclusion of the second data set, although the second measurements also exceeded the predicted, the first data set controls the change to the USE EMA. Therefore, a USE EMA adjustment is also required for this material; the results demonstrated that the decrease exceeds the criterion defined in BWRVIP-74-A for 54 EFPY. Consequently, a J-R Integral fracture mechanics evaluation was performed and is presented in NEDC-33820P (Enclosure 2). The evaluation demonstrates that the plate materials in the MNGP RPV meet the margins of safety against fracture equivalent to those required by Appendix G of Section XI of the ASME Code and RG 1.161. This conclusion is valid for operation including Extended Power Uprate conditions and a 60-year license (54 EFPY).

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### <u>RAI-3</u>

List all PUSAR sections that have been superseded by the implementation of more recent RPV neutron fluence calculations and changes to any material properties affecting the neutron embrittlement analyses for the RPV and internals. Explain how the information is superseded. Revised or marked up PUSAR sections may facilitate the review, if there are substantial changes. The assessment should take into consideration the following:

c. Any changes to the 54 EFPY circumferential weld and axial weld properties that support RPV circumferential weld examination relief for 54 EFPY; and

### **Response:**

c. There are no changes to the material properties or fluence for the 54 EFPY circumferential welds; therefore, there are no changes to the previously submitted evaluation. Axial welds were not addressed during EPU.

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# RESPONSE TO NRC REQUESTS FOR ADDITIONAL INFORMATION 3.A, 3.B and 3.D

This Enclosure provides responses to RAIs #3.a, 3.b and 3.d from the Requests for Additional Information provided by the NRC. The NRC requested information is provided in italics font and the response is provided in normal font.

## NRC RAI #3

- 3. List all PUSAR sections that have been superseded by the implementation of more recent [Reactor Pressure Vessel] RPV neutron fluence calculations and changes to any material properties affecting the neutron embrittlement analyses for the RPV and internals. Explain how the information is superseded. Revised or marked up PUSAR sections may facilitate the review, if there are substantial changes. The assessment should take into consideration the following:
  - a. The implementation of revised pressure-temperature (P-T) limit curves and associated changes to the adjusted RT<sub>NDT</sub> calculations (including the neutron fluence, material property inputs, and application of credible BWRVIP ISP data) used for generating the P-T limit curves;
  - Any changes to the upper shelf energy projections or equivalent margins analyses (including the neutron fluence, material property inputs, and application of credible BWRVIP ISP data) that support compliance with the upper shelf energy (USE) requirements of 10 CFR Part 50, Appendix G through 54 effective full power years (EFPY);
  - d. Any changes that could affect the adequacy of the RPV internals aging management programs under EPU conditions.

### NSPM Response:

No PUSAR sections have been superseded by the responses provided below.

a. Inclusion of the fitted chemistry factor (CF) for the MNGP integrated surveillance program (ISP) plate material causes the 54 EFPY adjusted reference temperatures (ART) to increase from 157°F to 186.6°F. P-T limit curves have been updated to use the fitted CF and were provided to the NRC and approved under Monticello Nuclear Generating Plant (MNGP) license amendment 172.

- b. This request has been addressed in Enclosure 1, RAI #1 response. This response indicates that only the USE for the reactor pressure vessel beltline plate C2220 has been changed.
- d. As noted above, USE is affected. RAI #1 addresses the updates to the USE evaluations and demonstrates compliance for all materials. P-T limit curves have been updated to use the fitted CF and were provided to the NRC and approved under MNGP license amendment 172. No other changes to RPV internals aging management programs have been identified.

# AFFIDAVITS FOR WITHHOLDING PROPRIETARY DOCUMENTS

6 pages follow

## GE-Hitachi Nuclear Energy Americas LLC

## AFFIDAVIT

### I, Linda C. Dolan, state as follows:

- (1) I am the Manager, Regulatory Compliance of GE-Hitachi Nuclear Energy Americas LLC (GEH), 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 GEH proprietary report, NEDC-33820P, "Monticello Nuclear Generating Plant Upper Shelf Energy Evaluation for Plate C2220 Material for 54 EFPY," Revision 0, June 2013. This document contains information that is proprietary to GEH and to EPRI. The proprietary information in NEDC-33820P is identified by a dotted underline inside double square brackets with a superscript that is used to identify the origin of the information. [[This sentence is an example.<sup>(3)</sup>]]. Figures containing proprietary information are identified with double square brackets before and after the object. In the case of GEH proprietary information, the superscript notation <sup>(3)</sup> refers to Paragraph (3) of this affidavit that provides the basis for the proprietary determination. In the case of EPRI proprietary information, the superscript notation <sup>(E)</sup> refers to EPRI. A separate affidavit is provided by EPRI to attest to the proprietary nature of their material that is contained herein. Under the terms of our agreement with EPRI, we are requesting that their proprietary materials as well that of GEH be protected from disclosure to the public.
- (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 U.S.C. Sec. 552(b)(4), and the *Trade Secrets Act*, 18 U.S.C. 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 qualifies under the narrower definition of trade secret, within the meanings assigned to those terms for purposes of FOIA Exemption 4 in, respectively, <u>Critical Mass Energy Project v. Nuclear Regulatory Commission</u>, 975 F.2.d 871 (D.C. Cir. 1992), and <u>Public Citizen Health Research Group v. FDA</u>, 704 F.2.d 1280 (D.C. Cir. 1983).
- (4) The information sought to be withheld is considered to be proprietary for the reasons set forth in paragraphs (4)a. and (4)b. Some examples of categories of information that 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 GEH or other companies.

# GE-Hitachi Nuclear Energy Americas LLC

- b. Information that, if used by a competitor, would reduce their expenditure of resources or improve their competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product.
- c. Information that reveals aspects of past, present, or future GEH customer-funded development plans and programs, that may include potential products of GEH.
- d. Information that discloses trade secret or potentially patentable subject matter for which it may be desirable to obtain patent protection.
- (5) To address 10 CFR 2.390(b)(4), the information sought to be withheld is being submitted to the 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, not been disclosed publicly, and not been made available in public sources. All disclosures to third parties, including any required transmittals to the NRC, have been made, or must be made, pursuant to regulatory provisions or proprietary or confidentiality agreements that provide for maintaining the information in confidence. The initial designation of this information as proprietary information, and the subsequent steps taken to prevent its unauthorized disclosure are as set forth in the following paragraphs (6) and (7).
- (6) Initial approval of proprietary treatment of a document is made by the manager of the originating component, who is the person most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge, or who is the person most likely to be subject to the terms under which it was licensed to GEH. Access to such documents within GEH is limited to 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 or confidentiality agreements.
- (8) The information identified in paragraph (2) above is considered proprietary because it contains detailed design specifications, methods and processes that GEH has developed and applied to pressure-temperature curves for the BWR over a number of years. The development of the BWR pressure-temperature curves was achieved at a significant cost to GEH. The development of the evaluation methodology along with the interpretation and application of the analytical results is derived from the extensive experience database that constitutes a major GEH asset.

The EPRI proprietary information referred to in that paragraph should be protected for the reasons stated in their affidavit.

## **GE-Hitachi Nuclear Energy Americas LLC**

(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 17<sup>th</sup> day of June, 2013.

Link C. Weber

Linda C. Dolan Manager, Regulatory Compliance GE-Hitachi Nuclear Energy Americas LLC 3901 Castle Hayne Rd Wilmington, NC 28401 Linda.dolan@ge.com



### AFFIDAVIT

### **RE:** Request for Withholding of the Following Proprietary Information Included In:

"Monticello Nuclear Generating Plant Upper Shelf Energy Evaluation for Plate C2220 Material for 54 EFPY" GE-0000-0162-0373-R0, Class III, DRF 0000-0162-0366-R0, June 2013

I, Kurt Edsinger, being duly sworn, depose and state as follows:

I am the Director of PWR and BWR Materials at Electric Power Research Institute, Inc. whose principal office is located at 3420 Hillview Avenue, Palo Alto, CA. ("EPRI") and I have been specifically delegated responsibility for the above-listed report that contains EPRI Proprietary Information that is sought under this Affidavit to be withheld "Proprietary Information". I am authorized to apply to the U.S. Nuclear Regulatory Commission ("NRC") for the withholding of the Proprietary Information on behalf of EPRI.

EPRI Information is identified by a solid underline with double brackets and is highlighted in blue. Tables containing EPRI proprietary information are also identified with a solid underline with brackets and highlighted in blue.

EPRI requests that the Proprietary Information be withheld from the public on the following bases:

Withholding Based Upon Privileged And Confidential Trade Secrets Or Commercial Or Financial Information:

a. The Proprietary Information is owned by EPRI and has been held in confidence by EPRI. All entities accepting copies of the Proprietary Information do so subject to written agreements imposing an obligation upon the recipient to maintain the confidentiality of the Proprietary Information. The Proprietary Information is disclosed only to parties who agree, in writing, to preserve the confidentiality thereof.

b. EPRI considers the Proprietary Information contained therein to constitute trade secrets of EPRI. As such, EPRI holds the Information in confidence and disclosure thereof is strictly limited to individuals and entities who have agreed, in writing, to maintain the confidentiality of the Information.

c. The information sought to be withheld is considered to be proprietary for the following reasons. EPRI made a substantial economic investment to develop the Proprietary Information and, by prohibiting public disclosure, EPRI derives an economic benefit in the form of licensing royalties and other additional fees from the confidential nature of the Proprietary Information. If the Proprietary Information were publicly available to consultants and/or other businesses providing services in the electric and/or nuclear power industry, they would be able to use the Proprietary Information for their own commercial benefit and profit and without expending the substantial economic resources required of EPRI to develop the Proprietary Information.

d. EPRI's classification of the Proprietary Information as trade secrets is justified by the <u>Uniform Trade Secrets Act</u> which California adopted in 1984 and a version of which has been adopted by over forty states. The <u>California Uniform Trade Secrets Act</u>, California Civil Code §§3426 – 3426.11, defines a "trade secret" as follows:

"Trade secret' means information, including a formula, pattern, compilation, program device, method, technique, or process, that:

(1) Derives independent economic value, actual or potential, from not being generally known to the public or to other persons who can obtain economic value from its disclosure or use; and

(2) Is the subject of efforts that are reasonable under the circumstances to maintain its secrecy."

e. The Proprietary Information contained therein are not generally known or available to the public. EPRI developed the Information only after making a determination that the Proprietary Information was not available from public sources. EPRI made a substantial investment of both money and employee hours in the development of the Proprietary Information. EPRI was required to devote these resources and effort to derive the Proprietary Information. As a result of such effort and cost, both in terms of dollars spent and dedicated employee time, the Proprietary Information is highly valuable to EPRI.

f. A public disclosure of the Proprietary Information would be highly likely to cause substantial harm to EPRI's competitive position and the ability of EPRI to license the Proprietary Information both domestically and internationally. The Proprietary Information can only be acquired and/or duplicated by others using an equivalent investment of time and effort.

I have read the foregoing and the matters stated herein are true and correct to the best of my knowledge, information and belief. I make this affidavit under penalty of perjury under the laws of the United States of America and under the laws of the State of California.

Executed at 3420 Hillview Avenue, Palo Alto, CA. being the premises and place of business of Electric Power Research Institute, Inc.

Date: _	6/12/2013
	Konth

Kurt Edsinger

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### CALIFORNIA JURAT WITH AFFIANT STATEMENT

See Attached Document (Notary to cross out lines 1–6 below)

□ See Statement Below (Lines 1–5 to be completed only by document signer[s], not Notary)

à З ligner No. 1 Signature of Document Signer No. 2 (if any) State of California Lana County of Subscribed and sworn to (or affirmed) before me on this 20<u>/</u>3, by day of ب Signer proved to me on the basis of satisfactory evidence to be the person who appeared before me (.)  $\lambda$ **KATHY SYLER** Commission # 1937043 <del>(a</del>nd Notary Public - California Santa Clara County (2)Name of Signer Comm. Expires May 19, 2015 proved to me on the basis of satisfactory evidence to be the person who appeared before me.) Signature Public Place Notary Seal Above **OPTIONAL** -Though the information below is not required by law, it may prove GHT THUMBPRIN OF SIGNER #2 valuable to persons relying on the document and could prevent OF SIGNER #1 fraudulent removal and reattachment of this form to another document. Top of thumb here Top of thumb here Further Description of Any Attached Document AFFIRAU, - REG For WITH. OF Title or Type of Document: PADD / NED - MONTICE LID NUC GEN PLANT U PPERSISELF ENFRENCE, TOU PARE C222 12/1 \_\_\_\_ Number of Pages: Document Date: Signer(s) Other Than Named Above:

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