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October 7, 2004

Docket No. 50-271
BVY 04-113
TAC No. MC0761

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

Subject: **Vermont Yankee Nuclear Power Station**
Technical Specification Proposed Change No. 263 – Supplement No. 20
Extended Power Uprate – Meeting on Steam Dryer Analysis

Reference: 1) Entergy letter to U.S. Nuclear Regulatory Commission, "Vermont Yankee Nuclear Power Station, Technical Specification Proposed Change No. 263, Extended Power Uprate," BVY 03-80, September 10, 2003

This letter provides additional information in support of the application (Reference 1) by Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (Entergy) for a license amendment to increase the maximum authorized power level of the Vermont Yankee Nuclear Power Station (VYNPS) from 1593 megawatts thermal (MWt) to 1912 MWt.

On September 29, 2004, a meeting was held with the NRC staff to discuss the steam dryer analysis associated with the proposed power uprate of VYNPS. This letter transmits copies of presentation materials used by Entergy and its contractors during the meeting, as well as a report prepared by Continuum Dynamics, Inc. (CDI). These documents contain information which is considered to be proprietary by the respective contractors. The attachments to this letter are as follows:

- Attachment 1 is a complete set of the meeting presentation slides, including the proprietary information (i.e., proprietary version). The slides that are considered to be proprietary are clearly marked as either "CDI Proprietary" or "GE Proprietary." Note that the information contained in Attachment 1 (and Attachment 2) that is designated as *Preliminary Information* is the result of sensitivity studies and is not design or licensing basis calculation results for VYNPS. The portions of the presentation slides that contain proprietary information are identified by double square brackets [[]].
- Attachment 2 is a complete set of the presentation slides with the proprietary information redacted (i.e., non-proprietary version).
- Attachment 3 is the proprietary report prepared by CDI, "Methodology to Determine Unsteady Pressure Loading on Components in Reactor Steam Domes," Revision 3, September 2004, which was the basis for some discussion during the meeting. The methodology contained in this report was used to support the analysis of the VYNPS steam dryer. Because CDI considers the report to be proprietary in its entirety, no non-proprietary version is being provided.
- Attachment 4 contains affidavits from both CDI and General Electric Company attesting to the proprietary nature of the information provided in Attachments 1 and 3. The CDI affidavit is applicable to the proprietary presentation slides in Attachment 1 and all of

A P O I

Attachment 3. The GE affidavit is applicable to some of the presentation slides in Attachment 1. The designations of *Proprietary Information* were made by the respective owners of the proprietary information in accordance with 10CFR2.390. The bases for the proprietary determinations are provided within the affidavits. The affidavits constitute requests for withholding from public disclosure in accordance with the provisions of 10CFR2.390 and 10CFR9.17. The proprietary information contained in the attached was provided to Entergy in separate GE and CDI transmittals that are referenced by the respective affidavit. The proprietary information has been faithfully reproduced by Entergy such that the affidavits remain applicable.

This supplement to the license amendment request provides additional information to clarify Entergy's application for a license amendment and does not change the scope or conclusions in the original application, nor does it change Entergy's determination of no significant hazards consideration.

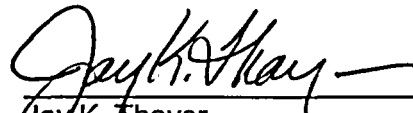
There are no new regulatory commitments made in this submittal.

If you have any questions or require additional information, please contact Mr. James M. DeVincentis at (802) 258-4236.

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

Executed on October 7, 2004.

Sincerely,



Jay K. Thayer
Site Vice President

Vermont Yankee Nuclear Power Station

Attachments (4)

cc: (see next page)

cc: Mr. Richard B. Ennis, Project Manager (w/attachments)
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation
Mail Stop O 8 B1
Washington, DC 20555

Mr. Samuel J. Collins (w/o attachments)
Regional Administrator, Region 1
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

USNRC Resident Inspector (w/o attachments)
Entergy Nuclear Vermont Yankee, LLC
P.O. Box 157
Vernon, Vermont 05354

Mr. David O'Brien, Commissioner (w/o proprietary information)
VT Department of Public Service
112 State Street – Drawer 20
Montpelier, Vermont 05620-2601

Attachment 4

Vermont Yankee Nuclear Power Station

Proposed Technical Specification Change No. 263 – Supplement No. 20

Extended Power Uprate – Meeting on Steam Dryer Analysis

Affidavits

**Total number of pages in Attachment 4
(excluding this cover sheet) is 5.**

**AFFIDAVIT**

Re: "Methodology to Determine Unsteady Pressure Loading on Components in Reactor Steam Domes," Presentation prepared by Continuum Dynamics, Inc. for Entergy Nuclear Northeast Vermont Yankee, 29 September 2004; and "Methodology to Determine Unsteady Pressure Loading on Components in Reactor Steam Domes," C.D.I. Report No. 04-09P Rev. 3, prepared by Continuum Dynamics, Inc., dated September 2004.

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

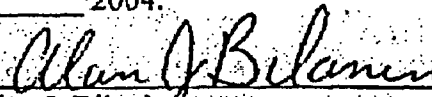
1. I hold the position of President and Senior Associate of Continuum Dynamics, Inc. (hereinafter referred to as C.D.I.), and I am authorized to make the request for withholding from Public Record the Information contained in the documents described in Paragraph 2. This Affidavit is submitted to the 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 Entergy Vermont Yankee as attachments to C.D.I. Letter No. 04134 dated 6 October 2004, is contained in the presentation entitled "Methodology to Determine Unsteady Pressure Loading on Components in Reactor Steam Domes," prepared by Continuum Dynamics, Inc. for Entergy Nuclear Northeast Vermont Yankee, dated 29 September 2004 and C.D.I. Report No. 04-09P, Rev. 3, entitled "Methodology to Determine Unsteady Pressure Loading on Components in Reactor Steam Domes," prepared by Continuum Dynamics, Inc., dated September 2004.
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.

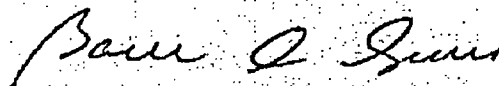
I declare under penalty of perjury that the foregoing affidavit and the matters stated therein are true and correct to be the best of my knowledge, information and belief.

Executed on this 6 day of Oct 2004.



Alan J. Bilanin
Continuum Dynamics, Inc.

Subscribed and sworn before me this day: 6 October 2004


Barbara A. Agans, Notary Public

General Electric Company

AFFIDAVIT

I, **George B. Stramback**, state as follows:

- (1) I am Manager, Regulatory Services, General Electric Company ("GE") 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 Enclosure 2 to GE letter GE-VYNPS-AEP-365, Michael Dick (GE) to Craig Nichols (ENOI), *VY Presentation dated September 29, 2004*, dated October 6, 2004. The Enclosure 2 proprietary information, *VY Presentation to NRC dated September 29, 2004 Slides 71 and 72*, is delineated by a box with the superscript notation⁽³⁾ which 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, GE 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 General Electric's competitors without license from General Electric 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 General Electric customer-funded development plans and programs, resulting in potential products to General Electric;
 - 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 GE, 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 GE, 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. Access to such documents within GE 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, by the manager of the cognizant marketing function (or his delegate), and by the Legal Operation, for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside GE 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 detailed results and conclusions from analyses of the Vermont Yankee Steam Dryer which encompass and takes into account analyses and repairs utilizing analytical models and methods, including computer codes, which GE has developed. The development of these models and computer codes was achieved at a significant cost to GE, on the order of ½ million dollars.

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

- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GE's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of GE'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 GE.


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.

GE's competitive advantage will be lost if its competitors are able to use the results of the GE 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 GE 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 GE of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing 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 6th day of October 2004.


George B. Stramback
General Electric Company