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PROPRIETARY - WITHHOLD FROM PUBLIC DISCLOSURE UNDER 10 CFR 2.390

November 8, 2011

NL-11-123

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

SUBJECT: Request for Additional Information on Relief Request IP2-ISI-RR-14 For Code Case N-770-1 Weld Inspection Frequency Extension (TAC No. ME6689)
Indian Point Unit Number 2
Docket No. 50-247
License No. DPR-26

- REFERENCES:**
1. Entergy Letter NL-11-094 Regarding Request For Relief Request 14 - Code Case N-770-1 Weld Inspection Frequency Extension , dated August 3, 2011.
 2. NRC E mail Regarding NRC Request for Additional Information on Indian Point 2 Relief Request RR-14, ME6801, dated September 14, 2011.

Dear Sir or Madam:

Entergy Nuclear Operations, Inc. (Entergy) submitted, Reference 1, Relief Request No. IP2-ISI-RR-14 for the Indian Point Unit No. 2 (IP2) Fourth Ten-Year Inservice Inspection Interval. This letter is to respond to NRC questions, Reference 2, on that relief request. The response is in Attachment 1. The response is based on the proprietary calculation in Enclosure 1. The affidavit requesting that the calculation in Enclosure 1 be withheld from public disclosure is in Enclosure 2. A non proprietary version of the calculation is in Enclosure 3.

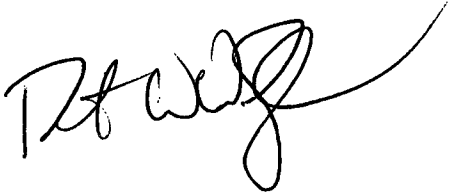
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When Enclosure 1 is detached, this letter, it's Attachment and Enclosures may be made publicly available

A047
NRK

There are no new commitments identified in this submittal. If you have any questions or require additional information, please contact me.

Very truly yours,



RW/sp

- Attachment: 1. Response to Request for Additional Information Regarding Relief Request IP2-ISI-RR-14
- Enclosure: 1. LTR-PAFM-11-136P, Rev. 0 "Technical Justification to Support Extended Volumetric Examination Interval for Indian Point Generating Station Unit 2 Reactor Vessel Inlet Nozzle to Safe End Dissimilar Metal Welds," November 2011
2. Affidavit Requesting Withholding of LTR-PAFM-11-136P
3. LTR-PAFM-11-136NP, Rev. 0 "Technical Justification to Support Extended Volumetric Examination Interval for Indian Point Generating Station Unit 2 Reactor Vessel Inlet Nozzle to Safe End Dissimilar Metal Welds," November 2011
- cc: Mr. John P. Boska, Senior Project Manager, NRC NRR DORL
 Mr. William M. Dean, Regional Administrator, NRC Region I
 NRC Resident Inspector's Office Indian Point
 Mr. Paul Eddy, New York State Department of Public Service
 Mr. Francis J. Murray Jr., President and CEO NYSERDA

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ATTACHMENT 1 TO NL-11-123

**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
REGARDING RELIEF REQUEST IP2-ISI-RR-14**

**ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NO. 2
DOCKET NO. 50-247**

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Response to Request For Additional Information
Regarding Relief Request IP2-ISI-RR-14

By letter dated August 3, 2011 (Agencywide Documents Access & Management System (ADAMS) at ML11224A026), Entergy Nuclear Operations, Inc. proposed an alternative to 10 CFR 50.55a(g)(6)(ii)(F) for Indian Point Nuclear Generating Unit No. 2 (IP2). The requirement, for which relief is requested defines the inservice volumetric inspection frequency of the reactor vessel cold leg nozzle to safe end welds in accordance with American Society of Mechanical Engineer's (ASME) Boiler and Pressure Vessel Code (Code) Case N-770-1, "Alternative Examination Requirements and Acceptance Standards for Class 1 PWR Piping and Vessel Nozzle Butt Welds Fabricated With UNS N06082 or UNS W86182 Weld Filler Material With or Without Application of Listed Mitigation Activities, Section XI, Division 1," with NRC conditions. The request for relief applies to the fourth 10-year inservice inspection (ISI) interval in which the licensee adopted the 2001 Edition through the 2003 Addenda of ASME Code Section XI, as the Code of Record.

The NRC reviewed the information submitted and has requested the following additional information to complete the evaluation:

NRC Question 1

A flaw analysis calculation of hypothetical flaws that grow axially and circumferentially through the period of reinspection frequency is needed to allow the NRC staff to fully evaluate the request. Initial hypothetical flaw size should be based on a conservative assessment of the effectiveness of previous examination techniques including the probability of detection for the inspection methods. Justification of the initial hypothetical flaw size is necessary for the staff to assess the results of the analysis. Comparison of final flaw size to allowable flaw size is also requested. Allowable flaw size is governed by Section XI of the ASME Code. The staff recognizes that additional guidance for input parameters and attributes for an acceptable residual stress analysis are provided in the Materials Reliability Program Report, "Primary Water Stress Corrosion Cracking (PWSCC) Flaw Evaluation Guidance (MRP 287)."

Response

Enclosure 1 provides a flaw tolerance analysis performed by Westinghouse for the IP2 RPV inlet nozzle to safe end DM welds. The purpose of this analysis was to assess the impact of extending the 7 year inspection frequency required by Code Case N-770-1 to 8 years to allow IPEC to perform the next inspection during the 2014 refueling outage eliminating the need to remove the core support barrel during two consecutive refueling outages.

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Enclosure 1 calculated the length and the depth of the largest axial and circumferential flaws which, if left in service for 8 years would not grow beyond the limits provided in sub section IWB-3600 of the ASME Section XI Code. These flaw dimensions are provided in Table 8-1 of the enclosure.

The evaluation also established the maximum flaw size which could have reasonably been missed during the 2006 inspection considering the detection capabilities of the NDE techniques used during the inspection. It was estimated that the volumetric inspection technique (i.e. Ultrasound) used during the inspection was capable of reliably detecting a 10% through wall, surface breaking flaw. This size flaw was then assumed to have been missed during the 2006 inspection even though a surface examination (i.e. Eddy Current) did not identify any surface breaking flaws. Based on this, assuming that the 2006 inspection could have missed a 10% through wall flaw is a conservative assumption.

A comparison of the depth of the maximum flaw which could have been reasonably missed during the 2006 inspection (i.e. 0.25") with the depth of the maximum flaw (i.e. 1.2") which would not grow beyond the ASME Section XI limits after 8 years of service results in a margin of conservatism of approximately 5 beyond the margins of safety required by the ASME Section XI Code. Based on these results and the details provided in the Enclosure 1 evaluation, it is concluded that performing the next cold leg nozzle DM weld inspections during the 2014 refueling outage is acceptable since it will not result in flaws which exceed the ASME Section XI Code limits.

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ENCLOSURE 2 TO NL-11-123

AFFIDAVIT REQUESTING WITHHOLDING OF LTR-PAFM-11-136P

**ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NO. 2
DOCKET NO. 50-247**

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Westinghouse Electric Company
Nuclear Services
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Cranberry Township, Pennsylvania 16066
USA

U.S. Nuclear Regulatory Commission
Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

Direct tel: (412) 374-4643
Direct fax: (724) 720-0754
e-mail: greshaja@westinghouse.com
Proj letter:

CAW-11-3296

November 2, 2011

APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE


Subject: LTR-PAFM-11-136-P, "Technical Justification to Support Extended Volumetric Examination Interval for Indian Point Generating Station Unit 2 Reactor Vessel Inlet Nozzle to Safe End Dissimilar Metal Welds." (Proprietary)

The proprietary information for which withholding is being requested in the above-referenced report is further identified in Affidavit CAW-11-3296 signed by the owner of the proprietary information, Westinghouse Electric Company LLC. The affidavit, which accompanies this letter, sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR Section 2.390 of the Commission's regulations.

Accordingly, this letter authorizes the utilization of the accompanying affidavit by Entergy Nuclear Operation, Inc.

Correspondence with respect to the proprietary aspects of the application for withholding or the Westinghouse affidavit should reference this letter, CAW-11-3296, and should be addressed to J. A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company LLC, Suite 428, 1000 Westinghouse Drive, Cranberry Township, Pennsylvania 16066.

Very truly yours,


J. A. Gresham, Manager
Regulatory Compliance

Enclosures

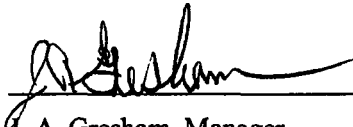
AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

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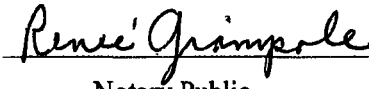
COUNTY OF BUTLER:

Before me, the undersigned authority, personally appeared J. A. Gresham, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Westinghouse Electric Company LLC (Westinghouse), and that the averments of fact set forth in this Affidavit are true and correct to the best of his knowledge, information, and belief:

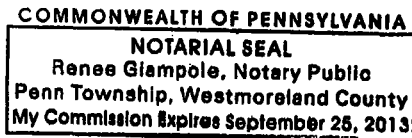


J. A. Gresham, Manager
Regulatory Compliance

Sworn to and subscribed before me
this 2nd day of November 2011



Notary Public



- (1) I am Manager, Regulatory Compliance, in Nuclear Services, Westinghouse Electric Company LLC (Westinghouse), and as such, I have been specifically delegated the function of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear power plant licensing and rule making proceedings, and am authorized to apply for its withholding on behalf of Westinghouse.
- (2) I am making this Affidavit in conformance with the provisions of 10 CFR Section 2.390 of the Commission's regulations and in conjunction with the Westinghouse Application for Withholding Proprietary Information from Public Disclosure accompanying this Affidavit.
- (3) I have personal knowledge of the criteria and procedures utilized by Westinghouse in designating information as a trade secret, privileged or as confidential commercial or financial information.
- (4) Pursuant to the provisions of paragraph (b)(4) of Section 2.390 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.
 - (i) The information sought to be withheld from public disclosure is owned and has been held in confidence by Westinghouse.
 - (ii) The information is of a type customarily held in confidence by Westinghouse and not customarily disclosed to the public. Westinghouse has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitutes Westinghouse policy and provides the rational basis required.

Under that system, information is held in confidence if it falls in one or more of several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:

 - (a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of

Westinghouse's competitors without license from Westinghouse constitutes a competitive economic advantage over other companies.

- (b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage, e.g., by optimization or improved marketability.
- (c) Its use 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 a similar product.
- (d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of Westinghouse, its customers or suppliers.
- (e) It reveals aspects of past, present, or future Westinghouse or customer funded development plans and programs of potential commercial value to Westinghouse.
- (f) It contains patentable ideas, for which patent protection may be desirable.

There are sound policy reasons behind the Westinghouse system which include the following:

- (a) The use of such information by Westinghouse gives Westinghouse a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the Westinghouse competitive position.
- (b) It is information that is marketable in many ways. The extent to which such information is available to competitors diminishes the Westinghouse ability to sell products and services involving the use of the information.
- (c) Use by our competitor would put Westinghouse at a competitive disadvantage by reducing his expenditure of resources at our expense.

- (d) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components of proprietary information, any one component may be the key to the entire puzzle, thereby depriving Westinghouse of a competitive advantage.
 - (e) Unrestricted disclosure would jeopardize the position of prominence of Westinghouse in the world market, and thereby give a market advantage to the competition of those countries.
 - (f) The Westinghouse capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage.
- (iii) The information is being transmitted to the Commission in confidence and, under the provisions of 10 CFR Section 2.390; it is to be received in confidence by the Commission.
- (iv) The information sought to be protected is not available in public sources or available information has not been previously employed in the same original manner or method to the best of our knowledge and belief.
- (v) The proprietary information sought to be withheld in this submittal is that which is appropriately marked in, LTR-PAFM-11-136-P, "Technical Justification to Support Extended Volumetric Examination Interval for Indian Point Generating Station Unit 2 Reactor Vessel Inlet Nozzle to Safe End Dissimilar Metal Welds" (Proprietary), for submittal to the Commission, being transmitted by Entergy Nuclear Operation letter and Application for Withholding Proprietary Information from Public Disclosure, to the Document Control Desk. The proprietary information as submitted by Westinghouse is that associated with technical justification to support extended volumetric examination interval for Indian Point Generating Station Unit 2 reactor vessel inlet nozzle to safe end dissimilar metal welds, and may be used only for that purpose.

This information is part of that which will enable Westinghouse to:

- (a) Provide technical justification to support extended volumetric examination interval for Indian Point Generating Station Unit 2 reactor vessel inlet nozzle to safe end dissimilar metal welds.

Further this information has substantial commercial value as follows:

- (a) Westinghouse plans to sell the use of the information to its customers for the purpose of providing technical justification to support extended volumetric examination interval for reactor vessel nozzle to safe end dissimilar metal welds.
- (b) The information requested to be withheld reveals the distinguishing aspects of a methodology which was developed by Westinghouse.

Public disclosure of this proprietary information is likely to cause substantial harm to the competitive position of Westinghouse because it would enhance the ability of competitors to provide similar evaluation and licensing defense services for commercial power reactors without commensurate expenses. Also, public disclosure of the information would enable others to use the information to meet NRC requirements for licensing documentation without purchasing the right to use the information.

The development of the technology described in part by the information is the result of applying the results of many years of experience in an intensive Westinghouse effort and the expenditure of a considerable sum of money.

In order for competitors of Westinghouse to duplicate this information, similar technical programs would have to be performed and a significant manpower effort, having the requisite talent and experience, would have to be expended.

Further the deponent sayeth not.

PROPRIETARY INFORMATION NOTICE

Transmitted herewith are proprietary and/or non-proprietary versions of documents furnished to the NRC in connection with requests for generic and/or plant-specific review and approval.

In order to conform to the requirements of 10 CFR 2.390 of the Commission's regulations concerning the protection of proprietary information so submitted to the NRC, the information which is proprietary in the proprietary versions is contained within brackets, and where the proprietary information has been deleted in the non-proprietary versions, only the brackets remain (the information that was contained within the brackets in the proprietary versions having been deleted). The justification for claiming the information so designated as proprietary is indicated in both versions by means of lower case letters (a) through (f) located as a superscript immediately following the brackets enclosing each item of information being identified as proprietary or in the margin opposite such information. These lower case letters refer to the types of information Westinghouse customarily holds in confidence identified in Sections (4)(ii)(a) through (4)(ii)(f) of the affidavit accompanying this transmittal pursuant to 10 CFR 2.390(b)(1).

COPYRIGHT NOTICE

The reports transmitted herewith each bear a Westinghouse copyright notice. The NRC is permitted to make the number of copies of the information contained in these reports which are necessary for its internal use in connection with generic and plant-specific reviews and approvals as well as the issuance, denial, amendment, transfer, renewal, modification, suspension, revocation, or violation of a license, permit, order, or regulation subject to the requirements of 10 CFR 2.390 regarding restrictions on public disclosure to the extent such information has been identified as proprietary by Westinghouse, copyright protection notwithstanding. With respect to the non-proprietary versions of these reports, the NRC is permitted to make the number of copies beyond those necessary for its internal use which are necessary in order to have one copy available for public viewing in the appropriate docket files in the public document room in Washington, DC and in local public document rooms as may be required by NRC regulations if the number of copies submitted is insufficient for this purpose. Copies made by the NRC must include the copyright notice in all instances and the proprietary notice if the original was identified as proprietary.

Entergy Nuclear Operation

Letter for Transmittal to the NRC

The following paragraphs should be included in your letter to the NRC:

Enclosed are:

1. 4 copies of LTR-PAFM-11-136-P, "Technical Justification to Support Extended Volumetric Examination Interval for Indian Point Generating Station Unit 2 Reactor Vessel Inlet Nozzle to Safe End Dissimilar Metal Welds." (Proprietary)
2. 2 copies of LTR-PAFM-11-136-NP, "Technical Justification to Support Extended Volumetric Examination Interval for Indian Point Generating Station Unit 2 Reactor Vessel Inlet Nozzle to Safe End Dissimilar Metal Welds." (Non-Proprietary)

Also enclosed is the Westinghouse Application for Withholding Proprietary Information from Public Disclosure CAW-11-3296, accompanying Affidavit, Proprietary Information Notice, and Copyright Notice.

As Item 1 contains information proprietary to Westinghouse Electric Company LLC, it is supported by an affidavit signed by Westinghouse, the owner of the information. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.390 of the Commission's regulations.

Accordingly, it is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR Section 2.390 of the Commission's regulations.

Correspondence with respect to the copyright or proprietary aspects of the items listed above or the supporting Westinghouse affidavit should reference CAW-11-3296 and should be addressed to J. A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company LLC, Suite 428, 1000 Westinghouse Drive, Cranberry Township, Pennsylvania 16066.