Nuclear Operating Company

South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

Attachment 2 contains proprietary information and should be withheld from public disclosure in accordance with 10 CFR 2.390

March 3, 2016
NOC-AE-16003345
10 CFR 50.55a
10 CFR 2.390
File No.: D43.01

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

South Texas Project Unit 2
Docket No. STN 50-499
Request for Relief from Code Case N-770-1, Subsection 2400 and Table 1 Inspection Frequency of Reactor Vessel Cold Leg Nozzle to Safe-end Welds with Flaw Analysis
(Relief Request RR-ENG-3-20)

In accordance with the provisions of 10 CFR 50.55a(z)(2), STP Nuclear Operating Company (STPNOC) requests relief for South Texas Project (STP) Unit 2 for performing the reactor vessel cold leg nozzle to safe-end weld inspections, covered by ASME 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", by the currently scheduled outage 2RE18 (Fall 2016). This relief request proposes extending the inspection period by two operating cycles and performing the Code Case N-770-1 inspections in conjunction with the implementation of an approved stress improvement process to mitigate primary water stress corrosion cracking (PWSCC) in the Hot and Cold leg nozzle to safe-end welds. This proposes an alternative to extend the Code Case N-770-1 Inspection Item B inspections by two cycles, approximately 36 months, until Refueling Outage 2RE20 scheduled for the fall of 2019.

10 CFR 50.55a(g)(6)(ii)(F)(1), effective July 21, 2011, requires that the STP Inservice Inspection program implement Code Case N-770-1. STPNOC has determined that compliance with code inspection requirements would result in unnecessary hardship without a compensating increase in the level of quality and safety.

By performing the cold leg weld inspections in conjunction with an approved stress improvement process during Refueling Outage 2RE20, STPNOC would reduce unnecessary radiation exposure to personnel, and perform two work evolutions during the same time period.

STPNOC requests NRC review and approval of this alternative request by July 15, 2016, to support the use of the proposed inspection date extension when authorized, as required by 10 CFR 50.55a(z).

A047
NRR

STI: 34285291

There are no commitments in this letter.

If there are any questions, please contact Craig Younger at 361-972-8186, or Michael Berg at 361-972-7030.

James W. Connolly
General Manager
of Engineering

rjg

Enclosures:
1. SOUTH TEXAS PROJECT UNIT 2, Request for Relief from Code Case N-770-1, Subsection 2400 and Table 1 Inspection Frequency of Reactor Vessel Cold Leg Nozzle to Safe-end Welds with Flaw Analysis (Relief Request RR-ENG-3-20)
2. Application for Withholding Proprietary Information From Public Disclosure

Attachments:
1. LTR-PAFM-16-11-NP Revision 0, Technical Justification to Support Extended Volumetric Examination Interval for South Texas Unit 2 Reactor Vessel Inlet Nozzle to Safe End Dissimilar Metal Welds, March 2016 (Non-Proprietary).
2. LTR-PAFM-16-11-P Revision 0, Technical Justification to Support Extended Volumetric Examination Interval for South Texas Unit 2 Reactor Vessel Inlet Nozzle to Safe End Dissimilar Metal Welds, March 2016 (Proprietary).

cc:
(paper copy)

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Enclosure 1

SOUTH TEXAS PROJECT UNIT 2, Request for Relief from Code Case N-770-1, Subsection 2400 and Table 1 Inspection Frequency of Reactor Vessel Cold Leg Nozzle to Safe-end Welds with Flaw Analysis (Relief Request RR-ENG-3-20)

SOUTH TEXAS PROJECT UNIT 2
Request for Relief from Code Case N-770-1, Subsection 2400 and Table 1 Inspection Frequency of Reactor Vessel Cold Leg Nozzle to Safe-end Welds with Flaw Analysis
(Relief Request RR-ENG-3-20)

A. ASME Component(s) Affected

The affected components are STP Unit 2 reactor vessel (RV) cold leg nozzle to safe-end dissimilar metal (DM) welds (Table 1), which are Alloy 82/182 welds subject to Code Case N-770-1 (Reference 1).

Table 1 - STP Unit 2 reactor vessel cold leg nozzle to safe-end welds

UNIT 2				
CATEGORY	**ITEM NO**	**STP SUMMARY NO***	**COMP ID**	**COMP DESCRIPTION**
N-770-1	B	101340 101330	RPV2-N2ASE	SAFE END TO RPV LOOP A INLET NOZZLE
N-770-1	B	101480 101470	RPV2-N2BSE	SAFE END TO RPV LOOP B INLET NOZZLE
N-770-1	B	101620 101630	RPV2-N2CSE	SAFE END TO RPV LOOP C INLET NOZZLE
N-770-1	B	101770 101760	RPV2-N2DSE	SAFE END TO RPV LOOP D INLET NOZZLE

* Identifiers for N-770-1 and Risk Informed components

B. Applicable ASME Code Edition and Addenda

ASME Section XI 2004 Edition (Reference 2)
Code Case N-770-1 as referenced in 10 CFR 50.55a(g)(6)(ii)(F)(1).

C. Applicable ASME Code Requirement

Table 1 of Code Case N-770-1, requires volumetric examination of essentially 100% of Inspection Item B (RV cold leg DM welds) pressure retaining welds once every second inspection period not to exceed 7 years. This is the third In-service Inspection (ISI) interval beginning October 19, 2010 through October 18, 2020.

D. Reason for Relief from Code Requirements

STPNOC requests to extend the cold leg weld inspections two operating cycles (approximately 36 months) to fall 2019 for Refueling Outage 2RE20.
STPNOC will be performing mitigation with a stress improvement process on both the RV hot and cold leg nozzle to safe-end DM welds that are subject to primary water stress corrosion cracking (PWSCC). Complete ASME compliant volumetric examination of these DM welds cannot be performed from the outside surface due to access and geometry of the welds. Therefore, examination of the RV nozzle DM welds is performed with automated inspection equipment from inside the RV. An infrequently performed evolution of removing the RV lower

internals assembly (core barrel) is required for the automated inspection equipment to examine the RV cold leg nozzle DM welds. By receiving relief to move the inspection by two operating cycles, the site can leverage performing the inspection and the mitigation of PWSCC during the same evolution, thus reducing the risk of an infrequently performed evolution, and adhering to best "As Low As Reasonably Achievable" (ALARA) practices.

E. Proposed Alternative and Basis for Use:

10 CFR 50.55a(z) states in part:

> (z) Alternatives to codes and standards requirements. Alternatives to the requirements of paragraphs (b) through (h) of this section or portions thereof may be used when authorized by the Director, Office of Nuclear Reactor Regulation, or Director, Office of New Reactors, as appropriate. A proposed alternative must be submitted and authorized prior to implementation. The applicant or licensee must demonstrate that:
> (2) Hardship without a compensating increase in quality and safety. Compliance with the specified requirements of this section would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

STPNOC believes the proposed alternatives of this request provide an acceptable level of quality and safety.

STPNOC proposes a one time extension to the requirements of Code Case N-770-1, Table 1, Inspection Item B, volumetric examinations from a period not to exceed 7 years, to a one time period not to exceed 9-1/2 years for STP Unit 2.

During the Unit 2 fall 2019 outage, STPNOC will be performing mitigation on both the RV hot and cold leg nozzle Alloy 82/182 DM welds that are subject to PWSCC. STPNOC plans to use a non-welded stress improvement method (meeting the performance criteria of Code Case N-770-1 Appendix 1) as the mitigation process to minimize the potential of PWSCC by permanently eliminating the tensile stress through approximately the inner 50% of the DM weld wall thickness. The NRC and the commercial nuclear industry recognize non-welded stress improvement methods as a permanent solution to eliminate the risk of PWSCC. Examination of Code Case N-770-1 Item B (cold leg) welds are performed from the ID in Unit 2 due to geometry of the weld and limited access provisions from the outside surface of the pipe. The STPNOC ASME Code Case N-770-1 Inspection Item A-2 (hot leg) and Item B (cold leg) welds are located in the annulus space between the RV and concrete primary shield wall also known as the RV nozzle gallery. The inspection of Item B (cold leg) welds from the ID requires removal of the core barrel.

The removal of the RV core barrel is considered to be an infrequently performed evolution due to the weight of the component, the tight clearances involved, and the radiation emitted by the assembly. The STP Unit 2 core barrel was last removed from the RV during the spring 2010 refueling outage. For these reasons, only personnel directly involved with the movement of the internals are typically allowed in the Reactor Containment Building during the evolution. Remote cameras are used to allow most personnel involved with the lift to be outside of the refueling cavity area to minimize personnel radiation exposure. The core barrel lifts are performed remotely by viewing cameras. If the need arises, the Polar Crane operator is instructed to sit on the floor of the cab or behind shielding and not to raise his head above the cab area of the crane to maintain his radiation dose as low as reasonably achievable (ALARA). Due to the complexity of raising the core barrel, this work is considered to be a high radiological risk work activity.
For STP, removing the core barrel requires that it be raised above the refueling cavity water level during transfer from the reactor vessel to the storage stand location. As can be expected, the

radiation exposure levels for this activity can be high and necessitate unrelated work to stop, evacuation of personnel from containment, and installation of shielding for the polar crane operator(s). In addition, the dose rates in the area would increase due to the presence of the core barrel in the temporary storage location. By aligning the N-770-1 inspection with the non-welded stress improvement method activity, and performing two work evolutions during the same time period, this would reduce unnecessary radiation exposure to personnel. Eliminating the need to remove the core barrel during 2RE18 could save approximately 610.5 mrem of dose.

The total dose attributed to removal of the core barrel was estimated based on data from refueling outage, 2RE14 (spring 2010), the most recent outage when the core barrel was removed. The total dose for the actual work activities to remove and install the reactor core barrel during 2RE14 was 123 mrem. The core barrel was transferred to the Lower Internal Storage Area (LISA) where it was stored underwater for 13 days. The dose rates in the vicinity of the LISA with the core barrel present were compared to the dose rates without the core barrel present. The approximate increase in dose rates in the general area walkway was 1.3 mrem/hour (surveys #47960 and #47718). Dose rates were taken on the south end of the 68' elevation of the Reactor Containment Building (RCB) which is a general area walkway and a common travel path for workers inside containment. During the 13 days that the core barrel was stored in this area, workers could have received additional dose due to the higher area dose rates totaling approximately 487.5 mrem (see assumptions below). The total dose associated with moving and storing the core barrel and lower internals is 610.5 mrem.

Assumptions

1. The total time the core barrel remained in the LISA, and thus, caused increased dose rates in the general area walkway was 13 days.
2. The total RWP-hours during those 13 days was approximately 37,500 hours.
3. The total number of hours that workers may have spent in the vicinity of the 68' with higher dose rates is approximately 1% of the total RWP-hours = 375 hours.
4. The average increase in dose rates in the general area walkway was 1.3 mrem/hour.

Calculation: 375 hours x 1.3 = 487.5 mrem

Operating experience on Primary Water Stress Corrosion Cracking (PWSCC) of Alloy 82/182 welds shows that weld repairs performed during original plant construction are a significant contributor in the initiation and propagation of cracking. A review of the construction records and a weld repair search performed for the STP Unit 2 Reactor Vessel nozzle Alloy 82/182 welds did not identify any significant weld repairs performed on these welds during original plant construction.

STP will perform a non-welded stress improvement method on the reactor vessel inlet and outlet nozzle to safe end welds during the 2RE20 refueling outage scheduled for fall 2019. This proposed approach reduces radiological exposure and personnel safety hazards associated with removing and reinstalling the RV core barrel.

Technical Basis

Electric Power Research Institute (EPRI) Technical Report for Materials Reliability Program: PWR Reactor Coolant System Cold-Loop Dissimilar Metal Butt Weld Reexamination Interval Extension, MRP-349 (Reference 3) provides the basis for extension of the current volumetric inspection interval for the RV cold leg DM welds from every second inspection period or 7 years, as currently required by Code Case N-770-1, to 9-1/2 years in the current inspection interval. In summary, the basis for one time extension of Code Case N-770-1, Table 1, Inspection Item B, volumetric examinations from a period of not to exceed 7 years to a period of not to exceed 9-1/2 years is: (1) there has been no service experience with cracking found in RV cold leg DM welds, (2) crack growth rates in RV cold leg DM welds are small, and (3) likelihood of cracking or through wall leaks is very small in RV cold leg DM welds. This technical basis demonstrates that the re-examination interval can be extended to 9-1/2 years while maintaining an acceptable level of quality and safety.

In addition, a site specific flaw tolerance analysis (Reference 4) has been performed to determine the largest allowable initial axial and circumferential flaws that could be left behind in service and remain acceptable between the planned examinations.

If this maximum allowable initial flaw size is equal to or greater than a flaw size which would have been detected during the last inspection, then deferring the UT examination is technically justified. The attachments (i.e. Attachment 1 Non-proprietary and Attachment 2 Proprietary) to this enclosure contain the flaw tolerance analysis in Reference 4.

During the spring 2010 STP Unit 2 refueling outage, an ultrasonic (UT) examination was performed in accordance with ASME XI Appendix VIII along with a supplemental eddy current (ET) examination. As discussed in Section 7.0 of Attachment 1, "Technical Justification to Support Extended Volumetric Examination Interval for South Texas Unit 2 Reactor Vessel Inlet Nozzle to Safe End Dissimilar Metal Welds" the ET examination procedure used during the 2010 examinations required that an indication with a depth of 0.08" and length of 0.28" or more be recorded. However, during the spring 2010 inspection, it was possible to identify indications with shorter axial flaw lengths. Circumferential ET scans using an index size of 0.08" were used in looking for axial defects which would allow axial flaw lengths of 0.16" and smaller to be detected and evaluated. The nondestructive examination (NDE) vendor (WesDyne) was requested to re-evaluate the Unit 2 inspection data to support the crack growth evaluation results for axial oriented flaws as addressed in Attachment 1. A Wesdyne ET Certified Level III performed a re-evaluation of the 2010 STP Unit 2 RV cold leg DM welds ET data recorded by the WesDyne Paragon™ system.and determined there were no axial indications present with a depth more than 0.08" or flaw length greater than 0.16". This supports the maximum allowable initial axial flaw size that would have been detected during the last inspection.

In May 2015, UT and ET examinations were performed on the STP Unit 2 hot leg DM welds and no indications were identified. In fall 2016, UT and ET examinations are scheduled to be performed on the STP Unit 2 cold leg DM welds to meet the scheduling requirements of ASME Code Case N-770-1. The absence of any indications in the hot leg DM welds in 2015 provides added assurance that the one time extension of the inspection of the cold leg DM welds by approximately 36 months provides an acceptable level of quality and safety.

Service Experience

The STP Unit 2 RV cold weld DM welds were last examined in the fall 2010 using remote mechanized examinations from the Inside Diameter (ID) in accordance with Appendix VIII using performance demonstrated methods where 100% of the flaws (in the test specimens) were detected. In addition, an eddy current examination was performed on the inside (or wetted) surface to interrogate for surface connected flaws. No recordable indications were identified during the 2010 examinations. All volumetric examinations of the STP Unit 2 RV cold weld DM welds previous to 2010 also did not identify any indications requiring resolution. The technique used in site specific exams included 100% coverage for axial and circumferential flaws. Data is obtained using encoded techniques; therefore, data may be reviewed by multiple qualified examiners and/or reviewed years later to look for specific UT or ET signal responses. Site specific mock-ups were not used because of the flat, uniform surface associated with performance of these examinations from the ID. These techniques provide a strong assurance that flaws will be detected during inspections. Each STP Unit 2 RV cold weld DM is exposed to approximately 563°F (cold leg temperature) during normal plant operation.

Crack Growth Rates (Flaw Tolerance)

The flaw tolerance analyses performed to date has shown that the critical crack sizes in large-diameter butt welds operating at RV cold leg temperatures are very large. Assuming that a flaw initiates, the time required to grow to through-wall is in excess of 20 years in most cases analyzed. The time to grow from a through-wall leak to a crack equal to the critical crack size can be in excess of 40 years.

More recent analyses have been performed for the RV nozzles using through-wall residual stress distributions that were developed based on the most recent guidance. These analyses have shown that the flaw tolerance of these locations is high and postulated circumferential flaws will not reach the maximum ASME allowable depth in less than 10 years. Crack growth analysis is given for limiting plants part-circumferential through-wall flaws in Table 5-2 of MRP-349.

Probability of Cracking or Through Wall Leaks

Analyses have been performed to calculate the probability of failure for Alloy 82/182 welds using both probabilistic fracture mechanics and statistical methods. Both approaches have shown that the likelihood of cracking or through-wall leaks, in large-diameter CL welds, is very small. Furthermore, sensitivity studies performed using probabilistic fracture mechanics have shown that even for the more limiting high temperature locations, more frequent inspections than required by Section XI, such as that in MRP-139 or Code Case N-770, have only a small benefit in terms of risk.

Though past service experience may not be an absolute indicator of the likelihood of future cracking, the experience does give an indication of the relative likelihood of cracking in CL temperature locations versus hot leg temperature locations. While there is a significant amount of PWSCC service experience in hot leg locations, the number of indications in large-bore butt welds is still

small relative to the number of potential locations. Also, all indications have been detected before they were a safety concern. Therefore, if Hot Leg PWSCC is a leading indicator for CL PWSCC, and the higher frequency of inspections will be maintained for the hot leg locations, it is reasonable to conclude that a moderately less rigorous inspection schedule would be capable of detecting any CL indications before they became large enough to be a concern.

F. Duration of Proposed Alternative

(a) This request is applicable to STPNOC's inservice inspection program for the third interval for STP Unit 2. The proposed alternative is to defer the ASME Code Case N-770-1 required volumetric examination, as required by 10 CFR 50.55a(g)(6)(ii)(F) with conditions, from the fall 2016 refueling outage (2RE18) up to and including the fall 2019 refueling outage (2RE20). Essentially, this request is a nominal 36 month extension request, i.e. two operating cycles.

G. References

1. 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.
2. ASME Boiler and Pressure Vessel Code, Section XI, 2004 Edition No Addenda, American Society of Mechanical Engineers, New York.
3. EPRI, Materials Reliability Program: PWR Reactor Coolant System Cold-Loop Dissimilar Metal Butt Weld Reexamination Interval Extension (MRP-349), August 2012, (1025852).
4. LTR-PAFM-16-11-P Revision 0, Technical Justification to Support Extended Volumetric Examination Interval for South Texas Unit 2 Reactor Vessel Inlet Nozzle to Safe End Dissimilar Metal Welds, March 2016 (Proprietary).

H. Precedents

Relief from this examination requirement to apply the proposed alternative at the South Texas Project Unit 2 was previously approved by the NRC for the following (with ADAMS Accession No. references):

(1) South Texas Project Unit 1 Docket No. STN 50-498 Request for Relief from Code Case N-770-1, Subsection 2400 and Table 1 Inspection Frequency of Reactor Vessel Cold Leg Nozzle to Safe-end Welds with Flaw Analysis (Relief Request RR-ENG-3-17), dated April 24, 2015 (ML15133A130).
(2) Indian Point Nuclear Generating Unit No. 2 - Request for Relief Request No. IP2-ISI-RR-14, Code Case N-770-1, Reactor Coolant System Cold Leg Nozzle Weld Inspection Frequency Extention (TAC No. ME6801), dated February 2, 2012 (ML120260090).
(3) Arkansas Nuclear One, Unit No. 1 – Request for Alternative ANO1-ISI-023 to ASME Code Case N-770-1 Volumetric Examination Frequency Requirements for the Fourth 10-Year Inservice Inspection Interval (TAC No. MF3176), dated October 29, 2014 (ML14282A479).
(4) Joseph M. Farley Nuclear Plant, Units 1 and 2 – Request for Alternative FNP-ISI-13 Regarding Deferral of Inservice Inspection of Reactor Pressure Vessel Cold Leg Nozzle Dissimilar Metal Welds (TAC Nos. ME9739 and ME 9740), dated August 8, 2013 (ML13212A176).

Attachments

(1) LTR-PAFM-16-11-NP Revision 0, Technical Justification to Support Extended Volumetric Examination Interval for South Texas Unit 2 Reactor Vessel Inlet Nozzle to Safe End Dissimilar Metal Welds, March 2016 (Non-Proprietary).
(2) LTR-PAFM-16-11-P Revision 0, Technical Justification to Support Extended Volumetric Examination Interval for South Texas Unit 2 Reactor Vessel Inlet Nozzle to Safe End Dissimilar Metal Welds, March 2016 (Proprietary).

Enclosure 2

Application for Withholding Proprietary Information From Public Disclosure

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CAW-16-4382

March 2, 2016

APPLICATION FOR WITHHOLDING PROPRIETARY INFORMATION FROM PUBLIC DISCLOSURE

Subject: LTR-PAFM-16-11-P, Revision 0, "Technical Justification to Support Extended Volumetric Examination Interval for South Texas 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-16-4382 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 STP Nuclear Operating Company.

Correspondence with respect to the proprietary aspects of the Application for Withholding or the Westinghouse Affidavit should reference CAW-16-4382, and should be addressed to James A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company, 1000 Westinghouse Drive, Building 3 Suite 310, Cranberry Township, Pennsylvania 16066.

Very truly yours,

James A. Gresham, Manager
Regulatory Compliance

CAW-16-4382
March 2, 2016

AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

ss

COUNTY OF BUTLER:

I, James A. Gresham, am 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 my knowledge, information, and belief.

James A. Gresham, Manager
Regulatory Compliance

(1) I am Manager, Regulatory Compliance, 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 constitute Westinghouse policy and provide 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.

(iii) 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.

(iv) 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.

(v) 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.

(vi) The proprietary information sought to be withheld in this submittal is that which is appropriately marked in LTR-PAFM-16-11-P, Revision 0, "Technical Justification to Support Extended Volumetric Examination Interval for South Texas Unit 2 Reactor Vessel Inlet Nozzle to Safe End Dissimilar Metal Welds" (Proprietary), for submittal to the Commission, being transmitted by STP Nuclear Operating Company 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 South Texas Unit 2 reactor vessel inlet nozzle to safe end dissimilar metal welds, and may be used only for that purpose.

(a) This information is part of that which will enable Westinghouse to provide technical justification to support extended volumetric examination interval for South Texas Unit 2 reactor vessel inlet nozzle to safe end dissimilar metal welds.

(b) Further this information has substantial commercial value as follows:

(i) Westinghouse plans to sell the use of similar 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.

(ii) Westinghouse can sell support and defense of industry guidelines and acceptance criteria for plant-specific applications.

(iii) 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 technical evaluation justifications 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 associated with technical justification to support extended volumetric examination interval for South Texas Unit 2 reactor vessel inlet nozzle to safe end dissimilar metal welds, and may be used only for that purpose.

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

STP Nuclear Operating Company

Letter for Transmittal to the NRC

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

Enclosed are:

1. LTR-PAFM-16-11-P, Revision 0, "Technical Justification to Support Extended Volumetric Examination Interval for South Texas Unit 2 Reactor Vessel Inlet Nozzle to Safe End Dissimilar Metal Welds" (Proprietary)

2. LTR-PAFM-16-11-NP, Revision 0, "Technical Justification to Support Extended Volumetric Examination Interval for South Texas 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-16-4382, 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-16-4382 and should be addressed to James A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company, 1000 Westinghouse Drive, Building 3 Suite 310, Cranberry Township, Pennsylvania 16066.