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724-682-5234

May 12, 2021
L-21-125

10 CFR 50.90

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

Subject:
Beaver Valley Power Station, Unit No. 2
Docket No. 50-412, License No. NPF-73
Response to Request for Additional Information Regarding Steam Generator Tube Sleeve License Amendment Request (EPID L-2020-LLA-0140)

By correspondence dated June 25, 2020 (Accession No. ML20177A272), Energy Harbor Nuclear Corp. submitted to the Nuclear Regulatory Commission (NRC) a request to amend Beaver Valley Power Station, Unit No. 2 Technical Specification requirements related to methods of inspection and service life for Alloy 800 steam generator tubesheet sleeves. By email dated October 22, 2020 (Accession No. ML20297A322), the NRC requested additional information to complete its review. Energy Harbor Nuclear Corp. responded to the October 22, 2020 email providing supplemental information in letters dated January 22, 2021 (Accession No. ML21022A133) and February 16, 2021 (Accession No. ML21048A082). At the NRC staff's request, a public meeting was conducted on April 6, 2021 (Accession No. ML21095A138) for clarification of certain responses. On April 9, 2021 the NRC staff requested information to clarify the January 22, 2021 and February 16, 2021 responses to the staff's October 22, 2020 request for additional information.

This letter forwards the response to the April 9, 2021 NRC staff request for information. The response to items one through five is provided in enclosures A and B that present non-proprietary and proprietary versions, respectively. The response to item six is provided in the attachment.

Enclosure C contains Affidavit CAW-21-5176 signed by Westinghouse Electric Company LLC ("Westinghouse"). The affidavit sets forth the basis on which proprietary information owned by Westinghouse that is contained in Enclosure B may be withheld

from public disclosure by the Nuclear Regulatory Commission ("Commission") and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.390 of the Commission's regulations.

Accordingly, it is respectively requested that the information that 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-21-5176 and should be addressed to Anthony J. Schoedel, Manager, eVinci Licensing & Configuration Management, Westinghouse Electric Company, 1000 Westinghouse Drive, Suite 165, Cranberry Township, Pennsylvania 16066.

The information provided by this submittal does not invalidate the significant hazards consideration analysis provided in the June 25, 2020 submittal.

There are no regulatory commitments contained in this submittal. If there are any questions or if additional information is required, please contact Mr. Phil H. Lashley, Manager - Fleet Licensing, at (330) 696-7208.

I declare under penalty of perjury that the foregoing is true and correct. Executed on May 12, 2021.

Sincerely,

Grabnar, John 19072

Grabnar, John 19072
Site Vice President, Beaver Valley
I am approving this document
May 12 2021 1:14 PM

DocuSign

John J. Grabnar

Attachment:
Energy Harbor Nuclear Corp. Response to April 9, 2021 Request for Additional Information Item 6, Related to Steam Generator Tube Sleeve License Amendment Request

Enclosures:

A. Responses to the Second Request for Additional Information on the Beaver Valley Unit 2 Steam Generator Tube Sleeve License Amendment Request (Non-proprietary)
B. Responses to the Second Request for Additional Information on the Beaver Valley Unit 2 Steam Generator Tube Sleeve License Amendment Request (Proprietary)
C. Affidavit for Withholding Proprietary Information

cc: NRC Region I Administrator
NRC Resident Inspector
NRR Project Manager
Director BRP/DEP
Site BRP/DEP Representative

Energy Harbor Nuclear Corp. Response to April 9, 2021
Request for Additional Information Item 6,
Related to Steam Generator Tube Sleeve License Amendment Request

The Nuclear Regulatory Commission request for additional information Item 6 is provided below in bold text and followed by the Energy Harbor Nuclear Corp. response.

6. Reference: RAI question 7 response

As stated in the January 22, 2021 RAI response, the Ghent Probe will be used for the eddy current "call of record" when inspecting the nickel band portion of the tubesheet sleeve. Given that the +Point probe data will also be available, and given the experience from the test program and field data (e.g., scratches), please discuss how:

a. Supplemental data from the +Point may be used in conjunction with the Ghent probe data.

Response 6.a

Energy Harbor Nuclear Corp. procedure, ISIE1-8, "Unit #2 Steam Generator Examination Guidelines," requires the data analysts to review all the data that is presented to them. Under the section for analysis of rotating coil probes, Paragraph 12.1 of procedure ISIE1-8 provides the following directions:

> The data analysis shall consist of viewing the Lissajous, strip charts and C-scans so that all indications are detected and recorded. C-scans of ALL coils shall be reviewed to establish the presence of indications. C-scans shall be reviewed on the prime frequency channel for each coil. Other channels may be used for additional confirmation.

Paragraph 3.1 of Attachment Q, "Alloy 800 Leak Limiting Sleeves," of ISIE1-8 requires that initial screening of the data shall be performed at setup spans and rotations and shall include a review of all channels of all data within the pressure boundary of the sleeve and parent tube.

The supplemental data from the +Point probe was reviewed during the spring of 2020 refueling outage (2R21) tubesheet sleeve inspections as evidenced by the axial scratch indications that were reported. An excerpt from the 2R21 condition monitoring report states, in part:

> ...two sleeve installations were reported to have single axial indications (SAI) in the nickel band region of the sleeve assembly. . . . The indications were initially detected in 2R21 with the Ghent coil and were also visible on the +POINT coil.

As the +Point probe is not qualified to detect flaws in the nickel band region of an Alloy 800 tubesheet sleeve, the +Point probe cannot be used for reporting indications in this area.

The requirement to review the data of all coils, regardless of probe design, is included in procedure ISIE1-8 and will continue to be implemented in accordance with this procedure during future Alloy 800 tubesheet sleeve inspections.

b. An indication in the nickel band region from the +Point probe would be dispositioned in the absence of a corresponding Ghent probe indication.

Response 6.b

The site-specific Appendix H qualification of the Ghent Version 2 probe meets the requirements of the Electric Power Research Institute (EPRI) Steam Generator (SG) Examination Guidelines (EPRI Report 3002007572, Revision 8, latest revision) for the detection of indications in the parent tube behind the nickel band region of the Alloy 800 tubesheet sleeve. The Ghent Version 2 probe has also demonstrated superior detection capabilities in the nickel band region of the Alloy 800 tubesheet sleeve over that exhibited by the +Point probe. The +Point probe is not qualified for detection of indications within the nickel band region of the Alloy 800 tubesheet sleeve.

The lack of a corresponding Ghent probe signal would bring into question the validity of the +Point probe indication. The inspection history of the sleeve indication would have been reviewed as part of the standard resolution process in an attempt to determine if any precursor signals existed and the possible origin of the indication. The sleeve would subsequently be designated with the 3-letter code SLA (sleeve anomaly) and left in service. The sleeve would be re-examined in all future sleeve inspections to monitor for any change in the signal characteristics (for example, greater than 0.5 volts growth in amplitude or greater than 10 degrees phase rotation). Changes in signal characteristics greater than those specified would be cause for conservatively removing the sleeve from service.

In the April 6, 2021 phone conversation with the NRC, Energy Harbor Nuclear Corp. personnel stated that if a lone +Point indication was reported in the nickel band region of the tubesheet sleeve pressure boundary with no corresponding Ghent probe signal accompanying it, the sleeve would be conservatively removed from service. After additional consideration, Energy Harbor Nuclear Corp. does not want to set a precedent of removing tubes or sleeves from service based on reports from unqualified inspection techniques. Therefore, +Point indications reported in the nickel band region of the sleeve pressure boundary with no corresponding Ghent probe signal will remain in service. The +Point indication will be processed as specified in the paragraph above. The same protocol will be applied to Ghent probe indications with no corresponding +Point signal located in the non-nickel band portion of the sleeve pressure boundary.

During 2R21, 481 in-service Alloy 800 tubesheet sleeves were examined with the Ghent Version 2 probe. In addition, 86 newly installed tubesheet sleeves were inspected with the Ghent Version 2 probe. There were no incidents reported where a lone +Point probe indication was observed without a corresponding Ghent probe response.

Enclosure A
L-21-125

Responses to the Second Request for Additional Information on the
Beaver Valley Unit 2 Steam Generator Tube Sleeve License Amendment Request
(Non-proprietary)

(8 pages follow)

Westinghouse Electric Company

LTR-CDMP-21-29 NP-Attachment
Revision 0

Responses to the Second Request for Additional Information on the Beaver Valley Unit 2 Steam Generator Tube Sleeve License Amendment Request

May 2021

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Electronically approved records are authenticated in the Electronic Document Management System.

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Responses to the Second Request for Additional Information on the Beaver Valley Unit 2 Steam Generator Tube Sleeve License Amendment Request

Background

By letter dated June 25, 2020 (ADAMS Accession No. ML20177A272), Energy Harbor Nuclear Corporation (the licensee) requested a license amendment related to methods of inspection and service life for Alloy 800 steam generator tube repair sleeves. By email dated October 22, 2020 (ML20297A322), the NRC Staff requested additional information. The licensee responded by letters dated January 22, 2021 (ML21022A133) and February 16, 2021 (ML21048A082). At the Staff's request, a public meeting was conducted on April 6, 2021 (ML21095A138) for clarification of certain responses. The Nuclear Regulatory Commission (NRC) Staff has determined that additional information is needed to complete its review of the request (Reference 1). As a result, Westinghouse was contracted by Energy Harbor Nuclear Corporation to respond to the NRC request for additional information (RAI). The Westinghouse response to each information request is provided below.

Responses to Request for Additional Information

In order to complete the review of the LAR, the Staff requests the following information to clarify the January 22, 2021, and February 16, 2021, responses to the Staff's October 22, 2020, request for additional information (RAI):

1. Reference: RAI question 1a response, related to Revision 2 of the probability of detection (POD) report and the detection of circumferential flaws.

   Figure 1-1 of the RAI response shows a 0.83 volt signal from a 50% through-wall (TW) electrical discharge machined (EDM) circumferential notch that was judged as difficult to detect due to a low signal-to-noise ratio in the eddy current response. Table 3-1 in the POD report shows axial outside diameter stress corrosion cracking (ODSCC) signals of much lower amplitude (0.23 to 0.39 volts peak-to-peak) that were detected in sleeve test samples. Discuss the reason for these differences, including any noise differences between the EDM notch samples and ODSCC samples.

   Response:

   The amount of noise in the EDM notch sample was measured to be three times higher than the ODSCC crack samples. This is primarily due to the thickness of the notch sample nickel being at the maximum tolerance of [ ]^{a,c,e}, while the nickel thickness for the crack samples was [ ]^{a,c,e}.

   Additionally, the Lissajous response in Figure 1-1 corresponds with the location of the 50% through-wall (TW) circumferential notch. However, the peer review team determined that a

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flaw response could not be detected in the C-scan plot. A positive Lissajous response and a negative C-scan response led the peer review team to report this as "not detectable."

2. Reference: RAI question 1c response, page 3 of 13, regarding the nickel band thickness effects testing program.

   The response states that the feasibility study resulted in a peak-to-peak voltage of [ ]^{a,c,e} volts using the axial coil on the [ ]^{a,c,e} of the same [ ]^{a,c,e} nickel thickness. Please clarify the following:

   a. Based on Table 1 of the response (page 5 of 13), should the peak-to-peak voltage be [ ]^{a,c,e} volts for the [ ]^{a,c,e} described and the same nickel thickness, rather than [ ]^{a,c,e} volts?

   Response:

   The information contained in Table 1 is correct. The [ ]^{a,c,e} with a [ ]^{a,c,e} nickel band thickness in the sleeve is [ ]^{a,c,e} from the Ghent Version 2 probe axial sensitive coil. The [ ]^{a,c,e} response is for the [ ]^{a,c,e} in a sleeve with a nickel band thickness of [ ]^{a,c,e}. The associated text on page 3 was not correct.

   b. Is the circumferential [ ]^{a,c,e} located in the [ ]^{a,c,e}, rather than the [ ]^{a,c,e} as stated?

   Response:

   The circumferential [ ]^{a,c,e} is located in the [ ]^{a,c,e} representing the parent tube and was not contained in the [ ]^{a,c,e}.

3. Reference: RAI question 1c response, regarding detection of circumferential flaws with the [ ]^{a,c,e} Ghent probe channel.

   Considering the [ ]^{a,c,e} produced a [ ]^{a,c,e} volt response to a 100% TW circumferential EDM notch:

   a. Please discuss the capability of the [ ]^{a,c,e} channel to detect partial through-wall circumferential SCC cracks.

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Response:

A non-through-wall circumferential outside diameter stress corrosion crack (ODSCC) may produce a detectable signal with the G4 channel depending on the depth of the flaw and volume of the crack. A tight crack will be difficult to detect, as the eddy currents produced by the G4 channel will flow in parallel with the crack. If some volume of material is removed within the crack, then the eddy currents on the G4 channel have a better chance to be disrupted, enabling the G4 channel to show a flaw response for a circumferential crack. Crack detection is best when the eddy currents and flaw are perpendicular to each other. The axial sensitive G4 coil does produce measurable signals on circumferential notches due to the larger axial extent of the notch versus a tight crack. EDM notches are [ ]^{a,c,e} wide, thus producing responses from the axial coil. This was observed during the Appendix H qualification program and the nickel thickness testing program. The G3 channel produces eddy current flow that is perpendicular to a circumferential crack, and thus the G3 channel will be used to detect circumferential cracks, not the G4 channel. The capability of the G3 channel to detect partial through-wall circumferential stress corrosion cracking (SCC) is also discussed below.

b. Please discuss if the [ ]^{a,c,e} channel will be the primary channel for circumferential flaw detection in the tubesheet sleeve joint.

Response:

As noted above, circumferential flaw detection will be performed with the G3 channels of the Ghent Version 2 probe in the nickel band region of the tubesheet sleeve joint. The G3 channels can detect partial through-wall SCC circumferential cracks. This was demonstrated during qualification for detection of the Ghent Version 2 probe. Both G3 and G4 channels are required to be reviewed during the data analysis process.

c. Given the difference in detectability between cracks and EDM notches, please discuss the expected probability of detection as a function for crack depths ranging from 60 to 100% TW located in the middle of the nickel band.

Response:

Reference 2 provided the results of a test program that evaluated the probability of detection for axial ODSCC in the parent tube behind the nickel band of the lower tubesheet joint of the Alloy 800 mechanical sleeve. This program was based on 0.875 inch diameter and 0.050 inch wall thickness Alloy 600 tube samples containing twelve (12) laboratory produced axial ODSCC flaws of varying sizes. The flaw depths of these samples ranged from [ ]^{a,c,e} to [ ]^{a,c,e} as determined through destructive examination of these crack samples. Five of the samples contained flaw depths that were less than 60% TW, and one sample contained a [ ]^{a,c,e} flaw. The remaining six flaw depths ranged from [ ]^{a,c,e} to [ ]^{a,c,e}.

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Prototypical Alloy 800 nickel banded mechanical tubesheet sleeves were inserted into the parent tube crack samples and expanded into a simulated tubesheet collar. The cracks were centered about the middle of the nickel band region. All prototypic sleeve samples contained nickel band thicknesses of [ ]^{a,c,e}. The sleeve/tube/tubesheet assemblies were tested with the Ghent Version 2 probe. The smallest flaw detected in this test program was [ ]^{a,c,e} and all flaws greater than [ ]^{a,c,e} were detected by the Ghent Version 2 probe. The flaws not detected by the Ghent Version probe ranged from [ ]^{a,c,e} to [ ]^{a,c,e}. The data for detected and non-detected flaws produced a POD distribution that has a 95th percentile POD of 74.5% TW and 50th percentile of 67.8% TW. The resultant POD distribution is shown in Figure 4-1 of Reference 2. From this POD curve, a crack with a depth of 60% TW has a [ ]^{a,c,e} POD and a 100% POD at a flaw depth of [ ]^{a,c,e} and greater.

The manufacturing tolerance or range of the nickel band thickness is [ ]^{a,c,e}. Reference 3 provided the results of a test program that related flaw signal responses and POD with nickel band thicknesses of [ ]^{a,c,e} to [ ]^{a,c,e}. This program showed a strong relation between nickel thickness and flaw voltage amplitude as shown in Figure 1 of Reference 3 for both peak-to-peak voltage (Vpp) and vertical maximum voltage (Vvm) flaw amplitudes. POD curves were developed under this test program that were based upon flaw voltage instead of flaw depth to eliminate the direct dependance on nickel thickness. Flaw voltage to flaw depth relations were developed to relate the voltage-based POD to flaw depths at varying nickel thicknesses as described in Reference 3. The effect of increasing the nickel thickness from [ ]^{a,c,e} to [ ]^{a,c,e} the 95th POD percentile value by about [ ]^{a,c,e} based on the Vvm POD curve and about [ ]^{a,c,e} for the Vpp POD curve. For the more limiting Vvm voltage-based POD curve (Figure 9 of Reference 3) and flaw depth relation, the 95th percentile POD is [ ]^{a,c,e} and the 50th percentile is [ ]^{a,c,e} for sleeves with a nickel thickness of [ ]^{a,c,e}. From this POD curve, a crack with a depth of 60% TW has [ ]^{a,c,e} POD probability and a 100% POD at a flaw depth of [ ]^{a,c,e} and greater for a sleeve at the upper end of the manufacturing nickel thickness tolerance. The detection probability improves dramatically between [ ]^{a,c,e} to [ ]^{a,c,e} for a nickel thickness of [ ]^{a,c,e}. Sleeves with lesser nickel band thicknesses have [ ]^{a,c,e} POD.

The test programs described above and presented in References 2 and 3 were based on ODSCC flaws because PWSCC flaw samples were not readily available. It is expected that the Ghent Version 2 probe would have improved detection capabilities for ID parent tube flaws over that to OD originating flaws. The inspection frequency, 70 kHz, was calculated to provide the optimum magnetic field concentration at the ID of the parent tube, thus providing better detection for smaller flaws at the inner surface than at the outer surface of the parent tube. The magnetic field is reduced at the tube OD surface as it traverses through the thickness of the parent tube.

It is noted that the degradation mechanism potentially applicable to the lower sleeve joint within the tubesheet is primary water stress corrosion cracking (PWSCC) originating on the parent tube inner diameter (ID). As discussed in Reference 4, the degradation mechanism within a full depth hard rolled tubesheet below the top expansion transition is PWSCC. The

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residual stresses in a tube that is expanded into the tubesheet are compressive in the absence of localized geometry discontinuities (i.e., bulges, skip rolls, etc.) thereby reducing the PWSCC potential. The presence of the tube sleeve joint reduces the potential for the parent tube to interact with the primary coolant thus reducing the environmental effect for SCC initiation. The potential for PWSCC is further reduced by the shot peening performed at BVPS Unit 2 prior to operation. Prior to sleeve installation, **+POINT™**[1] probe inspections are required to be performed in the area of the lower sleeve joint to ensure there are no anomalies or localized geometry discontinuities that may hinder sleeve installation or to create an SCC initiation site. Thus, it can be concluded that initiation of PWSCC of the parent tube adjacent to the nickel band sleeve joint is an extremely low or nonexistent event.

4. Reference: RAI question 1c response, Table 2

Table 2 presents the EPRI ODSCC samples with voltage adjustments calculated based on the nickel thickness study. What is the basis for expecting that the same relationship between voltage response and nickel band thickness will hold for part through-wall SCC cracks as for 100% TW [ ]^{a,c,e}? The Staff notes that stress corrosion crack signals can be much lower amplitude and more variable as compared to EDM notches.

Response:

Eddy current examination is a volumetric technique where voltage amplitude responses are directly proportional to the volume of a flaw. Flaws containing more volume loss would have larger voltage amplitudes than flaws with less volume. The volume loss of a flaw can be defined by flaw depth, width, and length. Flaws with different flaw depths can produce similar voltage amplitudes if the volume losses are the same considering offsetting differences in flaw length and width. Likewise, flaws with the same flaw depth could have differing voltage amplitudes due to differences in flaw length and width.

The objective of the nickel thickness testing program was to evaluate the effect of the lower sleeve joint nickel band material on parent tube flaw signals from the Ghent Version 2 probe. The effects of the nickel material can influence the eddy current signals as the magnetic fields pass through the nickel material and into the parent tube material. Therefore, the effects of the nickel material that influence eddy current signal changes is [ ]^{a,c,e} and acts upon the volume of a flaw. The volume of a flaw is dependent on all aspects of the flaw geometry (i.e., flaw depth, length and width) and not just flaw depth. Part through-wall SCC cracks may have smaller volume and voltage amplitudes than through-wall EDM notches, however, the effects of the nickel material are [ ]^{a,c,e} on the flaw signals, whether it is a crack or notch geometry. The nickel thickness testing program established that flaw voltage responses are [ ]^{a,c,e} to the nickel thickness thus demonstrating that the nickel effects are [ ]^{a,c,e} on a given volume of a flaw. Therefore, the [ ]^{a,c,e} relationship between

[1] *+POINT is a trademark or registered trademark of Zetec, Inc. Other names may be trademarks of their respective owners*

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flaw voltage response and nickel thickness [ ]^{a,c,e} to part through-wall SCC flaws.

5. Reference: RAI question 2 response, Table 2-1

   The ODSCC specimens have a 50 mil nominal tube wall thickness; however, for sample J-3 Flaw #3, Table 2-1 shows a [ ]^{a,c,e} % destructive examination (DE) flaw depth at [ ]^{a,c,e} mils. Please explain this possible discrepancy.

   Response:

   Destructive examination of the ODSCC specimens were performed by Westinghouse Churchill Laboratory Services. Destructive examination of crack samples requires the tube to be burst tested with pressure from an internal bladder to facilitate the opening or widening of the tight cracks for examination. The burst testing resulted in the bulging of the tube at the location of the flaw and producing a fishmouth opening at the crack location. The bulging of the tube and the fishmouth opening of the crack face produced thinning of the tube of about [ ]^{a,c,e} from the nominal tube wall thickness. The [ ]^{a,c,e} flaw in specimen J-3 Flaw #3 was confirmed to be [ ]^{a,c,e} by visual and fractography examination, however, due to the wall thinning from the burst testing, the measured wall thickness was [ ]^{a,c,e}.

6. Reference: RAI question 7 response

   As stated in the January 22, 2021 RAI response, the Ghent Probe will be used for the eddy current "call of record" when inspecting the nickel band portion of the tubesheet sleeve. Given that the +POINT probe data will also be available, and given the experience from the test program and field data (e.g., scratches), please discuss how:

   a. Supplemental data from the +POINT may be used in conjunction with the Ghent probe data.

   b. An indication in the nickel band region from the +POINT probe would be dispositioned in the absence of a corresponding Ghent probe indication.

   Response: Energy Harbor

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References

1. Email from Phil H. Lashley, Energy Harbor, to Jay R. Smith, Westinghouse, et al., Subject: RE: NRC Phone Call, Friday, April 9, 2021 5:17 PM. *(Attached in PRIME)*

2. SG-CDMP-19-19 P-Attachment, Revision 2, "Probability of Flaw Detection in the Alloy 800 Mechanical Sleeve Lower Tubesheet Joint Using the Ghent Version 2 Eddy Current Probe," January 2021. (ML21022A133)

3. LTR-CDMP-21-1 P-Attachment, Revision 0, "Responses to Request for Information for Questions 1.c Regarding Beaver Valley Power Station Unit No. 2 Steam Generator Tube Inspection and Repair," January 2021. (ML21048A082)

4. LTR-SGMP-18-3, Revision 0, "Steam Generator Alloy 800 Nickel Band Tubesheet Sleeve Operating Cycle Length Extension License Amendment Request: Technical Bases," March 2018. (ML18087A293)

*** This record was final approved on 5/7/2021 6:55:28 AM. (This statement was added by the PRIME system upon its validation)

Enclosure B
L-21-125

Responses to the Second Request for Additional Information on the
Beaver Valley Unit 2 Steam Generator Tube Sleeve License Amendment Request
(Proprietary)

(8 pages follow)

Enclosure C
L-21-125

Affidavit for Withholding Proprietary Information

(3 pages follow)

COMMONWEALTH OF PENNSYLVANIA:
COUNTY OF BUTLER:

(1) I, Anthony J. Schoedel, have been specifically delegated and authorized to apply for withholding and execute this Affidavit on behalf of Westinghouse Electric Company LLC (Westinghouse).

(2) I am requesting the proprietary portions of LTR-CDMP-21-29 P-Attachment, Revision 0, "Responses to the Second Request for Additional Information on the Beaver Valley Unit 2 Steam Generator Tube Sleeve License Amendment Request," be withheld from public disclosure under 10 CFR 2.390.

(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 10 CFR 2.390, 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 and is not customarily disclosed to the public.

(ii) The information sought to be withheld is being transmitted to the Commission in confidence and, to Westinghouse's knowledge, is not available in public sources.

(iii) Westinghouse notes that a showing of substantial harm is no longer an applicable criterion for analyzing whether a document should be withheld from public disclosure. Nevertheless, 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.

(5) Westinghouse has policies in place to identify proprietary information. 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.

(6) The attached documents are bracketed and marked to indicate the bases for withholding. The justification for withholding 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 (5)(a) through (f) of this Affidavit.

I declare that the averments of fact set forth in this Affidavit are true and correct to the best of my knowledge, information, and belief.

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

Executed on: 5/6/2021

Anthony J. Schoedel, Manager
eVinci Licensing & Configuration
Management