

WBN2Public Resource

From: Boyd, Desiree L [dlboyd@tva.gov]
Sent: Thursday, December 01, 2011 10:01 AM
To: Epperson, Dan; Poole, Justin; Raghavan, Rags; Milano, Patrick; Campbell, Stephen
Cc: Arent, Gordon; Hamill, Carol L; Boyd, Desiree L
Subject: TVA letter to NRC_11-30-11_I&C RAI Response
Attachments: 11-30-11_I&C RAI Response_Final.pdf

Please see attached TVA letter that was sent to the NRC today.

The attachments are too large to send by e-mail. For those of you who receive a cc in the mail, the attachments will be included with your letter.

Thank You,

~*~*~*~*~*~*~*~*~*~*

Desiree L. Boyd
WBN 2 Licensing Support
Sun Technical Services
dlboyd@tva.gov
423-365-8764

Hearing Identifier: Watts_Bar_2_Operating_LA_Public
Email Number: 601

Mail Envelope Properties (7AB41F650F76BD44B5BCAB7C0CCABFAF25DB5F61)

Subject: TVA letter to NRC_11-30-11_I&C RAI Response
Sent Date: 12/1/2011 10:01:12 AM
Received Date: 12/1/2011 10:01:17 AM
From: Boyd, Desiree L

Created By: dlboyd@tva.gov

Recipients:

"Arent, Gordon" <garent@tva.gov>
Tracking Status: None
"Hamill, Carol L" <clhamill@tva.gov>
Tracking Status: None
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Tracking Status: None
"Poole, Justin" <Justin.Poole@nrc.gov>
Tracking Status: None
"Raghavan, Rags" <Rags.Raghavan@nrc.gov>
Tracking Status: None
"Milano, Patrick" <Patrick.Milano@nrc.gov>
Tracking Status: None
"Campbell, Stephen" <Stephen.Campbell@nrc.gov>
Tracking Status: None

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MESSAGE	452	12/1/2011 10:01:17 AM
11-30-11_I&C RAI Response_Final.pdf		166137

Options

Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

Attachments 6, 10, 13, 16, 19, 22, 25, 28, 30, 33, 35, 36 and 37 are to be withheld from public disclosure under 10 CFR § 2.390.

When separated from these attachments, this letter is decontrolled.



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

November 30, 2011

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

Watts Bar Nuclear Plant, Unit 2
NRC Docket No. 50-391

10 CFR 50.4

Subject: WATTS BAR NUCLEAR PLANT (WBN) UNIT 2 – INSTRUMENTATION AND CONTROLS STAFF INFORMATION REQUESTS

Reference: Supplemental Safety Evaluation Report (SSER) 22, 23 and 24 Appendix HH
Watts Bar Unit 2 Action Items Table

The purpose of this letter is to provide TVA's responses to NRC's information requests on:

- SSER 22, 23 and 24 Appendix HH "Watts Bar Unit 2 Action Items Table," items 121 and 126
- Various commitments

Enclosure 1 to this letter provides TVA's responses to the information requested by NRC. Enclosure 2 contains the supporting documents for TVA's responses to NRC's requests/questions provided in Enclosure 1. Enclosure 3 contains a list of references on which TVA's responses are based.

Attachments 6, 10, 13, 16, 19 and 22 contain information proprietary to Westinghouse Electric Company LLC (WEC). TVA requests that the WEC proprietary information be withheld from public disclosure in accordance with 10 CFR § 2.390.

Attachments 25, 28, 30, 33, 35, 36 and 37 contain information proprietary to General Atomics - Electronic Systems Inc. (GA-ESI). TVA requests that the GA-ESI proprietary information be withheld from public disclosure in accordance with 10 CFR § 2.390.

This letter does not contain any new regulatory commitments.

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If you have any questions, please contact Gordon Arent at (423) 365-2004.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 30th day of November 2011.

Respectfully,

A handwritten signature in black ink, appearing to read 'D Stinson', with a long horizontal line extending to the right.

David Stinson
Watts Bar Unit 2 Vice President

Enclosures:

1. TVA Responses to Instrumentation and Controls Staff Information Requests
2. List of Attachments
3. List of References

cc (Enclosures):

U. S. Nuclear Regulatory Commission
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Marquis One Tower
245 Peachtree Center Ave., NE Suite 1200
Atlanta, Georgia 30303-1257

NRC Resident Inspector Unit 2
Watts Bar Nuclear Plant
1260 Nuclear Plant Road
Spring City, Tennessee 37381

U.S. Nuclear Regulatory Commission
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bcc (Enclosures):

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Enclosure 1
TVA Letter Dated November 30, 2011
TVA Responses to Instrumentation and Controls Staff Information Requests

Acronyms and Abbreviations

The following acronyms/abbreviations are used in this letter:

AI	Analog Input
AIR	Auxiliary Instrument Room
Common Q	Common Qualified
DBE	Design Bases Earthquake
EMC	Electro-Magnetic Compatibility
EQ	Environmental Qualification
GA	General Atomics
GA-ESI	General Atomics-Electronic Systems, Inc.
IIS	Incore Instrument System
IITA	Incore Instrument Thimble Assembly
LOCA	Loss of Coolant Accident
MCR	Main Control Room
MI	Mineral Insulated
MTP	Maintenance and Test Panel
NRC	Nuclear Regulatory Commission
NSSS	Nuclear Steam Supply System
OM	Operators Module
PAMS	Post Accident Monitoring System
RAI	Request for Additional Information
RH	Relative Humidity
SPS	Signal Processing System
SSER	Supplemental Safety Evaluation Report
TID	Total Integrated Dose
TVA	Tennessee Valley Authority
WBN	Watts Bar Nuclear Plant
WEC	Westinghouse Electric Corporation

Notes

1. In some instances, the abbreviation GA is used to refer to General Atomics. In some instances, the abbreviation GA-ESI is used to refer to General Atomics-Electronic Systems, Inc. GA and GA-ESI are the same company and the abbreviations can be used interchangeably.
2. For some NRC requests for additional information (RAIs), this letter provides TVA's initial response. For the other NRC RAIs in this letter, a response has been provided in previous TVA letters to the NRC, and the NRC has subsequently requested additional information. For these requests, the initial TVA response is not repeated below. The additional NRC information requests are identified in this letter as "**Follow-up NRC Requests.**" TVA responses to these items are identified as "**TVA Response to Follow-up NRC Request.**"

Enclosure 1
TVA Letter Dated November 30, 2011
TVA Responses to Instrumentation and Controls Staff Information Requests

Responses

1. **Not Used**
2. **NRC Request (SSER 24 Appendix HH Item Number 121)**

TVA should submit the results to the NRC staff of a dielectric strength test performed on the IITA assembly. (SSER 24, Section 7.7.1.9.5)

TVA Partial Response to NRC Request

TVA previously submitted the dielectric strength documentation for the Incore Instrument Thimble Assembly (IITA) excore section, the Mineral Insulated (MI) cables, and the IITA connectors. This partial response provides the documentation for the incore portion of the IITAs.

The final portion of the dielectric strength test documentation is included in Revision 1 to proprietary Westinghouse Electric Company (WEC) document WNA-CN-00157-WBT-P, "Watts Bar 2 Incore Instrument System (IIS) Signal Processing System (SPS) Isolation Requirements." Attachment 6 contains Westinghouse Electric Company proprietary document WNA-CN-00157-WBT-P, "Watts Bar 2 Incore Instrument System (IIS) Signal Processing System (SPS) Isolation Requirements," Revision 1. Attachment 7 contains Westinghouse Electric Company non-proprietary document WNA-CN-00157-WBT-NP, "Watts Bar 2 Incore Instrument System (IIS) Signal Processing System (SPS) Isolation Requirements," Revision 1. Attachment 8 contains WEC document CAW-11-3316, "Application For Withholding Proprietary Information From Public Disclosure WNA-CN-00157-WBT-P, Watts Bar 2 Incore Instrument System (IIS) Signal Processing System (SPS) Isolation Requirements, Revision 1," (proprietary), dated November 17, 2011.

This completes the response to this item.

3. **NRC Request (SSER 24 Appendix HH Item Number 126)**

To enable the NRC staff to evaluate and review the IITA environmental qualification, TVA should provide the summary report of the environmental qualification for the IITA. (SSER 24, Section 7.7.1.9.5)

TVA Partial Response to NRC Request

In TVA to NRC letter dated September 30, 2011 (Reference 1) TVA provided a response to this item. Subsequently, WEC submitted to TVA non-proprietary qualification report WBT-D-3566 NP-Enclosure, "Summary of IITA Equipment Qualification Watts Bar 2," dated October 2011. The report provides the summary of seismic qualification testing of the IITA (incore and excore). Attachment 9 contains the qualification report.

This completes the response to this item.

Enclosure 1
TVA Letter Dated November 30, 2011
TVA Responses to Instrumentation and Controls Staff Information Requests

4. TVA Commitment

The demarcated proprietary documents, non-proprietary documents, as well as the remaining withholding affidavits for the following proprietary documents, will be provided by April 29, 2011:

Demarcated proprietary and non-proprietary versions of Dynamic Similarity Analysis for the Watts Bar Unit 2 Post Accident Monitoring System (PAMS), Revision 0, dated September 28, 2010.

Commitment Closure

As committed to in Enclosure 2 of TVA letter to NRC dated October 26, 2010 (Reference 2), Attachment 10 contains WEC proprietary document CN-EQT-10-44-P, "Dynamic Similarity Analysis for the Watts Bar Unit 2 Post Accident Monitoring System (PAMS)," Revision 1 (proprietary). Attachment 11 contains WEC non-proprietary document CN-EQT-10-44-NP, "Dynamic Similarity Analysis for the Watts Bar Unit 2 Post Accident Monitoring System (PAMS)," Revision 1 (non-proprietary). Attachment 12 contains WEC document CAW-11-3278, Application For Withholding Proprietary Information From Public Disclosure CN-EQT-10-44-P, Revision 1, "Dynamic Similarity Analysis for the Watts Bar Unit 2 Post Accident Monitoring System (PAMS)," (proprietary), dated October 21, 2011.

5. TVA Commitment

The demarcated proprietary documents, non-proprietary documents, as well as the remaining withholding affidavits for the following proprietary documents, will be provided by April 29, 2011:

Demarcated proprietary and non-proprietary versions of Common Q PAMS Comparison of Tested Conditions for the AI687 and AI688 Common Q Modules to the Watts Bar Unit 2 (WBT) Requirements (EQ-EV-62-WBT, Rev. 0).

Commitment Closure

As committed to in Enclosure 2 of TVA letter to NRC dated October 26, 2010 (Reference 2), Attachment 13 contains WEC proprietary document EQ-EV-62-WBT-P, "Comparison of Tested Conditions for the AI687 and AI688 Common Q Modules to the Watts Bar Unit 2 (WBT) Requirements," Revision 1 (proprietary). Attachment 14 contains WEC non-proprietary document EQ-EV-62-WBT-NP, "Comparison of Tested Conditions for the AI687 and AI688 Common Q Modules to the Watts Bar Unit 2 (WBT) Requirements," Revision 1 (non-proprietary). Attachment 15 contains WEC document CAW-11-3297, Application For Withholding Proprietary Information From Public Disclosure EQ-EV-62-WBT-P, "Comparison of Tested Conditions for the AI687 and AI688 Common Q Modules to the Watts Bar Unit 2 (WBT) Requirements," Rev. 1 (proprietary), dated November 3, 2011.

Enclosure 1
TVA Letter Dated November 30, 2011
TVA Responses to Instrumentation and Controls Staff Information Requests

6. TVA Commitment

The demarcated proprietary documents, non-proprietary documents, as well as the remaining withholding affidavits for the following proprietary documents, will be provided by April 29, 2011:

Demarcated proprietary and non-proprietary versions of Common Q PAMS Environmental and Seismic Test Report, AI687 & AI688 Modules for use in Common Q PAMS (EQLR-171, Rev. 0).

Commitment Closure

As committed to in Enclosure 2 of TVA letter to NRC dated October 26, 2010 (Reference 2), Attachment 16 contains WEC proprietary document EQLR-171-P, "Environmental and Seismic Test Report Analog Input (AI)687 and AI688 Modules and Supporting Components for Use in Common Qualified (Common Q) Post Accident Monitoring System (PAMS)," Revision 1 (proprietary). Attachment 17 contains WEC non-proprietary document EQLR-171-NP, "Environmental and Seismic Test Report Analog Input (AI)687 and AI688 Modules and Supporting Components for Use in Common Qualified (Common Q) Post Accident Monitoring System (PAMS)," Revision 1 (non-proprietary). Attachment 18 contains WEC document CAW-11-3299, Application For Withholding Proprietary Information From Public Disclosure EQLR-171-P, Revision 1, "Analog Input (AI)687 and AI688 Modules and Supporting Components for Use in Common Qualified (Common Q) Post Accident Monitoring System (PAMS)," (Proprietary), dated November 11, 2011.

7. TVA Commitment

The demarcated proprietary documents, non-proprietary documents, as well as the remaining withholding affidavits for the following proprietary documents, will be provided by April 29, 2011:

Demarcated proprietary and non-proprietary versions of Common Q PAMS AI687 and AI688 for use in Common Q PAMS EMC Test Report and Installation Limitations (EQ-QR-64-GEN, Rev. 0).

Commitment Closure

As committed to in Enclosure 2 of TVA letter to NRC dated October 26, 2010 (Reference 2), Attachment 19 contains WEC proprietary document EQ-QR-64-GEN-P, "AI687 and AI688 for Use in Common Q PAMS EMC Test Report and Installation Limitations," Revision 0 (proprietary). Attachment 20 contains WEC non-proprietary document EQ-QR-64-GEN-NP, "AI687 and AI688 for Use in Common Q PAMS EMC Test Report and Installation Limitations," Revision 0 (non-proprietary). Attachment 21 contains WEC document CAW-11-3303, Application for Withholding Proprietary Information From Public Disclosure EQ-QR-64-GEN-P, Revision 0, "AI687 and AI688 for Use in Common Q PAMS EMC Test Report and Installation Limitations," (Proprietary), dated November 9, 2011.

Enclosure 1
TVA Letter Dated November 30, 2011
TVA Responses to Instrumentation and Controls Staff Information Requests

8. TVA Commitment

The Common Q PAMS document discrepancies identified in TVA letter to NRC dated December 22, 2010, Attachment 18, will be corrected in the next revision of the identified documents. TVA will submit the revised documents within two weeks of receipt from Westinghouse.

Commitment Closure

As committed to in Enclosure 4 of TVA letter to NRC dated December 22, 2010 (Reference 3), the identified discrepancies have been corrected. Attachment 22 contains WEC proprietary document WNA-DS-01667-WBT-P, "Post Accident Monitoring System – System Design Specification," Revision 5 (proprietary). Attachment 23 contains WEC non-proprietary document WNA-DS-01667-WBT-NP, "Post Accident Monitoring System – System Design Specification," Revision 5 (non-proprietary). Attachment 24 contains WEC document CAW-11-3301, Application For Withholding Proprietary Information From Public Disclosure WNA-DS-01667-WBT-P, Rev. 5, "Post Accident Monitoring System – System Design Specification," (proprietary), dated November 8, 2011.

9. TVA Commitment

The non-proprietary version of 04038800-1SP, "RM-1000 EMC Test Report Supplement 1," Revision A and affidavit for withholding will be submitted by November 30, 2011.

Commitment Closure

As committed to in Enclosure 4 of TVA letter to NRC dated October 13, 2011 (Reference 4), Attachment 25 contains proprietary General Atomics-Electronics Systems, Inc. demarcated proprietary document 04038800-1SP, "RM-1000 EMC Test Report Supplement 1," Revision A. Attachment 26 contains General Atomics-Electronics Systems Inc. redacted non-proprietary document 04038800-1SP, "RM-1000 EMC Test Report Supplement 1," Revision A. Attachment 27 contains GA-ESI letter GA-ESI 4496, Request by General Atomics Electronic Systems, Inc. to Withhold Certain Information from Public Disclosure under 10CFR2.390 dated October 28, 2011.

10. TVA Commitment

The General Atomics Electronics Systems Inc. (GA-ESI) affidavits for withholding and non-proprietary versions of attachments 5, 6, 7, 8 and 23 will be submitted within two weeks of receipt from GA-ESI.

Enclosure 1
TVA Letter Dated November 30, 2011
TVA Responses to Instrumentation and Controls Staff Information Requests

Commitment Closure

As committed to in Enclosure 4 of TVA letter to NRC dated February 25, 2011 (Reference 5), Attachment 28 contains GA-ESI demarcated proprietary document 04038903-QSR, "Qualification Summary Report for Watts Bar Nuclear Plant Unit 2 Replacement Radiation Monitors," Revision D. Attachment 29 contains GA-ESI redacted non-proprietary document 04038903-QSR, "Qualification Summary Report for Watts Bar Nuclear Plant Unit 2 Replacement Radiation Monitors," Revision D. Attachment 27 contains GA-ESI letter GA-ESI 4496, Request by General Atomics Electronic Systems, Inc. to Withhold Certain Information from Public Disclosure under 10CFR2.390 dated October 28, 2011. This completes item 8 of this commitment.

A review of past submittals found that:

- Item 5 of this commitment (GA document 04508905-1SP non-proprietary version and affidavit for withholding) was submitted in TVA to NRC letter dated September 1, 2011 (Reference 9).
- Item 6 of this commitment (GA document 04508905-2SP non-proprietary version and affidavit for withholding) was submitted in TVA to NRC letter dated July 14, 2010 (Reference 8).
- Item 7 of this commitment (GA document 04038903-7SP non-proprietary version and affidavit for withholding) was submitted in TVA to NRC letter dated September 1, 2011 (Reference 9).
- Item 23 of this commitment (GA document 04508905-QR non-proprietary version and affidavit for withholding) was submitted in TVA to NRC letter dated September 30, 2011 (Reference 1).

This completes the submittals required by this commitment.

11. TVA Commitment

The non-proprietary version of GA-ESI report 04509050, RM-1000 EMC Test Report and affidavit for withholding will be submitted within two weeks of receipt from GA-ESI.

Commitment Closure

As committed to in Enclosure 4 of TVA letter to NRC dated April 15, 2011 (Reference 6), Attachment 30 contains GA-ESI demarcated proprietary document 04509050, "RM-1000 EMC Test Report," dated April 22, 2003. Attachment 31 contains GA-ESI redacted non-proprietary document 04509050, "RM-1000 EMC Test Report," dated April 22, 2003. Attachment 32 contains GA-ESI letter GA-ESI 4493, Request by General Atomics Electronic Systems, Inc. to Withhold Certain Information from Public Disclosure under 10CFR2.390 dated October 14, 2011.

Enclosure 1
TVA Letter Dated November 30, 2011
TVA Responses to Instrumentation and Controls Staff Information Requests

12. TVA Commitment

The non-proprietary version and affidavit for withholding for GA procedure OP-7.3-240, Revision K, "Safety-Related Commercial Grade Item Parts Acceptance," will be submitted by December 1, 2011.

Commitment Closure

As committed to in Enclosure 4 of TVA letter to NRC dated September 30, 2011 (Reference 1), Attachment 33 contains GA-ESI demarcated proprietary document OP-7.3-240, "Safety-Related Commercial Grade Item Parts Acceptance," Revision K. Attachment 34 contains GA-ESI redacted non-proprietary document OP-7.3-240, "Safety-Related Commercial Grade Item Parts Acceptance," Revision K. Attachment 32 contains GA-ESI letter GA-ESI 4493, Request by General Atomics Electronic Systems, Inc. to Withhold Certain Information from Public Disclosure under 10CFR2.390 dated October 14, 2011.

13. TVA Commitment

Provide engineering approved proprietary versions of the General Atomics documents submitted on July 15, 2010.

Commitment Closure

Attachment 35 contains engineering approved GA-ESI proprietary document 04508100-1TM, "RM-1000 Digital Radiation Processor Technical Manual," Revision C. The non-proprietary version and affidavit for withholding were submitted in TVA to NRC letter dated July 15, 2010 (Reference 7).

14. TVA Commitment

A non-proprietary version of GA-ESI white paper attachment (Bechtel Document Number 25402-011-V1A-HARA-00204-001) and an affidavit for withholding will be provided by November 30, 2011.

Commitment Closure

As committed to in Enclosure 4 of TVA letter to NRC dated October 13, 2011 (Reference 4), Attachment 36 contains engineering approved GA-ESI proprietary document 04038800, "White Paper: Qualification of RM-1000 Processors," Revision A. The non-proprietary version of the white paper was submitted in TVA to NRC letter dated October 13, 2011 (Reference 4). Attachment 37 contains demarcated proprietary GA-ESI document 04038800, Attachment 1, "White Paper: Qualification of RM-1000 Processors," Revision A. Attachment 38 contains redacted non-proprietary GA-ESI document 04038800, Attachment 1, "White Paper: Qualification of RM-1000 Processors," Revision A. Attachment 39 contains GA-ESI letter GA-ESI 4500, Request by General Atomics Electronic Systems, Inc. to Withhold Certain Information from Public Disclosure under 10CFR2.390 dated November 18, 2011.

Enclosure 2
TVA Letter Dated November 30, 2011
List of Attachments

Note: While project coversheets have not been included, all attachments have been reviewed and approved by Engineering prior to submittal.

1. Not Used
2. Not Used
3. Not Used
4. Not Used
5. Not Used
6. Westinghouse Electric Company proprietary document WNA-CN-00157-WBT-P, "Watts Bar 2 Incore Instrument System (IIS) Signal Processing System (SPS) Isolation Requirements," Revision 1 (Letter Item 2, SSER 24 Appendix HH Item Number 121)
7. Westinghouse Electric Company non-proprietary document WNA-CN-00157-WBT-NP, "Watts Bar 2 Incore Instrument System (IIS) Signal Processing System (SPS) Isolation Requirements," Revision 1 (Letter Item 2, SSER 24 Appendix HH Item Number 121)
8. Westinghouse Electric Company document CAW-11-3316, "Application For Withholding Proprietary Information From Public Disclosure WNA-CN-00157-WBT-P, "Watts Bar 2 Incore Instrument System (IIS) Signal Processing System (SPS) Isolation Requirements," Revision 1," (proprietary), dated November 17, 2011 (Letter Item 2, SSER 24 Appendix HH Item Number 121)
9. Westinghouse Electric Company non-proprietary document WBT-D-3566 NP-Enclosure, "Summary of IITA Equipment Qualification Watts Bar 2," dated October 2011 (Letter Item 2, SSER 24 Appendix HH Item Number 126)
10. Westinghouse Electric Company proprietary document CN-EQT-10-44-P, "Dynamic Similarity Analysis for the Watts Bar Unit 2 Post Accident Monitoring System (PAMS)," Revision 1 (proprietary) (Letter Item 4)
11. Westinghouse Electric Company non-proprietary document CN-EQT-10-44-NP, "Dynamic Similarity Analysis for the Watts Bar Unit 2 Post Accident Monitoring System (PAMS)," Revision 1 (non-proprietary) (Letter Item 4)
12. Westinghouse Electric Company document CAW-11-3278, Application For Withholding Proprietary Information From Public Disclosure CN-EQT-10-44-P, Revision 1, "Dynamic Similarity Analysis for the Watts Bar Unit 2 Post Accident Monitoring System (PAMS)," (proprietary), dated October 21, 2011 (Letter Item 4)
13. Westinghouse Electric Company proprietary document EQ-EV-62-WBT-P, "Comparison of Tested Conditions for the AI687 and AI688 Common Q Modules to the Watts Bar Unit 2 (WBT) Requirements," Revision 1 (proprietary) (Letter Item 5)
14. Westinghouse Electric Company non-proprietary document EQ-EV-62-WBT-NP, "Comparison of Tested Conditions for the AI687 and AI688 Common Q Modules to the Watts Bar Unit 2 (WBT) Requirements," Revision 1 (non-proprietary) (Letter Item 5)

Enclosure 2
TVA Letter Dated November 30, 2011
List of Attachments

15. Westinghouse Electric Company document CAW-11-3297, Application For Withholding Proprietary Information From Public Disclosure EQ-EV-62-WBT-P, "Comparison of Tested Conditions for the AI687 and AI688 Common Q Modules to the Watts Bar Unit 2 (WBT) Requirements," Rev. 1 (proprietary), dated November 3, 2011 (Letter Item 5)
16. Westinghouse Electric Company proprietary document EQLR-171-P, "Environmental and Seismic Test Report Analog Input (AI)687 and AI688 Modules and Supporting Components for Use in Common Qualified (Common Q) Post Accident Monitoring System (PAMS)," Revision 1 (proprietary) (Letter Item 6)
17. Westinghouse Electric Company non-proprietary document EQLR-171-NP, "Environmental and Seismic Test Report Analog Input (AI)687 and AI688 Modules and Supporting Components for Use in Common Qualified (Common Q) Post Accident Monitoring System (PAMS)," Revision 1 (non-proprietary) (Letter Item 6)
18. Westinghouse Electric Company document CAW-11-3299, Application For Withholding Proprietary Information From Public Disclosure EQLR-171-P, Revision 1, "Analog Input (AI)687 and AI688 Modules and Supporting Components for Use in Common Qualified (Common Q) Post Accident Monitoring System (PAMS)," (Proprietary), dated November 11, 2011 (Letter Item 6)
19. Westinghouse Electric Company proprietary document EQ-QR-64-GEN-P, "AI687 and AI688 for Use in Common Q PAMS EMC Test Report and Installation Limitations," Revision 0 (proprietary) (Letter Item 7)
20. Westinghouse Electric Company non-proprietary document EQ-QR-64-GEN-NP, "AI687 and AI688 for Use in Common Q PAMS EMC Test Report and Installation Limitations," Revision 0 (non-proprietary) (Letter Item 7)
21. Westinghouse Electric Company document CAW-11-3303, Application For Withholding Proprietary Information From Public Disclosure EQ-QR-64-GEN-P, Revision 0, "AI687 and AI688 for Use in Common Q PAMS EMC Test Report and Installation Limitations," (Proprietary), dated November 9, 2011 (Letter Item 7)
22. Westinghouse Electric Company proprietary document WNA-DS-01667-WBT-P, "Post Accident Monitoring System – System Design Specification," Revision 5 (proprietary) (Letter Item 8)
23. Westinghouse Electric Company non-proprietary document WNA-DS-01667-WBT-NP, "Post Accident Monitoring System – System Design Specification," Revision 5 (non-proprietary) (Letter Item 8)
24. Westinghouse Electric Company document CAW-11-3301, Application For Withholding Proprietary Information From Public Disclosure WNA-DS-01667-WBT-P, Rev. 5, "Post Accident Monitoring System – System Design Specification," (proprietary), dated November 8, 2011 (Letter Item 8)
25. General Atomics-Electronics Systems Inc. demarcated proprietary document 04038800-1SP, "RM-1000 EMC Test Report Supplement 1," Revision A (Letter Item 9)

Enclosure 2
TVA Letter Dated November 30, 2011
List of Attachments

26. General Atomics-Electronics Systems Inc. redacted non-proprietary document 04038800-1SP, "RM-1000 EMC Test Report Supplement 1," Revision A (Letter Item 9)
27. General Atomics-Electronics Systems Inc. letter GA-ESI 4496, Request by General Atomics Electronic Systems, Inc. to Withhold Certain Information from Public Disclosure under 10CFR2.390 dated October 28, 2011 (Letter Items 9 and 10)
28. General Atomics-Electronics Systems Inc. demarcated proprietary document 04038903-QSR, "Qualification Summary Report for Watts Bar Nuclear Plant Unit 2 Replacement Radiation Monitors," Revision D (Letter Item 10)
29. General Atomics-Electronics Systems Inc. redacted non-proprietary document 04038903-QSR, "Qualification Summary Report for Watts Bar Nuclear Plant Unit 2 Replacement Radiation Monitors," Revision D (Letter Item 10)
30. General Atomics-Electronics Systems Inc. demarcated proprietary document 04509050, "RM-1000 EMC Test Report," dated April 22, 2003 (Letter Item 11)
31. General Atomics-Electronics Systems Inc. redacted non-proprietary document 04509050, "RM-1000 EMC Test Report," dated April 22, 2003 (Letter Item 11)
32. General Atomics-Electronics Systems Inc. letter GA-ESI 4493, Request by General Atomics Electronic Systems, Inc. to Withhold Certain Information from Public Disclosure under 10CFR2.390 dated October 14, 2011 (Letter Items 11 and 12)
33. General Atomics-Electronics Systems Inc. demarcated proprietary document OP-7.3-240, "Safety-Related Commercial Grade Item Parts Acceptance," Revision K (Letter Item 12)
34. General Atomics-Electronics Systems Inc. redacted non-proprietary document OP-7.3-240, "Safety-Related Commercial Grade Item Parts Acceptance," Revision K (Letter Item 12)
35. General Atomics-Electronics Systems Inc. proprietary document 04508100-1TM, "RM-1000 Digital Radiation Processor Technical Manual," Revision C (Letter Item 13)
36. General Atomics-Electronics Systems Inc. proprietary document 04038800, "White Paper: Qualification of RM-1000 Processors," Revision A (Letter Item 14)
37. Demarcated proprietary General Atomics-Electronics Systems Inc. document 04038800, Attachment 1, "White Paper: Qualification of RM-1000 Processors," Revision A (Letter Item 14)
38. Redacted non-proprietary General Atomics-Electronics Systems Inc. document 04038800, Attachment 1, "White Paper: Qualification of RM-1000 Processors," Revision A (Letter Item 14)
39. General Atomics-Electronics Systems Inc. letter GA-ESI 4500, Request by General Atomics Electronic Systems, Inc. to Withhold Certain Information from Public Disclosure under 10CFR2.390 dated November 18, 2011 (Letter Item 14)

Enclosure 3
TVA Letter Dated November 30, 2011
List of References

1. TVA to NRC letter September 30, 2011, "Watts Bar Nuclear Plant (WBN) Unit 2 – Instrumentation and Controls Staff Information Requests" (Letter Item 2, SSER 23 Appendix HH Item Number 77 (Letter Item 3, SSER 24 Appendix HH Item Number 126, and Letter Item 12)
2. TVA to NRC letter October 26, 2010, "Watts Bar Nuclear Plant (WBN) Unit 2 – Instrumentation and Controls Staff Information Requests" (Letter Item 2, SSER 23 Appendix HH Item Number 77 (Letter Items 4, 5, 6 and 7)
3. TVA to NRC letter dated December 22, 2010, "Watts Bar Nuclear Plant (WBN) Unit 2 – Instrumentation and Controls Staff Information Requests" (Letter Item 8)
4. TVA to NRC letter dated October 13, 2011, "Watts Bar Nuclear Plant (WBN) Unit 2 – Instrumentation and Controls Staff Information Requests" (Letter Item 9 and 14)
5. TVA to NRC letter dated February 25, 2011, "Watts Bar Nuclear Plant (WBN) Unit 2 – Instrumentation and Controls Staff Information Requests" (Letter Item 10)
6. TVA to NRC letter dated April 15, 2011, "Watts Bar Nuclear Plant (WBN) Unit 2 – Instrumentation and Controls Staff Information Requests" (Letter Item 11)
7. TVA to NRC letter dated July 15, 2010, "Watts Bar Nuclear Plant (WBN) Unit 2 – Instrumentation and Controls Staff Information Requests" (Letter Item 13)
8. TVA to NRC letter dated July 14, 2010, "Watts Bar Nuclear Plant (WBN) Unit 2 – Instrumentation and Controls Staff Information Requests" (Letter Item 13)
9. TVA to NRC letter dated September 1, 2011, "Watts Bar Nuclear Plant (WBN) Unit 2 – Instrumentation and Controls Staff Information Requests" (Letter Item 13)