

WBN2Public Resource

From: Smith, James D [smith1jd@westinghouse.com]
Sent: Thursday, September 08, 2011 1:53 PM
To: Poole, Justin; Milano, Patrick; Campbell, Stephen; Epperson, Dan
Cc: Crouch, William D; Arent, Gordon; Bryan, Robert H Jr; clstephenson@tva.gov; Smith, James D; jdsmith@tva.gov
Subject: billcopy markup Watts Bar 2 APPENDIX HH Status 9-8-11 (2).docx
Attachments: billcopy markup Watts Bar 2 APPENDIX HH Status 9-8-11 (2).docx

Attached for your review is the latest status TVA has for the SSER open items. Track changes has been left on to assist in seeing the latest changes.

Hearing Identifier: Watts_Bar_2_Operating_LA_Public
Email Number: 494

Mail Envelope Properties (27265BDD489F164BAB98F1FFF637197207342B8292)

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Sent Date: 9/8/2011 1:52:52 PM
Received Date: 9/8/2011 1:53:18 PM
From: Smith, James D

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billcopy markup Watts Bar 2 APPENDIX HH Status 9-8-11 (2).docx			111826

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APPENDIX HH STATUS – (9/8/2011)

WATTS BAR UNIT 2 ACTION ITEMS TABLE

This table provides a status of required action items associated of all open items, confirmatory issues, and proposed license conditions that the staff has identified.

CI – Confirmatory Issue

<u>Item</u>	<u>Type</u>	<u>Action Required</u>	<u>NRC Lead</u>	<u>TVA Response Required/ TVA Lead</u>	<u>TVA Action Required to Close</u>	<u>NRC Action Required to Close</u>	<u>Due Date</u>	<u>SSER</u>
(1)	CI	Review evaluations and corrective actions associated with a power assisted cable pull. (NRC safety evaluation dated August 31, 2009, ADAMS Accession No. ML092151155)	EEEE	Yes/ELE, I&C	Complete. TVA to provide letter to NRR documenting any power assisted cable pulls if performed. NRR and/or RII to review calculations on any power assisted cable pulls. Results documented in inspection report. Letter from TVA if no power assisted cable pulls were done. NRR Calculation Review Addressed by Maximo Commitment Closure package 10181059	TVA to provide letter to NRR documenting any power assisted cable pulls if performed. NRR and/or RII to review calculations on any power assisted cable pulls. Results documented in inspection report. Letter from TVA if no power assisted cable pulls were done.		25
(2)	CI	Conduct appropriate inspection activities to verify cable lengths used in calculations and analysis match as-installed configuration. (NRC safety evaluation dated August 31, 2009, ADAMS Accession No. ML092151155)	RII	No/ Elec	Due date:02/29/2012 For NRC Inspection / Review Provide NRC Residents access to as-constructed ICRDS database and associated calcs. Note: Pending completion of the cable pull effort and updating ICRDS for as-installed cable lengths by construction.	Include in inspection planning and conduct inspection. Reference closure in IR and SER. Pending TVA's completion of cable installation and update of ICRDS for as-installed cable lengths		25
(4)	CI	Conduct appropriate inspection activities to verify that TVA's maximum SWBP criteria for signal level and coaxial cables do not exceed the cable manufacturers maximum SWBP criteria. (NRC safety evaluation dated August 31, 2009, ADAMS Accession No. ML092151155)	RII	No	Complete. Closed by IR 2010604	Include in inspection planning and conduct inspection. Reference closure in IR and SER. See IR 2010-604		24

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(5)	CI	Verify timely submittal of pre-startup core map and perform technical review. (TVA letter dated September 7, 2007, ADAMS Accession No. ML072570676)	SRXB	Yes	Complete. Response provided in TVA to NRC letter dated April 6, 2011.	NRR review and evaluate pre-startup core map. Document in SER. See Att 1 to 4/6/11 Ltr provides.		24
(6)	CI	Verify implementation of TSTF-449. (TVA letter dated September 7, 2007, ADAMS Accession No. ML072570676)	ITSB/EI CB	Yes	Complete. Response provided in TVA to NRC letter dated April 6, 2011.	NRR confirm TSs for proper implementation. See current TSs Rev. B		24
(7)	CI	Verify commitment completion and review electrical design calculations. (TVA letter dated October 9, 1990, ADAMS Accession No. ML073551056)	RII	No/ Elec	Due date: 12/1/11 For NRC Inspection / Review See commitments in TVA Letter. Provide NRC Residents a copy of related electrical calculation procedures and provide NRC access to calculations	Include in inspection planning and conduct inspection. Reference closure in IR and SER. Specific actions need to be clarified with EEEB.		25
(8)	CI	TVA should provide a pre-startup map to the NRC staff indicating the rodded fuel assemblies and a projected end of cycle burnup of each rodded assembly for the initial fuel cycle 6-months prior to fuel load. (NRC safety evaluation dated May 3, 2010, ADAMS Accession No. ML101200035)	SRXB	Yes	Complete. Response provided in TVA to NRC letter dated April 6, 2011.	NRR review and evaluate pre-startup core map. Document in SER. Conduct with item (5) above. NRR to verify that Att 1 to 4/6/11 letter is acceptable.		24
(9)	CI	Confirm that education and experience of management and principal supervisory positions down through the shift supervisory level conform to Regulatory Guide 1.8. (SSER 22, Section 13.1.3., pg 13-2)	RII	No/ LIC	Due date: 8/31/11 9/23/11 For NRC Inspection / Review Obtain education and experience information from WBN Human Resources and provide info to NRC Residents.	RII include in inspection planning and conduct inspection. Reference closure in IR and update status in Appendix HH. TVA to provide education and experience info to RII staff.		24
(10)	CI	Confirm that TVA has an adequate number of licensed and non-licensed operators in the training pipeline to support the preoperational test program, fuel loading, and dual unit operation. (SSER 22, Section 13.1.3, pg 13-2)	RII	No/ OPS	<u>Due Date: 9/23/11</u> For NRC Inspection/ Review Provide submittal that confirms we have adequate personnel in the pipeline.	RII include in inspection planning and conduct inspection. Reference closure in IR and update status in Appendix HH.		24

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(11)	CI	The plant administrative procedures should clearly state that, when the Assistant Shift Engineer assumes his duties as Fire Brigade Leader, his control room duties are temporarily assumed by the Shift Supervisor (Shift Engineer), or by another SRO, if one is available. The plant administrative procedures should clearly describe this transfer of control room duties. (SSER 22, Section 13.1.3, pg 13-2)	RII	No/ OPS	Due date: 9/4/11 Complete TVA Letter dated 9/1/11 For NRC Inspection / Review: provide NRC Residents copy of procedure that provides the controls of this function.	RII to verify plant administrative procedures have been updated. Document in IR and update status in Appendix HH. TVA to provide procedure to RII staff		24
(12)		TVA's implementation of NGDC PP-20 and EDCR Appendix J is subject to future NRC audit and inspection. (SSER 22, Section 25.9, pg 25-3)	DORL	Yes	Complete. For NRC Inspection / Review	TVA provided letter on 6/17/11 summarizing QA audits of licensing basis program. NRR conduct review/audit of the program. Document in audit report and update status in Appendix HH.		25
(13)		TVA is expected to submit an IST program and specific relief requests for WBN Unit 2 nine months before the projected date of OL issuance. (SSER 22, Section 3.9.6, pg 3-11)	CPTB	Yes/ LIC	Due date: 10/21/11 Provide submittal addressing IST program and relief requests.	NRR tech staff review of ISI/IST programs upon receipt from TVA. Document in letter and staff evaluation.		25
(14)		TVA stated that the Unit 2 PTLR is included in the Unit 2 System Description for the Reactor Coolant System (WBN2-68-4001), which will be revised to reflect required revisions to the PTLR by September 17, 2010. (SSER 22, Section 5.3.1, pg 5-8)	CVIB	Yes	Complete. Response provided in TVA to NRC letter dated April 6, 2011.	TVA to provide PTLR for NRR review. Tech staff review and document in SER. Revision 1 to the Unit 2 System Description for RCS (WBN2-68-4001) revised. Verify ETA of SD.		25
(16)		Based on the uniqueness of EQ, the NRC staff must perform a detailed inspection and evaluation prior to fuel load to determine how the WBN Unit 2 EQ program complies with the requirements of 10 CFR 50.49. (SSER 22, Section 3.11.2, pg 3-12/13)	RII/ EEEB	No/ ELE, I&G	Due date: Ongoing Inspection For NRC Inspection / Review Provide NRC Residents copies of EQ documents as requested for the onsite inspections.	Conduct EQ inspection. Document in IR and update status in Appendix HH.		25

Item	Type	Action Required	NRC Lead	TVA Response Required/ TVA Lead	TVA Action Required to Close	NRC Action Required to Close	Due Date	SSER
(17)		The NRC staff should verify the accuracy of the WBN Unit 2 EQ list prior to fuel load. (SSER 22, Section 3.11.2.1, pg 3-13)	RII/ EEEB	No/ ELE, I&C	Due date: Ongoing Inspection For NRC Inspection/Review: provide NRC Residents copies of EQ documents as requested for the onsite inspections.	Conduct EQ inspection. Document in IR and update status in Appendix HH.		25
(20)		Resolve whether or not routine maintenance activities should result in increasing the EQ of the 6.9 kV motors to Category I status in accordance with 10 CFR 50.49. (SSER 22, Section 3.11.2.2.1, pg 3-14).	RII/ EEEB	Yes/ ELE, I&C	Complete Response provided in TVA to NRC letter dated April 6, 2011.	TVA submitted letter dated April 6, 2011. NRR tech staff review and document in SER.		24
(21)		The NRC staff should confirm that the Electrical Penetration Assemblies (EPAs) are installed in the tested configuration, and that the feedthrough module is manufactured by the same company and is consistent with the EQ test report for the EPA. (SSER 22, Section 3.11.2.2.1, pg 3-14)	RII/ EEEB	No	Complete For NRC Inspection / Review Complete - Copies of EQ documents as requested for the onsite inspection are available.	TVA provided RI staff with copies of requested EQ documents. Conduct EQ inspection. Document in IR and update status in Appendix HH.		25
(23)		Resolve whether or not TVA's reasoning for not upgrading the MSIV solenoid valves to Category I is a sound reason to the contrary, as specified in 10 CFR 50.49(l). (SSER 22, Section 3.11.2.2.1, pg 3-15)	EEEB	Yes/ ELE, I&C	Complete Response provided in TVA to NRC letter dated April 6, 2011.	TVA commitment in April 6, 2011 letter. NRR tech staff review and document in SER.		24
(25)		Prior to the issuance of an operating license, TVA is required to provide satisfactory documentation that it has obtained the maximum secondary liability insurance coverage pursuant to 10 CFR 140.11(a)(4), and not less than the amount required by 10 CFR 50.54(w) with respect to property insurance, and the NRC staff has reviewed and approved the documentation. (SSER 22, Section 22.3, pg 22-1)	PFAIB	Yes LIC	Due date: 09/14/27/1/12 (Smith) TVA to answer later. <u>Provide insurance coverage submittal-sign indemnity letter and provide to NRC.</u>	TVA to provide indemnity letter for tech staff review and update status in Appendix HH. Include indemnity agreement with operating license.		26

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<u>Item</u>	<u>Type</u>	<u>Action Required</u>	<u>NRC Lead</u>	<u>TVA Response Required/ TVA Lead</u>	<u>TVA Action Required to Close</u>	<u>NRC Action Required to Close</u>	<u>Due Date</u>	<u>SSER</u>
{30}		TVA should confirm that all other safety-related equipment (in addition to the Class 1E motors) will have adequate starting and running voltage at the most limiting safety related components (such as motor operated valves, contactors, solenoid valves or relays) at the degraded voltage relay setpoint dropout setting. TVA should also confirm that the final Technical Specifications are properly derived from these analytical values for the degraded voltage settings. (SSER 22, Section 8.3.1.2, , pg 8-10)	RII/ EEEB	NO/ELE; I&C	Complete Submitted letter 8/12/11.	TVA submitted letter dated August 12, 2011. NRR tech staff review and document in SER.		25
{32}		TVA should provide to the NRC staff the details of the administrative limits of EDG voltage and speed range, and the basis for its conclusion that the impact is negligible, and describe how it accounts for the administrative limits in the Technical Specification surveillance requirements for EDG voltage and frequency. (SSER 22, Section 8.3.1.14, pg 8-14)	EEEB	Yes/ELE Hilmes	Due date: 8/30/11 9/30/11 (Hilmes) Provide response for submittal to NRR. Note – NRC RII may have an issue with the actual DG loading –	TVA to provide information on EDG admin limits. NRR tech staff review and document in SER. TVA to submit amendment to TSs for Unit 1		25
{33}	CI	TVA stated in Attachment 9 of its letter dated July 31, 2010, that certain design change notices (DCNs) are required or anticipated for completion of WBN Unit 2, and that these DCNs were unverified assumptions used in its analysis of the 125 V dc vital battery system. Verification of completion of these DCNs to the NRC staff is necessary prior to issuance of the operating license. (SSER 22, Section 8.3.2.3, pg 8-16)	RII/ EEEB	Yes/	Complete. Response provided in TVA to NRC letter dated April 6, 2011.	TVA provided information in April 6, 2011 letter. TVA to notify RII when work completed. RII to verify completion of DCNs and include in IR. Update status in Appendix HH.		25

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(35)		TVA should provide information to the NRC staff that the CCS will produce feedwater purity in accordance with BTP MTEB 5-3 or, alternatively, provide justification for producing feedwater purity to another acceptable standard. (SSER 22, Section 10.4.6, pg 10-9)	CSGB/D ORL	Yes/ LIC	Complete. Response provided in TVA to NRC letter dated June 7, 2011.	TVA provided information on water purity in 6/7/11 letter. NRR tech staff review and document in SER.		24
(37)	CI	The NRC staff will review the combined WBN Unit 1 and 2 Appendix C prior to issuance of the Unit 2 OL to confirm (1) that the proposed Unit 2 changes were incorporated into Appendix C, and (2) that changes made to Appendix C for Unit 1 since Revision 92 and the changes made to the NP-REP since Revision 92 do not affect the bases of the staff's findings in this SER supplement. (SSER 22, Section 13.3.2, pg 13-8)	NSIR	Yes/ REP	Due date: 06/1/12 Submit final Unit 1/2 REP to NRC	TVA to provide Appendix C within 6 months of fuel load. NSIR to review and document in SER.		26

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(38)	CI	The NRC staff will confirm the availability and operability of the ERDS for Unit 2 prior to issuance of the Unit 2 OL. (SSER 22, Section 13.3.2.6, pg 13-14)	RII/ NSIR	Yes/ REP	Due date: 10/1/11 For NRC Inspection / Review The Emergency Response Data System software has previously been modified and tested for the Watts Bar Unit 2 addition. This unit can be selected from the ERDS menu to send data to the NRC at this time. In addition, the software has been developed and tested to send data from the WBN PEDS to the CECC. However, the official list of points for Watts Bar Unit 2 has not been provided by Unit 2 Design Engineering and, until this has been completed and submitted to the Computer Engineering Group for addition to the ERDS software, official testing of the software for this unit cannot be completed with the NRC in order to declare the WBN ERDS Unit 2 operational. This list is derived from the official Data Point List. Once developed, Unit 2 Licensing submits the data to the NRC. Once this list has been received by the NRC, it would require one month to add the list to the NRC data systems, write the test, schedule the test with TVA/NRC, run the test, and TVA submit the results. Detchemendy	TVA states that ERDS software previously modified and tested for Unit 2 addition and to send data from the WBN PEDS to the CECC. Official list of points for WBN 2 has not been provided to TVA Computer Engineering Group for addition to the ERDS software; official testing of software cannot be completed with NRC to declare the WBN 2 ERDS operational. NRC needs list to add to the NRC data systems, write the test, schedule the test with TVA/NRC, run the test, and TVA submit the results. RII to review and document in IR. NSIR to update status in Appendix HH.		26
(39)	CI	The NRC staff will confirm the adequacy of the communications capability to support dual unit operations prior to issuance of the Unit 2 OL. (SSER 22, Section 13.3.2.6, pg 13-14)	RII/ NSIR	Yes/ REP	For NRC Inspection / Review Provide NRC Residents copies of related documents as requested for the onsite inspection. This item is covered by the response to Item 38 Due date: See Item 38 Detchemendy	See discussion in Item 38. RII to review and document in IR. NSIR to update status in Appendix HH.		26

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(40)	CI	The NRC staff will confirm the adequacy of the emergency facilities and equipment to support dual unit operations prior to issuance of the Unit 2 OL. (SSER 22, Section 13.3.2.8, pg 13-15)	RII/ NSIR	Yes/ REP	Due date: 10/1/11 For NRC Inspection / Review Perform self assessment to verify processes and materials in main control room, TSC, OSC, EOF and local recovery facility. Provide NRC Residents copies of self assessment documents for the onsite inspection. Detchemendy	TVA to perform self assessment to verify processes and materials in MCR, TSC, OSC, EOF and local recovery facility. Provide RI staff copies of self assessment documents. RII to review and document in IR. NSIR to update status in Appendix HH.		26
{41}	CI	TVA committed to (1) update plant data displays as necessary to include Unit 2, and (2) to update dose assessment models to provide capabilities for assessing releases from both WBN units. The NRC staff will confirm the adequacy of these items prior to issuance of the Unit 2 OL. (SSER 22, Section 13.3.2.9, pg 13-16)	RII/ NSIR	Yes/ PSE	Due date: 10/1/11 7/1/12 For NRC Inspection / Review 1) Provide demonstration of capability of SPDS, ICS and PEDS data system displays for Unit 2. <u>Due Date: 10/1/11</u> 2) Submit EPIP-13. Describe RED, FRED and BRED data systems.. Detchemendy	TVA to provide demonstration of capability of SPDS, ICS and PEDS data system displays by 7/1/12; and to submit EPIP-13. (describe RED, FRED and BRED data systems) by 10/1/11. RII to review and document in IR. NSIR to update status in Appendix HH.		26
{42}	CI	The NRC staff will confirm the adequacy of the accident assessment capabilities to support dual unit operations prior to issuance of the Unit 2 OL. (SSER 22, Section 13.3.2.9, pg 13-16)	RII/ NSIR	Yes/ PSE	Due date: 10/1/11 For NRC Inspection / Review 1) Provide demonstration of capability of SPDS, ICS and PEDS data system displays for Unit 2. Due date: 7/1/12 (Olson) 2) Submit EPIP-13. Describe RED, FRED and BRED data systems.. Due date: 10/1/11 Detchemendy	RII to review and document in IR. NSIR to update status in Appendix HH. Complete with Item 41.		26

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(43)	CI	Section V of Appendix E to 10 CFR Part 50 requires TVA to submit its detailed implementing procedures for its emergency plan no less than 180 days before the scheduled issuance of an operating license. Completion of this requirement will be confirmed by the NRC staff prior to the issuance of an operating license. (SSER 22, Section 13.3.2.18, pg 13-23)	NSIR	Yes/REP	Due date: 10/1/11 TVA to answer later. Submit Unit 1/2 REP implementing procedures (EPIP-1 thru EPIP-17) to NRC (Detchemendy)	TVA to submit EPIPs 6 months before OL. NSIR to update status in Appendix HH.		26
(44)		TVA should provide additional information to clarify how the initial and irradiated RT _{NDT} was determined. (SSER 22, Section 5.3.1, pg 5-9, 5-11, 5-13, 5-17, 5-28, 5-29, 5-31, 5-32)	CVIB	Yes	Complete. Response provided in TVA to NRC letter dated April 6, 2011.	TVA provided information in April 6, 2011 letter. NRR tech staff review and document in SER.		25
(45)	CI	TVA stated in its response to RAI 5.3.2-2, dated July 31, 2010, that the PTLR would be revised to incorporate the COMS arming temperature. (SSER 22, Section 5.3.2, pg 5-28/29, 5-32)	CVIB	Yes	Complete. Response provided in TVA to NRC letter dated April 6, 2011.	TVA to provide PTLR for NRR review. Tech staff review and document in SER. See also item (14).		25
(46)	CI	The LTOP lift settings were not included in the PTLR, but were provided in TVA's response to RAI 5.3.2-2 in its letter dated July 31, 2010. TVA stated in its RAI response that the PTLR would be revised to incorporate the LTOP lift settings into the PTLR. (SSER 22, Section 5.3.2, pg 5-28/29, 5-32)	CVIB	Yes	Complete. Response provided in TVA to NRC letter dated April 6, 2011.	TVA to provide PTLR for NRR review. Tech staff review and document in SER. See also item (14).		25

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(47)		The NRC staff noted that TVA's changes to Section 6.2.6 in FSAR Amendment 97, regarding the implementation of Option B of Appendix J, were incomplete, because several statements remained regarding performing water-sealed valve leakage tests "as specified in 10 CFR [Part] 50, Appendix J." With the adoption of Option B, the specified testing requirements are no longer applicable; Option A to Appendix J retains these requirements. The NRC discussed this discrepancy with TVA in a telephone conference on September 28, 2010. TVA stated that it would remove the inaccurate reference to Appendix J for specific water testing requirements in a future FSAR amendment. (SSER 22, Section 6.2.6, pg 6-12)	SCVB	Yes	Complete Response provided in TVA to NRC letter dated June 7, 2011. However, one FSAR Note was missed. A105 corrected FSAR (8/12/11).	TVA to provide correction in future amendment (A105) to FSAR. See also info in letter of 6/7/11. NRR tech staff review and document in SER.		25
(48)	CI	The NRC staff should verify that its conclusions in the review of FSAR Section 15.4.1 do not affect the conclusions of the staff regarding the acceptability of Section 6.5.3. (SSER 22, Section 6.5.3, pg 6-15)	DORL/A ADB	Yes	Complete. Response provided in TVA to NRC letter dated June 7, 2011.	Upon NRR completion of SER Chapter 15 review, tech staff review and document in SER update to section 6.5.3. See also info in TVA letter of 6/7/11.		25
(49)	CI	The NRC staff was unable to determine how TVA linked the training qualification requirements of ANSI N45.2-1971 to TVA Procedure TI-119. Therefore, the implementation of training and qualification for inspectors will be the subject of future NRC staff inspections. (NRC letter dated July 2, 2010, ADAMS Accession No. ML101720050,)	RII	No	Due date: Complete For NRC Inspection / Review Provided NRC Residents how the refurb training requirements are linked to the ANSI standard. Provided the training records for refurb inspectors.	TVA provided RI staff with how the refurb training requirements are linked to the ANSI standard. Provided training records for refurb inspectors. RII to review and document in IR and update status in Appendix HH.		25

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(50)	CI	TVA stated that about 5 percent of the anchor bolts for safety-related pipe supports do not have quality control documentation, because the pull tests have not yet been performed. Since the documentation is still under development, the NRC staff will conduct inspections to follow-up on the adequate implementation of this construction refurbishment program requirement. (NRC letter dated July 2, 2010, ADAMS Accession No. ML101720050)	RII	No/ Plant Design	For NRC Inspection / Review Notify NRC Residents of anchor bolt pull tests. Inspection of pull tests ongoing (Gilley)	TVA to notify RI staff of anchor bolt pull tests. RII to review and document in IR and update status in Appendix HH.		24
(51)	CI	The implementation of TVA Procedure TI-119 will be the subject of NRC follow-up inspection to determine if the construction refurbishment program requirements are being adequately implemented. (NRC letter dated July 2, 2010, ADAMS Accession No. ML101720050)	RII	No/Moll	For NRC Inspection / Review Provide NRC Residents the results of the refurb program. Due date: Ongoing Inspection (Moll)	RII to review and document in IR and update status in Appendix HH.		24
(59)		The staff's evaluation of the compatibility of the ESF system materials with containment sprays and core cooling water in the event of a LOCA is incomplete pending resolution of GSI-191 for WBN Unit 2. (SSER 23, Section 6.1.1.4, pg 6-2)	CVIB	Yes	Complete Response provided in TVA to NRC letter dated June 7, 2011.	Tech staff review and document in SER.		24
(60)	CI	TVA should amend the FSAR description of the design and operation of the spent fuel pool cooling and cleanup system in FSAR Section 9.1.3 as proposed in its December 21, 2010, letter to the NRC. (SSER 23, Section 9.1.3, pg 9-3)	SBPB	Yes	Complete. Response provided in TVA to NRC letter dated June 7, 2011.	TVA provided information in A103. NRR tech staff review and update status in Appendix HH.		24

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(61)		TVA should provide information to the NRC staff to demonstrate that PAD 4.0 can conservatively calculate the fuel temperature and other impacted variables, such as stored energy, given the lack of a fuel thermal conductivity degradation model. (SSER 23, Section 4.2.2, pg 4-5)	SNPB	Yes	Will result in a License Condition.	NRR tech staff review and document in SER. May require license condition.		24
(63)	CI	TVA should confirm to the NRC staff that testing prior to Unit 2 fuel load has demonstrated that two-way communications is impossible with the Eagle 21 communications interface. (SSER 23, Section 7.2.1.1, pg 7-7)	RII	No/ PSE	Due date: 7/1/12 Hot functional testing. I&C Matrix Item None This will be addressed by a License Condition (Duplicate of SSER 23 Item 93)	RII to inspect testing and document in IR. Update status in Appendix HH. From I&C matrix 171		25
(64)	CI	TVA stated that, "Post modification testing will be performed to verify that the design change corrects the Eagle 21, Rack 2 RTD accuracy issue prior to WBN Unit 2 fuel load." This issue is open pending NRC staff review of the testing results. (SSER 23, Section 7.2.1.1, pg 7-8)	RII	No/ I&C/PSE	Due Date: FCN date from WEC is 9/16/11; <u>to issue Mod is 10/31/11; and to implement Mod and Test 1/31/2412</u> For NRC Inspection / Review I&C Matrix Item None Provide requested info	RII to inspect testing and document in IR. Update status in Appendix HH. From I&C matrix 127		25
(65)		TVA should provide justification to the staff regarding why different revisions of WCAP-13869 are referenced in WBN Unit 1 and Unit 2. (SSER 23, Section 7.2.1.1, pg 7-3/4, 7-10)	EICB	Yes/ I&C	Complete Response provided in TVA to NRC letter dated June 7, 2011. I&C Matrix Item 323 Changes are reflected in FSAR Amendment 104.	Tech staff review and document in SER. Changes in FSAR A104 I&C matrix 323		24
(66)	CI	TVA should clarify FSAR Section 9.2.5 to add the capability of the UHS to bring the non-accident unit to cold shutdown within 72 hours. (SSER 23, Section 9.2.5, pg 9-8)	SBPB	Yes/ Mech	Due Date: 9/15/11 Complete. Addressed in Amendment 105 (change package 1-105-13) A402 provided update to FSAR Section 9.2.2.4 to cover this question for both ERCW and CCS. Additional info from 4/13 submittal required.	TVA to provide information in future amendment. NRR tech staff review and update status in Appendix HH.		24

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(67)	CI	TVA should confirm, and the NRC staff should verify, that the component cooling booster pumps for Unit 2 are above PMF level. (SSER 23, Section 9.2.2, pg 9-6)	RII	No/ Civil	Due Date:7/1/12 For NRC Inspection / Review Provide EDCR closure documentation for installation of CCS thermal barrier booster pump dike. AA FCR issued. Inspect after field complete	TVA provided EDCR closure document to RI staff on installation of CCS thermal barrier booster pump dike. RII to review, inspect installation, and document in IR and update status in Appendix HH.		25
(69)	CI	The WBN Unit 2 RCS vent system is acceptable, pending verification that the RCS vent system is installed. (SSER 23, Section 5.4.5, pg 5-5)	RII	No Mech	Due Date: 7/1/12 For NRC Inspection / Review Provide EDCR closure documentation for installation of vents.	TVA to provide EDCR closure document for installation of RCS vents to RI staff. RII to review, inspect, and document in IR and update status in Appendix HH.		25
{70}		TVA should provide the revised WBN Unit 2 PSI program ASME Class 1, 2, and 3 Supports "Summary Tables," to include numbers of components so that the NRC staff can verify that the numbers meet the reference ASME Code. (Section 3.2.3 of Appendix Z of SSER 23, pg z-11, z-13)	NRR	Yes/ ISO	Due Date: 11/1/13 1/12 (Tinley) Provide requested info	TVA needs to provide PSI program information to NRR. NRR tech staff review and document in SER.		25
{71}		By letter dated April 21, 2011 (ADAMS Accession No. ML111110513), TVA withdrew its commitment to replace the Unit 2 clevis insert bolts. TVA should provide further justification for the decision to not replace the bolts to the NRC staff. (SSER 23, Section 3.9.5, pg 3-2/3)	CVIB	Yes/ Koontz	Due Date 9/6/23 /11 Initial response provided in TVA to NRC letter dated June 7, 2011.	TVA requested to withdraw commitment to replace X-750 bolts by letter dated April 21, 2011. NRR tech staff reviewing request. TVA needs to justify use on low-temp heat treated bolts.		25
{72}		The NRC staff should complete its review and evaluation of the additional information provided by TVA regarding the ICC instrumentation. (SSER 23, Section 4.4.8, pg 4-22)	EICB	No/ <u>I&C</u>	Open pending NRC review Responses provided in multiple TVA to NRC letters. I&C Matrix Item 041, , 244, 245, 246, 250, 251, 252, 367, 368, 372, 373, and 374	Work with SRXB to resolve this issue prior to SSER 24. I&C Matrix Items 041, 043, 067, 068, 069, 074, 081, 086, 101, 138, 142, 143, 144, 145, 183, 185, 202, 212, 244, 245, 246, 250, 251, 252, 367, 368, 372, 373, and 374		24

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(73)	CI	The NRC staff will inspect to confirm that TVA has completed the WBN Unit 2 EOPs prior to fuel load. (SSER 23, Section 7.5.3, pg 7-119)	RII	No/ OPS	Due date: 2/1/12 Check date For NRC Inspection / Review Provide copies of EOPs for inspection.	TVA to provide EOPs to RI staff. RII to review and document in IR and update status in Appendix HH.		26
(74)	CI	The NRC staff will verify installation of the acoustic-monitoring system for the power-operated relief valve (PORV) position indication in WBN Unit 2 before fuel load. (SSER 23, Section 7.8.1, pg 7-167)	RII	No/ I&C	Due Date: MAY 2012 Need field complete dates For NRC Inspection / Review Provide EDCR closure documentation for installation of acoustic monitors. Panels installed 5/18/11 Probes not installed	TVA to provide EDCR closure documentation for acoustic monitors to RI staff. RII to review and document in IR and update status in Appendix HH.		25
(75)	CI	The NRC staff will verify that the test procedures and qualification testing for auxiliary feedwater initiation and control and flow indication are completed in WBN Unit 2 before fuel load. (SSER 23, Section 7.8.2, pg 7-167)	RII	No/ PSE	Due date: 07/01/12 For NRC Inspection / Review Provide copies of test procedures for inspection.	RII to review and document in IR and update status in Appendix HH.		26
(76)	CI	The NRC staff will verify that the derivative time constant is set to zero in WBN Unit 2 before fuel load. (SSER 23, Section 7.8.3, pg 7-167)	RII	No/ PSE	Due date: 07/01/12 For NRC Inspection / Review Provide copies of test procedures for inspection.	RII to review and document in IR and update status in Appendix HH.		26
(77)		It is unclear to the NRC staff which software V&V documents are applicable to the HRCAR monitors. TVA should clarify which software V&V documents are applicable, in order for the staff to complete its evaluation. (SSER 23, Section 7.5.2.3, pg 7-109)	EICB	Yes/ I&C	Complete. Response provided in TVA to NRC letter dated Sept. 1, 2011. Complete. TVA Letter 9date and TO2 Provide requested information I&C Matrix Item None Request sent to GA on 7/18/11	TVA needs to obtain V&V documents from vendor and provide to NRR. NRR tech staff review and document in SER.		25

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{78}		TVA intends to issue a revised calculation reflecting that the TID in the control room is less than 1×10^3 rads, which will be evaluated by the NRC staff. (SSER 23, Section 7.5.2.3, pg 7-110, 7-116)	EICB	Yes/ I&C	Complete. Provide requested calculation I&C Matrix Item 349 – Calculation WBNAPS3-127 “EQ Dose in the Control Building” is ready to submit Calculation submitted in TVA to NRC letter dated August 4, 2011	TVA to provide revised calculation WBNAPS3-127 “EQ Dose in the Control Building.” NRR tech staff review and document in SER. I&C matrix item 349		25
{79}		TVA should perform a radiated susceptibility survey, after the installation of the hardware but prior to the RM-1000 being placed in service, to establish the need for exclusion distance for the HRCAR monitors while using handheld portable devices (e.g., walkie-talkie) in the control room, as documented in Attachment 23 to TVA’s letter dated February 25, 2011, and item number 355 of TVA’s letter dated April 15, 2011. (SSER 23, Section 7.5.2.3, pg 7-110)	EICB	Yes/ Hilmes. Brehm	Due Date: 7/1/12 For NRC Inspection / Review I&C Matrix Item 355 (closed to commitment) TVA made a commitment to perform the survey and provide results to NRC Owner: R. Brehm 7/1/12	TVA to provide confirmation of satisfactory completion of rad survey/testing. NRR tech staff review and document in SER. I&C matrix item 355		26
(80)		TVA should provide clarification to the staff on how TVA Standard Specification SS-E18-14.1 meets the guidance of RG 1.180, and should address any deviations from the guidance of the RG. (SSER 23, Section 7.5.2.3, pg 7-115)	EICB	Yes/ I&C	Complete Response provided in TVA to NRC letter dated May 6, 2011 I&C Matrix Item 340 - submitted NRC review pending	TVA provide confirmation that it met guidance in RG 1.180 in letter of 5/6/11. NRR tech staff review and document in SER. I&C matrix item 340		25
{81}		The extent to which TVA’s supplier, General Atomics (GA), complies with EPRI TR-106439 and the methods that GA used for its commercial dedication process should be provided by TVA to the NRC staff for review. (SSER 23, Section 7.5.2.3, pg 7-117)	EICB	Yes/ I&C	Due Date: 9/16/11 Provide revised Procedure to NRC for review. I&C Matrix Item 353 NRC comments on GA procedure received 7/11/11 sent to GA for resolution.	TVA to provide revised procedure on GA commercial dedication process based on NRC letter of 7/11/11. NRR tech staff review and document in SER. I&C matrix item 353		25

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(83)	CI	TVA should confirm to the NRC staff the completion of the data storm test on the DCS. (SSER 23, Section 7.7.1.4, pg 7-159)	EICB	Yes/ PSE	Due date: 07/01/12 For NRC Inspection / Review I&C Matrix Item None Provide requested info	TVA to provide confirmation of satisfactory completion of testing. NRR tech staff review and document in SER.		24
(90)	CI	The NRC staff should verify that the ERCW dual unit flow balance confirms that the ERCW pumps meet all specified performance requirements and have sufficient capability to supply all required ERCW normal and accident flows for dual unit operation and accident response, in order to verify that the ERCW pumps meet GDC 5 requirements for two-unit operation. (SSER 23, Section 9.2.1, pg 9-4)	RII/ SBPB	No/ Mech	No response necessary. TVA to support inspection only. Region II to inspect.	RII to inspect the satisfactory completion of ERCW testing. RII to review and document in IR and update status in Appendix HH.		25
{91}		TVA should update the FSAR with information describing how WBN Unit 2 meets GDC 5, assuming the worst case single failure and a LOOP, as provided in TVA's letter dated April 13, 2011. (SSER 23, Section 9.2.1, pg 9-5)	SBPB	Yes/ MECH	Due Date: 9/15/11) Will be in FSAR A1065	TVA to provide updated information in future FSAR amendment. NRR tech staff to confirm and update status in Appendix HH.		25
(93)		TVA should confirm to the staff that testing of the Eagle 21 system has sufficiently demonstrated that two-way communication to the ICS is precluded with the described configurations. (SSER 23, Section 7.9.3.2, pg 7-175)	RII	Yes/PSE	TVA to answer later. I&C Matrix Item None Complete - This will be addressed by a License Condition (Duplicate of SSER 23 Item 63(F)) 7/1/12	RII to inspect testing and document in IR. Update status in Appendix HH.		25

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(94)		TVA should provide to the staff either information that demonstrates that the WBN Unit 2 Common Q PAMS meets the applicable requirements in IEEE Std. 603-1991, or justification for why the Common Q PAMS should not meet those requirements. (SSER 23, Section 7.5.2.2.3, pg 7-50, 7-87)	EICB	Yes/ I&C	Complete. Response provided in TVA to NRC letter dated Sept. 1, 2011. Due date: 9/1/11 Prepare evaluation to show how Common Q PAMS meets these requirements. Response provided in TVA to NRC Letter 5/6/11 I&C Matrix Item 364 item 1, 367, 372	TVA to provide additional information. NRR tech staff review and document in SSER.		
(95)		TVA should update FSAR Table 7.1-1, "Watts Bar Nuclear Plant NRC Regulatory Guide Conformance," to reference IEEE Std. 603-1991 for the WBN Unit 2 Common Q PAMS. (SSER 23, Section 7.5.2.2.3, pg 7-50)	EICB	Yes/ I&C	Complete Response provided in TVA to NRC letter dated May 6, 2011 I&C Matrix Item: 364 Item 2 Addressed in Amendment 105 (change package 1-105-13) Preparing FSAR A105 change package to close. Response provided in TVA to NRC letter dated August 4, 2011	TVA to provide additional information. NRR tech staff review and document in SSER.		24
(96)		TVA should (1) update FSAR Table 7.1-1 to include RG 1.100, Revision 3, for the Common Q PAMS, or (2) demonstrate that the Common Q PAMS is in conformance with RG 1.100, Revision 1, or provide justification for not conforming. (SSER 23, Section 7.5.2.2.3, pg 7-52, 7-76)	EICB	Yes/ I&C	Complete Response provided in TVA to NRC letter dated May 6, 2011 I&C Matrix Item 366 Addressed in Amendment 105 (change package 1-105-13) Preparing FSAR A105 change package to close. Response provided in TVA to NRC letter dated August 4, 2011	TVA to provide additional information. NRR tech staff review and document in SSER.		24

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(97)		TVA should demonstrate that the WBN Unit 2 Common Q PAMS is in conformance with RG 1.153, Revision 1, or provide justification for not conforming. (SSER 23, Section 7.5.2.2.3, pg 7-53)	EICB	Yes/ I&C	Complete Response provided in TVA to NRC letter dated May 6, 2011 I&C Matrix Item 367 Needs to be in Table 7.1-1 Response provided in TVA to NRC letter dated August 4, 2011	TVA to provide additional information. NRR tech staff review and document in SSER.		24
(98)		TVA should demonstrate that the WBN Unit 2 Common Q PAMS is in conformance with RG 1.152, Revision 2, or provide justification for not conforming. (SSER 23, Section 7.5.2.2.3, pg 7-53, 7-60, 7-102)	EICB	Yes/ I&C	Complete Response provided in TVA to NRC letter dated May 6, 2011 I&C Matrix Item 368 Needs to be in Table 7.1-1 Response provided in TVA to NRC letter dated August 4, 2011	TVA to provide additional information. NRR tech staff review and document in SSER.		24
(99)		TVA should update FSAR Table 7.1-1 to reference IEEE 7-4.3.2-2003 as being applicable to the WBN Unit 2 Common Q PAMS. (SSER 23, Section 7.5.2.2.3, pg 7-53)	EICB	Yes/ I&C	Complete Provide response that Common Q PAMS meets these requirements and update FSAR in A105 I&C Matrix Item 369 <u>Addressed in Amendment 105 (change package 1-105-13)</u> Preparing FSAR A105 change package to close. Response provided in TVA to NRC letter dated August 4, 2011	TVA to provide additional information. NRR tech staff review and document in SSER.		24
(100)		TVA should update FSAR Table 7.1-1 to reference RG 1.168, Revision 1; IEEE 1012-1998; and IEEE 1028-1997 as being applicable to the WBN Unit 2 Common Q PAMS. (SSER 23, Section 7.5.2.2.3, pg 7-54)	EICB	Yes/ I&C	Complete Response provided in TVA to NRC letter dated May 6, 2011 I&C Matrix Item 370 <u>Addressed in Amendment 105 (change package 1-105-13)</u> Preparing FSAR A105 change package to close. Response provided in TVA to NRC letter dated August 4, 2011	TVA to provide additional information. NRR tech staff review and document in SSER.		24

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(101)		TVA should demonstrate that the WBN Unit 2 Common Q PAMS application software is in conformance with RG 1.168, Revision 1, or provide justification for not conforming. (SSER 23, Section 7.5.2.2.3, pg 7-54, 7-60, 7-65)	EICB	Yes/ I&C	<u>Due Date:TBD</u> <u>Initial response was not accepted by staff. WEC to provide analysis similar to the one for IEEE 603 demonstrating compliance.Complete Response provided in TVA to NRC letter dated February 25, 2011. I&C Matrix Item 084</u> <u>For NRC Inspection / Review</u>	TVA to provide additional information. NRR tech staff review and document in SSER.		24
(102)		TVA should update FSAR Table 7.1-1 to reference RG 1.209 and IEEE Std. 323-2003 as being applicable to the WBN Unit 2 Common Q PAMS. (SSER 23, Section 7.5.2.2.3, pg 7-54, 7-75)	EICB	Yes/ I&C	Complete Provide response that Common Q PAMS meets these requirements and update FSAR in A105 I&C Matrix Item 371 Item 1 <u>Addressed in Amendment 105 (change package 1-105-13)</u> <u>Preparing FSAR A105 change package to close.</u> Response provided in TVA to NRC letter dated August 4, 2011	TVA to provide additional information. NRR tech staff review and document in SSER.		24
(103)		TVA should demonstrate that the WBN Unit 2 Common Q PAMS conforms to RG 1.209 and IEEE Std. 323-2003, or provide justification for not conforming. (SSER 23, Section 7.5.2.2.3, pg 7-55)	EICB	Yes/ I&C	Complete <u>Prepare evaluation to show how Common Q PAMS meets these requirements.</u> I&C Matrix Item 371 Item 2 Response provided in TVA to NRC letter dated August 4, 2011	TVA to provide additional information. NRR tech staff review and document in SSER.		24

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(104)	CI	The NRC staff will review the WEC self assessment to verify that it the WBN Unit 2 PAMS is compliant to the V&V requirements in the SPM or that deviations from the requirements are adequately justified. (SSER 23, Section 7.5.2.2.3.4.2, pg 7-62, 7-63, 7-65, 7-70)	EICB	Yes/ I&C	<u>Complete.</u> Response provided in TVA to NRC letter dated June 10, 2011 I&C Matrix Item 041 Self Assessment is available for NRC review at the WEC Rockville Office For NRC Inspection / Review	NRR tech staff to confirm satisfactory findings in WEC self-assessment.		24
(105)		TVA should produce an acceptable description of how the WBN Unit 2 Common Q PAMS SysRS and SRS implement the design basis requirements of IEEE Std. 603-1991 Clause 4. (SSER 23, Section 7.5.2.2.3.4.3.1, pg 7-71)	EICB	Yes/ I&C	<u>Complete.</u> <u>Response provided in TVA to NRC letter dated Sept. 1, 2011. Due date: 9/1/11</u> <u>Prepare Response</u> I&C Matrix Item 213 & 372 <u>(dispositioned by Item 94)</u>	TVA to provide additional information. NRR tech staff review and document in SSER.		24
(106)		TVA should produce a final WBN Unit 2 Common Q PAMS SRS that is independently reviewed. (SSER 23, Section 7.5.2.2.3.4.3.1, pg 7-71)	EICB	Yes/ I&C	Complete Response provided in TVA to NRC letter dated June 10, 2011 I&C Matrix Item 372 item 2 NRC review pending	TVA to provide additional information. NRR tech staff review and document in SSER.		24
(107)	CI	TVA should provide to the NRC staff documentation to confirm that the final WBN Unit 2 Common Q PAMS SDDs that are independently reviewed. (SSER 23, Section 7.5.2.2.3.4.3.2, pg 7-71)	EICB	Yes/ I&C	Complete Response provided in TVA to NRC letter dated June 10, 2011 I&C Matrix Item 373 NRC review pending	NRR tech staff to confirm independent review of SDDs.		24
(108)		TVA should demonstrate to the NRC staff that there are no synergistic effects between temperature and humidity for the Common Q PAMS equipment. (SSER 23, Section 7.5.2.2.3.5.2, pg 7-75)	EICB	Yes/ I&C	<u>Complete.</u> <u>Response provided in TVA to NRC letter dated Sept. 1, 2011. Due date: 9/1/11</u> <u>Prepare Response</u> I&C Matrix Item None	TVA to provide additional information. NRR tech staff review and document in SSER.		24

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(109)		TVA should demonstrate to the NRC staff acceptable data storm testing of the Common Q PAMS. (SSER 23, Section 7.5.2.2.3.7.1.8, pg 7-78, 7-81)	EICB	Yes/ I&C	Complete Response provided in TVA to NRC letter dated June 10, 2011 I&C Matrix Item None NRC review pending	TVA to provide additional information. NRR tech staff review and document in SSER.		24
(110)		TVA should provide information to the NRC staff describing how the WBN Unit 2 Common Q PAMS design supports periodic testing of the RVLIS function. (SSER 23, Section 7.5.2.2.3.9.2.6, pg 7-93)	EICB	Yes/ I&C	Complete. Response provided in TVA to NRC letter dated Sept. 1, 2011. Due date: 9/1/11/8/11 Prepare Response I&C Matrix Item None	TVA to provide additional information. NRR tech staff review and document in SSER.		24
(111)		TVA should confirm to the staff that there are no changes required to the technical specifications as a result of the modification installing the Common Q PAMS. If any changes to the technical specifications are required, TVA should provide the changes to the NRC staff for review. (SSER 23, Section 7.5.2.2.3.11, pg 7-102)	EICB	Yes/ I&C	Complete Response provided in TVA to NRC letter dated May 6, 2011 I&C Matrix Item 374	TVA to provide additional information. NRR tech staff review and document in SSER.		25
Proposed Open Items								
(112)	CI	TVA should provide an update to the FSAR reflecting the radiation protection design features descriptive information provided in its letter dated October 4, 2010. (SSER 24, Section 12.4)	IHPB	LIC	Update FSAR-Complete. Addressed in A105 - change package 2-105-04			
(113)	CI	TVA should provide an update to the FSAR reflecting the justification for the periodicity of the COT frequency for WBN non-safety related area radiation monitors. (SSER 24, Section 12.4)	IHPB	Yes/ Hilmes I&C	Complete. A105 u Update of the FSAR - change package 2-105-07-			

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(114)	CI	TVA should update the FSAR to reflect that WBN meets the radiation monitoring requirements of 10 CFR 50.68. (SSER 24, Section 12.4)	IHPB	LIC	<u>Complete.</u> <u>Addressed in A105.Update FSAR. - change package 2-105-01</u>			
(115)	CI	TVA should update the FSAR to reflect the information regarding design changes to be implemented to lower radiation levels as provided in its letter the NRC dated June 3, 2010. (SSER 24, Section 12.5)	IHPB	LIC	<u>Due Date: TBD</u> Update FSAR.			
(116)	CI	TVA should update the FSAR to reflect the qualification standards of the RPM as provided in its letter to the NRC dated October 4, 2010. (SSER 24, Section 12.6)	IHPB	LIC	<u>Complete.</u> <u>Addressed in A105. - change package 2-105-06Update FSAR.</u>			
(117)	CI	TVA should update the FSAR to reflect the calculational basis for access to vital areas as provided in its letter dated February 25, 2011. (SSER 24, Section 12.7.1)	IHPB	LIC	<u>Due date: TBD</u> Update FSAR.			
(118)		TVA should provide to the NRC staff a description of how the other vanadium detectors within the IITA would be operable following the failure of an SPND. (SSER 24, Section 7.7.1.9.2)	EICB	Yes/ ELE, I&C	<u>Due date: 10/1/11.</u> <u>Provide response to NRC.</u>			
(119)		TVA should submit WNA-CN-00157-WBT, Revision 0, to the NRC by letter. The NRC staff should confirm by review of WNA-CN-00157-WBT, Revision 0, that no credible source of faulting can negatively impact the CETs or PAMS train. (SSER 24, Section 7.7.1.9.5)	EICB	Yes/ ELE, I&C	<u>Complete.</u> <u>Response provided in TVA to NRC letter dated Sept. 1, 2011.</u> <u>Due date: 10/1/11.</u> <u>Provide response to NRC.</u>			

<u>Item</u>	<u>Type</u>	<u>Action Required</u>	<u>NRC Lead</u>	<u>TVA Response Required/ TVA Lead</u>	<u>TVA Action Required to Close</u>	<u>NRC Action Required to Close</u>	<u>Due Date</u>	<u>SSER</u>
(120)		TVA should confirm to the NRC staff that the maximum over-voltage or surge voltage that could affect the system is 264 VAC, assuming that the power supply cable to the SPS cabinet is not routed with other cables greater than 264 VAC. (SSER 24, Section 7.7.1.9.5)	EICB	Yes/ ELE, I&C	<u>Complete.</u> <u>Response provided in TVA to NRC letter dated Sept. 1, 2011. Due date: 10/1/11.</u> <u>Provide response to NRC. Note that the non-prop/affidavits to be provided by 12/1/11</u>			
(121)		TVA should submit the results to the NRC staff of a 600 VDC dielectric strength test performed on the IITA assembly. (SSER 24, Section 7.7.1.9.5)	EICB	Yes/ ELE, I&C	<u>Due date: 10/1/11.</u> <u>Provide response to NRC.</u>			
(122)		TVA should confirm to the NRC staff that different divisions of safety power are supplied to the IIS SPS cabinets, with the power cables routed in separate shielded conduits. (SSER 24, Section 7.7.1.9.5)	EICB	Yes/ ELE, I&C	<u>Complete.</u> <u>Response provided in TVA to NRC letter dated Sept. 1, 2011. Due date: 10/1/11.</u> <u>Provide response to NRC.</u>			
(123)		TVA should provide an explanation to the NRC staff of how the system will assign a data quality value to notify the power distribution calculation software to disregard data from a failed SPND. (SSER 24, Section 7.7.1.9.5)	EICB	Yes/ ELE, I&C	<u>Due date: 10/1/11.</u> <u>Provide response to NRC.</u>			
(124)		While the BEACON datalink on the Application server can connect to either BEACON machine, only BEACON A is used for communication. TVA should clarify to the NRC staff whether automatic switchover to the other server is not permitted. (SSER 24, Section 7.7.1.9.5)	EICB	Yes/ ELE, I&C	<u>Complete.</u> <u>Response provided in TVA to NRC letter dated Sept. 1, 2011. Due date: 10/1/11.</u> <u>Provide response to NRC.</u>			
(125)		TVA should provide clarification to the NRC staff of the type of connector used with the MI cable in Unit 2, and which EQ test is applicable. (SSER 24, Section 7.7.1.9.5)	EICB	Yes/ ELE, I&C	<u>Due date: 10/1/11.</u> <u>Provide response to NRC.</u>			

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(126)		TVA should provide the summary report of the EQ for the IITA. (SSER 24, Section 7.7.1.9.5)	EICB	Yes/ ELE , I&C	<u>Due date: 10/1/11.</u> <u>Provide response to NRC.</u>			
(127)		TVA should provide a summary to the NRC staff of the electro-magnetic interference/radio-frequency interference (EMI/RFI) testing for the MI cable electro-magnetic compatibility (EMC) qualification test results. (SSER 24, Section 7.7.1.9.5)	EICB	Yes/ ELE , I&C	<u>Due date: 10/1/11.</u> <u>Provide response to NRC.</u>			
(128)		TVA should submit the seismic qualification test report procedures and results for the SPS cabinets to the NRC staff for review. (SSER 24, Section 7.7.1.9.5)	EICB	Yes/ ELE, I&C	<u>Complete.</u> <u>Response provided in TVA to NRC letter dated Sept. 1, 2011.</u> <u>Note that the non-prop/affidavits to be provided by 12/1/11</u> <u>Due date: 10/1/11.</u> <u>Provide response to NRC.</u>			
(129)		TVA should verify to the NRC staff resolution of the open item in WNA-CN-00157-WBT for the Quint power supply (to be installed in the SPS cabinet) to undergo EMC testing of 4 kV to validate the assumptions made in the Westinghouse analysis. (SSER 24, Section 7.7.1.9.5)	EICB	Yes/ ELE, I&C	<u>Due date: 10/1/11.</u> <u>Provide response to NRC.</u>			
(130)		TVA should provide a summary to the NRC staff of the EMC qualification test results of the SPS cabinets. (SSER 24, Section 7.7.1.9.5)	EICB	Yes/ ELE, I&C	<u>Complete.</u> <u>Response provided in TVA to NRC letter dated Sept. 1, 2011.</u> <u>Note that the non-prop/affidavits to be provided by 12/1/11</u> <u>Due date: 10/1/11.</u> <u>Provide response to NRC.</u>			
(131)		TVA should review the EOP action level setpoint to account for the difference between core exit temperature readings for Unit 1 and Unit 2 and confirm the EOP action level setpoint to the NRC staff. (SSER 24, Section 7.7.1.9.5)	EICB	Yes/ Koontz	<u>Due Date: TBD</u>			

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(132)		TVA should provide to the NRC staff analyses of the B dilution event that meet the criteria of SRP Section 15.4.6, including a description of the methods and procedures used by the operators, to identify the dilution path(s) and terminate the dilution. (SSER 24, Section 15.2.4.4)	SRXB	Koontz	<u>Due Date: TBD</u> Provide analysis results to NRC			
(133)		TVA will perform either a hydrology analysis without crediting the use of the sand baskets at Fort Loudoun dam for the seismic dam failure and flood combination or TVA will perform a seismic test of the sand baskets. TVA will report the results of this analysis or test to the NRC by October 31, 2011. (SSER 24, Section 2.4.10)	EMCB	CORP CIVIL	<u>Due Date: TBD</u> Provide analysis to NRC.			
(134)		TVA should provide to the NRC staff supporting technical justification for the statements in Amendment 104 of FSAR Section 2.4.4.1, "Dam Failure Permutations," page 2.4-32 (in the section "Multiple Failures") that, "Fort Loudoun, Tellico, and Watts Bar have previously been judged not to fail for the OBE (0.09 g). Postulation of Tellico failure in this combination has not been evaluated but is bounded by the SSE failure of Norris, Cherokee, Douglas and Tellico." (SSER 24, Section 2.4.10)	EMCB	CORP CIVIL	<u>Due Date: TBD</u> Provide analysis to NRC.			

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(135)		TVA has not provided the analysis required by 10 CFR Part 50, Appendix I, subsection II.D. TVA should demonstrate with a cost-benefit analysis that a sufficient reduction in the collective dose to the public within a 50-mile radius would not be achieved by reasonable changes to the design of the WBN gaseous effluent processing systems. (SSER 24, Section 11.3)	IHPB	LIC	Complete. TVA 07/28/11 letter to NRC (T02 110728 004)			
Outstanding I&C Matrix Items								
TVA 4		The audit mentioned on 2/2/22 above, was performed 2/28-3/4/2011 (ML110980761). This audit report documents WBN2 specific and generic actions required to address the conditions identified during the audit.	EICB		I&C Matrix Item 043 Item is verified to be duplicate of activity already documented in matrix			
TVA 2		TVA to respond to open items in CQ PAMS SE. See ML111150287 Section 7.5.2.2.3.4.2.5 on page 24 and Section 7.5.2.2.3.4.3.1 on page 26.	EICB		I&C Matrix Item 142, 143, 144, 145, 183, 185 Item is verified to be duplicate of activity already documented in matrix			
TVA 5		All safety related work must be quality controlled per 10CFR50, App. B. TVA to confirm that the procedure used for the RM-1000 system verification tests (04507007) was actually a procedure that was prepared per 10CFR50, App. B. 7.5.2.3	EICB	I&C	Due Date: TBD Provide requested response from GA I&C Matrix Item 346			
TVA 6		Was the CERPI system developed under a 10 CFR 50 Appendix B compliant program?	EICB	I&C	Complete. Response in letter dated 4/15/11 I&C Matrix Item 359 NRC Review Pending			

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TVA 7		Was the Foxboro IA system developed under a 10 CFR 50 Appendix B compliant program?	EICB	I&C	Complete. Response in letter dated 4/15/11 I&C Matrix Item 361 NRC Review Pending			

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TVA 8		<p>OI#199 requested TVA to provide information concerning how TVA plans to meet regulatory criteria for Quality (10 CFR 50.55a(a)(1)) associated with the Technical Support Center and Nuclear Data Link. TVA responded in Letter Dated October 5, 2010, Item 63; however, TVA's response does not address the quality aspects of these system features. A similar question had been asked for Quality Criteria adherence for the SPDS and the BISI functions of the Integrated Computer System. In response to that request (same letter) TVA provided a description of TVA procedures, BISI software development procedures, and various management measures that will be taken to assure high quality in the design, operation, and maintenance of the SPDS and BISI functions of the ICS. Since the TSC and Nuclear Data Link information originates in the SPDS function of the ICS, are there any aspects of the quality measures that apply to the TSC and NDL features developed as part of quality processes for the ICS that are applicable to the data communications features?</p> <p>Specifically, what is the scope of TVA Procedure SPP-2.6 "Computer Software Control"? How does it apply to the ICS functions of a) SPDS, b) BISI, and c) TSC and NDL functions? Wouldn't there be aspects of the quality procedures that apply to the development, maintenance, and operations of the software needed to support the data communications features. Also, what quality measures will be applied to develop, maintain, and operate the hardware that accomplishes the TSC and NDL functions to ensure that these features will be reliable and available when needed?</p>	EICB	I&C	<p><u>Complete.</u> Response submitted in letter dated 5/16/11</p> <p>I&C Matrix Item 363</p> <p>NRC Review pending</p>			

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TVA 9		<p>On <u>5/6/2010</u> (See Open Item No. 81) the NRC Staff requested an evaluation of the Common Q PAMS against the current staff position.</p> <p>By letter dated <u>2/25/11</u> (ML110620219), TVA docketed a response: "that WBN2 is not committed in complying with Reg. Guide 1.75...Since WBN2 is not committed to RG 1.75 or IEEE 384, no comparison is required..."</p> <p>However, WBN2 is committed to RG 1.75 Rev. 2, "Physical Independence of Electric Systems." RG 1.75 Rev. 3 and IEEE Std. 384-1992 are used, in part, to address IEEE Std 603-1991 Clause 5.6.1. The current NRC staff position for RG 1.75 is documented in Rev. 3. Based upon the review of this item, the staff finds the following open item:</p> <p>1—TVA to updated FSAR (Amendment 103) Table 7.1-1 to include RG 1.75 Rev. 3 for WBN2 Common Q PAMS and the Sorrento Containment High Radiation monitor.</p> <p>The Common Q PAMS was designed to meet the requirements of RG 1.75 Rev. 2. WBN2 did not perform an analysis to RG 1.75 Rev. 3. Based upon the review of this item, the staff finds the following open item:</p> <p>2—TVA to evaluate Common Q PAMS and the Sorrento Containment High Radiation monitor for conformance with RG 1.75 Rev. 3.</p> <p>Submit FSAR amendment to reflect changes</p>	EICB		<p>Response submitted in letter dated 5/16/11</p> <p>I&C Matrix Item 365</p> <p>Pending A105 submittal.</p> <p>Item is verified to be duplicate of activity already documented in matrix</p>			

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TVA 10		<p>Reference—EDCR # 52321, Revision A—EDCR Unit Difference Form --- Bechtel Document</p> <p>Page 2—Maintenance Difference—</p> <p>The proposed In-Core Instrument Thimble Assemblies (IITAs) which will replace Movable In-Core Detectable Systems (MIDs) have the following features:</p> <p>(1) IITAs are not fully extracted and they are held in a movable frame assembly.</p> <p>(2) IITAs exert lower vibration amplitude and therefore, aging degradation due to wear does not occur.</p> <p>(3) Loss of reactor coolant system pressure boundary due to breach of IITA outer sheath does not occur.</p> <p>Question: The staff believes that the licensee should provide an inspection program to confirm that the aforementioned attributes associated with IITAs are valid and this inspection program can be a part of a routine maintenance program.</p> <p>Replacement of 58 CETs for the current 65 CETs to be addressed by the fuels division.</p>	EICB		<p>Response submitted 6/13/11 I&C Matrix Item 376 NRC Review pending Item is verified to be duplicate of activity already documented in matrix</p>			

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TVA 11		Non-Proprietary description of the qualification of the MI cable assemblies with references to any EQ report (if applicable) — June 10th	EICB		Response submitted 6/13/11 I&C Matrix Item 384 NRC Review pending Item is verified to be duplicate of activity already documented in matrix			
TVA 12		Non-Proprietary description of the qualification of the HTA with references to EQ report(s) NRC Update (Alvarado) — need the proprietary versions of reports, such as EQ tests, EMI/RFI tests, calculations, and other documents to make a safety determination, not non-proprietary reports that reference these reports and calculations. NRC update (RA) 6/16: The report will be available after June 30. This is still an open item	EICB		I&C Matrix Item 383 Item is verified to be duplicate of activity already documented in matrix			
TVA 13		Provide the following documents, which describe operation of the WINCISE Application Server. <ul style="list-style-type: none"> • Sections 1 and 2 of the WNA-GO 00075-WBT, WINCISE Signal Processing System Cabinet Operation & Maintenance Manual, Revision 0. • WNA-DS-01811-WBT, WINCISE Signal Processing System Design Requirements, Revision 0, May 2010 • 420A90, WINCISE Functional Specification for Watts Bar Unit 2, Revision 2. 	EICB		I&C Matrix Item 388 Item is verified to be duplicate of activity already documented in matrix			

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TVA 14		Provide the proprietary version of the calculation described in "WNA-CN-00157-WBT, Watts Bar 2 IIS Signal Processing System Isolation Requirements". Revision 0.	EICB		I&C Matrix Item 389 Item is verified to be duplicate of activity already documented in matrix			
TVA 15		Westinghouse has indicated that the WINCISE Application Servers, as well as the BEACON are redundant. However, the WINCISE Application Server communicates only with Beacon A. Westinghouse also explained that to switch from Beacon A to Beacon B, the operator must perform this manually. After reviewing Westinghouse documents, we couldn't find explanation that automatic switchover to the other server is not permitted.	EICB		I&C Matrix Item 390 Item is verified to be duplicate of activity already documented in matrix			
TVA 16		Clarify the type of connector used with the MI cable in Unit 2. During this review, we identified the following connectors, but we could not establish which one will be used in unit 2. Also explain if the qualification performed is still valid or if it is going to be revised. <ul style="list-style-type: none"> ○ Whittaker connectors ○ Litton connectors ○ Electronic Resources Division (ERD) connectors 	EICB		I&C Matrix Item 391 Item is verified to be duplicate of activity already documented in matrix			

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TVA 17		Clarify the logic to subtract failed detectors from the algorithm used to calculate core power. During the May 12 meeting with Westinghouse and TVA, Westinghouse explained that the WINCISE Application Server includes an algorithm to subtract failed detectors. However, during our review in Westinghouse office, we could not find description on how this algorithm is accomplished. Furthermore, the document BEACON Data Processing Application Program Software Requirements Specification includes the following assumption: "BEACON will perform the subtraction between various length elements for the vanadium detector design. This is appropriate, as BEACON is more equipped to support the replacement value algorithm should an element fail. BEACON has knowledge of the flux shape which is critical to this process."	EICB		I&C Matrix Item 392 Item is verified to be duplicate of activity already documented in matrix			
TVA 18		Clarify if the IITA assembly and the 6-to-1 transition cable have been subjected to the 600VDC dielectric strength test. Document Watts Bar 2 IIS Signal Processing System Isolation Requirements states that the MI and IITA assemblies need to be subjected to a 600VDC dielectric strength test. Letter LTR ME-10-3 summarizes the result for the MI cable. However, similar documentation was not available for the IITA assembly.	EICB		I&C Matrix Item 393 Item is verified to be duplicate of activity already documented in matrix			

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TVA 19		Confirm that power supply cables to the WINCISE SPS cabinet are not routed with cables that are greater than 264V.	EICB		I&C Matrix Item 394 Item is verified to be duplicate of activity already documented in matrix			
TVA 20		Confirm that power supply to the WINCISE SPS cabinet are from isolated 1E sources, such that power supply routed to PAMS train A is the same routed to SPS cabinet 1, and power supply routed to PAMS train B is the same routed to SPS cabinet 2.	EICB		I&C Matrix Item 395 Item is verified to be duplicate of activity already documented in matrix			
TVA 21		Provide proprietary, non-proprietary versions and affidavits for withholding for the following documents: <ul style="list-style-type: none"> General Atomics Electronic Systems 04038903-1SP, Qualification Basis for 04031101-001 (2-RE-90-130 &131). General Atomics Electron Systems 04038903-2SP, Qualification Basis for 04031301-001 (2_RE-90-106). General Atomics Electronic Systems 04038903-4SP, Qualification Basis for 04031501-001 (2-RE-90-112). 	EICB	I&C	Due date: 10/1/11 Provide response to NRC. I&C Matrix Item 396			
Closed								
(52)		TVA should provide an update to the FSAR replacing Table 12.2-3 with the expected source strength values of the freshly irradiated IITAs. (Section 12.3)	IHPB		Response provided in TVA to NRC letter dated June 7, 2011. Complete.	Never issued in SSER, issued as RAI questions. TVA provided information in February 25, 2011 letter. See also letter of 6/7/11.		

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(53)		TVA should provide an update to the FSAR reflecting the information provided in its letter dated October 4, 2010, regarding the WBN radiation protection design features, including controlled access areas, decontamination areas, and onsite laboratories and counting rooms. (Section 12.4)	IHPB			Never issued in SSER, issued as RAI questions. TVA provided information in February 25, 2011 letter.		
(54)		TVA should provide adequate technical justification to the staff to relax the frequency of the radiation monitor channel quarterly operability tests. TVA should provide sufficient information to the staff to determine that the portable airborne radiation monitors comply with the requirements of 10 CFR 20.1501. TVA should provide sufficient information to the staff to determine that the licensing or TVA program requirements for the calibration and operability testing of area radiation monitors are sufficient to meet the regulatory requirements of 10 CFR 20.1501. (Section 12.4)	IHPB		On bucket list. Calculation has been issued and is ready to submit. Meeting with NRC next week	Never issued in SSER, issued as RAI questions. TVA to provide revised wording in FSAR to discuss statistically sound justification to justify relaxation of channel check frequency.		
(55)		TVA should provide sufficient information to the staff to demonstrate that the two area radiation monitors for the Spent Fuel Pit comply with the requirements of 10 CFR 70.24 and 10 CFR 50.68 for radiation monitoring in areas where fuel is handled or stored. (Section 12.4)	IHPB		TVA to NRC letter submitted July 14, 2011. A 105 Change package prepared	Never issued in SSER, issued as RAI questions. TVA clarify previous RAI response from letter 2/25/11 in new letter of 6/14/11.		
(56)	CI	TVA should update the FSAR to reflect the information regarding the dose assessment program provided in its letter the NRC dated June 3, 2010. (Section 12.5)	IHPB			Never issued in SSER, issued as RAI questions.		

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(57)	CI	TVA should update the FSAR to reflect the qualification standards of the RPM as provided in its letter to the NRC dated October 4, 2010. (Section 12.6)	HHPB			Never issued in SSER, issued as RAI questions.		
(58)	CI	The staff has insufficient information to conclude that TVA has taken appropriate actions to reduce radiation levels and increase the capability of operators to control and mitigate the consequences of an accident at WBN Unit 2, in accordance with the guidance of NUREG 0737, Item II.B.2, or can maintain occupational doses to plant operators within the requirements of GDC 19. Therefore, the staff cannot conclude that the plant shielding for WBN Unit 2 is acceptable. (Section 12.7.1)	HHPB		(I&C Matrix Item 349) WBNAPS3-126, "EQ Dose in the U1/U2 Auxiliary Instrument Rooms and the Computer Room in the Control Building" WBNAPS3-127 "EQ Dose in the Control Building" TVA to review	Never issued in SSER, issued as RAI questions. TVA provided information in February 25, 2011 letter. TVA to provide calculation or summary of calculation when complete.		
(68)		TVA should clarify to the NRC staff how the CSS complies with GDC 5. (Section 9.2.2)	SBPB			Never issued in SSER		
(84)		TVA should provide additional information for the NRC staff to complete its review of post LOGA long term cooling boric acid precipitation. (Section 15.3.1)	NRR		Response provided in TVA to NRC Letter dated July 18, 2011. complete	Never issued in SSER		
(85)		The 95/95 peak local oxidation was calculated to be 1.04 percent, while core-wide oxidation was calculated to be much less than 0.1 percent. TVA should provide to the NRC staff the value of the decay heat multiplier used for this limiting large break, in order for the staff to complete its evaluation. (Section 15.3.1)	NRR		Response provided in TVA to NRC Letter dated July 18, 2011. complete	Never issued in SSER		

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(86)		TVA should demonstrate to the staff, in the WCOBRA/TRAC analysis of the limiting break, that the core remains covered with a two-phase mixture and can be cooled for an indefinite period of time. (Section 15.3.1)	NRR		Response provided in TVA to NRC Letter dated July 18, 2011. complete	Never issued in SSER		
(87)		In order for the staff to complete its evaluation, TVA should provide (1) a time step sensitivity study for the limiting break displaying downcomer boiling, (2) a list of ten key parameter plots for the worst case downcomer boiling transient, (3) values for the lateral k factors used in the evaluation, and (4) the manner in which condensation was modeled in the downcomer. (Section 15.3.1)	NRR		Response provided in TVA to NRC Letter dated July 18, 2011. complete	Never issued in SSER		
(88)		It is also unclear to the staff that the entrainment correlation information has been incorporated into the EOP, to ensure that operators do not initiate hot and cold side injection during the period of time that entrainment could preclude injection into the hot legs. TVA should provide the EOP guidance/instructions for the operators to the staff for review. (Section 15.3.1)	NRR		Response provided in TVA to NRC Letter dated July 18, 2011. complete	Never issued in SSER		
(89)		TVA should demonstrate, quantitatively, the applicability of the generic analysis to WBN Unit 2, to demonstrate that the EOP instructions to the operators can effectively deal with the failure of a bottom mounted instrument tube in the lower head. (Section 15.3.1)	NRR		Response provided in TVA to NRC Letter dated July 18, 2011. complete	Never issued in SSER		

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(92)		The NRC staff should perform an inspection in accordance with NRC Temporary Instruction 2515/087, "Inspection of Licensee's Implementation of Multi-Plant Action A-17: Instrumentation for Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident (Regulatory Guide 1.97)." (Section 7.5.2.1.4)	RII			Never issued in SSER		
TVA 3		NRC to confirm receipt of the following: The non-proprietary versions of the following RM-1000, Containment High Range Post Accident Radiation Monitor documents will be provided by June 30, 2010. 1. V&V Report 04508006A 2. System Description 04508100-1TM 3. Qualification Reports 04508905-QR, 04508905-1 SP, 04508905-2SP, 04508905-3SP 4. Functional Testing Report 04507007-1TR			Documents submitted on TVA letter to NRC dated July 15, 2010. I&C Matrix Item 101 NRC action pending	Item is closed. This is already be tracked on bucket list. Waiting for document control processing.		
TVA 4		Attachment 36 contains Foxboro proprietary drawings 08F802403-SC-2001 sheets 1 through 6. An affidavit for withholding and non-proprietary versions of the drawings will be submitted by January 31, 2011.			Response in letter dated 11/24/10 I&C Matrix Item 327 NRC Review Pending	Item is closed. 11/24/10 letter reviewed and drawings were included.		
(3)	CI	Confirm TVA submitted update to FSAR section 8.3.1.4.1. (NRC safety evaluation dated August 31, 2009, ADAMS Accession No. ML092151155)	EEEE	Yes	Response provided in TVA to NRC letter dated April 6, 2011. Complete	Closed in SSER 24, Section 8.1. TVA to include in amendment to FSAR and highlight in transmittal letter. NRR staff review of FSAR update. In 4/6/11 letter, TVA states it was in AMD 95.		24

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(15)		TVA should confirm to the NRC staff the completion of Primary Stress Corrosion Cracking (PWSCC) mitigation activities on the Alloy 600 dissimilar metal butt welds (DMBW) in the primary loop piping. (Section 3.6.3)	CPNB	Yes	Response provided in TVA to NRC letter dated April 6, 2011. Complete	Closed in SSER 24, Section 3.6.3. TVA submitted information in A103. NRR tech staff review and document in SER.		24
(18)		Based on the extensive layup period of equipment within WBN Unit 2, the NRC staff must review, prior to fuel load, the assumptions used by TVA to re-establish a baseline for the qualified life of equipment. The purpose of the staff's review is to ensure that TVA has addressed the effects of environmental conditions on equipment during the layup period. (Section 3.11.2.2)	RII/ EEEB	No	Response provided in TVA to NRC letter dated April 6, 2011. Complete	Closed in Inspection Report 0500391/2011604, dated June 29, 2011, ADAMS Accession No. ML111810890. Conduct EQ inspection. Document in IR and update status in Appendix HH. See TVA response (RAI 3.11-EQ-1) in letter dated 12/17/10.		24
(19)		The NRC staff should complete its review of TVA's EQ Program procedures for WBN Unit 2 prior to fuel load. (Section 3.11.2.2.1)	RII/ EEEB	No	For NRC Inspection / Review Provide NRC Residents copies of EQ documents as requested for the onsite inspection Complete - Expect NRC to close in next inspection report	Closed in Inspection Report 0500391/2011604, dated June 29, 2011, ADAMS Accession No. ML111810890. TVA to provide RI staff with copies of EQ documents. Conduct EQ inspection. Document in IR and update status in Appendix HH.		24
(22)		TVA must clarify its use of the term "equivalent" (e.g., identical, similar) regarding the replacement terminal blocks to the NRC staff. If the blocks are similar, then a similarity analysis should be completed and presented to the NRC for review. (Section 3.11.2.2.1)	EEEB	Yes	Response provided in TVA to NRC letter dated April 6, 2011. Complete	Closed in SSER 24, Section 8.1. NRR in receipt of information to address this item in TVA letter of 4/6/11. NRR tech staff review and document in SER.		24

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(24)		The NRC staff requires supporting documentation from TVA to justify its establishment of a mild environment threshold for total integrated dose of less than 1×10^3 rads for electronic components such as semiconductors or electronic components containing organic material. (Section 3.11.2.2.1)	EEEEB	Yes	Response provided in TVA to NRC letter dated April 6, 2011. Complete	Closed in SSER 24, Section 8.1. TVA provided information in April 6, 2011 letter. NRR tech staff review and document in SER.		24
(26)		For the scenario with an accident in one unit and concurrent shutdown of the second unit without offsite power, TVA stated that Unit 2 pre-operational testing will validate the diesel response to sequencing of loads on the Unit 2 emergency diesel generators (EDGs). The NRC staff will evaluate the status of this issue and will update the status of the EDG load response in a future SSER. (SSER 22, Section 8.1)	EEEEB	Yes	Response provided in TVA to NRC letter dated April 6, 2011. Complete	Closed in SSER 24, Section 8.1. TVA provided information in April 6, 2011 letter. NRR tech staff review and document in SER. This item was also partially reviewed during EDSFI. EEEB to review results of IDVP and EDSFI reports for impact in this area.		24
(27)		TVA should provide a summary of margin studies based on scenarios described in Section 8.1 for CSSTs A, B, C, and D. (SSER 22, Section 8.2.2)	EEEEB	Yes	Response provided in TVA to NRC letter dated April 6, 2011. Complete	Closed in SSER 24, Section 8.1. TVA provided information in April 6, 2011 letter. NRR tech staff review and document in SER.		24
(28)		TVA should provide to the NRC staff a detailed discussion showing that the load tap changer is able to maintain the 6.9 kV bus voltage control band given the normal and post-contingency transmission operating voltage band, bounding voltage drop on the grid, and plant conditions. (SSER 22, Section 8.2.2)	EEEEB	Yes	Response provided in TVA to NRC letter dated April 6, 2011. Complete	Closed in SSER 24, Section 8.1. TVA provided information in April 6, 2011 letter. NRR tech staff review and document in SER.		24

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(29)		TVA should provide information about the operating characteristics of the offsite power supply at the Watts Bar Hydro Plant (for dual-unit operation), including the operating voltage range, postcontingency voltage drops (including bounding values and post-unit trip values), and operating frequency range. (SSER 22, Section 8.2.2) (corrected version of Open Item 29 from previous SSER Appendix HH)	EEEEB	Yes	Response provided in TVA to NRC letter dated June 7, 2011. Complete	Closed in SSER 24, Section 8.1. TVA to provide updated grid stability analysis. TVA provided information in letter of 6/7/11. NRR tech staff review and document in SER.		24
(31)		TVA should clarify the loading sequence as explained in its letter dated December 6, 2010 to the staff. TVA should clarify whether the existing statements in FSAR regarding automatic sequencing logic are correct. If the FSAR description is correct, TVA should explain how the EDG and logic sequencing circuitry will respond to a LOCA followed by a LOOP scenario. (SSER 22, Section 8.3.1.11) (corrected version of Open Item 31 from SSER 22 Appendix HH)	EEEEB	Yes	Response provided in TVA to NRC letter dated April 6, 2011. Complete.	Closed in SSER 24, Section 8.1. TVA provided information in April 6, 2011 letter. NRR tech staff review and document in SER.		24
(34)	CI	TVA stated that the method of compliance with Phase I guidelines would be substantially similar to the current Unit 1 program and that a new Section 3.12 will be added to the Unit 2 FSAR that will be materially equivalent to Section 3.12 of the current Unit 1 FSAR. (SSER 22, Section 9.1.4)	SBPB	Yes	Response provided in TVA to NRC letter dated April 6, 2011. Complete.	Closed in SSER 24, Section 9.1.4. TVA submitted information in 4/6/11 letter and A103. NRR tech staff review and document in SER.		24

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(36)		TVA should provide information to the NRC staff to enable verification that the SGBS meets the requirements and guidance specified in the SER or provide justification that the SGBS meets other standards that demonstrate conformance to GDC 1 and GDC 14. (SSER 22, Section 10.4.8)	CSGB/D ORL	Yes	Response provided in TVA to NRC letter dated April 6, 2011. Complete.	Closed in SSER 24, Section 10.4.8. TVA provided information in April 6, 2011 letter. NRR tech staff review and document in SER.		24
(62)	CI	Confirm TVA's change to FSAR Section 10.4.9 to reflect its intention to operate with each CST isolated from the other. (SSER 23, Section 10.4.9)	SBPB	Yes	Response provided in TVA to NRC letter dated June 7, 2011. Complete	Closed in SSER 24, Section 10.4.9. TVA provided information in letter of 6/7/11 and A103. NRR tech staff review and update status in Appendix HH.		24
(82)		The staff concluded that the information provided by TVA pertaining to the in-containment LPMS equipment qualification for vibration was incomplete. TVA should provide (item number 362 of ADAMS Accession No. ML111050009), documentation that demonstrates the LPMS in-containment equipment has been qualified to remain functional in its normal operating vibration environment, per RG 1.133, Revision 1. (SSER 23, Section 7.6.1)	EICB	Yes	Response provided in TVA to NRC letter dated June 10, 2011 I&C Matrix Item 362 Complete - Staff accepted the response and closed the I&C Matrix Item as of 7/11/11.	Closed in SSER 24, Section 7.6.1.4.5. TVA provided LPMS equipment vibration qualification in letter of 6/10/11. NRR tech staff review and document in SER. I&C matrix item 362		24