

WBN2Public Resource

From: Poole, Justin
Sent: Tuesday, October 12, 2010 6:59 AM
To: Singh, Gursharan
Cc: WBN2HearingFile Resource
Subject: FW: Rad Mon Questions

See below

Justin C. Poole
Project Manager
NRR/DORL/LPWB
U.S. Nuclear Regulatory Commission
(301)415-2048
email: Justin.Poole@nrc.gov

From: Crouch, William D [mailto:wdcrouch@tva.gov]
Sent: Monday, October 11, 2010 7:22 AM
To: Poole, Justin
Subject: FW: Rad Mon Questions

See below.

William D. (Bill) Crouch
(423) 365-2004 WBN
(256) 777-7676 Cell

From: Clark, Mark Steven
Sent: Thursday, October 07, 2010 3:23 PM
To: Crouch, William D
Subject: FW: Rad Mon Questions

Bill:

Please forward to Justin for Gursharan Singh.

Thanks,

Steve

Steve Clark
Bechtel Power Corp.
Control Systems
Watts Bar 2 Completion Project
Phone: 865.632.6547
Fax: 865.632.2524
e-mail: msclark0@tva.gov

From: Chavez, Hector [mailto:Hector.Chavez@ga-esi.com]
Sent: Wednesday, October 06, 2010 4:42 PM
To: Clark, Mark Steven; Mather, Dale C

Cc: Temples, Joe T Jr
Subject: RE: Rad Mon Questions

Mark,

It all seems fine, no additional comments.

Hector Chavez

Project manager
 General Atomics Electronic Systems, Inc.
 (858) 522-8341
Hector.Chavez@ga-esi.com

From: Clark, Mark Steven [mailto:msclark0@tva.gov]
Sent: Wednesday, October 06, 2010 12:54 PM
To: Clark, Mark Steven; Chavez, Hector; Mather, Dale C
Cc: Temples, Joe T Jr
Subject: RE: Rad Mon Questions

I don't know what happened but I lost my numbering. This one is easier to read

<p>TVA has provided various documents in support of RM-1000 high range monitors for WBN2. Please clarify the following: RM-1000 v1.1 Software Verification Report 04508006 (Sequoyah) RM-1000 v1.2 Software Verification Report 04508006 (Sequoyah) RM-1000 System Verification Test Results (Sequoyah)</p> <p>These documents were prepared for the Sequoyah plant. IS the version provided applicable to WBN2? Please confirm and explain if these documents are applicable to WBN 2 as provided or with differences?</p>	<p>The Sequoyah RM-1000 v1.1 Software Verification Report 04508006 and RM-1000 v1.2 Software Verification Report 04508006 are applicable to WBN Unit 2.</p> <p>The RM-1000 System Verification Test Results report is not applicable to WBN Unit 2. This document was for the non-safety related software and was superseded by the 04508006 v1.1 and v1.2 reports for the safety-related software.</p>
<p>TVA has provided a proprietary and a non-proprietary version of Technical Manual for RM-1000 Digital Radiation Processor under ML101680582 and ML101680587).</p> <p>(i) Are these documents applicable to WBN2 as provided (October 2003 version). (ii) Why is DCN38993-A attached at the back of the proprietary version? It is for WBN1 Turbine Governor Control Valve. (iii) This document does not state the requirements for RM-1000 units. Please provide a document that states the requirements for the RM-1000 radiation monitors for WBN2.</p>	<p>(i) These documents are applicable to WBN Unit 2. (ii) This was an error in document preparation that occurred when attachments were assembled for a previous letter. (iii) The Technical Manual is not intended to include equipment requirements. Requirements would be found in the applicable TVA Specifications for the contract.</p>
<p>TVA has provided the following documents for RM-1000 equipment qualification:</p> <p>(i) Qualification Test Report for RM-1000 Processor Module and Current-To-Frequency Converter 04508905-QR (January 2001) (ii) Qualification Test Report Supplement, RM-1000 Upgrades 04508905-1SP (June 2006) (iii) Qualification Test Report Supplement, RM-</p>	<p>(i) Applicable to WBN Unit 2. 04508905-1QR is applicable only in regards to the RM-1000, with the exception of re-qualification of certain RM-1000 equipment differences covered in the -1SP report. The Current-to-Frequency (I-F) converter module qualifications in the base report and the -1SP report are not applicable to the RM-1000s, and will be used later as references in the WBN Unit 2 specific</p>

<p>1000 Upgrades 04508905-2SP (June 2008) (iv) Qualification Test Report Supplement, RM-1000 Upgrades 04508905-3SP (May 2008)</p> <p>Please clarify whether all of these are fully applicable to WBN2 or are they applicable with exceptions? If with exceptions, then please clarify what those are.</p> <p>Supplement 3 was issued one month prior to supplement 2. Please explain the reason for the same.</p>	<p>qualification reports. (ii) Applicable to WBN Unit 2. (iii) Not applicable to WBN Unit 2 (iv) Not applicable to WBN Unit 2</p> <p>The 04508905-3SP report was prepared for another TVA plant, as a monitor system-level report, where the system included equipment mostly based on the base report equipment items. These two -2SP and -3SP supplement reports were essentially worked concurrently, but the -2SP document review/release process resulted in the release time difference.</p>
<p>TVA provided System Verification Test Results 04507007-1TR (July 1999) for Sequoyah to support test verification. However, the document states (page v) that it is not applicable for high range monitors with an action noted for fixing a problem with the high range RM-1000 monitors on page vi. TVA to respond to the following clarifications:</p> <p>Has the anomaly noted on page vi been resolved for the high range monitors?</p> <p>Provide the high range verification document for WBN2.</p>	<p>See Response to letter item __ (RAI Matrix Item 316) for non-applicability of 04507007-1TR. The recorded anomaly was later resolved through the verification of software version 1.2, reported in RM-1000 v1.2 Software Verification Report 04508006.</p> <p>The high range verification documents are the Sequoyah RM-1000 v1.1 Software Verification Report 04508006 and RM-1000 v1.2 Software Verification Report 04508006.</p>

Regards,

Steve

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Fax: 865.632.2524
e-mail: msclark0@tva.gov

From: Clark, Mark Steven
Sent: Wednesday, October 06, 2010 3:46 PM
To: 'Chavez, Hector'; Mather, Dale C
Cc: Temples, Joe T Jr
Subject: RE: Rad Mon Questions

Hector

Thanks. I did a little work on the responses to make them read better for the NRC. Please review and let me know if you have any comments.

RAI	Response
<p>TVA has provided various documents in support of RM-1000 high range monitors for WBN2. Please clarify the following: RM-1000 v1.1 Software Verification Report 04508006 (Sequoyah) RM-1000 v1.2 Software Verification Report</p>	<p>The Sequoyah RM-1000 v1.1 Software Verification Report 04508006 and RM-1000 v1.2 Software Verification Report 04508006 are applicable to WBN Unit 2.</p> <p>The RM-1000 System Verification Test Results</p>

<p>04508006 (Sequoyah) RM-1000 System Verification Test Results (Sequoyah)</p> <p>These documents were prepared for the Sequoyah plant. IS the version provided applicable to WBN2? Please confirm and explain if these documents are applicable to WBN 2 as provided or with differences?</p>	<p>report is not applicable to WBN Unit 2. This document was for the non-safety related software and was superseded by the 04508006 v1.1 and v1.2 reports for the safety-related software.</p>
<p>TVA has provided a proprietary and a non-proprietary version of Technical Manual for RM-1000 Digital Radiation Processor under ML101680582 and ML101680587).</p> <p>Are these documents applicable to WBN2 as provided (October 2003 version). Why is DCN38993-A attached at the back of the proprietary version? It is for WBN1 Turbine Governor Control Valve. This document does not state the requirements for RM-1000 units. Please provide a document that states the requirements for the RM-1000 radiation monitors for WBN2.</p>	<p>These documents are applicable to WBN Unit 2. This was an error in document preparation that occurred when attachments were assembled for a previous letter. The Technical Manual is not intended to include equipment requirements. Requirements would be found in the applicable TVA Specifications for the contract.</p>
<p>TVA has provided the following documents for RM-1000 equipment qualification:</p> <p>Qualification Test Report for RM-1000 Processor Module and Current-To-Frequency Converter 04508905-QR (January 2001) Qualification Test Report Supplement, RM-1000 Upgrades 04508905-1SP (June 2006) Qualification Test Report Supplement, RM-1000 Upgrades 04508905-2SP (June 2008) Qualification Test Report Supplement, RM-1000 Upgrades 04508905-3SP (May 2008)</p> <p>Please clarify whether all of these are fully applicable to WBN2 or are they applicable with exceptions? If with exceptions, then please clarify what those are.</p> <p>Supplement 3 was issued one month prior to supplement 2. Please explain the reason for the same.</p>	<p>Applicable to WBN Unit 2. 04508905-1QR is applicable only in regards to the RM-1000, with the exception of re-qualification of certain RM-1000 equipment differences covered in the -1SP report. The Current-to-Frequency (I-F) converter module qualifications in the base report and the -1SP report are not applicable to the RM-1000s, and will be used later as references in the WBN Unit 2 specific qualification reports. Applicable to WBN Unit 2. Not applicable to WBN Unit 2 Not applicable to WBN Unit 2</p> <p>The 04508905-3SP report was prepared for another TVA plant, as a monitor system-level report, where the system included equipment mostly based on the base report equipment items. These two -2SP and -3SP supplement reports were essentially worked concurrently, but the -2SP document review/release process resulted in the release time difference.</p>
<p>TVA provided System Verification Test Results 04507007-1TR (July 1999) for Sequoyah to support test verification. However, the document states (page v) that it is not applicable for high range monitors with an action noted for fixing a problem with the high range RM-1000 monitors on page vi. TVA to respond to the following clarifications:</p> <p>Has the anomaly noted on page vi been resolved for the high range monitors?</p> <p>Provide the high range verification document for WBN2.</p>	<p>Responder: Temples</p> <p>See Response to letter item __ (RAI Matrix Item 316) for non-applicability of 04507007-1TR. The recorded anomaly was later resolved through the verification of software version 1.2, reported in RM-1000 v1.2 Software Verification Report 04508006.</p> <p>The high range verification documents are the Sequoyah RM-1000 v1.1 Software Verification Report 04508006 and RM-1000 v1.2 Software Verification Report 04508006.</p>

Regards,

Steve

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From: Chavez, Hector [<mailto:Hector.Chavez@ga-esi.com>]
Sent: Wednesday, October 06, 2010 2:25 PM
To: Mather, Dale C
Cc: Temples, Joe T Jr; Clark, Mark Steven
Subject: RE: Rad Mon Questions

Dale,

Following is our response to the Rad monitors questions, Item Numbers 316, 317, 318, 319.

1. 1. The first two documents listed are directly applicable to WBN2 RM-1000s, as the code version results are applicable to both the present WBN2 safety-related contract, and to any future SQN safety-related RM-1000 contract. The System Verification Test Results 04507007-1TR is not applicable to WBN, because it is only applicable to Sequoyah non-safety-related RM-1000s. The 04507007-1TR report was requested by TVA/SQN, when TVA suspended GA-ESI work on the safety-related portion of the SQN contract in work for RM-1000s. This 04507007-1TR report was solely used by TVA to provide a level of software verification commensurate with their application of non-safety-related RM-1000s in the SQN contract, leaving GA-ESI to later continue with safety-related verification separately. This later GA-ESI work developed the safety-related software verification, including a Critical Digital Review by TVA, where RM-1000 software Version 1.1 was approved by TVA for future safety-related procurement. And, this work produced the first two listed documents, that are the applicable results documents for the deliverable WBN2 safety-related RM-1000s.
2. 2. i. These documents are applicable
- iii. The iii. Technical Manual is not intended to include equipment requirements. Requirements would be found in the applicable TVA Specifications for the contract.
3. 3. With regards to the RM-1000 modules, the first two documents are applicable to WBN2, but not the 04508905-2SP and 3SP documents. The base document 04508905-1QR is applicable only in regards to the RM-1000, with the exception of re-qualification of certain RM-1000 equipment differences covered in the -1SP report. The Current-to-Frequency (I-F) converter module qualifications in the base report and the -1SP report are not applicable to the RM-1000s, and will be used later as references in the WBN2-specific qualification reports. The 04508905-3SP report was prepared for another TVA plant, as a monitor system-level report, where the system included equipment mostly based on the base report equipment items. These two -2SP and -3SP supplement reports were essentially worked concurrently, but the -2SP document review/release process resulted in the release time difference.
4. 4. See Response 1 for non-applicability of 04507007-1TR. However, the recorded anomaly was resolved later, through the verification of software version 1.2, reported in 04508006.

Thank you for you patients
Hector Chavez
Project manager
General Atomics Electronic Systems, Inc.
(858) 522-8341
Hector.Chavez@ga-esi.com

From: Mather, Dale C [<mailto:dcmathe0@tva.gov>]
Sent: Tuesday, October 05, 2010 9:03 AM

To: Chavez, Hector
Cc: Temples, Joe T Jr; Clark, Mark Steven
Subject: FW: Rad Mon Questions

Hector

Please respond to Item Number 316, 317, 318, 319 AND GIVE ME A CALL.

Dale Mather
Bechtel Control Systems Engineering
Watts Bar Unit 2
865-632-7527
Fax:240-379-2045

From: Clark, Mark Steven
Sent: Tuesday, October 05, 2010 10:45 AM
To: Temples, Joe T Jr; Mather, Dale C
Subject: Rad Mon Questions

1. **NRC Request (Item Number 316)**

TVA has provided various documents in support of RM-1000 high range monitors for WBN2.

Please clarify the following:

RM-1000 v1.1 Software Verification Report 04508006 (Sequoyah)

RM-1000 v1.2 Software Verification Report 04508006 (Sequoyah)

RM-1000 System Verification Test Results (Sequoyah)

These documents were prepared for the Sequoyah plant. Is the version provided applicable to WBN2? Please confirm and explain if these documents are applicable to WBN 2 as provided or with differences?

TVA Response:

2. **NRC Request (Item Number 317)**

TVA has provided a proprietary and a non-proprietary version of Technical Manual for RM-1000 Digital Radiation Processor under ML101680582 and ML101680587).

(vii) Are these documents applicable to WBN2 as provided (October 2003 version).

(viii) N/A

(ix) This document does not state the requirements for RM-1000 units. Please provide a document that states the requirements for the RM-1000 radiation monitors for WBN2.

TVA Response:

3. **NRC Request (Item Number 318)**

TVA has provided the following documents for RM-1000 equipment qualification:

Qualification Test Report for RM-1000 Processor Module and Current-To-Frequency Converter 04508905-QR (January 2001)

Qualification Test Report Supplement, RM-1000 Upgrades 04508905-1SP (June 2006)

Qualification Test Report Supplement, RM-1000 Upgrades 04508905-2SP (June 2008)

Qualification Test Report Supplement, RM-1000 Upgrades 04508905-3SP (May 2008)

Please clarify whether all of these are fully applicable to WBN2 or are they applicable with exceptions? If with exceptions, then please clarify what those are.

Supplement 3 was issued one month prior to supplement 2. Please explain the reason for the same.

TVA Response:

4. NRC Request (Item Number 319)

TVA provided System Verification Test Results 04507007-1TR (July 1999) for Sequoyah to support test verification. However, the document states (page v) that it is not applicable for high range monitors with an action noted for fixing a problem with the high range RM-1000 monitors on page vi. TVA to respond to the following clarifications:

Has the anomaly noted on page vi been resolved for the high range monitors?

Provide the high range verification document for WBN2.

TVA Response:

Regards,

Steve

Steve Clark
Bechtel Power Corp.
Control Systems
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Hearing Identifier: Watts_Bar_2_Operating_LA_Public
Email Number: 134

Mail Envelope Properties (19D990B45D535548840D1118C451C74D6FD36BBAEB)

Subject: FW: Rad Mon Questions
Sent Date: 10/12/2010 6:58:47 AM
Received Date: 10/12/2010 6:58:52 AM
From: Poole, Justin

Created By: Justin.Poole@nrc.gov

Recipients:

"WBN2HearingFile Resource" <WBN2HearingFile.Resource@nrc.gov>

Tracking Status: None

"Singh, Gursharan" <Gursharan.Singh@nrc.gov>

Tracking Status: None

Post Office: HQCLSTR02.nrc.gov

Files	Size	Date & Time
MESSAGE	17676	10/12/2010 6:58:52 AM

Options

Priority: Standard

Return Notification: No

Reply Requested: No

Sensitivity: Normal

Expiration Date:

Recipients Received: