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

November 24, 2010

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

Watts Bar Nuclear Plant, Unit 2 — 10 CFR 50.4
NRC Docket No. 50-391

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

Reference: 1. Licensee Open Items to be Resolved for SER Approval List

The purpose of this letter is to provide TVA's responses to NRC's information requests on the "Licensee Open Items to be Resolved for SER Approval List." Enclosure 1 to this letter provides TVA's responses to the information requested by NRC.

Enclosure 2 contains the supporting documents for TVA's responses to NRC's requests/ questions provided in Enclosure 1. Enclosure 3 contains a list of references on which TVA's responses are based. Enclosure 4 provides the new regulatory commitment contained in this letter. If you have any questions, please contact William Crouch at (423) 365-2004.

I declare under the penalty of perjury that the foregoing is true and correct. Executed on the 24th day of November, 2010.

Sincerely,

M. Bajestani

Masoud Bajestani
Watts Bar Unit 2 Vice President

Enclosures:

1. Responses to Licensee Open Items To Be Resolved For SER Approval
2. Attachments
3. References
4. Regulatory Commitment

D030
NRR

cc (Enclosures):

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

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

Enclosure 1
TVA Letter Dated November 24, 2010
Responses to Licensee Open Items to be Resolved for SER Approval

For some NRC Requests for Additional Information (RAI), this letter provides TVA's initial response. For the other NRC RAI requests in this letter, a response has been provided in previous TVA letters to the NRC and the NRC has subsequently requested additional information. For these requests, the initial TVA response is not included. Additional NRC information requests are identified in this letter as "**Follow-up NRC Requests.**" TVA responses to these items are identified as "**TVA Response to Follow-up NRC Request.**"

1. **NRC Request (Item Number 276)**

In order for the staff to review the effects of multi control systems failure, provide the summary of the analyses documenting the effect on the plant based on the following events: (1) loss of power to all control systems powered by a single power supply; (2) failure of each instrument sensor which provides signal to two or more control systems; (3) Break of any sensor impulse line which is used for sensors providing signals to two or more control systems; and (4) failure of digital system based on the common cause software failure affecting two or more control systems. For each of these events, confirm that the consequences of these events will not be outside chapter 15 analyses or beyond the capability of operators or safety systems.

Follow-up NRC Request:

TVA needs to make a statement that all non-safety control systems have been evaluated against these criteria and have determined that their failure does not have consequences which will put the plant outside chapter 15 analyses.

TVA Response to Follow-up NRC Request:

All non-safety related control systems were reviewed in the context of this question. Only those control systems (i.e. the Distributed Control System [DCS], Rod Control, and the Main Turbine Electro-hydraulic Control System) previously discussed in the TVA to NRC letter dated October 21, 2010 (Reference 3) are within the scope of this question. The review found that failures of non-safety-related control systems based on the scenarios in this RAI do not have consequences which will put the plant outside the Chapter 15 analyses.

2. **NRC Request (Item Number 281)**

For FSAR Section 7.6.8 in amendment 96, redline version has completely rewritten this section of the FSAR, however, the staff is not able to determine any changes made to the section. Explain what changes have been made to this FSAR Section.

Follow-up NRC Request:

Provide the basis for the changes. Look at Foxboro I/A impact.

TVA Response to Follow-up NRC Request:

There are no differences between Unit 1 and Unit 2 interlocks, operation of interlocks and operator interface for operation of the RCS Pressure Control. Primary sensing elements and final control elements are identical and operations of these devices are identical. For Unit 2, once signals are processed by the Eagle 21 system, interlock implementation is by software modules in the Foxboro I/A DCS. Hardware outputs, generated in the DCS, operate the PORVs. Section 7.6.8 in Amendment 101 of the WBN Unit 2 FSAR reflects the Unit 2 changes associated with implementation of the DCS.

3. **NRC Request (Item Number 288)**

(1) Can we add a section to chapter 7 giving a brief overview of the Foxboro Spec 200 in Section 7.3?

Additional Clarification provided by the NRC

(2) TVA should include the list of all the functions where Spec 200 is used and discuss differences between unit 1 and unit 2. (3) This discussion should also include loops which are currently used for Unit 1 operation (4) If Spec 200 components have also been qualified to RG 1.209, it should be stated and if not why not.

TVA Response:

(1) and (2) The following new section and reference will be added to the WBN Unit 2 FSAR as part of Amendment 102:

7.3.1.1.3 Analog Instrumentation

The miscellaneous safety-related analog process control and indication loops are made up of discrete analog modules that have been tested and qualified for use in safety related systems. The various components have been qualified to IEEE Standard 323-1983 (R-1996) IEEE Standard for Qualifying Class IE Equipment for Nuclear Power Generating Stations, IEEE Standard 344-1987 (R-1993) IEEE Standard Recommended Practices for Seismic Qualification of Class IE Equipment for Nuclear Power Generating Stations, and IEEE Standard 384-1984 (R-1992) IEEE Standard Criteria for Independence of Class IE Equipment and Circuits. The modules are arranged in instrument loops to provide the safety functions listed below:

- Turbine driven AFW Pump Flow Control
- Motor driven AFW pump differential pressure indication and recirculation valve control
- Steam generator AFW flow and level indication and control
- Containment Pressure indication
- Upper and Lower Compartment Containment Ambient Temperature indication
- RHR Heat Exchanger CCS Supply Header Flow
- Sample Heat Exchanger Header CCS Differential Flow
- ERCW Strainer Differential Pressure, Backwash and Flush Control
- CCS Heat Exchanger B Inlet Pressure

- CCS Surge Tank Level Control
- CCS Heat Exchanger B Outlet Temperature
- Reactor Vessel Head Vent Throttle Manual Loading Station (Unit 2 Only)
- EGTS Annulus Differential Pressure Control

The components are physically arranged in the racks to meet the requirements of IEEE-279 and Watts Bar Design Criteria WB-DC-30-4, Separation/Isolation (Unit 2 Only). Two IE analog modules are used to isolate IE to Non-IE signals. These are the Contact Output Isolator and Voltage-to-Current Converter, both of which have the Input and Output signals isolated.

EMI testing and acceptance by TVA of the Foxboro Spec 200 hardware is documented in Reference [8].

Reference:

(8) Invensys Process Systems Document No. 800063-1830, "Electromagnetic Compatibility Test Reports," dated August 21, 2008, Rev. 0.

(2) As agreed to by TVA and the NRC reviewer, the level of detail necessary to describe the differences between Unit 1 and Unit 2 is down to the specific hardware manufacturer. This level of detail was agreed to not be appropriate in Chapter 7 which discusses the functions and design requirements for the plant control systems. The hardware manufacturer level of detail is addressed in Chapter 3.10 which describes the qualification of the specific hardware for safety-related functions.

(3) While not specifically identified as such, loops in service for Unit 1 (Essential Raw Cooling Water, etc.) are described in the FSAR chapters describing the systems the loops serve.

(4) Reg. Guide 1.209, "Guidelines for Environmental Qualification of Safety-Related Computer-Based Instrumentation and Control Systems in Nuclear Power Plants," is not applicable to the analog Foxboro Spec 200 hardware.

4. **NRC Request (Item Number 300)**

Need Radiation Monitoring System Description/Design Criteria

Are detectors different from Unit 1? Describe any differences.

Are there any commercially dedicated parts in the RM-1000? If so, how are they dedicated?

Please confirm that digital communication ports available in RM-1000 are not used.

Follow-up NRC Request:

TVA to clarify that GA has a commercial dedication program in place and that GA is an approved 10CFR50, App. B supplier.

TVA Response to Follow-up NRC Request:

General Atomics Electronics Systems, Inc., is an approved 10 CFR 50 Appendix B supplier. They have a commercial grade dedication program.

5. **NRC Request (Item Number 301)**

1. *TVA is requested to address the consequences of software common cause failure including all potential resulting failures (i.e. total loss of CERPI, system fail as-is).*

2. *In addition, address how the actions stipulated in the plant Technical Specifications will be taken when the CERPI system indications are lost. Information Notice IN 2010-10 (ML100080281) addresses the need to consider software failures and the actions required to assure that the plant will stay within its licensing basis.*

3. *Provide FMEA in support of your response.*

4. *FSAR Table 7.7-1, Plant Control System Interlocks lists interlock C-11 to block automatic rod withdrawal when 1/1 Control Bank D rod position is above setpoint. This interlock capability would be lost in case of total loss of CERPI. How is the rod block assured for this event?*

5. *How is automatic rod withdrawal affected in case of total loss of signals from the CERPI to the ICS? Is this interlock fail safe?*

6. *FSAR chapter 15, Section 2.3.2.1 states that the resolution of the rod position indicator channel is 5% of span (7.2 inches). The CERPI system accuracy specified in the CERPI System Requirements Specification, WNDS-DS-00001-WBT, Rev. 2 is 12 steps or 5.19%. The specified system accuracy seems to be greater than the accuracy assumed in the FSAR Chapter 15. Please clarify this anomaly.*

TVA Response:

Items 1 and 3 through 6 were addressed in the partial response provided in TVA to NRC letter dated October 29, 2010 (Reference 1). Item 2 is addressed as follows by Westinghouse letter WBT-D-2636, "RFI-CERPI System Software Failure," (Reference 6):

Description of the CERPI systems installed at Watts Bar (Unit 1 & 2):

Each Programmable Logic Controller (PLC), Maintenance Test Panel (MTP), and Operators Module (OM) is isolated within its own Train, A or B. Rod position information is provided to the OMs in the main control room via redundant data links. Each train (PLC, MTP, and OM) is electrically isolated from the other train.

Communications within a CERPI train (PLC, MTP, and OM) are continuously monitored. If communication is interrupted, this condition is annunciated to the operator in the control room. The MTP and OM display screens have rotating cursors in the upper right-hand corner of the display to indicate that the system is operating.

History of CERPI:

The basic PLC software associated with the CERPI system has been in use for over ten years. The first plant to utilize the CERPI PLC software was Beaver Valley. In 2003, the CERPI software was deployed with interfaces to the Common Q MTP and OM interfaces within the systems for Surry Units 1 & 2, and Watts Bar Unit 1. In 2009, the Watts Bar Unit 1 CERPI system was modified to allow for two independent trains of CERPI. The Watts Bar Unit 2 CERPI system is based on the Unit 1 design. Only the detectors and the detector interface boards are not redundant within the Watts Bar CERPI systems.

CERPI Software Failure Analysis

With regard to the CERPI system software:

- The software used on PLC-A is identical to that used on PLC-B.
- The software used on MTP-A is identical to that used on MTP-B
- The software used on OM-A is identical to that used on OM-B.

A common cause failure affecting the software of one CERPI train would affect the other train as well. Common cause problems associated with the CERPI software were mitigated by the Westinghouse software development process, factory acceptance testing, and site acceptance testing. There is no "fail as-is" scenario. Any failure of a hardware/software component (resulting in processor lock-up) would be immediately annunciated (Main Control Room alarm). A loss of communication to the MTP, or OM would be annunciated, and the data values on the flat panel display would be displayed in magenta (indicating failure). A hardware/software failure in the PLC (resulting in processor lock-up) would result in an annunciator because of the watchdog alarm circuit associated with the PLC processor module.

A total loss of CERPI indication (e.g., loss of both AC power sources to the rod position cabinets) is possible, but this condition would be immediately annunciated. A complete loss of CERPI indication would lead to entering Technical Specification LCO 3.0.3. A more likely scenario would be loss of a single train of CERPI due to a hardware failure; in which case, there are no technical specification conditions to enter because a single train is capable of providing all rod indications needed for control.

6. NRC Request (Item Number 327)

Attachment 36 [of TVA to NRC Letter dated October 5, 2010 (Reference 2)] 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.

TVA Response:

In accordance with correspondence from Foxboro, there is no proprietary information contained in the 08F802403-SC-2001 drawings. Based on this, no affidavit for withholding is required. Attachment 1 contains versions of the drawings with the proprietary information block removed.

7. **NRC Request (Item Number 330)**

IE Bulletin 80-06 calls for review of engineered safety features with the objective of ensuring that no device will change position solely because of the 'reset' action.

In Supplement 3 of NUREG-0847, Section 7.3.5, the staff approved the design modifications proposed by the applicant that would allow certain devices to remain unchanged upon an ESF reset. The staff also found acceptable the applicant's justification for some safety-related equipment that does not remain in its emergency mode after an ESF reset.

Please list for Unit 1 and Unit 2 the safety-related equipment that does not remain in its emergency mode after an ESF reset.

TVA Response:

The original response to IE Bulletin 80-06 for both WBN Unit 1 and 2 was provided on TVA letter to NRC dated March 11, 1982 (ML073530129) (Reference 4). Subsequent design changes have impacted the original response such that some equipment that originally changed state no longer does so and some equipment has been deleted. There are no additions to the list originally provided in TVA letter to NRC dated March 11, 1982 (ML073530129) (Reference 4). The following is the current list of equipment that does not remain in its emergency mode after an ESF reset:

1. Unit 1 and 2 Equipment (prefix 1- (Unit 1) or prefix 2- (Unit 2))

   a. Auxiliary Feedwater (AFW) Pump Turbine Speed Control Valve, FCV-1-52

   b. Auxiliary Feedwater (AFW) Level Control Valves as listed below:

      i. LCV-3-172 - SG3 - Level Control Valve
      ii. LCV-3-173 - SG2 - Level Control Valve
      iii. LCV-3-174 - SG1 - Level Control Valve
      iv. LCV-3-175 - SG4 - Level Control Valve
      v. LIC-3-172 - SG3 - Level Indicating Controller
      vi. LIC-3-173 - SG2 - Level Indicating Controller
      vii. LIC-3-174 - SG1 - Level Indicating Controller
      viii. LIC-3-175 - SG4 - Level Indicating Controller
      ix. LCV-3-148 - SG3 - Level Valve
      x. LCV-3-156 - SG2 - Level Valve
      xi. LCV-3-164 - SG1 - Level Valve
      xii. LCV-3-171 - SG4 - Level Valve
      xiii. LCV-3-148A - SG3 - Level Bypass Control Valve

xiv. LCV-3-156A - SG2 - Level Bypass Control Valve
xv. LCV-3-164A - SG1 - Level Bypass Control Valve
xvi. LCV-3-171A - SG4 - Level Bypass Control Valve
xvii. LIC-3-148 - SG3 - Controller
xviii. LIC-3-156 - SG2 - Controller
xix. LIC-3-164 - SG1 - Controller
xx. LIC-3-171 - SG4 - Controller

c. Lower and Upper Compartment Cooler Fans and Control Rod Drive Mechanism Cooler Fan

d. Penetration Room Cooler Fans Elevations 737, 692 and 713

e. Pipe Chase Cooler Fans

2. Common Equipment

a. Shutdown Board Room Pressurizing Fan

b. Control Building Ventilation Dampers as listed below:

i. 0-FCO-31-9 - Spreading Room Supply Fan Damper
ii. 0-FCO-31-10 - Spreading Room Supply Fan Damper
iii. 0-FCO-31-16 - Toilet and Locker Room Exhaust Fan Exhaust Damper
iv. 0-FCO-31-17 - Toilet and Locker Room Exhaust Fan Exhaust Damper
v. 0-FCO-31-3 - Main Control Room Isolation Damper
vi. 0-FCO-31-4 - Main Control Room Isolation Damper
vii. 0-FCO-31-36 - Spreading Room Fresh Air Supply Damper
viii. 0-FCO-31-37 - Spreading Room Fresh Air Supply Damper

c. Cask Loading Exhaust Dampers as listed

i. 0-FCO-30-122 - Cask Loading Area Exhaust Damper
ii. 0-FCO-30-123 - Cask Loading Area Exhaust Damper

d. Auxiliary Building General Supply Exhaust Fans Elevation 737

e. Component Cooling System and AFW Pump Space Cooler Fans

f. Spent Fuel Pit Pumps Space Coolers

g. Emergency Gas Treatment System Room Coolers

h. AFW and Boric Acid Space Coolers

8. **NRC Request (Item Number 336)**

Re: RM-1000 Report 04508905-QR

Please check the page numbering in Appendix F, Closed Nonconforming Material Reports. Pages 1 and 6 are missing and page 2 is included multiple times. Also identify which page number is the last page number.

TVA Response:

General Atomics was not able to determine where the duplicate page 2 originated. The master document does not contain any duplicate pages. Due to a clerical error during document development, the master document starts at page 2 and ends at page 9, for a total of 8 pages. In May of this year, the NRC discovered that the master document was missing page 6. The master document was revised and re-submitted. Attachment 2 contains the missing page 6.

The Nonconforming Material (NCM) reports found on Appendix F are complete.

9. **NRC Request (Item Number 337)**

Re: RM-1000 Report 04508905-QR

Appendix C is titled as Seismic Test Fixture for RM2300, See Drawing 04619028. Please verify whether or not it applies to RM-1000? If applicable, then please identify how it is applicable.

TVA Response:

The test fixture listed on Appendix C is applicable to the RM-1000, as indicated in the second and third paragraph of section 4.3.1, of the 04508905-QR report. The RM-1000s and the I/F converters are mounted on a standard 19 inch NIM-Bin, and this test rack is configured to simulate the field installation of a standard 19 inch rack.

This seismic test fixture was originally built for the seismic testing of the RM2300s which are also mounted on a standard 19 in NIM-Bin.

Enclosure 2
TVA Letter Dated November 24, 2010
Responses to Licensee Open Items to be Resolved for SER Approval

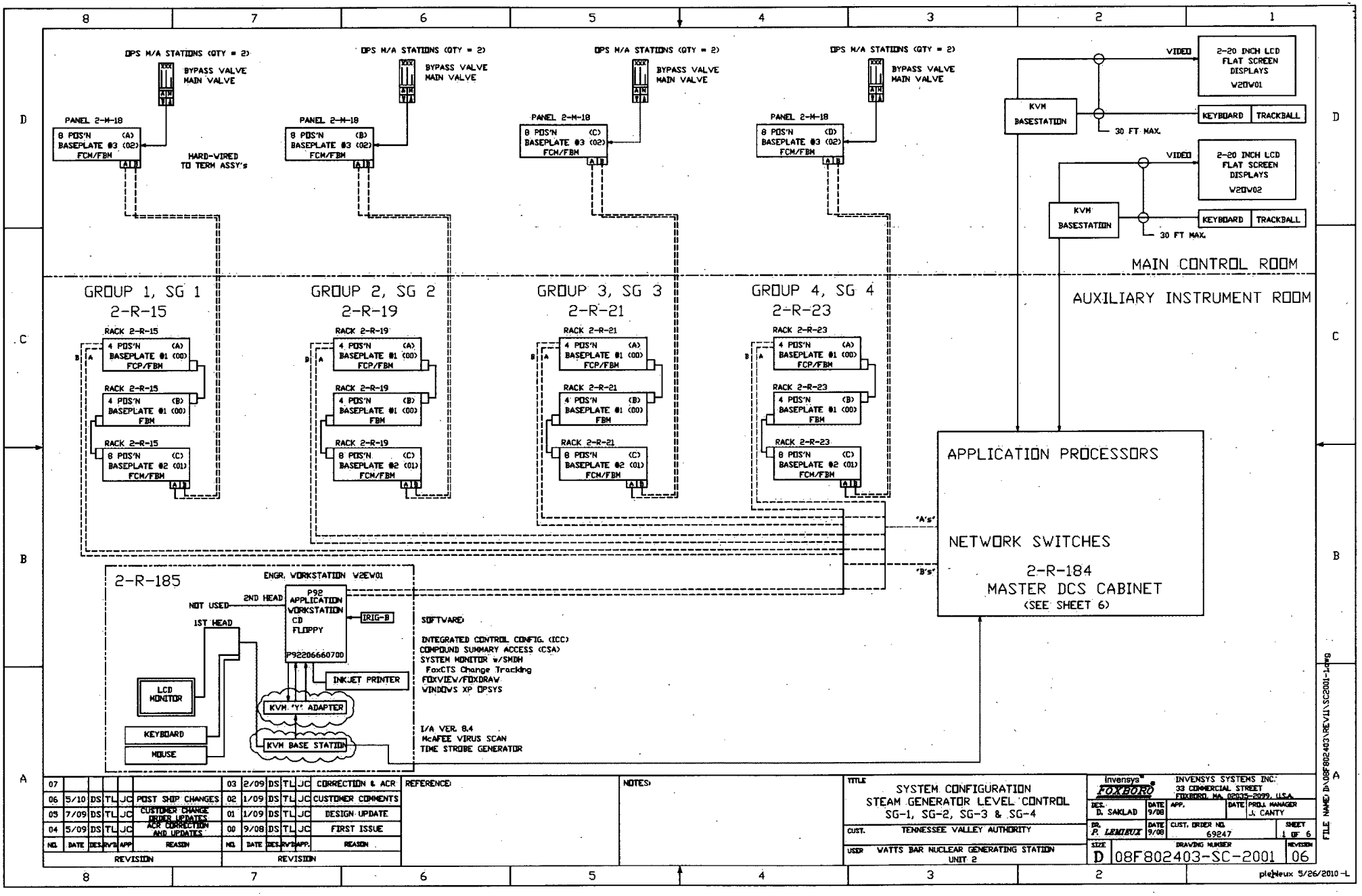
Attachments

1. Foxboro 08F802403-SC-2001 drawings with proprietary information blocks removed
2. General Atomics Report 04508905-QR, page 6

Enclosure 2
TVA Letter Dated November 24, 2010
Responses to Licensee Open Items to be Resolved for SER Approval

Attachment 1

Foxboro 08F802403-SC-2001 Drawings
With Proprietary Information Blocks Removed



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02	1/09	DS	TL	JC	CUSTOMER COMMENTS
01	1/09	DS	TL	JC	DESIGN UPDATE
00	9/08	DS	TL	JC	FIRST ISSUE

REVISION

REFERENCE:

NOTES:

TITLE: SYSTEM CONFIGURATION
STEAM GENERATOR LEVEL CONTROL
SG-1, SG-2, SG-3 & SG-4

CUST. TENNESSEE VALLEY AUTHORITY

USER WATTS BAR NUCLEAR GENERATING STATION UNIT 2

Invensys FOXBORO
INVENSYS SYSTEMS INC.
33 COMMERCIAL STREET
FOXBORO, MA 02035-2099, U.S.A.

DES.	DATE	APP.	DATE	PROJ. MANAGER
D. SAKLAD	9/08			J. CANTY
DR. P. LEMIEUX	DATE 9/08	CUST. ORDER NO. 69247		SHEET 1 OF 6

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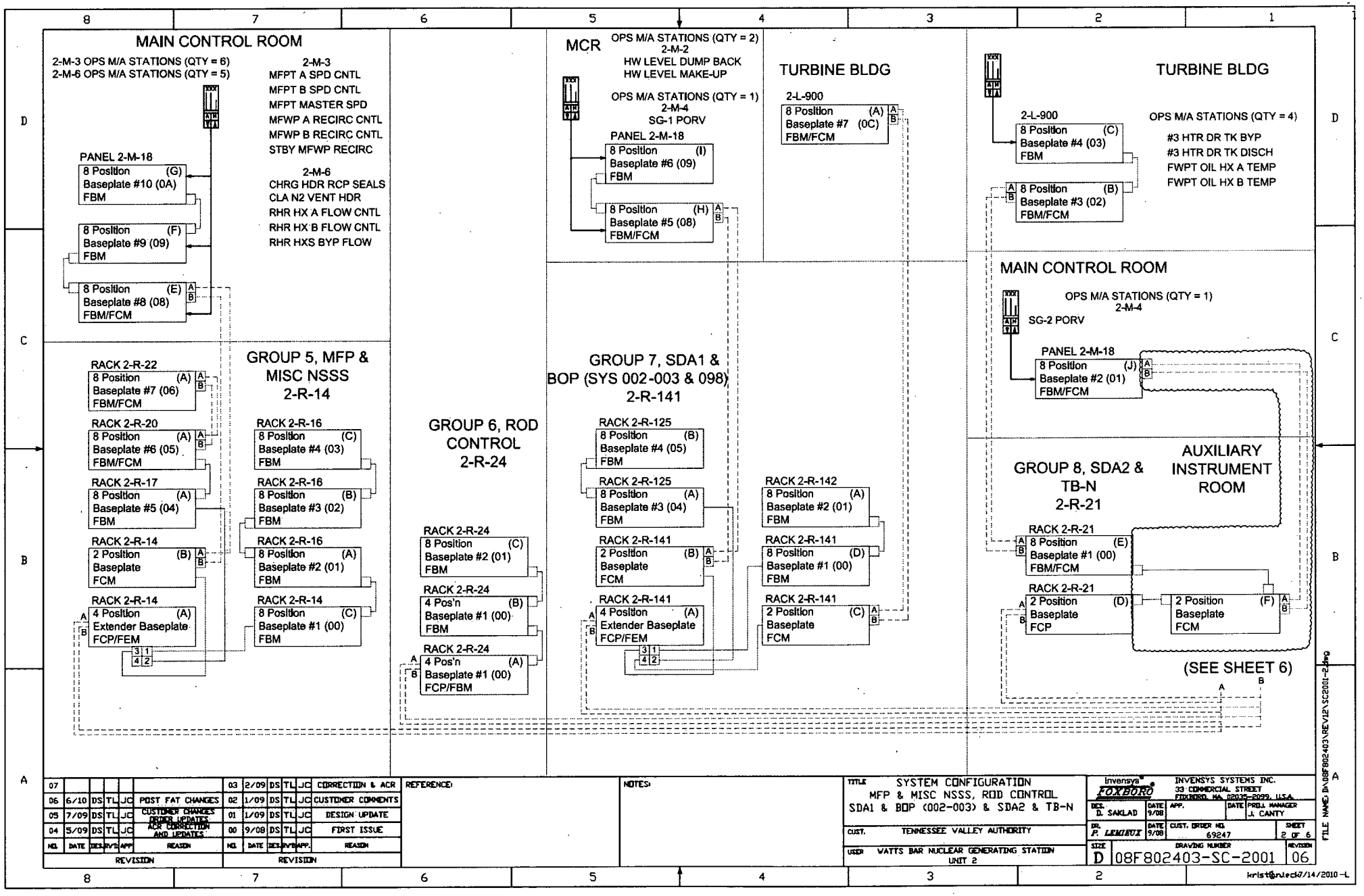

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00	9/08	DS	TL	JC	FIRST ISSUE

REVISION

REFERENCE:

NOTES:

TITLE: SYSTEM CONFIGURATION
MFP & MISC NSSS, ROD CONTROL
SDA1 & BOP (002-003) & SDA2 & TB-N

CUST.: TENNESSEE VALLEY AUTHORITY

USER: WATTS BAR NUCLEAR GENERATING STATION UNIT 2

Invensys FOXBORO
INVENSYS SYSTEMS INC.
33 COMMERCIAL STREET
FOXBORO, MA 02035-2099, U.S.A.

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DR. P. LEMIEUX	DATE 9/08	CUST. ORDER NO. 69247		SHEET 2 OF 6

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REVISION: 06

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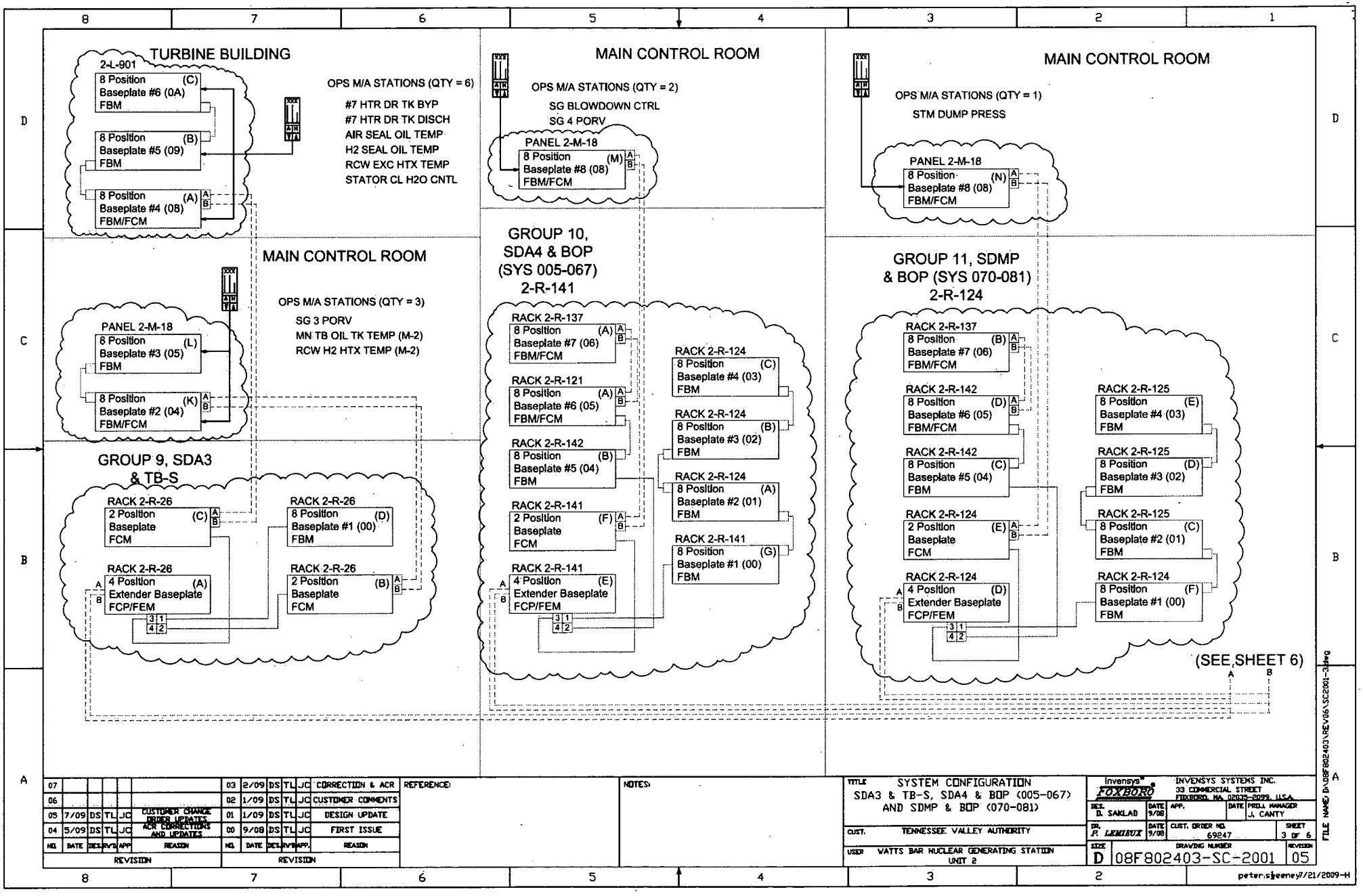

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REFERENCE:

NOTES:

TITLE: SYSTEM CONFIGURATION SDA3 & TB-S, SDA4 & BOP (005-067) AND SDMP & BOP (070-081)

CUST.: TENNESSEE VALLEY AUTHORITY

USER: WATTS BAR NUCLEAR GENERATING STATION UNIT 2

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INVENSYS SYSTEMS INC.
33 COMMERCIAL STREET
FOXBORO, MA 02035-2099, U.S.A.

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DR. P. LEMIEUX	9/08	CUST. ORDER NO. 69247		SHEET 3 OF 6

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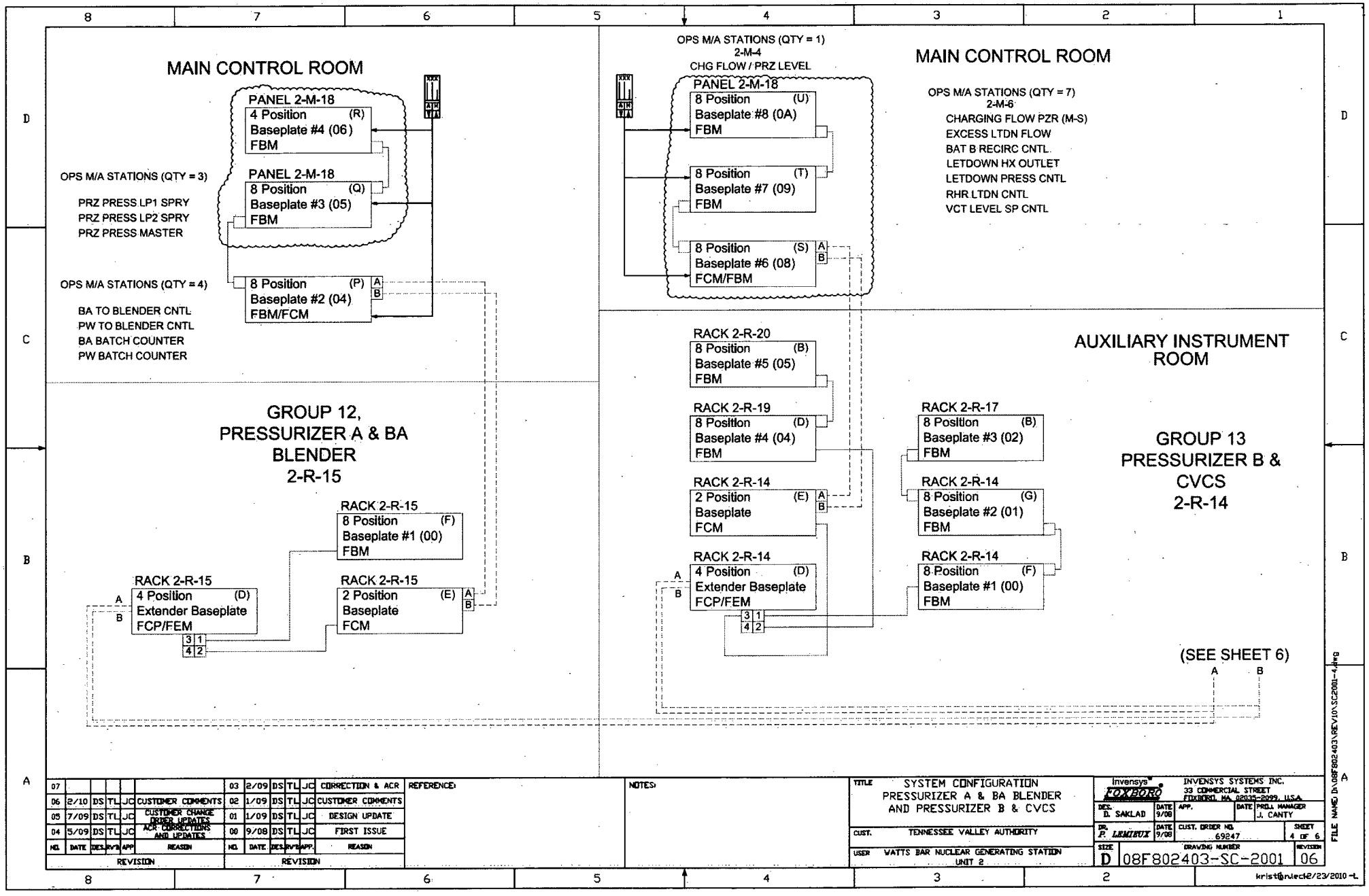

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01	1/09	DS	TL	JC	DESIGN UPDATE
00	9/08	DS	TL	JC	FIRST ISSUE

REVISION

REFERENCE:

NOTES:

TITLE: SYSTEM CONFIGURATION
PRESSURIZER A & BA BLENDER
AND PRESSURIZER B & CVCS

CUST. TENNESSEE VALLEY AUTHORITY

USER WATTS BAR NUCLEAR GENERATING STATION UNIT 2

Invensys FOXBORO

INVENSYS SYSTEMS INC.
33 COMMERCIAL STREET
FOXBORO, MA. 02035-2099, U.S.A.

DES.	DATE	APP.	DATE	PROJ. MANAGER
D. SAKLAD	9/08			J. CANTY
DR. P. LEMIEUX	DATE 9/08	CUST. ORDER NO. 69247		SHEET 4 OF 6

SIZE D | DRAWING NUMBER 08F802403-SC-2001 | REVISION 06

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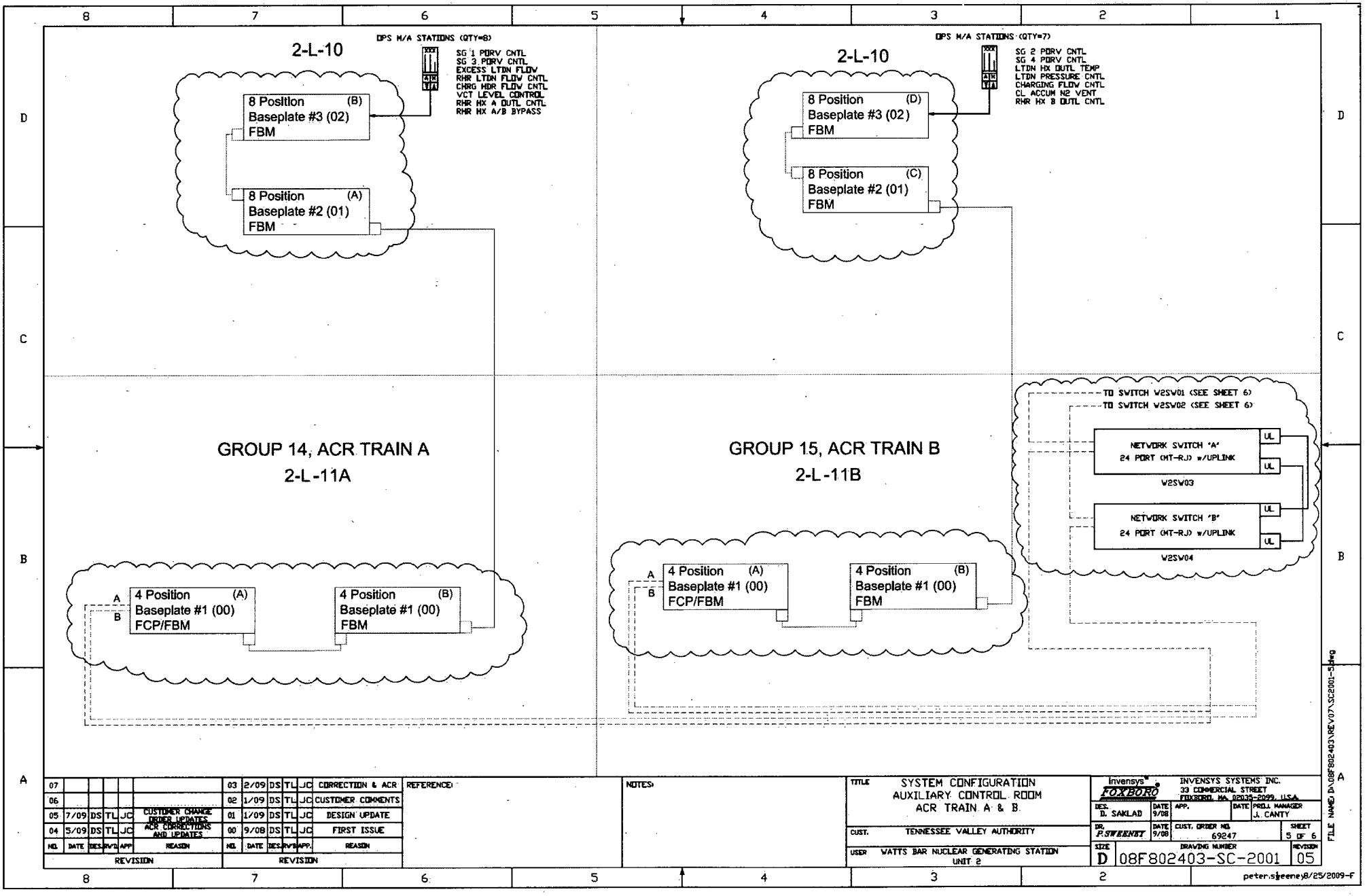

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04	5/09	DS	TL	JC		ACR CORRECTIONS AND UPDATES	00	9/08	DS	TL	JC	FIRST ISSUE

REFERENCE:

NOTES:

TITLE: SYSTEM CONFIGURATION
AUXILIARY CONTROL ROOM
ACR TRAIN A & B

CUST. TENNESSEE VALLEY AUTHORITY

USER WATTS BAR NUCLEAR GENERATING STATION
UNIT 2

Invensys FOXBORO
INVENSYS SYSTEMS INC.
33 COMMERCIAL STREET
FOXBORO, MA 02035-2099, U.S.A.

DES.	DATE	APP.	DATE	PROJ. MANAGER
D. SAKLAD	9/08			J. CANTY
DR. P.SWEENEY	DATE 9/08	CUST. ORDER NO. 69247		SHEET 5 OF 6
SIZE D	DRAWING NUMBER 08F802403-SC-2001			REVISION 05

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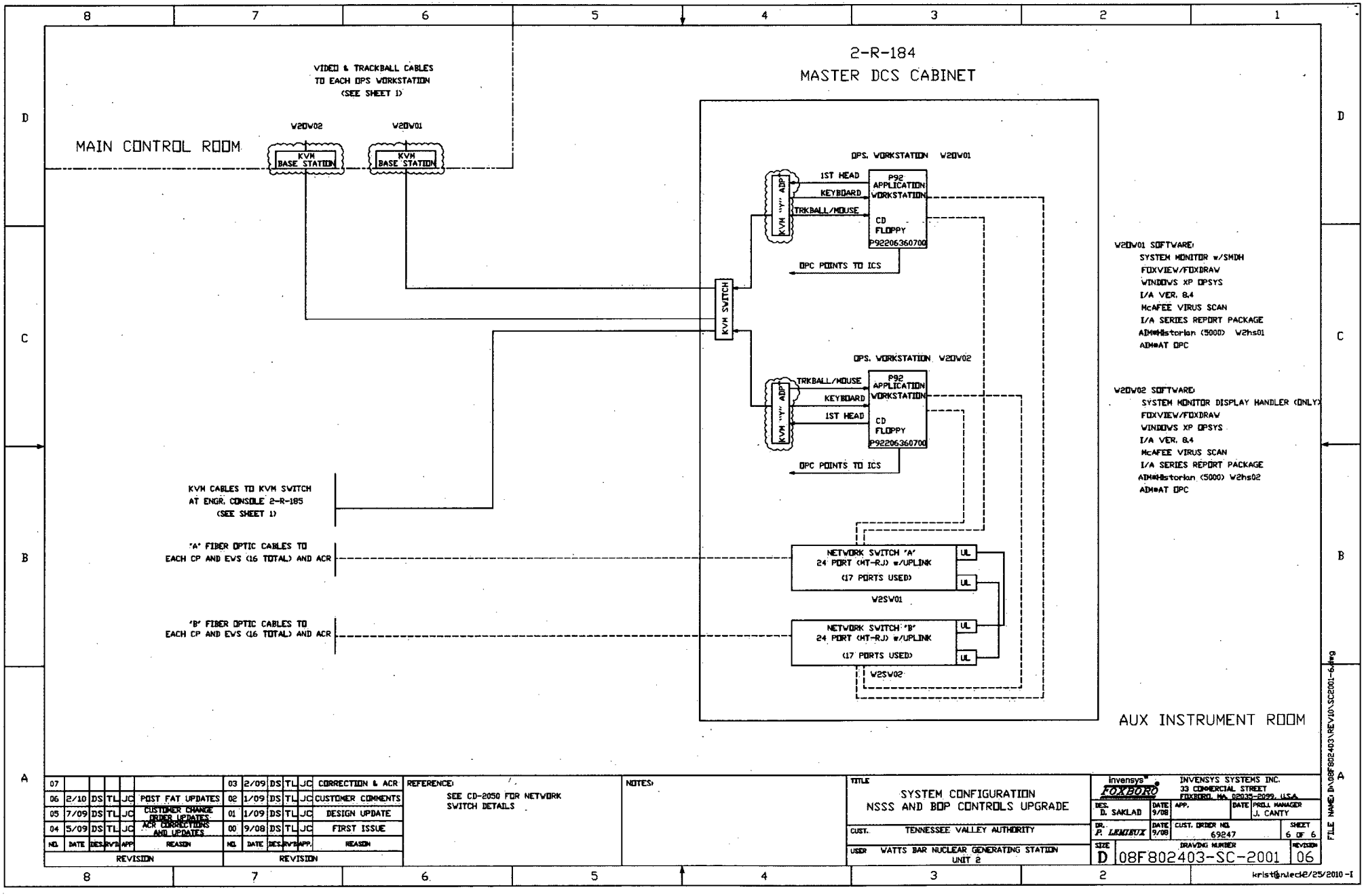

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03	2/09	DS	TL	JC	CORRECTION & ACR
02	1/09	DS	TL	JC	CUSTOMER COMMENTS
01	1/09	DS	TL	JC	DESIGN UPDATE
00	9/08	DS	TL	JC	FIRST ISSUE

REVISION

REFERENCE:
SEE CD-2050 FOR NETWORK SWITCH DETAILS

NOTES:

TITLE
SYSTEM CONFIGURATION
NSSS AND BOP CONTROLS UPGRADE

CUST. TENNESSEE VALLEY AUTHORITY

USER WATTS BAR NUCLEAR GENERATING STATION UNIT 2

invensys FOXBORO
INVENSYS SYSTEMS INC.
33 COMMERCIAL STREET
FOXBORO, MA. 02035-2099, U.S.A.

DES.	DATE	APP.	DATE	PROJ. MANAGER
D. SAKLAD	9/08			J. CANTY

DR.	DATE	CUST. ORDER NO.	SHEET
P. LEMIEUX	9/08	69247	6 OF 6

SIZE	DRAWING NUMBER	REVISION
D	08F802403-SC-2001	06

FILE NAME: D:\08F802403\REV06\SC2001-6.dwg

kristf@nlec12/25/2010 -I

Enclosure 2
TVA Letter Dated November 24, 2010
Responses to Licensee Open Items to be Resolved for SER Approval

Attachment 2

General Atomics Report 04508905-QR, Page 6

NMR 15813, ITEMS 0001 AND 0002 RESOLUTION

This information is in addition and supplementary for these NMR items that are closed.

DISCREPANCY/ FAILURE SUMMARY:

Before initiation of seismic testing, the shake table made a random jolting movement that was not part of the test. The abrupt hard jolt was caused by a faulty table actuator. Item 0001 of the NMR described that the internal PWAs of both the area and process RM-1000s were found to be out of their sockets. After the process RM-1000 boards were re-installed, it was operational. The area RM-1000 had a problem with incorrect 15 V operation and Diode D317 had a resistance of about ten ohms in both directions. Item 0002 was written for the area RM-1000 after the seismic test resumed after repairs were made to the shake table actuator

RESOLUTION:

Due to the table misoperation, the dynamic loading on the RM-1000s was far in excess of required test conditions. The Output Board on the area RM-1000 was repaired with new parts and the test proceeded successfully.

Enclosure 3
TVA Letter Dated November 24, 2010
Responses to Licensee Open Items to be Resolved for SER Approval

References

1. TVA Letter to NRC "Watts Bar Nuclear Plant (WBN) Unit 2 – Instrumentation And Controls Staff Information Requests," dated October 29, 2010

2. TVA Letter to NRC "Watts Bar Nuclear Plant (WBN) Unit 2 – Instrumentation And Controls Staff Information Requests," dated October 5, 2010

3. TVA Letter to NRC "Watts Bar Nuclear Plant (WBN) Unit 2 – Instrumentation And Controls Staff Information Requests," dated October 21, 2010

4. TVA letter to NRC "Watts Bar Units 1 and 2 Response to IE Bulletin 80-06, Question 31.147," dated March 11, 1982 (ML073530129)

5. Not Used

6. Westinghouse letter WBT-D-2636 "RFI-CERPI System Software Failure," dated November 11, 2010

Enclosure 4
TVA Letter Dated November 24, 2010
Responses to Licensee Open Items to be Resolved for SER Approval

Commitments

1. New section 7.3.1.1.3 Analog Instrumentation and Reference 8 will be added to the WBN Unit 2 FSAR as part of Amendment 102.