Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

CNL-17-020

February 16, 2017

10 CFR 50.90

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

Watts Bar Nuclear Plant, Unit 2
Facility Operating License No. NPF-96
NRC Docket No. 50-391

Subject: **Response to Request for Additional Information Regarding Watts Bar Nuclear Plant, Unit 2 License Amendment Request for One-Time Extension of Technical Specification Surveillance Requirements Group 1 - LAR Attachments 8, 10, and 11 (CAC NO. MF8869)**

Reference:
1. TVA Letter to NRC, CNL-16-110, "Application to Modify Watts Bar Nuclear Plant Unit 2 Technical Specifications to Extend Surveillance Requirement Specified Intervals (WBN-TS-16-020)," dated November 23, 2016 (ML16333A250)
2. NRC Electronic Mail to TVA, "Request for Additional Information - Watts Bar Unit 2 SR Extension LAR - MF8869," dated January 23, 2017

In Reference 1, the Tennessee Valley Authority (TVA) submitted a request for an amendment to the Watts Bar Nuclear Plant (WBN) Unit 2 Technical Specifications (TS) to revise Surveillance Requirement (SR) 3.0.2 to extend, on a one-time basis, those SRs listed in Table 1 of Enclosure 1 to Reference 1 that are normally performed on an 18-month frequency in conjunction with a refueling outage. In Reference 2, the Nuclear Regulatory Commission (NRC) submitted a request for additional information (RAI). Enclosure 1 to this letter provides the TVA response to the RAI.

As noted in Enclosure 1, during the development of this RAI response, TVA discovered an error in the surveillance instructions (SIs) that perform SR 3.3.3.3, Function 11. For the containment isolation valves (CIVs) shown in Table 1 to Enclosure 1, SR 3.3.3.3, Function 11 is performed as part of the SIs for the stroke tests and position indication as part of the inservice testing (IST) program when the unit is in Mode 5 (cold shutdown) or Mode 6 (defueled). When the stroke test is performed, the SIs verify the CIV's position both locally and on the handswitch in the control room. However, the SIs did not require verifying the

CIV's position on the post-accident monitoring (PAM) instrumentation panels (2-XX-55-6E and 6F) that is needed to satisfy SR 3.3.3.3, Function 11. This oversight has been entered into the TVA Corrective Action Program. Based on the actions described in the response to RAI 1.b. in Enclosure 1, TVA has determined that the valve position indicators as required by SR 3.3.3.3, Function 11, are properly functioning and operable. Enclosure 2 contains revisions to Table 1 and Attachment 10 of Reference 1.

Enclosure 3 lists the new regulatory commitment associated with this submittal. These responses do not change the no significant hazards considerations determination contained in Reference 1. Please address any questions regarding this response to Ed Schrull at 423-751-3850.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 16th day of February 2017.

Respectfully,

for

J. W. Shea
Vice President, Nuclear Licensing

Enclosures:

1. Response to Request for Additional Information Regarding Watts Bar Nuclear Plant, Unit 2 License Amendment Request for One-Time Extension of Technical Specification Surveillance Requirements Group 1 - LAR Attachments 8, 10, and 11 (CAC NO. MF8869)

2. Revisions to Table 1 and Attachment 10 of TVA Letter CNL-16-110, Application to Modify Watts Bar Nuclear Plant Unit 2 Technical Specifications to Extend Surveillance Requirement Specified Intervals (WBN-TS-16-020)

3. New Regulatory Commitment

cc (Enclosures):

NRC Regional Administrator - Region II
NRC Senior Resident Inspector - Watts Bar Nuclear Plant
NRR Project Manager - Watts Bar Nuclear Plant

Enclosure 1

Response to Request for Additional Information Regarding Watts Bar Nuclear Plant, Unit 2 License Amendment Request for One-Time Extension of Technical Specification Surveillance Requirements Group 1 - LAR Attachments 8, 10, and 11 (CAC NO. MF8869)

Nuclear Regulatory Commission (NRC) Introduction

"By letter dated November 23, 2016, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16333A250), Tennessee Valley Authority (TVA), submitted a license amendment request (LAR) for Watts Bar Nuclear Plant, Unit 2. The LAR proposes to revise Technical Specification (TS) Surveillance Requirement (SR) 3.0.2 to extend, on a one-time basis, specific SRs that are normally performed on an 18-month frequency in conjunction with a refueling outage. Of the 52 SRs in the LAR, the staff is currently reviewing the 19 SRs represented in LAR attachments 8, 9 and 11 and has identified areas where additional information is needed to complete the review."

NRC RAI-MF8966-EICB-01

"In Attachment 10 of the LAR, the licensee states that the test acceptance criteria for SR 3.3.3.3 Function 11 require that the open and closed positions of the Containment Isolation Valves are correctly indicated in the main control room as compared to the local position of the valve. The licensee cited SR 3.3.3.1 and In-Service Testing (IST) as providing an alternate means of partially satisfying the SR 3.3.3.3, and as justification for allowing the interval extension. SR 3.3.3.1 requires a monthly Channel Check to be performed for each required Post Accident Monitoring (PAM) instrumentation channel to identify deviations between redundant parameters. The IST verifies the Containment Isolation Valve (CIV) position, but does not require local verification of valve position. Attachment 10 of the LAR identifies 34 valves for which the one-time extension of SR 3.3.3.3, Function 11 is applicable:

a. *Please describe the process for conducting a monthly Channel Check of the valves. Specifically, describe what features or functions are being "checked" and describe how such information is used in providing assurance of operability of the valve position indication functions.*
b. *Please identify if any of the 34 CIVs identified for Function 11 have previously failed SR 3.3.3.1 or the IST tests.*
c. *Please describe the operational, administrative, and corrective actions to be taken if any CIV fails SR 3.3.3.1 or an IST.*
d. *Please augment the Table in Attachment 10 to indicate which surveillances or ISTs are performed on each valve, the dates such surveillances or ISTs were performed for each valve and the frequency of the ISTs for each valve. Additionally, please document any adverse findings and corrective actions taken as a result of such surveillances or ISTs.*
e. *Please describe what functions are tested and what acceptance criteria are applied during an 18-month local leak rate test (LLRT) versus the functions tested and acceptance criteria applied during an in-service test (IST)."*

Tennessee Valley Authority (TVA) Response:

a. Watts Bar Nuclear Plant (WBN) Unit 2 Surveillance Instruction (SI) 2-SI-0-4, "Monthly Surveillances," performs the monthly channel check of the containment isolation valves (CIVs) associated with Technical Specification (TS) Surveillance Requirement (SR) 3.3.3.1 and SR 3.3.3.3, Function 11. SI 2-SI-0-4 performs a channel check of the Train A Phase A and B, and Train B Phase A and B, CIV position indicators by performing a lamp test of the containment isolation status panel. The channel check is successful if both bulbs for each CIV position indicator illuminate when tested. As noted in the Bases for TS SR 3.3.3.1, "Performance of the CHANNEL CHECK once every 31 days ensures that a gross instrumentation failure has not occurred."

   For the requested extension period for SR 3.3.3.3, Function 11, the channel check in addition to the inservice testing (IST) as described further in the response to question 1.e., provides further assurance of operability of the valve position indication functions, by verifying that the valve position indicator lights are operable and that the valve is fully stroked to both its open and closed position within the stroke time acceptance criteria.

b. None of the CIVs for Function 11 of TS Table 3.3.3-1 have failed their monthly channel checks as required by SR 3.3.3.1 or their ISTs as listed in Table 1 of this enclosure.

   On January 30, 2017, during the development of this RAI response, TVA discovered an error in the SIs that perform SR 3.3.3.3, Function 11. For the valves shown in Table 1, SR 3.3.3.3, Function 11 is performed as part of the SIs for the stroke valve tests and position indication when the unit is in Mode 5 (cold shutdown) or Mode 6 (defueled). When the stroke test is performed, the SIs verify the CIV's position both locally and on the handswitch in the control room. However, the SIs did not require verifying the CIV's position on the post-accident monitoring (PAM) instrumentation panels (2-XX-55-6E and 6F) that is needed to satisfy SR 3.3.3.3, Function 11. This oversight has been entered in the TVA Corrective Action Program (CAP). This oversight is mitigated by the following:

   - The valve positions for the components monitored on the PAM instrumentation panels were verified to match the plant process indications and switch positions for WBN Units 1 and 2.
   - The PAM instrumentation panels are operated by the same limit switch as the CIV handswitches, whose position indications are verified as part of the IST stroke tests.
   - By March 3, 2017, TVA will stroke test the CIVs listed in Table 1 that can be tested online, and verify that the handswitch position indicator light matches that on the PAM instrumentation panel.
   - In accordance with the requirements of SR 3.0.3, a risk evaluation was performed that determined the PAM panel position indication is not necessary for any action modeled in the WBN probabilistic risk assessment (PRA). Therefore, the risk significance of this oversight is negligible.

Therefore, TVA has determined that the valve position indicators as required by SR 3.3.3.3, Function 11, are properly functioning and operable. Revisions to Table 1 and Attachment 10 of the referenced letter are provided in Enclosure 2, as indicated by bold italics.

c. In the event a CIV fails the channel check, the Shift Manager/Unit Supervisor is immediately notified and the cause of the failure is investigated. If it is determined that the CIV position function is inoperable then the appropriate Action(s) of TS 3.3.3, "Post Accident Monitoring (PAM) Instrumentation," is entered.

   Regarding a failed IST stroke test, the following actions are taken:

   - If a valve meets its required limiting value of full stroke time, but is outside the stroke time acceptance criterion, one of the following actions is taken.
     1. Initiate corrective actions, declare the valve inoperable, and evaluate the effects on system operability in accordance with the applicable TS, or
     2. Retest the valve immediately.
        a. If the second valve stroke time remains within the limiting value of full stroke time, but is outside the stroke time acceptance criterion, the valve remains operable. The data is analyzed to determine if the initial stroke time is acceptable. This analysis and any required reference value worksheet must be completed within 96 hours unless any TS Action would invoke a more restrictive timeframe to determine operability. In those cases, the TS action statement timeframe supersedes the American Society of Mechanical Engineering (ASME) Operating and Maintenance (OM) Code requirements.
        b. If the analysis determines that the new stroke time represents unacceptable valve operation, corrective actions are initiated, the valve is declared inoperable, and the effect on system operability is evaluated in accordance with the applicable TS.
   - If a valve stroke time falls outside the limiting value of full stroke time, corrective actions are initiated, the valve is declared inoperable, and the effect on system operability is evaluated in accordance with the applicable TS.

   In either scenario, the failure would also be entered in the TVA CAP and the cause of the valve failure would be investigated.

d. Table 1 to this enclosure augments the table in Attachment 10 to the referenced letter to provide the requested information. Specifically, Table 1 includes the following augmented information for the CIVs for which an extension is requested:

   - Whether or not the IST for the CIV can be tested online
   - The dates that SR 3.3.3.1 were performed
   - The dates that SR 3.3.3.3, Function 11 were last performed
   - The category of the valve in accordance with the 2004 edition through 2006 Addenda of the ASME OM Code, which is the code of record for WBN Unit 2.
   - The IST requirements and frequency
   - The date(s) the CIVs were IST full stroke tested in accordance with the ASME OM Code

As noted in response to question 1.b., each of the CIVs for Function 11 of TS Table 3.3.3-1 have successfully passed their monthly channel checks as required by SR 3.3.3.1 and their ISTs. These valves have also successfully passed their 18-month SR 3.3.3.3 trip actuating device operational test (TADOT).

e. For those CIVs that require a local leak rate test (LLRT) (i.e., those valves that are designated Category A in Table 1) in accordance with 10 CFR 50 Appendix J, the LLRT is performed in accordance with the SRs and SIs associated with TS 3.6.1, "Containment," TS 3.6.3, "Containment Isolation Valves," and TS 5.7.2.19 ,"Containment Leakage Rate Testing Program." As noted in TS 5.7.2.19. the leakage rate acceptance criteria are < 0.60 La for the combined Type B and Type C LLRTs. The IST requirements and frequency for each of the CIVs are shown in Table 1. For the IST valve stroke testing, the acceptance criteria include measuring the stroke time of the valve when the valve is cycled. The individual SIs specify the stroke time acceptance criteria (seconds) and the limiting value of the full stroke time (seconds). For example, for valve 2-FCV-62-61-B, the stroke time acceptance criterion is between 4.05 to 6.75 seconds and the limiting value of the full stroke time is between 2.7 to 8.1 seconds.

NRC RAI-MF8966-EICB-02

"In Attachment 11 of the LAR the licensee identified SR 3.3.4.3, and Power Ascension Testing (PAT), as providing alternate means of partially satisfying SR 3.3.4.2. SR 3.3.4.3 requires a channel calibration for each instrumentation channel. PAT demonstrated that the unit could be taken to and maintained in hot standby from outside the control room while at 30% power.

However the licensee does not describe when SR 3.3.4.3 was last performed for TS Table 3.3.4-1 Functions 3.b, 4.b, and 5.a.

a. Please identify when SR 3.3.4.3 was last successfully performed for TS Table 3.3.4-1 functions 3.b, 4.b, and 5.a. If available, please provide a summary of Unit 1 calibration as-found data for SR 3.3.4.3 functions 2.b, 2.c, 3.b, 4.b, 4.c, and 5.a.

b. In Attachment 11 of the LAR, the licensee stated that for function 4.e, the T_{sat} loops are shared with the steam generator (SG) pressure loop; with the auxiliary control room (ACR) indicators having both pressure and saturation temperature on each indicator. In order to understand if the potential for drift exists in the T_{sat} indicator for SR 3.3.4.3 function 4.e, please provide a description of the device(s) used to indicate T_{sat} using the signal from the steam generator pressure transmitters.

c. In Attachment 11 of the LAR, the licensee stated that the pressure indicators are monitored monthly for deviations with a maximum channel deviation of 50 psig between the main control room and ACR instrumentation to allow for early identification of a failing component. Please describe how the 50 psig value was derived as a deviation limit between channels, and how that compares to the instrument tolerance. Also, as part of your response, please provide the procedural instrument as-found and as-left tolerances."

TVA Response

a. The information regarding when WBN Unit 2 SR 3.3.4.3 was last successfully performed for TS Table 3.3.4-1, Functions 3.b, 4.b, and 5.a, is provided in Table 2 of this enclosure.

   Regarding the request to provide a summary of the WBN Unit 1 calibration as-found data for SR 3.3.4.3, Functions 2.b, 2.c, 3.b, 4.b, 4.c, and 5.a, as noted in the TS Bases for WBN Unit 1 SR 3.3.4.3, the channel calibration is a complete check of the instrument loop and the sensor. The test verifies that the channel responds to a measured parameter within the necessary range and accuracy. A review of the data sheets for each of the requested WBN Unit 1 SR 3.3.4.3 functions determined that the as-found data was the same as the as-left data, except as noted in Table 3 to this enclosure. A list of the instrumentation associated with these functions is also provided in Table 3 to this enclosure. The tolerance criteria (i.e., Hi and Lo limits) for the as-left parameters are generally less than the as-found parameters. As noted in Table 3, in those cases where the as-left was not the same as the as-found, they were both within in their tolerance criteria with the exception of Function 5.a for loop 1-LPF-63-173C. In this case, the as found readings for the two lowest points were low in scale (i.e., below their Lo limit tolerance criteria), but within 33% of the tolerance criteria. The out of tolerance readings would not have impacted post-accident operation because the hot leg injection would not have been utilized in that region. Additionally, all of the as-left readings were within the tolerance criteria for this function.

b. The steam generator (SG) pressure transmitter provides input to a meter that has dual scaling. The scaling on the indicator shows pressure and the corresponding saturation temperature. Any drift associated with saturation temperature is resultant from the pressure transmitter.

c. The pressurizer pressure has an as-found tolerance of +25 psig from desired indication and an as-left tolerance of +12 psig from desired. The SG pressure has an as-found tolerance of +40 psig tolerance from desired indication and an as-left tolerance of +20 psig from desired. The deviation limit between channels was based on the as-found tolerances for the respective instrument. The referenced letter has a typographical error; the SG pressure has maximum channel deviation of 80 psig between the main control room and the auxiliary control room (ACR) rather than 50 psig as stated in the referenced letter.

Reference

TVA Letter to NRC, CNL-16-110, “Application to Modify Watts Bar Nuclear Plant Unit 2 Technical Specifications to Extend Surveillance Requirement Specified Intervals (WBN-TS-16-020),” dated November 23, 2016 (ML16333A250)

Table 1 - Testing Requirements for the Containment Isolation Valves for SR 3.3.3.3, Function 11 for which an Extension is Requested								
Component ID	**Component Description**	**Can be tested online?**	**Dates that SR 3.3.3.1 Were Performed**	**Date that SR 3.3.3.3, Function 11 was Last Performed**	**IST ASME OM Code Category (Note 3)**	**IST Requirement (Note 4)**	**IST Frequency (Note 5)**	**Date(s) that the IST Valve Stroke Tests Were Performed**
2-FCV-62-61-B	Chemical volume control system (CVCS) seal water return header isolation	No	Note 1	9/23/2015	A	RPI LTJ STC	2Y AppJ CSD	1/31/2016
2-FCV-62-63-A	CVCS seal water return header isolation	No	Note 1	11/14/2015	A	RPI LTJ STC	2Y AppJ CSD	1/31/2016
2-FCV-62-72-A	CVCS letdown orifice A isolation	Yes	Note 1	11/17/2015	A	RPI LTJ FSC STC	2Y AppJ Q Q	4/25/2016 7/27/2016 10/24/2016
2-FCV-62-73-A	CVCS letdown orifice B isolation	Yes	Note 1	11/17/2015	A	RPI LTJ FSC STC	2Y AppJ Q Q	4/25/2016 7/27/2016 10/24/2016
2-FCV-62-74-A	CVCS letdown orifice C isolation	Yes	Note 1	11/17/2015	A	RPI LTJ FSC STC	2Y AppJ Q Q	4/25/2016 7/27/2016 10/23/2016
2-FCV-62-76-A	CVCS letdown orifice Isolation	Yes	Note 1	11/17/2015	A	RPI LTJ FSC STC	2Y AppJ Q Q	4/25/2016 7/27/2016 10/23/2016
2-FCV-62-77-B	CVCS Lp letdown isolation	No	Note 1	11/14/2015	A	RPI LTJ FSC STC	2Y AppJ CSD CSD	1/31/2016

Table 1 - Testing Requirements for the Containment Isolation Valves for SR 3.3.3.3, Function 11 for which an Extension is Requested								
Component ID	**Component Description**	**Can be tested online?**	**Dates that SR 3.3.3.1 Were Performed**	**Date that SR 3.3.3.3, Function 11 was Last Performed**	**IST ASME OM Code Category (Note 3)**	**IST Requirement (Note 4)**	**IST Frequency (Note 5)**	**Date(s) that the IST Valve Stroke Tests Were Performed**
2-FCV-63-111	Cold leg 2 and 3 residual heat removal (RHR) check valve leak test isolation	Yes	Note 1	11/18/2015	B	RPI FSC STC	2Y Q Q	9/5/2016 12/4/2016 (Note 6)
2-FCV-63-112	Cold leg 1 and 4 RHR Check valve leak test isolation	Yes	Note 1	3/07/2016	B	RPI FSC STC	2Y Q Q	12/12/2016 (Note 6)
2-FCV-63-121	Safety injection pump to cold leg check valve leak test isolation	Yes	Note 1	11/13/2015	B	RPI FSC STC	2Y Q Q	12/12/2016 (Note 6)
2-FCV-63-158	RHR hot leg 1 and 3 check valve leak test isolation	Yes	Note 1	11/13/2015	B	RPI FSC STC	2Y Q Q	12/12/2016 (Note 6)
2-FCV-63-167	Hot leg 2 and 4 safety injection system (SIS) check valve leak test isolation	Yes	Note 1	11/13/2015	B	RPI FSC STC	2Y Q Q	12/12/2016 (Note 6)
2-FCV-63-174	Boron injection to cold legs check valve leak test isolation	Yes	Note 1	11/13/2015	B	RPI FSC STC	2Y Q Q	12/12/2016 (Note 6)
2-FCV-63-185	RHR supply 2-FCV-74-2 leak test line isolation	Yes	Note 1	2/14/2016	B	RPI FSC STC	2Y Q Q	6/10/2016 9/5/2016 12/4/2016
2-FCV-63-21	Safety injection pump (SIP) 2A-A hot leg 1and 3 check valve leak test isolation	Yes	Note 1	11/18/2015	B	RPI FSC STC	2Y Q Q	9/5/2016 12/4/2016 (Note 6)

Table 1 - Testing Requirements for the Containment Isolation Valves for SR 3.3.3.3, Function 11 for which an Extension is Requested

Component ID	Component Description	Can be tested online?	Dates that SR 3.3.3.1 Were Performed	Date that SR 3.3.3.3, Function 11 was Last Performed	IST ASME OM Code Category (Note 3)	IST Requirement (Note 4)	IST Frequency (Note 5)	Date(s) that the IST Valve Stroke Tests Were Performed
2-FCV-63-23-B	Cold leg accumulator fill from SIP 2Aa-A isolation valve	Yes	Note 1	2/09/2016	A	RPI LTJ FSC STC	2Y AppJ Q Q	6/30/2016 9/12/2016 12/11/2016
2-FCV-63-64-A	SIS accumulator N_2 header inlet valve	Yes	Note 1	11/25/2015	A	RPI LTJ FSC STC	2Y AppJ Q Q	6/10/2016 9/5/2016 12/4/2016
2-FCV-63-71-A	SIS check valve test line holdup tank isolation	Yes	Note 1	11/19/2015	A	RPI LTJ FSC STC	2Y AppJ Q Q	6/10/2016 9/5/2016 12/4/2016
2-FCV-63-72-A	Containment sump to RHR pump 2A-A isolation	No	Note 1	9/05/2015	B	RPI STC STO	2Y RO RO	1/28/2016
2-FCV-63-73-B	Containment sump to RHR pump 2B-B isolation	No	Note 1	9/05/2015	B	RPI STC STO	2Y RO RO	1/22/2016
2-FCV-63-84-B	SIS check valve leak test holdup tank isolation	Yes	Note 1	2/09/2016	A	RPI LTJ FSC STC	2Y AppJ Q Q	6/30/2016 9/12/2016 12/11/2016
2-FCV-70-100-A	Reactor coolant pump (RCP) oil coolers component cooling system (CCS) supply	No	Note 1	8/18/2015	A	RPI LTJ STC	2Y AppJ CSD	1/31/2016

Table 1 - Testing Requirements for the Containment Isolation Valves for SR 3.3.3.3, Function 11 for which an Extension is Requested								
Component ID	**Component Description**	**Can be tested online?**	**Dates that SR 3.3.3.1 Were Performed**	**Date that SR 3.3.3.3, Function 11 was Last Performed**	**IST ASME OM Code Category (Note 3)**	**IST Requirement (Note 4)**	**IST Frequency (Note 5)**	**Date(s) that the IST Valve Stroke Tests Were Performed**
2-FCV-70-134-B	Thermal barrier CCS supply	No	Note 1	8/17/2015	A	RPI LTJ STC	2Y AppJ CSD	1/31/2016
2-FCV-70-140-B	RCP oil cooler CCS supply	No	Note 1	8/17/2015	A	RPI LTJ STC	2Y AppJ CSD	1/31/2016
2-FCV-70-143-A	Excess letdown heat exchanger (Hx) CCS supply	Yes	Note 1	7/27/2015	A	RPI LTJ STC	2Y AppJ Q	5/15/2016 6/21/2016 9/22/2016 12/19/2016
2-FCV-70-85-B	Excess letdown Hx CCS outlet	Yes	Note 1	7/27/2015	A	RPI LTJ FSC STC	2Y AppJ Q Q	5/15/2016 6/21/2016 9/22/2016 12/19/2016
2-FCV-70-87-B	Thermal barrier CCS return	No	Note 1	8/17/2015	A	RPI LTJ STC	2Y AppJ CSD	1/31/2016
2-FCV-70-89-B	RCP oil cooler CCS return header	No	Note 1	8/17/2015	A	RPI LTJ STC	2Y AppJ CSD	1/31/2016
2-FCV-70-90-A	Thermal barrier CCS return	No	Note 1	8/18/2015	A	RPI LTJ STC	2Y AppJ CSD	1/31/2016
2-FCV-70-92-A	RCP oil cooler CCS return	No	Note 1	8/18/2015	A	RPI LTJ STC	2Y AppJ CSD	1/31/2016

Table 1 - Testing Requirements for the Containment Isolation Valves for SR 3.3.3.3, Function 11 for which an Extension is Requested								
Component ID	**Component Description**	**Can be tested online?**	**Dates that SR 3.3.3.1 Were Performed**	**Date that SR 3.3.3.3, Function 11 was Last Performed**	**IST ASME OM Code Category (Note 3)**	**IST Requirement (Note 4)**	**IST Frequency (Note 5)**	**Date(s) that the IST Valve Stroke Tests Were Performed**
2-FCV-72-44-A	Containment sump to CS pump 2A-A suction	No	Note 1	1/07/2016 Note 2	B	RPI STC STO	2Y RO RO	1/7/2016
2-FCV-72-45-B	Containment sump to CS pump 2B-B suction	No	Note 1	2/02/2016 Note 2	B	RPI STC STO	2Y RO RO	2/2/2016
2-FCV-74-2-B	Loop 4 hot leg to RHR suction	No	Note 1	9/23/2015	A	LTP RPI STC STO	2Y 2Y CSD CSD	3/4/2016
2-FCV-74-8-A	2-FCV-74-2 bypass RHR suction	No	Note 1	9/23/2015	A	LTP RPI STC STO	2Y 2Y CSD CSD	2/25/2016

Notes

1. SR 3.3.3.1 performs a channel check of the CIV position indicators by performing a lamp test of the containment isolation status panel. The channel check is successful if both bulbs for each CIV position indicator illuminate when tested. The channel check for Function 11 of TS Table 3.3.3-1 is required to be performed when the plant is in Modes 1, 2, and 3. The dates that this SR was performed are listed below:

   03/28/2016 09/23/2016
   05/01/2016 10/22/2016
   06/26/2016 11/18/2016
   07/22/2016 12/23/2016
   08/19/2016 01/27/2017

2. SR 3.3.3.3, Function 11, checks operation of the CIV position indicator both locally and in the main control room. For this valve, the SR is performed as part of the IST full stroke exercise.

3. Valve category as defined in ASME OM Code, Subsection ISTC:
   - Category A - valves for which seat leakage is limited to a specific maximum amount in the closed position for fulfillment of their required function(s), as specified in ASME OM Code ISTA-1100.
   - Category B - valves for which seat leakage in the closed position is inconsequential for fulfillment of the required function(s), as specified in ASE OM Code ISTA-1100.

4. See below table:

Abbreviation	Description
LTJ	Seat leakage test in accordance with 10 CFR 50, Appendix J. As noted in ASME OM Code ISTC-3620, “Containment isolation valves with a leakage rate requirement based on Appendix J program commitment shall be tested in accordance with the Owner’s 10 CFR 50, Appendix J program.”
RPI	Remote position indication test. This is the test method for valves that are equipped with remote position indication. This test verifies the indicating lights accurately reflect actual valve position.
STC	Stroke time close test. This is the test method for power operated valves that perform a safety function in the closed position. This test performs a full stroke exercise from open to closed and measures the stroke time closed.
STO	Stroke time open test. This is the test method for power operated valves that perform a safety function in the open position. This test performs a full stroke exercise from closed to open and measures the stroke time open.

5. See below table:

Abbreviation	Description
2Y	Two years
AppJ	Frequency determined and controlled by the 10 CFR 50, Appendix J, Containment Leak Rate Program in accordance with TS 5.7.2.19
CSD	Cold Shutdown
Q	Quarterly
RO	Refueling Outage

6. This valve was added to Revision 3 of the WBN Unit 2 IST program issued on September 27, 2016.

Table 2 - Dates when SR 3.3.4.3 was Last Successfully Performed			
SR 3.3.4.3 Function	**Surveillance Instruction (SI)**	**SI Title**	**Date Last Performed**
3.b	2-SI-62-62	18-month channel calibration of remote shutdown monitoring charging header flow loop 2 LPF-62-93C	8/27/2015
	2-SI-62-63	18-month channel calibration of remote shutdown monitoring letdown heat exchanger outlet temperature loop 2-LPT-62-80C	8/25/2015
	2-SI-62-64	18-month channel calibration of remote shutdown monitoring emergency boration flow loop 2-LPF-62-137C	8/26/2015
	2-SI-62-65	18-month channel calibration of remote shutdown monitoring volume control tank level loop 2-LPL-62-129C	9/11/2015
	2-SI-62-66	18-month channel calibration of remote shutdown control excess letdown flow loop 2-LPF-62-56	3/14/2016
	2-SI-62-67	18-month channel calibration of remote shutdown control CVCS charging header flow loop 2-LPF-62-93A	2/14/2016
	2-SI-62-68	18-month channel calibration charging header/RCP seal injection flow control Loop 2-LPF-62-89	2/23/2016
4.b	2-SI-3-16	18-month channel calibration of SG 3 turbine driven auxiliary feedwater (AFW) level control loop 2-LPL-3-172	9/07/2016
	2-SI-3-17	18-month Channel Calibration of SG 2 turbine driven AFW level control loop 2-LPL-3-173	9/06/2016
	2-SI-3-18	18-month channel calibration of SG 1 turbine driven AFW level control loop 2-LPL-3-174	9/05/2016
	2-SI-3-19	18-month channel calibration of SG 4 turbine driven AFW level control loop 2-LPL-3-175	2/04/2016
	2-SI-3-21	18-month channel calibration AFW pump 2A-A suction header pressure switches	3/29/2015

Table 2 - Dates when SR 3.3.4.3 was Last Successfully Performed			
SR 3.3.4.3 Function	**Surveillance Instruction (SI)**	**SI Title**	**Date Last Performed**
	2-SI-3-22	18-month channel calibration AFW pump 2B-B suction header pressure switches	3/18/2015
4.b (cont'd)	2-SI-3-60	18-month channel calibration of SG 3 AFW level control loop 2-LPL-3-148	9/09/2016
	2-SI-3-61	18-month channel calibration of SG 2 AFW level control loop 2-LPL-3-156	9/11/2016
	2-SI-3-62	18-month channel calibration of SG 1 AFW level control loop 2-LPL-3-164	9/05/2016
	2-SI-3-63	18-month channel calibration of SG 4 AFW Level control loop 2-LPL-3-171	9/10/2016
	2-SI-3-80	18-month channel calibration of AFW Pump 2A-A differential pressure loops 2-LPP-3-122C and 2-LPP-3-122A	5/24/2015
	2-SI-3-81	18-month channel calibration of AFW pump 2B-B differential pressure loops 2-LPP-3-132C and 2-LPP-3-132A	5/22/2015
	2-SI-46-1	18-month channel calibration of turbine driven AFW pump flow loops 2-LPF-3-142 and 2-LPF-46-57	9/14/2016
5.a	2-SI-63-60	18-month channel calibration of remote shutdown monitoring RHR pump 2A-A to reactor coolant system (RCS) 2 and 3 cold leg loop 2-LPF-63-91C	2/21/2016
	2-SI-63-61	18-month channel calibration of remote shutdown monitoring RHR Pump 2B-B to RCS 1 and 4 cold leg loop 2-LPF-63-92C	10/29/2015
	2-SI-63-62	18-month channel calibration of remote shutdown monitoring RHR Injection or recirculation after loss of coolant accident (LOCA) loop 2-LPF-63-173C	8/24/2015

Table 2 - Dates when SR 3.3.4.3 was Last Successfully Performed			
SR 3.3.4.3 Function	**Surveillance Instruction (SI)**	**SI Title**	**Date Last Performed**
	2-SI-74-62-A	18-month channel calibration of remote shutdown control RHR pump 2A-A miniflow 2-FS-74-12A, 2-FS-74-12B, and 2-FI-74-12	2/12/2016
5.a (cont'd)	2-SI-74-62-B	18-month channel calibration of remote shutdown control RHR pump 2B-B miniflow 2-FS-74-24A, 2-FS-74-24B, and 2-FI-74-24	3/22/2016
	2-SI-74-63-A	18-month channel calibration of remote shutdown control RHR Hx A outlet flow loop 2-LPF-74-16	10/25/2016
	2-SI-74-63-B	18-month channel calibration of remote shutdown control RHR Hx B outlet flow loop 2-LPF-74-16 2-LPF-74-28	3/21/2016
	2-SI-74-64	18-month channel calibration remote shutdown control RHR Hx	3/21/2016

Table 3 - WBN Unit 1 SR 3.3.4.3 Function Instrumentation		
Function	**Instrumentation**	**As-Found Same as As-Left**
2.b	Remote shutdown monitoring narrow range pressurizer pressure loops 1-LPP-68-336C and 1-LPP-68-337C	Yes
2.c	Remote shutdown monitoring narrow range pressurizer pressure loop 1-LPP-68-337C	Yes
	Remote shutdown monitoring pressurizer level loops 1-LPL-68-325C and 1-LPL-68-326C	Yes
3.b	Remote shutdown monitoring charging header flow loop 1-LPF-62-93C	Yes
	Remote shutdown monitoring charging header pressure loop 1-LPT-62-80C	Yes
	Remote shutdown monitoring emergency boration flow loop 1-LPF-62-137C	Yes
	Remote shutdown monitoring volume control tank level loop 1-LPL-62-129C	Yes
	Remote shutdown control excess letdown flow loop 1-LPF-62-56	Yes
	Remote shutdown control CVCS charging header flow loop 1-LPF-62-93A	Yes
	Charging header/RCP seal injection flow loop 1-LPF-62-89	Yes
4.b	Remote shutdown monitoring AFW pump 1A-A differential pressure loop 1-LPP-3-122C	Yes, for five of the ten parameters. For the remaining five parameters, the as-found and as-left readings were within the tolerance criteria
	Remote shutdown monitoring AFW pump 1A-A differential pressure loop 1-LPP-3-122A	Yes, for four of the ten parameters. For the remaining six parameters, the as-found and as-left readings were within the tolerance criteria.
	AFW pump 1A-A and 1B-B suction header pressure switches	Yes

Table 3 - WBN Unit 1 SR 3.3.4.3 Function Instrumentation		
Function	**Instrumentation**	**As-Found Same as As-Left**
4.b (cont'd)	SG 3 AFW train B level control loop 1-LPL-3-148	Yes
	SG 2 AFW level loop 1-LPL-3-156	Yes
	SG 1 AFW train A level control loop 1-LPL-3-164	Yes
	SG 4 AFW train B level control loop 1-LPL-3-171	Yes
	SG 4 level loop 1-LPL-3-175	No, but all of the as-found and as-left readings were within the tolerance criteria
	SG 2 level loop 1-LPL-3-173	Yes
	SG 1 level loop 1-LPL-3-174	Yes
	AFW pump turbine flow loops 1-LPF-3-142 and 1-LPF-46-57	Yes
	SG 3 level loop 1-LPL-3-172	Yes
4.c	SG 1 power relief valve control pressure loops 1-LPP-1-1C and 1-LPP-1-6	Yes, for 1-LPP-1-1C. No, for 1-LPP-1-6, but all of the as-found and as-left readings were within the tolerance criteria
	SG 2 power relief valve control pressure loops 1-LPP-1-8C and 1-LPP-1-13	Yes
	SG 3 power relief valve control pressure loops 1-LPP-1-19C and 1-LPP-1-24	Yes, for 1-LPP-1-19C. Yes for 1-LPP-1-24 for four of the nine parameters. For the remaining five parameters, the as-found and as-left readings were within the tolerance criteria
	SG 4 power relief valve control pressure loops 1-LPP-1-26C and 1-LPP-1-31	Yes
5.a	Remote shutdown monitoring RHR pump 1A-A to RCS 2 and 3 cold leg loop 1-LPF-63-91C	Yes
	Remote shutdown monitoring RHR pump 1B-B to RCS 1 and 4 cold leg loop 1-LPF-63-92C	Yes

Table 3 - WBN Unit 1 SR 3.3.4.3 Function Instrumentation		
Function	**Instrumentation**	**As-Found Same as As-Left**
5.a (cont'd)	Remote shutdown monitoring RHR injection or recirculation after LOCA loop 1-LPF-63-173C	No, the as found readings were within 33% of the tolerance criteria; however, all of the as-left readings were within the tolerance criteria
	Remote shutdown control RHR Pump 1A-A miniflow 1-FIS-74-12	No, but all of the as-found and as-left readings were within the tolerance criteria. See response to RAI 2.a., for additional information
	Remote shutdown control RHR Hx A outlet flow loop 1-LPF-74-16	Yes
	Remote shutdown control RHR Hx B outlet flow loop 1-LPF-74-28	Yes
	Remote shutdown control RHR Hx A/B bypass flow loop 1-LPF-74-32	Yes
	Remote shutdown control RHR pump 1B-B miniflow 1-FIS-74-24	Yes

Enclosure 2

Revisions to Table 1 and Attachment 10 of TVA Letter CNL-16-110, Application to Modify Watts Bar Nuclear Plant Unit 2 Technical Specifications to Extend Surveillance Requirement Specified Intervals (WBN-TS-16-020)

***Revised* Table 1** **Technical Specification Extension Summary**						
Technical Specification Surveillance Requirement (SR)	Date last Performed	Due Date plus 25%	Extended Date	Extension Days	Justification Location	Description of SR Requirement
3.3.2.10, Table 3.3.2-1, Function 7.b	09/04/15	07/22/17	10/31/17	101	Attachment 8	Verify ESFAS response times are within limit for the automatic switchover to containment sump refueling water storage tank (RWST) level - low coincident with safety injection and coincident with containment sump level - high function
3.3.3.2, Table 3.3.3-1, Function 5	09/26/15	08/13/17	10/31/17	79	Attachment 9	Perform channel calibration of the Reactor Coolant System (RCS) pressure (wide range) function
3.3.3.2, Table 3.3.3-1, Function 6	09/26/15	08/13/17	10/31/17	79	Attachment 9	Perform channel calibration of the reactor vessel water level function
3.3.3.3, Table 3.3.3-1, Function 11	07/20/15 ***(See Attachment 10 for additional information)***	06/06/17	10/31/17	147	Attachment 10	Perform TADOT of the containment isolation valve (CIV) position function
3.3.4.2, Table 3.3.4-1, Function 2.b	07/16/15	06/02/17	10/31/17	151	Attachment 11	Verify each required control circuit and transfer switch is capable of performing the intended function for the RCS pressure control PZR power operated relief valve (PORV) control and PZR block valve control function

Enclosure 2

Revised Attachment 10 to TVA Letter CNL-16-110

Watts Bar Nuclear Plant, Unit 2, WBN-TS-16-020

Evaluation of Proposed Technical Specification Change

SR 3.3.3.3, Function 11 - Perform a TADOT of PAM System Instrumentation, CI Valve Position

---

Date the SR was Last Performed - ***As shown in Table 1, "Technical Specification Extension Summary," this SR was last performed on July 20, 2015. However, on January 30, 2017, TVA determined that this SR had not been properly performed. However, based on the information provided in the Additional Testing section of this Attachment, TVA determined that the valve position indicators as required by SR 3.3.3.3, Function 11, are properly functioning and operable.***

Requested Date for Extended Surveillance - see Table 1, "Technical Specification Extension Summary"

Surveillance Interval Extension in Days – see Table 1, "Technical Specification Extension Summary"

Scope of SR Extension

This SR requires that each of the required containment isolation valves with position indication are exercised to its safety related position. Each valve is observed locally to verify its positions are correctly indicated in the main control room. The extension is for the verification of valve position indication for those valves that have position indication in the main control room, but also must be observed locally.

This SR extension applies to the following valves:

Component Id	Comp Description
2-FCV-62-61-B	Chemical Volume Control System (CVCS) Seal Water Return Header Isolation
2-FCV-62-63-A	CVCS Seal Water Return Header Isolation
2-FCV-62-72-A	CVCS Letdown Orifice A Isolation
2-FCV-62-73-A	CVCS Letdown Orifice B Isolation
2-FCV-62-74-A	CVCS Letdown Orifice C Isolation
2-FCV-62-76-A	CVCS Letdown Orifice Isolation
2-FCV-62-77-B	CVCS Lp Letdown Isolation
2-FCV-63-111	Cold Leg 2 & 3 RHR Check Valve Leak Test Isolation
2-FCV-63-112	Cold Leg 1 & 4 RHR Check Valve Leak Test Isolation
2-FCV-63-121	SI Pump to Cold Leg Check Valve Leak Test Isolation
2-FCV-63-158	RHR Hot Leg 1 & 3 Check Valve Leak Test Isolation
2-FCV-63-167	Hot Leg 2 & 4 Safety Injection System (SIS) Check Valve Leak Test Isolation
2-FCV-63-174	Boron Injection to Cold Legs Check Valve Leak Test Isolation
2-FCV-63-185	RHR Supply 2-FCV-74-2 Leak Test Line Isolation
2-FCV-63-21	SIP 2A-A Hot Leg 1&3 Check Valve Leak Test Isolation

SR 3.3.3.3, Function 11 - Perform a TADOT of PAM System Instrumentation, CI Valve Position

Component Id	Comp Description
2-FCV-63-23-B	Cold Leg Accumulator Fill from SIP 2Aa-A Isolation Valve
2-FCV-63-64-A	SIS Accumulator N_2 Header Inlet Valve
2-FCV-63-71-A	SIS Check Valve Test Line Holdup Tank Isolation
2-FCV-63-72-A	Containment Sump to RHR Pump 2A-A Isolation
2-FCV-63-73-B	Containment Sump to RHR Pump 2B-B Isolation
2-FCV-63-84-B	SIS Check Valve Leak Test Holdup Tank Isolation
2-FCV-70-100-A	RCP Oil Coolers CCS Supply
2-FCV-70-134-B	Thermal Barrier CCS Supply
2-FCV-70-140-B	RCP Oil Cooler CCS Supply
2-FCV-70-143-A	Excess Letdown Heat Exchanger (Hx) CCS Supply
2-FCV-70-85-B	Excess Letdown Hx CCS Outlet
2-FCV-70-87-B	Thermal Barrier CCS Return
2-FCV-70-89-B	RCP Oil Cooler CCS Ret Header
2-FCV-70-90-A	Thermal Barrier CCS Return
2-FCV-70-92-A	RCP Oil Cooler CCS Return
2-FCV-72-44-A	Containment Sump To CS Pump 2A-A Suction
2-FCV-72-45-B	Containment Sump To CS Pump 2B-B Suction
2-FCV-74-2-B	Loop 4 Hot Leg To RHR Suction
2-FCV-74-8-A	2-FCV-74-2 Bypass RHR Suction

Why these Surveillances Cannot be Performed Online

SR 3.3.3.3 is the performance of a TADOT. The SR is performed every 18 months. This test exercises, to the accident position, each of the TS 3.3.3 required containment isolation valves with position indication. Each valve is required to be observed both locally and in the control room during the test. The test acceptance criteria require that the open and closed positions are correctly indicated in the main control room as compared to the local position of the valve. The valve testing cannot be completed at power because, from for personnel safety reasons, the environment where these valves are located prohibits the local verification of the valve stroking during power operation. The equipment addressed by this SR is required to be operable in Modes 1, 2, 3 or 4. Therefore, in order to completely test all required equipment for the SR, the testing configuration requires that the plant must be in Modes 5 or 6 (or defueled).

System Description

The PAMS provides essential information required by the operator to diagnose and monitor significant accident conditions. The accident-monitoring instrumentation is designed with redundant channels so that a single failure would not prevent the operator from determining

the nature of an accident, the functioning of the engineered safety features, the need for operator action, and the response of the plant to the safety measures in operation.

Category 1 instrumentation provides essential information required by the operator to diagnose and monitor significant accident conditions. Category 2 and Category 3 instrumentation provide additional nonessential information to the operator to diagnose and monitor significant accident conditions as well as information required to determine the magnitude of radioactive material releases and continually assess such releases.

Five classifications of variable types, A, B, C, D, and E, were identified consistent with the classifications contained in RG 1.97, Revision 2. Type A variables provide primary information to the operators to allow them to take preplanned manually controlled actions to mitigate the consequences of a design basis event (DBE). Types B, C, D, and E are variables for following the course of an accident and are used as follows:

- to determine if the plant is responding to the safety measures in operation, and
- to inform the operator of the necessity for unplanned actions to mitigate the consequences of an accident should plant conditions evolve differently than predicted by UFSAR Chapter 15.

This SR requires that each of the required containment isolation valves with position indication are exercised to its safety related position. Each valve is observed locally to verify its positions are correctly indicated in the main control room.

Safety Analysis

The primary purpose of the PAM instrumentation is to display unit variables that provide information required by the control room operators during accident situations. These variables are specially related to the diagnosis and pre-planned actions required to mitigate design basis events. The operability of the accident monitoring instrumentation ensures that there is sufficient information available on selected unit parameters to monitor and to assess unit status and behavior following an accident.

CIV position is a non-Type A Category 1 variable provided for verification of containment operability, and verification of isolation after receipt of Phase A and/or Phase B isolation signals.

Surveillance Requirement

SR 3.3.3.3 checks operation of the containment isolation valve position indicators. This test exercises, to the accident position, each of the TS 3.3.3 required containment isolation valves with position indication. Each valve is required to be observed both locally and in the control room during the test. The test acceptance criteria require that the open and closed

positions are correctly indicated in the main control room as compared to the local position of the valve.

This TADOT is performed every 18 months. The frequency is based on the known reliability of the indicators and the multichannel redundancy available, and has been shown to be acceptable through operating experience. This SR has been modified by two Notes. Note 1 excludes verification of setpoints for the valve position indicators. Note 2 indicates that this SR is only applicable to Functions 11 and 16, which are the only Functions with valve position indicators.

Basis for Extension of the Surveillance Requirements

Review of Operating Experience
There is no additional operating experience that applies to this SR extension request.

Additional Testing

No additional testing has been performed since the surveillance activity for SR 3.3.3.3, Function 11 was last performed as shown in Table 1. However, further assurance of the operability of the containment isolation valve position indicators is demonstrated through the performance of SR 3.3.3.1, which performs a monthly channel check of PAM instrumentation channels to identify deviations between redundant parameters.

Additionally, the SR 3.3.3.3, Table 3.3.3-1 Function 11, containment isolation position indication is also verified during in-service testing (IST) as discussed below:

- The difference in acceptance criteria between SR 3.3.3.3 and the IST verification is that the IST program does not require local verification of valve position during the exercising of the valve to the accident position.
- Sixteen valves were successfully stroked under the IST program in January and February 2016. An additional 11 valves were successfully stroked on a quarterly basis using the main control room indication for stroke time and valve position indication; the last stroking was performed in September and October 2016. The remaining seven valves were cycled in support of ECCS check valve testing in early 2016 and as needed for monthly ECCS venting activities.
- The stroking of the valve to its accident position exercises the valve and provides confirmation in the control room that the limit switches changed state. If the valve failed to fully operate to the active safety position, then an intermediate light indication would identify any issues.

On January 30, 2017, TVA determined that this SR had not been properly performed. TVA discovered an error in the surveillance instructions that perform SR 3.3.3.3, Function 11. For the valves shown in Table 1, SR 3.3.3.3, Function 11 is performed as

part of the surveillance instructions for the stroke valve tests and position indication when the unit is in Mode 5 (cold shutdown) or Mode 6 (defueled). When the stroke test is performed, the SIs verify the CIV's position both locally and on the handswitch in the control room. However, the SIs did not require verifying the CIV's position on the PAM instrumentation panels (2-XX-55-6E and 6F) that is needed to satisfy SR 3.3.3.3, Function 11. This oversight was entered in the TVA Corrective Action Program (CAP). TVA determined that the valve position indicators as required by SR 3.3.3.3, Function 11, are properly functioning and operable by the following actions:

- ***The valve positions for all components monitored on the PAM instrumentation panels were verified to match plant conditions and switch positions.***
- ***The PAM instrumentation panels are operated by the same limit switch as the CIV handswitches, whose position indications are verified as part of the IST stroke tests.***
- ***The CIVs listed in Table 1 that can be tested online, were stroke tested and verified that the handswitch position indicator light matched that on the PAM instrumentation panel.***

WBN Unit 1 Impact

SR 3.3.3.3, Function 11, does not impact WBN Unit 1 operation. These PAMS instrumentation channels are separate for each WBN unit and are not cross-connected. These associated circuits and equipment do not share any Unit 1 equipment or circuits. These are separate and independent circuits and equipment. Performance of these Unit 2 SRs does not create an effect on the safety analysis of WBN Unit 1 . Thus, the proposed extension of these SRs for WBN Unit 2 will not affect the safe operation and accident mitigation ability of WBN Unit 1.

Conclusion

Based on the performance of this SR, ***as supplemented by information provided in the Additional Testing Section of this Attachment,*** and the additional IST for the CIVs, TVA has determined that extending this SR by the number of days shown in Table 1 to Enclosure 1, is acceptable and will have no adverse impact on the functionality of containment isolation valves as stated in the WBN Unit 2 accident analysis.

Enclosure 3

Watts Bar Nuclear Plant, Unit 2

New Regulatory Commitment

Commitment	Due Date/Event
TVA will stroke test the following containment isolation valves and verify that the handswitch position indicator light matches that on the post-accident monitoring (PAM) instrumentation panel: • 2-FCV-62-72-A • 2-FCV-62-73-A • 2-FCV-62-74-A • 2-FCV-62-76-A • 2-FCV-63-111 • 2-FCV-63-112 • 2-FCV-63-121 • 2-FCV-63-158 • 2-FCV-63-167 • 2-FCV-63-174 • 2-FCV-63-185 • 2-FCV-63-21 • 2-FCV-63-23-B • 2-FCV-63-64-A • 2-FCV-63-71-A • 2-FCV-63-84-B • 2-FCV-70-143-A • 2-FCV-70-85-B	March 3, 2017