



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
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ATLANTA, GEORGIA 30303-1257

September 4, 2012

Mr. Joseph W. Shea
Manager, Corp. Nuclear Licensing Programs
Tennessee Valley Authority
1101 Market Street, LP 4B-C
Chattanooga, TN 37402-2801

**SUBJECT: MID-CYCLE ASSESSMENT LETTER FOR BROWNS FERRY NUCLEAR
PLANT UNITS 1, 2, and 3 (NRC INSPECTION REPORT 05000259, 260,
296/2012006)**

Dear Mr. Shea:

On August 16, 2012, the NRC completed its mid-cycle performance review of Browns Ferry Nuclear Plant, Units 1, 2, and 3. The NRC reviewed the most recent quarterly performance indicators (PIs) in addition to inspection results and enforcement actions from July 1, 2011, through June 30, 2012. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility. This assessment reflects the integration of the security cornerstone into the Reactor Oversight Process performance assessment program governed by IMC 0305, "Operating Reactor Assessment Program."

The NRC determined the plant performance at Browns Ferry Unit 1 during the most recent quarter was within the Multiple/Repetitive Degraded Cornerstone column (Column 4) of the NRC's Reactor Oversight Process Action Matrix, beginning the fourth quarter 2010, based on the issuance of one finding classified as having a high safety significance (Red). This was detailed in Final Significance Determination of a Red Finding, Notice of Violation, and Assessment Follow-Up Letter (NRC Inspection Report No. 05000259/2011008, (ML111290482)) for Browns Ferry Nuclear Plant, dated May 9, 2011.

Since the last performance assessment, Browns Ferry Unit 1 received one additional action matrix input for Mitigating System Performance Index, High Pressure Injection Systems (HPCI) Performance Indicator, when it changed from Green to White. During this reporting period, 4 HPCI system failures were included. Unavailability also contributed to the performance indicator change due to HPCI steam admission valve leakage. The White performance indicator input does not change the current assessment of performance for Unit 1 because Unit 1 was already assessed to be in the Multiple/Repetitive Degraded Cornerstone column of the Reactor Oversight Process Action Matrix.

Consistent with NRC Manual Chapter 0305, the NRC will conduct Part 3 of a supplemental inspection in accordance with Inspection Procedure (IP) 95003, "Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or One Red Input," following written notification from you on your readiness to support this inspection. The Red finding is being held open past 4 quarters pending completion of Part 3, IP 95003. Based on a review of the inspection results, the NRC will provide further clarification

regarding any specific actions the Tennessee Valley Authority will need to take following completion of Part 3 of IP 95003. Additionally, the NRC will conduct a supplemental inspection (Inspection Procedure 95001, Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area) when you notify us of your readiness for the NRC to review the actions taken to address the White Mitigating System Performance Index, High Pressure Injection Systems, for Unit 1.

Plant performance for Browns Ferry Units 2 and 3 for the most recent quarter was in the Regulatory Response Column (Column 2) of the NRC's Reactor Oversight Process Action Matrix. As detailed in Final Significance Determination Of A White Finding, Notice Of Violation, And Assessment Follow-Up Letter (NRC Inspection Reports 05000259,260,296/2012013, (ML12226A647)) for Browns Ferry Nuclear Plant, dated Aug 13, 2012, Units 2 and 3 were determined to be in the Regulatory Response Column beginning in the second quarter 2012. As stated in this assessment, additional regulatory oversight actions will be implemented at your facility. We will conduct a supplemental inspection (Inspection Procedure 95001, Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area) when you notify us of your readiness for the NRC to review the actions taken to address the White Finding.

Since the last performance assessment, Browns Ferry Unit 3 received one additional action matrix input for the Unplanned Scrams Performance Indicator, which changed from Green to White in May of 2012. Reactor scrams on September 28, 2011, May 22, May 24, 2012, and May 29, 2012, caused the Performance Indicator to change from Green to White. The White performance indicator input does not change the current assessment of performance for Unit 3 because Unit 3 was already assessed to be in the Regulatory Response column of the NRC's Action Matrix based on an input from a different Reactor Oversight Process cornerstone. The NRC will conduct a supplemental inspection (Inspection Procedure 95001, Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area) when you notify us of your readiness for the NRC to review the actions taken to address the White Unplanned Scrams Performance Indicator for Unit 3.

In its Annual Assessment Letter, dated March 4, 2011, (ML11063042), the NRC opened a Substantive Cross-Cutting Issue (SCCI) in the Corrective Action Program component of the Problem Identification and Resolution cross-cutting area. Specifically, a cross-cutting theme was identified based on four Green inspection findings for the associated 12-month assessment period with documented cross-cutting aspects in the area of Problem Identification and Resolution, in the aspect of "appropriate and timely corrective actions" (P.1(d)). The NRC determined that an SCCI existed because the NRC had a concern with your staff's scope of effort and progress in addressing the cross-cutting theme (NRC Inspection Report No. 05000259,260,296/2010005 ML110400431). Although you identified and implemented a range of actions to address the cross-cutting theme; these actions had not yet proven effective in substantially mitigating the cross-cutting theme, even though a reasonable duration of time has passed. In its Mid-Cycle Assessment Letter, dated August 29, 2011, (ML112411450), the NRC requested that this SCCI be addressed during your third party safety culture assessment which will be reviewed as part of the Independent NRC Safety Culture Assessment per IP 95003, "Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or One Red Input." This SCCI will continue to remain open pending completion of these assessments and until the NRC has reviewed your other actions to address this SCCI, based on the following: 1) A comprehensive range of actions are identified in your Corrective Action Program that effectively demonstrate you will address the

cross-cutting theme; 2) No significant increase in the number of findings with the cross-cutting aspect of "appropriate and timely corrective actions" (P.1(d)) during the previous twelve month assessment period; and 3) The NRC has an increased level of confidence in your ability to deal effectively with operational/equipment issues as related to the cross-cutting theme of "appropriate and timely corrective actions" (P.1(d)) during the previous six months assessment period. This letter is the fourth consecutive assessment letter documenting an SCCI with the same cross-cutting aspect.

In its Annual Assessment Letter, dated March 3, 2010, (ML100620960), the NRC opened a SCCI in the Corrective Action Program component of the Problem Identification and Resolution cross-cutting area. Specifically, a cross-cutting theme was identified based on four Green inspection findings for the associated 12-month assessment period with documented cross-cutting aspects in the area of Problem Identification and Resolution, in the aspect of "thorough evaluation of identified problems" (P.1(c)). The NRC determined that an SCCI existed because the NRC had a concern with your staff's scope of effort and progress in addressing the cross-cutting theme (NRC Inspection Report No. 05000259,260,296/2010005). Although you identified and implemented a range of actions to address the cross-cutting theme; these actions had not yet proven effective in substantially mitigating the cross-cutting theme, even though a reasonable duration of time has passed. In its Mid-Cycle Assessment Letter, dated August 29, 2011, (ML112411450), the NRC requested that this SCCI be addressed during your third party safety culture assessment which will be reviewed as part of the Independent NRC Safety Culture Assessment per IP 95003, "Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or One Red Input." This SCCI will continue to remain open pending completion of these assessments and until the NRC has reviewed your other actions to address this SCCI, based on the following: 1) An appropriate and comprehensive range of actions identified by the Corrective Action Program, which will effectively address the cross-cutting theme; 2) No significant increase in the number of findings with the cross-cutting aspect of "thorough evaluation of identified problems" (P.1(c)) during the previous twelve month assessment period; and 3) An increased level of confidence in your ability to deal effectively with operational and equipment issues as related to the cross-cutting theme of "thorough evaluation of identified problems" (P.1(c)) during the previous six month assessment period. This letter is the sixth consecutive assessment letter documenting an SCCI with the same cross-cutting aspect.

During this assessment, the NRC identified a cross-cutting theme in the Resources component of the Human Performance & Error Prevention cross-cutting area. Specifically, five Green inspection findings for the current 12-month assessment period, each with a documented cross-cutting aspect of "Complete Documentation and Component Labeling" (H.2.(c)) were identified. The NRC determined that a SCCI did not exist because the NRC does not have a concern with your staff's scope of effort and progress in addressing the cross-cutting theme. This is based on TVA's proactive actions, which began in 2010, in addressing concerns associated with this Cross Cutting Aspect (CCA). Three of the five CCA's were assigned in the second quarter of 2012, which were the result of issues with the licensee's procurement and operations procedure processes that would not have been reasonably identified by the previous efforts to address this CCA. Each of the CCAs involved separate Reactor Oversight Process cornerstones. The NRC has concluded that it is reasonable to allow some amount of time for you to incorporate the new issues into your corrective action program. The NRC will evaluate the effectiveness of your corrective actions during the next assessment cycle and will continue to monitor your staff's effort and progress in addressing this theme.

The enclosed inspection plan lists the inspections scheduled through December 30, 2013. Routine inspections performed by resident inspectors are not included in the inspection plan. In addition to the baseline inspections, consistent with the Agency's actions related to Fukushima, the NRC will perform TI-187, "Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns" and TI-188 Inspection of Near-Term Task Force Recommendation 2.3 Seismic Walkdowns." The inspections listed during the last nine months of the inspection plan are tentative and may be revised at the end-of-cycle performance review. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes. This inspection plan does not include security related inspections, which will be sent via separate, non-publicly available correspondence.

In addition to the baseline inspections at your facility, we also plan on conducting infrequently performed inspections which include: IP 92702, Follow up On Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders, And Alternative Dispute Resolution Confirmatory Orders; initial reactor operator licensing examinations; and TI 2515/182, "Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping and Tanks."

In accordance with 10 CFR 2.390 of the NRC's Rules of Practice, a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Please contact Eugene Guthrie at 404-997-4662 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

/RA/

Victor M. McCree
Regional Administrator

Docket No.: 50-259, 50-260, 50-296
License No.: DPR-33, DPR-52, DPR-68

Enclosure: Browns Ferry Inspection/Activity Plan (09/01/2012 – 12/31/2013)

cc w/encl: (See page 5)

J. Shea

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cc w/encl:
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Browns Ferry
Inspection / Activity Plan
09/01/2012 - 12/31/2013

Unit Number	Planned Dates Start	Planned Dates End	Inspection Activity	Title	No. of Staff on Site
			95001 - WHITE VIOLATION FOR SSI TRAINING		1
1, 2, 3	10/08/2012	10/08/2012	IP 95001	Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area	
			OL RQ - REQUAL INSPECTION		2
1, 2, 3	10/08/2012	10/12/2012	IP 7111111B	Licensed Operator Requalification Program	
			TI-188 - TI-188 P2 - NTTF 2.3 - SEISMIC WALKDOWNS		1
1, 2, 3	10/17/2012	10/19/2012	IP 2515/188	Inspection of Near-Term Task Force Recommendation 2.3 Seismic Walkdowns	
			EB3 ISI - UNIT 1 INSERVICE INSPECTION		1
1	10/29/2012	11/02/2012	IP 7111108G	Inservice Inspection Activities - BWR	
			EB3 LR - UNIT 1 POST APPROVAL LR - PHASE 1		2
1	10/29/2012	11/02/2012	IP 71003	Post-Approval Site Inspection for License Renewal	
			CDBI - COMPONENT DESIGN BASES INSPECTION		10
1, 2, 3	01/07/2013	01/11/2013	IP 7111121	Component Design Bases Inspection	
1, 2, 3	01/28/2013	02/01/2013	IP 7111121	Component Design Bases Inspection	
1, 2, 3	02/11/2013	02/15/2013	IP 7111121	Component Design Bases Inspection	
1, 2, 3	02/25/2013	03/01/2013	IP 7111121	Component Design Bases Inspection	
			ISI - UNIT 2 INSERVICE INSPECTION		1
2	03/25/2013	03/29/2013	IP 7111108G	Inservice Inspection Activities - BWR	
			LR71003 - UNIT 2 POST APPROVAL LR PHASE 1		2
2	04/01/2013	04/05/2013	IP 71003	Post-Approval Site Inspection for License Renewal	
			PSB1-RP - RP OCCUPATIONAL BASELINE		2
1, 2, 3	04/01/2013	04/05/2013	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1, 2, 3	04/01/2013	04/05/2013	IP 71124.02	Occupational ALARA Planning and Controls	
1, 2, 3	04/01/2013	04/05/2013	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2, 3	04/01/2013	04/05/2013	IP 71124.04	Occupational Dose Assessment	
1, 2, 3	04/01/2013	04/05/2013	IP 71124.05	Radiation Monitoring Instrumentation	
1, 2, 3	04/01/2013	04/05/2013	IP 71151	Performance Indicator Verification	
			PSB1-RP - RP OCCUPATIONAL BASELINE WEEK 2		3
1, 2, 3	04/15/2013	04/19/2013	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1, 2, 3	04/15/2013	04/19/2013	IP 71124.02	Occupational ALARA Planning and Controls	
1, 2, 3	04/15/2013	04/19/2013	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2, 3	04/15/2013	04/19/2013	IP 71124.04	Occupational Dose Assessment	
1, 2, 3	04/15/2013	04/19/2013	IP 71124.05	Radiation Monitoring Instrumentation	
1, 2, 3	04/15/2013	04/19/2013	IP 71151	Performance Indicator Verification	

This report does not include INPO and OUTAGE activities.
This report shows only on-site and announced inspection procedures.

Enclosure

Browns Ferry
Inspection / Activity Plan
09/01/2012 - 12/31/2013

Unit Number	Planned Dates Start	Planned Dates End	Inspection Activity	Title	No. of Staff on Site
			OL EXAM - INITIAL EXAM PREP		3
1	05/06/2013	05/10/2013	V23394	BROWNS FERRY/JUNE 2013 INITIAL EXAM AT POWER FACILITIES	
			LR71003 - UNIT 1 POST APPROVAL LR PHASE 2		5
1	05/06/2013	05/10/2013	IP 71003	Post-Approval Site Inspection for License Renewal	
1	05/20/2013	05/24/2013	IP 71003	Post-Approval Site Inspection for License Renewal	
			TI-182 - TI-182 BURIED PIPING/TANK - PHASE 1		1
1, 2, 3	05/13/2013	05/17/2013	IP 2515/182	Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping	
			EP - EMERGENCY PREPAREDNESS EXERCISE		1
1, 2, 3	06/03/2013	06/07/2013	IP 7111401	Exercise Evaluation	
1, 2, 3	06/03/2013	06/07/2013	IP 71151	Performance Indicator Verification	
			OL EXAM - INITIAL EXAM - WEEK 1		3
1	06/03/2013	06/07/2013	V23394	BROWNS FERRY/JUNE 2013 INITIAL EXAM AT POWER FACILITIES	
			OL EXAM - INITIAL EXAM - WEEK 2		3
1	06/10/2013	06/14/2013	V23394	BROWNS FERRY/JUNE 2013 INITIAL EXAM AT POWER FACILITIES	
			BF TFPI - BF - TRIENNIAL FIRE PROTECTION INSP		4
1, 2, 3	10/01/2013	10/03/2013	IP 7111105T	Fire Protection [Triennial]	
1, 2, 3	10/21/2013	10/25/2013	IP 7111105T	Fire Protection [Triennial]	
1, 2, 3	11/04/2013	11/08/2013	IP 7111105T	Fire Protection [Triennial]	

Comments: