



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION II  
245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

March 4, 2011

Mr. R. M. Krich  
Vice President, Nuclear Licensing  
Tennessee Valley Authority  
1101 Market Street, LP 3R-C  
Chattanooga, TN 37402-2801

**SUBJECT: ANNUAL ASSESSMENT LETTER FOR THE BROWNS FERRY NUCLEAR  
PLANT UNIT 1 (NRC INSPECTION REPORT 05000259,260,296/2011001)**

Dear Mr.Krich:

On February 10, 2011, the NRC completed its end-of-cycle performance review of Browns Ferry, Units 1, 2, and 3. The NRC reviewed the most recent quarterly performance indicators (PIs) in addition to inspection results and enforcement actions from January 1, 2010, through December 31, 2010. 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 performance review and enclosed inspection plan do not include security information. A separate letter will include the NRC's assessment of your performance in the Security Cornerstone and its security-related inspection plan.

Plant performance for Browns Ferry Units 1, 2, and 3, for the most recent quarter was within the Degraded Cornerstone Column of the NRC's Action Matrix based on one violation characterized as substantial safety significance (Yellow) and one violation of low to moderate safety significance (White) being issued within the past four quarters. In October 2010, the NRC successfully completed an inspection per IP 95002, Inspection For One Degraded Cornerstone Or Any Three White Inputs In a Strategic Performance Area, and closed the open Yellow and White violations. In a letter dated December 3, 2010, the NRC informed TVA that all three Browns Ferry Units transitioned back to the Licensee Response Column of the Action Matrix. Although plant performance was within the Licensee Response Column, the NRC has not yet finalized the significance of apparent violation AV 05000259/2010005-01, RHR Subsystem Inoperable Beyond the TS Allowed Outage Time. The final safety significance determination may change our assessment of that issue.

The NRC identifies substantive cross-cutting issues (SCCIs) to communicate a concern with the licensee's performance in a cross-cutting area and to encourage the licensee to take appropriate actions before more significant performance issues emerge. The NRC identified a cross-cutting theme in the area of Problem Identification and Resolution. Specifically, a cross-cutting theme was identified based on four Green inspection findings for the current 12-month assessment period, each with a documented cross-cutting aspect of "appropriate and timely corrective actions" (P.1(d)). The NRC determined that an SCCI exists because the NRC has a concern with your staff's scope of effort and progress in addressing the cross-cutting theme. Although you have identified and implemented a range of actions to address the cross-cutting theme; these actions have not yet proven effective in substantially mitigating the cross-cutting theme, even though a reasonable duration of time has passed. The staff noted that your root

cause to address this issue stated that previous corrective actions had been unsuccessful at ensuring sustainable improvement; however a rigorous evaluation of why previous actions were ineffective was not included. The SCCI will remain open until the following criteria are met: 1) Fewer 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 2) An increased level of confidence in your ability to deal effectively with operational and equipment issues as related to the cross-cutting theme of "appropriate and timely corrective actions" (P.1(d)) during the previous six month assessment period. The NRC will monitor your staff's effort and progress in addressing the SCCI via implementation of the baseline inspection program. The staff will primarily accomplish this in accordance with IP 71152, Identification And Resolution of Problems, to include the Semiannual Trend Review and Selected Issue Follow-up Inspections specified in this procedure.

The NRC identified a cross-cutting theme in the Work Practices component of the Human Performance & Error Prevention cross-cutting area. Specifically, four Green inspection findings for the current 12-month assessment period, each with a documented cross-cutting aspect of "Human Performance & Error Prevention" (H.4(b)). The NRC determined that a SCCI does 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. The staff determined that you have completed a common cause root cause analysis implementing a range of actions to address the cross-cutting theme. The staff also determined that the scope and content of actions that you identified were reasonable and that a reasonable time had not passed for you to implement the corrective actions. The NRC will continue to monitor your staff's effort and progress in addressing the theme until the theme criteria are no longer met.

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 current 12-month assessment period, each with a documented cross-cutting aspect of "thorough evaluation of identified problems" (P.1(c)). In December 2010, an inspection was performed to assess the progress of your actions in addressing the SCCI. The results of the inspection were documented in Inspection Report 05000259, 260, 296/2010005. Additional assessment related to this cross-cutting area, was provided to you in Inspection Report 05000259, 260, 296/2010006. This report expressed concern for the challenges that remained related to this cross-cutting aspect, additionally the report referenced the violations that were issued as examples demonstrating how those remaining challenges were found to be affecting resolution of equipment performance. The staff noted that many of the actions, identified in your SCCI root cause analysis, were similar to previous corrective actions developed to address weaknesses in the Problem Identification and Resolution area. The staff concluded that those actions have proven to be ineffective over the long term. Additionally, the staff concluded that, without a means to evaluate against a measure of success and effectiveness, the staff is not able to conclude whether your actions will achieve sustainable and effective results. Following a review of your actions and based on the nature of the issues identified during the inspections; the number of corrective actions that are still pending completion; several additional findings documented with this cross-cutting aspect having occurred since the Mid-Cycle assessment; this SCCI will remain open until the following criteria are met: 1) Fewer 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 2) 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. Because this is the third consecutive assessment letter identifying this same cross-cutting aspect in which we have not found that you met the criteria for closing the SCCI, the staff requests that you provide a written response to describe your actions to address the issues pertaining to this SCCI. The staff will continue to monitor and follow-up on this SCCI via implementation of the baseline inspection program. The staff will primarily accomplish this in accordance with IP 71152, Identification and Resolution of Problems, to include the Semiannual Trend Review and Selected Issue Follow-up Inspections specified in this procedure.

In its Annual Assessment Letter, dated March 3, 2010, (ML100620960), the NRC identified a cross-cutting theme in the area of Safety Conscious Work Environment (SCWE) based on the December 22, 2009, issuance of a Confirmatory Order for Office of Investigation (report numbers 2-2006-025 and 2-2009-003) involving two instances of discrimination. The NRC does not currently have a concern with your scope of efforts or progress in addressing this theme. To ensure the Confirmatory Order actions are being addressed, the NRC continues to conduct follow up inspections in accordance with IP 92702, Follow-up On Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders, And Alternative Dispute Resolution Confirmatory Orders. Inspections are scheduled as required each year until completion in December of 2013. On this basis, the NRC has not classified this as a substantive cross cutting issue.

The enclosed inspection plan lists the inspections scheduled through June 30, 2012. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last nine months of the inspection plan are tentative and may be revised at the mid-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.

In addition to the reactor oversight process (ROP) baseline inspections at your facility, we also plan on conducting infrequently performed inspections which include: Reactor operator licensing examinations; 92702, Follow-up On Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders, And Alternative Dispute Resolution Confirmatory Orders.

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).

TVA

4

If circumstances arise which cause us to change this inspection plan, we will contact you to discuss the change as soon as possible. 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

cc w/encl: (See page 5)

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## Browns Ferry

## Inspection / Activity Plan

03/01/2011 - 06/30/2012

Unit Number	Planned Dates Start	Planned Dates End	Inspection Activity	Title	No. of Staff on Site
1, 2, 3	02/28/2011	03/04/2011	<b>PSB1-RP</b> - OCCUPATIONAL RP BASELINE WK1	Verification of Licensee Responses to NRC Requirement for Inventories of Materials Tracked in NSTS	3
1, 2, 3	02/28/2011	03/04/2011	IP 2515/179	Radiological Hazard Assessment and Exposure Controls	
1, 2, 3	02/28/2011	03/04/2011	IP 71124.01	Occupational ALARA Planning and Controls	
1, 2, 3	02/28/2011	03/04/2011	IP 71124.02	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2, 3	02/28/2011	03/04/2011	IP 71124.03	Occupational Dose Assessment	
1, 2, 3	02/28/2011	03/04/2011	IP 71124.04	Performance Indicator Verification	
1, 2, 3	02/28/2011	03/04/2011	IP 71151		
2	03/14/2011	03/18/2011	<b>EB3 ISI</b> - UNIT 2 INSERVICE INSPECTION	Inservice Inspection Activities - BWR	1
			IP 7111108G		
1, 2, 3	03/14/2011	03/18/2011	<b>PSB1-RP</b> - OCCUPATIONAL RP BASELINE WK2	Verification of Licensee Responses to NRC Requirement for Inventories of Materials Tracked in NSTS	3
1, 2, 3	03/14/2011	03/18/2011	IP 2515/179	Radiological Hazard Assessment and Exposure Controls	
1, 2, 3	03/14/2011	03/18/2011	IP 71124.01	Occupational ALARA Planning and Controls	
1, 2, 3	03/14/2011	03/18/2011	IP 71124.02	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2, 3	03/14/2011	03/18/2011	IP 71124.03	Occupational Dose Assessment	
1, 2, 3	03/14/2011	03/18/2011	IP 71124.04	Performance Indicator Verification	
1, 2, 3	03/14/2011	03/18/2011	IP 71151		
1, 2, 3	06/13/2011	06/17/2011	<b>PSB1EP</b> - EMERGENCY PREPAREDNESS EXERCISE	Exercise Evaluation	3
1, 2, 3	06/13/2011	06/17/2011	IP 7111401	Emergency Action Level and Emergency Plan Changes	
1, 2, 3	06/13/2011	06/17/2011	IP 7111404	Performance Indicator Verification	
1, 2, 3	06/13/2011	06/17/2011	IP 71151		
1	07/18/2011	07/22/2011	<b>OL EXAM</b> - INITIAL EXAM PREP	BROWNS FERRY/AUGUST 2011 EXAM AT POWER FACILITIES	4
			V23353		
1	08/08/2011	08/12/2011	<b>OL EXAM</b> - INITIAL EXAM - WEEK 1	BROWNS FERRY/AUGUST 2011 EXAM AT POWER FACILITIES	4
			V23353		
1	08/15/2011	08/19/2011	<b>OL EXAM</b> - INITIAL EXAM - WEEK 2	BROWNS FERRY/AUGUST 2011 EXAM AT POWER FACILITIES	4
			V23353		
1, 2, 3	02/27/2012	03/02/2012	<b>PSB1-RP</b> - RP RAD HAZARD ASSESSMENT	Radiological Hazard Assessment and Exposure Controls	1
			IP 71124.01		
3	04/09/2012	04/13/2012	<b>EB3 ISI</b> - UNIT 3 INSERVICE INSPECTION	Inservice Inspection Activities - BWR	1
			IP 7111108G		
1	04/16/2012	04/20/2012	<b>OL EXAM</b> - INITIAL EXAM PREP	BROWNS FERRY / MAY 2012 EXAM AT POWER FACILITIES	3
			V23370		
1, 2, 3	05/21/2012	05/25/2012	<b>BF TFPI</b> - TRIENNIAL FIRE PROTECTION INSPECTION	Fire Protection-NFPA 805 Transition Period [Triennial]	6
1, 2, 3	06/04/2012	06/08/2012	IP 7111105P	Fire Protection-NFPA 805 Transition Period [Triennial]	
			IP 7111105P		

This report does not include INPO and OUTAGE activities.

This report shows only on-site and announced inspection procedures.

Unit Number	Planned Dates Start End	Inspection Activity	Title	No. of Staff on Site
1	05/07/2012 05/11/2012	<b>OL EXAM - INITIAL EXAM - WEEK 1</b> V23370	BROWNS FERRY / MAY 2012 EXAM AT POWER FACILITIES	3
1	05/14/2012 05/19/2012	<b>OL EXAM - INITIAL EXAM - WEEK 2</b> V23370	BROWNS FERRY / MAY 2012 EXAM AT POWER FACILITIES	3
1, 2, 3	06/04/2012 06/08/2012	<b>PSB1EP - EMERGENCY PREPAREDNESS INSPECTION</b> IP 7111402	Alert and Notification System Testing	1
1, 2, 3	06/04/2012 06/08/2012	IP 7111403	Emergency Preparedness Organization Staffing and Augmentation System	
1, 2, 3	06/04/2012 06/08/2012	IP 7111404	Emergency Action Level and Emergency Plan Changes	
1, 2, 3	06/04/2012 06/08/2012	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
1, 2, 3	06/04/2012 06/08/2012	IP 71151	Performance Indicator Verification	
1, 2, 3	06/18/2012 06/22/2012	<b>PSB1-RP - PUBLIC RADIATION PROTECTION BASELINE</b> IP 71124.05	Radiation Monitoring Instrumentation	4
1, 2, 3	06/18/2012 06/22/2012	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
1, 2, 3	06/18/2012 06/22/2012	IP 71124.07	Radiological Environmental Monitoring Program	
1, 2, 3	06/18/2012 06/22/2012	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
1, 2, 3	06/18/2012 06/22/2012	IP 71151	Performance Indicator Verification	

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 This report shows only on-site and announced inspection procedures.