



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

March 4, 2013

Mr. Joseph W. Shea
Vice President, Nuclear Licensing
Tennessee Valley Authority
1101 Market Street, LP 3D-C
Chattanooga, TN 37402-2801

**SUBJECT: ANNUAL ASSESSMENT LETTER FOR BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, and 3 (NRC INSPECTION REPORT 05000259, 260, 296/2012001)**

Dear Mr. Shea:

On February 14, 2013, the NRC completed its end-of-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 January 1, 2012, through December 31, 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.

The NRC determined the performance at Browns Ferry Nuclear Plant, Unit 1, during the most recent quarter was within the Multiple/Repetitive Degraded Cornerstone column (Column 4) of the NRC's Reactor Oversight Process (ROP) Action Matrix, beginning the fourth quarter 2010, based on the issuance of one finding classified as having a high safety significance (Red) in the mitigating systems cornerstone. 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.

On November 30, 2012, the NRC issued NRC Supplemental Inspection Report 05000259/2012015, (ML12335A380) for completion of an inspection pursuant to IP 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area," for a White Unit 1 Mitigating System Performance Index, High Pressure Injection Systems (HPCI) performance indicator. The inspection was completed satisfactorily and the performance indicator has returned to Green.

On February 15, 2013, your staff notified the NRC of your readiness for it to conduct a supplemental inspection to review the actions taken to address the performance issues. Therefore, in addition to ROP baseline inspections, the NRC plans to conduct 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, beginning on May 13, 2013. The supplemental inspection will include inspection and assessment activities to provide the NRC additional information to be used in deciding whether the continued operation of the facility is acceptable and whether additional regulatory actions are necessary to arrest declining plant performance; to provide an

independent assessment of the extent of risk significant issues to aid in the determination whether an adequate level of margin of safety exists; and to evaluate the licensee's third-party safety culture assessment and conduct a graded assessment of the licensee's safety culture based on the results of the evaluation.

The NRC determined the performance at Browns Ferry Nuclear Plant, Units 2 and 3, during the most recent quarter was within 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.

On November 23, 2012, the NRC issued NRC Supplemental Inspection Report 05000259/2012014, 05000260/2012014, 05000296/2012014, (ML12331A180) for completion of an inspection pursuant to IP 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area," for the White finding. The inspection was completed satisfactorily and the performance issue will remain open for consideration in the NRC's assessment program until the end of the first quarter 2013.

On November 30, 2012, the NRC issued NRC Supplemental Inspection Report 05000296/2012016, (ML12335A371) for completion of an inspection pursuant to IP 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area," for a White Unplanned Scrams performance indicator for Unit 3. The inspection was completed satisfactorily and the performance indicator has returned to Green.

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 Resources component of the Human Performance & Error Prevention cross-cutting area. Specifically, six 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 an SCCI existed because the NRC has a concern with your staff's scope of effort and progress in addressing the cross-cutting theme. 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. This SCCI will remain open 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 "Complete Documentation and Component Labeling" (H.2.(c)) during the previous six 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 "Complete Documentation and Component Labeling" (H.2.(c)) during the previous six month assessment period.

In its Annual Assessment Letter, dated March 4, 2011, (ML11063042), the NRC opened a SCCI with 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." Therefore 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 this cross-cutting theme during the previous six months assessment period. This letter is the fifth 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 with 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." Therefore 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 this cross-cutting theme during the previous six month assessment period. This letter is the seventh consecutive assessment letter documenting an SCCI with the same cross-cutting aspect.

The enclosed inspection plan lists the inspections scheduled through June 30, 2014. 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. 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, TI 2515/182, "Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping and Tanks," and IP 71003, "Post-Approval Site Inspection For License Renewal."

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 website 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 (03/01/2013 – 06/30/2014)

cc w/encl: (See page 5)

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Regional Administrator

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cc w/encl: (See page 5)

X PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE X NON-SENSITIVE
ADAMS: X Yes ACCESSION NUMBER: _____ X SUNSI REVIEW COMPLETE

OFFICE	RII:DRP	RII:DRP	RII:DRP	RII:ORA	RII:ORA		
SIGNATURE	CRK /RA/	EFG /RA/	RPC /RA/	LDW /RA/	VMM /RA/		
NAME	CKontz	EGuthrie	RCroteau	LWert	VMcCree		
DATE	02/28/2013	02/28/2013	02/28/2013	03/04/2013	03/04/2013		
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: S:\DRP\PERIODIC ASSESSMENTS & REPORTS\EOC & MID-CYCLE\2012\END OF CYCLE\INPUT\RPB6\BROWNS FERRY\BROWNS FERRY 2012 EOC LETTER.DOCX

J. Shea

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cc w/encl:
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J. Shea

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Letter to Joseph W. Shea from Victor M. McCree dated March 4, 2013

SUBJECT: ANNUAL ASSESSMENT LETTER FOR BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, and 3 (NRC INSPECTION REPORT 05000259, 260, 296/2012001)

Distribution w/encl:

C. Evans, RII

L. Douglas, RII

OE Mail

RIDSNRRDIRS

PUBLIC

RidsNrrPMBrownsFerry Resource

ROP Assessment

Institute of Nuclear Power Operations (INPO)

Browns Ferry

Inspection / Activity Plan

03/01/2013 - 06/30/2014

Unit Number	Planned Dates Start End	Inspection Activity	Title	No. of Staff on Site
1	01/01/2013 12/31/2013	95003 IP 95003	- 95003 INSPECTION Inspection For Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inp	22
1, 2, 3	02/25/2013 03/01/2013	CDBI IP 7111121	- COMPONENT DESIGN BASES INSPECTION Component Design Bases Inspection	7
2	03/25/2013 03/29/2013	ISI IP 7111108G	- UNIT 2 INSERVICE INSPECTION Inservice Inspection Activities - BWR	1
1, 2, 3	03/25/2013 03/29/2013	RP IP 71124.01	- RP OCCUPATIONAL BASELINE Radiological Hazard Assessment and Exposure Controls	2
1, 2, 3	03/25/2013 03/29/2013	IP 71124.02	Occupational ALARA Planning and Controls	
1, 2, 3	03/25/2013 03/29/2013	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2, 3	03/25/2013 03/29/2013	IP 71124.04	Occupational Dose Assessment	
1, 2, 3	03/25/2013 03/29/2013	IP 71124.05	Radiation Monitoring Instrumentation	
1, 2, 3	03/25/2013 03/29/2013	IP 71151	Performance Indicator Verification	
2	04/01/2013 04/05/2013	LR IP 71003	- UNIT 2 POST APPROVAL LR PHASE 1 Post-Approval Site Inspection for License Renewal	2
1, 2, 3	04/08/2013 04/12/2013	RP IP 71124.01	- RP OCCUPATIONAL BASELINE WEEK2 Radiological Hazard Assessment and Exposure Controls	3
1, 2, 3	04/08/2013 04/12/2013	IP 71124.02	Occupational ALARA Planning and Controls	
1, 2, 3	04/08/2013 04/12/2013	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2, 3	04/08/2013 04/12/2013	IP 71124.04	Occupational Dose Assessment	
1, 2, 3	04/08/2013 04/12/2013	IP 71124.05	Radiation Monitoring Instrumentation	
1, 2, 3	04/08/2013 04/12/2013	IP 71151	Performance Indicator Verification	
1, 2, 3	06/03/2013 06/07/2013	EP IP 7111401	- EMERGENCY PREPAREDNESS EXERCISE Exercise Evaluation	1
1, 2, 3	06/03/2013 06/07/2013	IP 71151	Performance Indicator Verification	
1	05/06/2013 05/10/2013	OL EXAM V23394	- INITIAL EXAM PREP BROWNS FERRY/JUNE 2013 INITIAL EXAM AT POWER FACILITIES	3
1	06/03/2013 06/07/2013	OL EXAM V23394	- INITIAL EXAM - WEEK 1 BROWNS FERRY/JUNE 2013 INITIAL EXAM AT POWER FACILITIES	3
1	06/10/2013 06/14/2013	OL EXAM V23394	- INITIAL EXAM - WEEK 2 BROWNS FERRY/JUNE 2013 INITIAL EXAM AT POWER FACILITIES	3
1, 2, 3	06/17/2013 06/21/2013	TI-182 IP 2515/182	- TI-182 BURIED PIPING/TANK - PHASE 1 Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping	1

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

03/01/2013 - 06/30/2014

Unit Number	Planned Dates Start End	Inspection Activity	Title	No. of Staff on Site
		LR - POST APPROVAL LR PHASE 2		6
1	08/05/2013 08/09/2013	IP 71003	Post-Approval Site Inspection for License Renewal	
1	08/19/2013 08/23/2013	IP 71003	Post-Approval Site Inspection for License Renewal	
1, 2, 3	10/21/2013 10/25/2013	TFPI	- TRIENNIAL FIRE PROTECTION INSP	4
1, 2, 3	11/04/2013 11/08/2013	IP 7111105T	Fire Protection [Triennial]	
		IP 7111105T	Fire Protection [Triennial]	
1, 2, 3	10/15/2013 10/17/2013	TI-182	- TI-182 BURIED PIPING/TANK - PHASE 2	1
		IP 2515/182	Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping	
1, 2, 3	01/06/2014 01/10/2014	HS	- TRIENNIAL HEAT SINK PERFORMANCE	1
		IP 7111107T	Heat Sink Performance	
1, 2, 3	02/10/2014 02/14/2014	PI&R	- PROBLEM IDENTIFICATION AND RESOLUTION	4
1, 2, 3	02/24/2014 02/28/2014	IP 71152B	Problem Identification and Resolution	
		IP 71152B	Problem Identification and Resolution	
1, 2, 3	03/24/2014 03/28/2014	RP	- RAD HAZARDS ANALYSIS AND TRANSPORTATION	2
1, 2, 3	03/24/2014 03/28/2014	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1, 2, 3	03/24/2014 03/28/2014	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
1, 2, 3	03/24/2014 03/28/2014	IP 71151	Performance Indicator Verification	
1	03/31/2014 04/04/2014	OL EXAM	- INITIAL LICENSE EXAM PREP	3
		V23433	BROWNS FERRY/APRIL 2014 INITIAL EXAM AT POWER FACILITIES	
3	04/14/2014 04/18/2014	ISI	- UNIT 3 SG IN-SERVICE INSPECTION	1
		IP 7111108G	Inservice Inspection Activities - BWR	
1	04/28/2014 05/02/2014	OL EXAM	- INITIAL LICENSE EXAM WEEK 1	3
		V23433	BROWNS FERRY/APRIL 2014 INITIAL EXAM AT POWER FACILITIES	
1, 2, 3	06/09/2014 06/13/2014	EP	- EP PROGRAM INSPECTION	1
1, 2, 3	06/09/2014 06/13/2014	IP 7111402	Alert and Notification System Testing	
1, 2, 3	06/09/2014 06/13/2014	IP 7111403	Emergency Preparedness Organization Staffing and Augmentation System	
1, 2, 3	06/09/2014 06/13/2014	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
1, 2, 3	06/09/2014 06/13/2014	IP 71151	Performance Indicator Verification	
1, 2, 3	06/16/2014 06/20/2014	RP	- RP PUBLIC RADIATION SAFETY BASELINE	2
1, 2, 3	06/16/2014 06/20/2014	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
		IP 71124.07	Radiological Environmental Monitoring Program	

This report does not include INPO and OUTAGE activities.

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Enclosure

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
1, 2	06/16/2014	06/20/2014	RP IP 71151	- RP PUBLIC RADIATION SAFETY BASELINE Performance Indicator Verification	2

Comments: