



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

September 2, 2014

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

**SUBJECT: MID-CYCLE ASSESSMENT LETTER FOR BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2 AND 3 (NRC INSPECTION REPORTS 05000259/2014006,
05000260/2014006 and 05000296/2014006)**

Dear Mr. Shea:

On August 14, 2014, the NRC completed its mid-cycle performance review of the Browns Ferry 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, 2013, through June 30, 2014. 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 of the Reactor Oversight Process Action Matrix. In our Annual Assessment Letter dated February 19, 2014, (ADAMS Accession No. ML14063A109) we informed you that Browns Ferry Unit 1 would remain in Column 4 of the Action Matrix following closure of the Red (high safety significance) finding in December 2013. As detailed in the letter, this decision resulted from multiple White (low to moderate safety significance) inputs to the Mitigating Systems Cornerstone that met the criteria for a Repetitive Degraded Cornerstone beginning October 1, 2013. Two of these inputs, a White (low to moderate safety significance) Emergency AC Power Systems performance indicator and a White (low to moderate safety significance) Finding for failure to properly implement procedures, were applicable to both Units 1 and 2. Therefore on April 11, 2014, the NRC completed a supplemental inspection in accordance with Inspection Procedure 95002, "Supplemental Inspection for One Degraded Cornerstone or Any Three White Inputs in a Strategic Performance Area" for Units 1 and 2. Based on the results of that inspection, as documented in inspection report 05000259, 260/2014010 (ADAMS Accession No. ML14135A387), the NRC determined that your actions were sufficient to address the performance issues that led to the White (low to moderate safety significance) finding and the White (low to moderate safety significance) performance indicator.

Since the last performance assessment, all Unit 1 performance indicators have returned within the nominal, expected range (i.e., green) based on your second quarter 2014 performance indicator data submission.

The NRC determined the performance at Browns Ferry Nuclear Plant Unit 2 during the most recent quarter was within the Degraded Cornerstone column of the Reactor Oversight Process Action Matrix beginning the fourth quarter of 2012. As detailed in our Annual Assessment Letter dated February 19, 2014, this resulted from multiple White (low to moderate safety significance) inputs in the Mitigating Systems Cornerstone. As previously described, on April 11, 2014, the NRC completed a supplemental inspection using Inspection Procedure 95002, for Units 1 and 2.

Since the last performance assessment, all Unit 2 performance indicators have returned within the nominal, expected range (i.e., green) based on your second quarter 2014 performance indicator data submission.

The NRC determined the performance at Browns Ferry Nuclear Plant Unit 3 during the most recent quarter was within the Regulatory Response Column of the Reactor Oversight Process Action Matrix beginning the first quarter of 2013. As detailed in our Annual Assessment Letter dated February 19, 2014, this resulted from a White (low to moderate safety significance) action matrix input for Unplanned Scrams which exceeded a Green-to-White threshold in the first quarter 2013. On January 24, 2014, the NRC completed a supplemental inspection using Inspection Procedure 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area," for Unit 3. Based on the results of this inspection, as documented in inspection report 05000296/2014010 (ADAMS Accession No. ML14056A471), the NRC determined that your actions were sufficient to address the performance issues that led to the White (low to moderate safety significance) performance indicator.

Since the last performance assessment, Browns Ferry Units 1, 2, and 3, received an action matrix input beginning fourth quarter 2013 for a White (low to moderate safety significance) Violation 05000259, 260, 296/2013005-02, "Failure to Maintain Emergency Response Staffing Levels," in the Emergency Preparedness Cornerstone documented in inspection report 05000259, 260, 296/2014002 (ADAMS Accession No. ML14120A374). As of July 1, 2014, this is the only action matrix input for Browns Ferry Units 1, 2, and 3. Therefore, effective July 1, 2014, Browns Ferry Unit 1 transitioned from the Multiple/Repetitive Degraded Cornerstone Column to the Regulatory Response Column, Unit 2 transitioned from the Degraded Cornerstone Column to the Regulatory Response Column, and Unit 3 remained in the Regulatory Response Column of the Action Matrix. The NRC will conduct a supplemental inspection using Inspection Procedure 95001, Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area for Units 1, 2, and 3, in September 2014 to review the actions taken to address the White (low to moderate safety significance) Finding.

The NRC identified 2 cross-cutting themes during the assessment period:

1. The NRC identified a cross-cutting theme in the Human Performance cross-cutting area. Specifically, four inspection findings for the current 12-month assessment period, each with a documented cross-cutting aspect (CCA) of Procedure Adherence: Individuals follow processes, procedures, and work instructions (H.8) were identified.
2. The NRC identified a cross-cutting theme in the Problem Identification and Resolution cross-cutting area. Specifically, five inspection findings for the current 12-month assessment period, each with a documented cross-cutting aspect of Evaluation: The organization thoroughly evaluates issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance (P.2) were identified.

The NRC determined that a significant cross-cutting issue (SCCI) did not exist for these themes. This is based on actions TVA has taken subsequent to the performance deficiencies associated with the CCAs and trends in performance metrics in the areas of the CCAs that were observed during the confirmatory action letter (CAL) follow-up inspection documented in inspection report 05000259,260,296/2013014 (ADAMS Accession No. 14027A742). The NRC will continue to monitor your staff's effort and progress in addressing these themes.

Additionally, on May 1, 2014, the NRC issued a Confirmatory Order (EA-14-005) (ADAMS Accession No. ML14121A551) following a successful alternative dispute resolution (ADR) session to disposition two apparent violations (AV): AV 05000259, 260, 296/2013005-03, Inaccurate Information Provided Concerning Onsite Emergency Response Organization Staffing Requirements and AV 05000259, 260, 296/2013005-04, Inappropriate Amendment of License. During the ADR, the NRC concluded that the corrective actions and enhancements discussed by TVA were prompt and comprehensive and addressed the causes that gave rise to the two violations. In consideration of the commitments delineated in the Confirmatory Order, the NRC agreed to fully mitigate a civil penalty, and document the two violations as a part of the Confirmatory Order. The NRC will conduct follow-up inspections of the Confirmatory Order using NRC Manual Chapter Inspection Procedure (IP) 92702, which will make the need for additional follow up inspection of the violations unnecessary. Therefore the two violations are considered closed.

The enclosed inspection plan lists the inspections scheduled through December 31, 2015. 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 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 initial reactor operator licensing examinations, confirmatory order follow-up per IP 92702, as mentioned above, and IP 43004, "Inspection of Commercial-Grade Dedication Programs."

In response to the accident at Fukushima, the Commission issued Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," which requires licensees to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event. Additionally, the Commission issued Order EA-12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," which requires licensees to have a reliable means of remotely monitoring wide-range Spent Fuel Pool levels to support effective prioritization of event mitigation and recovery actions in the event of a beyond-design-basis external event. The NRC is conducting audits of licensee efforts towards compliance with these Orders. This audit includes an onsite

component in order for the NRC to evaluate licensee plans for complying with the Orders, as described in site-specific submittals, and to receive and review information relative to associated open items. This onsite activity will occur in the months prior to a declaration of compliance for the first unit at each site, and will aid staff in development of an ultimate Safety Evaluation for the site. The onsite component at your site is scheduled to begin January 5, 2015. A site-specific audit plan for the visit will be provided in advance to allow sufficient time for preparations.

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 Jonathan Bartley at 404-997-4607 with any questions you have regarding this letter.

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
(09/01/2014 – 12/31/2015)

cc Distribution via ListServ

J. Shea

4

component in order for the NRC to evaluate licensee plans for complying with the Orders, as described in site-specific submittals, and to receive and review information relative to associated open items. This onsite activity will occur in the months prior to a declaration of compliance for the first unit at each site, and will aid staff in development of an ultimate Safety Evaluation for the site. The onsite component at your site is scheduled to begin January 5, 2015. A site-specific audit plan for the visit will be provided in advance to allow sufficient time for preparations.

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 Jonathan Bartley at 404-997-4607 with any questions you have regarding this letter.

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
(09/01/2014 – 12/31/2015)

cc Distribution via ListServ

PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE NON-SENSITIVE
ADAMS: Yes ACCESSION NUMBER: ML14245A557 SUNSI REVIEW COMPLETE FORM 665 ATTACHED

| | | | | | | | |
|--------------|-----------|-----------|-----------|----------|----------|--------|--------|
| OFFICE | RII:DRP | RII:DRP | RII:DRP | RII:ORA | RII:ORA | | |
| SIGNATURE | /CRK1/ | /JHB1/ | /JTM/ | /LXW1/ | /VMM/ | | |
| NAME | CKontz | JBartley | JMunday | LWert | VMcCree | | |
| DATE | 8/26/2014 | 8/26/2014 | 8/29/2014 | 9/2/2014 | 9/2/2014 | | |
| 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\2014\Mid-cycle\Admin Working Folder\Letters\Browns Ferry 2014 Midcycle Letter.docx

J. Shea

5

Letter to Joseph W. Shea from Victor M. McCree dated September 2, 2014

SUBJECT: MID-CYCLE ASSESSMENT LETTER FOR BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2 AND 3 (NRC INSPECTION REPORTS 05000259/2014006,
05000260/2014006 and 05000296/2014006)

DISTRIBUTION:

D. Gamberoni, RII

L. Douglas, RII

OE Mail

RIDSNNRRDIRS

PUBLIC

RidsNrrPMBrownsFerry Resource

ROP Assessment

ROP Reports

Institute of Nuclear Power Operations (INPO)

Browns Ferry
Inspection / Activity Plan
09/01/2014 - 12/31/2015

| Unit Number | Planned Dates | | Inspection Activity | Title | No. of Staff on Site |
|-------------|---------------|------------|---|--|----------------------|
| | Start | End | | | |
| | | | 95001 - WHITE EP STAFFING 95001 | | 2 |
| 1, 2, 3 | 09/02/2014 | 09/05/2014 | IP 95001 | Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area | |
| | | | MODS - PLANT MODIFICATIONS INSPECTION | | 3 |
| 1, 2, 3 | 09/08/2014 | 09/12/2014 | IP 7111117T | Evaluations of Changes, Tests, and Experiments and Permanent Plant Modifications | |
| | | | OL RQ - REQUAL INSP | | 2 |
| 1, 2, 3 | 09/15/2014 | 09/19/2014 | IP 7111111B | Licensed Operator Requalification Program | |
| | | | ISI - UNIT 1 IN-SERVICE INSPECTION | | 1 |
| 1 | 10/13/2014 | 10/17/2014 | IP 7111108G | Inservice Inspection Activities - BWR | |
| | | | TI-189 - DYNAMIC RESTRAINT (SNUBBER) PROGRAM | | 1 |
| 1, 2, 3 | 10/13/2014 | 10/17/2014 | IP 2515/189 | Inspection to Determine Compliance of Dynamic Restraint (Snubber) Program with 10 CFR 50.55a | |
| | | | OL EXAM - INITIAL LICENSE EXAM PREP | | 3 |
| 1 | 12/15/2014 | 12/19/2014 | V23451 | BROWNS FERRY JANUARY 2015 INITIAL EXAM AT POWER FACILITIES | |
| | | | OL EXAM - INITIAL LICENSE EXAM | | 3 |
| 1 | 01/19/2015 | 01/30/2015 | V23451 | BROWNS FERRY JANUARY 2015 INITIAL EXAM AT POWER FACILITIES | |
| | | | ISI - UNIT 2 IN-SERVICE INSPECTION | | 1 |
| 2 | 03/23/2015 | 03/27/2015 | IP 7111108G | Inservice Inspection Activities - BWR | |
| | | | RP - RP OCCUPATIONAL BASELINE WEEK 1 | | 3 |
| 1, 2, 3 | 03/23/2015 | 03/27/2015 | IP 71124.01 | Radiological Hazard Assessment and Exposure Controls | |
| 1, 2, 3 | 03/23/2015 | 03/27/2015 | IP 71124.02 | Occupational ALARA Planning and Controls | |
| 1, 2, 3 | 03/23/2015 | 03/27/2015 | IP 71124.03 | In-Plant Airborne Radioactivity Control and Mitigation | |
| 1, 2, 3 | 03/23/2015 | 03/27/2015 | IP 71124.04 | Occupational Dose Assessment | |
| 1, 2, 3 | 03/23/2015 | 03/27/2015 | IP 71124.05 | Radiation Monitoring Instrumentation | |
| 1, 2, 3 | 03/23/2015 | 03/27/2015 | IP 71151 | Performance Indicator Verification | |
| | | | RP - RP OCCUPATIONAL BASELINE WEEK 2 | | 2 |
| 1, 2, 3 | 04/06/2015 | 04/10/2015 | IP 71124.01 | Radiological Hazard Assessment and Exposure Controls | |
| 1, 2, 3 | 04/06/2015 | 04/10/2015 | IP 71124.02 | Occupational ALARA Planning and Controls | |
| 1, 2, 3 | 04/06/2015 | 04/10/2015 | IP 71124.03 | In-Plant Airborne Radioactivity Control and Mitigation | |
| 1, 2, 3 | 04/06/2015 | 04/10/2015 | IP 71124.04 | Occupational Dose Assessment | |
| 1, 2, 3 | 04/06/2015 | 04/10/2015 | IP 71124.05 | Radiation Monitoring Instrumentation | |
| 1, 2, 3 | 04/06/2015 | 04/10/2015 | IP 71151 | Performance Indicator Verification | |
| | | | EP - EP EXERCISE | | 5 |
| 1, 2, 3 | 09/22/2015 | 09/25/2015 | IP 7111404 | Emergency Action Level and Emergency Plan Changes | |
| 1, 2, 3 | 09/22/2015 | 09/25/2015 | IP 7111407 | Exercise Evaluation - Hostile Action (HA) Event | |

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
09/01/2014 - 12/31/2015

| Unit Number | Planned Dates Start End | | Inspection Activity | Title | No. of Staff on Site |
|-------------------------|----------------------------|------------|---------------------|------------------------------------|----------------------|
| EP - EP EXERCISE | | | | | |
| 1, 2, 3 | 09/22/2015 | 09/25/2015 | IP 71151 | Performance Indicator Verification | 5 |

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