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

CNL-14-118

July 2, 2014

Mr. Victor M. Mc Cree
Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
Marquis One Tower
245 Peachtree Center Avenue, NE, Suite 1200
Atlanta, Georgia 30303-1257

Browns Ferry Nuclear Plant, Unit 1
Renewed Facility Operating License No. DPR-33
NRC Docket No. 50-259

Subject: **Confirmatory Action Letter Tier 2 Commitments Related to the Browns Ferry Integrated Improvement Plan**

References:

1. Letter from TVA to NRC, "Commitments Related to the Browns Ferry Integrated Improvement Plan," dated August 9, 2013
2. Letter from NRC to TVA, "Confirmatory Action Letter - Browns Ferry Nuclear Plant, Units 1, 2, And 3, Commitments Related To The Integrated Improvement Plan," dated August 22, 2013 [EA 13-185]
3. Letter from NRC to TVA, "Browns Ferry Nuclear Plant – Confirmatory Action Letter and Severity Level III 10 CFR 50.9 Violation Follow-Up Inspection Report 05000259/2013014, 05000260/2013014, and 05000296/2013014," dated January 27, 2014 [EA 11-018, EA 11-252, and EA 13-185]

In Reference 1, the Tennessee Valley Authority (TVA) submitted to the Nuclear Regulatory Commission (NRC) commitments associated with continuing efforts to improve performance at the Browns Ferry Nuclear Plant (BFN). Those commitments were specific to certain actions in the BFN Integrated Improvement Plan (IIP) and consisted of Tier 1 (short-term) and Tier 2 (long-term) actions.

Reference 2 documented the NRC review of these commitments, confirmed them as Confirmatory Action letter (CAL) commitment items, and outlined specific requirements for NRC follow-up inspections to assess adequate implementation of Tier 1 and Tier 2 commitment items.

Reference 3 documented the NRC review of TVA's commitments, including the schedule for completion of items and planned key activities, and determined that TVA's actions, when implemented, would provide NRC with the necessary assessment bases to evaluate transition of BFN Unit 1 out of Column 4 of the Agency Action Matrix. Reference 3 also documented the NRC supplemental inspection and closure of the CAL Tier 1 commitment items.

The purpose of this letter is to inform the NRC that the TVA has completed 12 of the 21 actions addressed on the CAL Tier 2 list of commitments provided in Reference 1. In accordance with the requirements of Reference 2, this correspondence also includes the bases for closure of commitment items in the context of the internal TVA reviews established in the IIP.

The following list of Tier 2 commitment items have been completed and closure details are provided in the Enclosure to this letter.

Commitment No. 11 - Safety System Reliability Plan (SSRP)
Commitment No. 12 - Technical Rigor (TR)
Commitment No. 13 - Continuous Learning Environment (CLE)
Commitment No. 14 - Safety Conscious Work Environment (SCWE)
Commitment No. 15 - Employee Concerns Program (ECP)
Commitment No. 16 - Design and Configuration Control (DCC)
Commitment No. 17 - Corrective Action Program (CAP)
Commitment No. 18 - Governance & Oversight (GOES)
Commitment No. 19 - Inappropriate Reliance on Process (IRP)
Commitment No. 22 - Procedure Use & Adherence (PUA)
Commitment No. 24 - Independent Oversight (IO)
Commitment No. 29 - Training

The closures of the remaining Tier 2 commitment items are expected prior to their commitment dates, and additional correspondence will address them. With regard to the closeout of Fundamental Problems (FPs), TVA committed to assess the effectiveness of the IIP actions and close the FPs in accordance with Procedure 95003-007, "Project Review Boards." This procedure required all closed actions for each FP to be reviewed by BFN's Closure Review Board. These closed actions were also reviewed collectively by BFN's Corrective Action Review Board, which replaced the Effectiveness Review Challenge Board described in Reference 1.

There are no new regulatory commitments made in this letter. Should you have any questions concerning this submittal, please contact Jamie L. Paul, Nuclear Site Licensing Manager at (256)729-2636.

Respectfully,

J. W. Shea
Vice President, Nuclear Licensing

Enclosure: List of CAL Tier 2 Regulatory Commitments and Bases for Closures

cc (Enclosure):

NRC Senior Resident Inspector - Browns Ferry Nuclear Plant

ENCLOSURE

Tennessee Valley Authority

Browns Ferry Nuclear Plant, Unit 1

List of CAL Tier 2 Regulatory Commitments and Bases for Closures

REGULATORY COMMITMENTS

Commitment No.	IIP PER Action No.	Commitment Description	Commitment Due Date
Tier 2 Commitments			
11	755599-011	Complete the Safety System Reliability Plan (SSRP) project scope as defined in Problem Evaluation Report (PER) Action 760220-003. The SSRP original scope and purpose are defined in PER Action 760220-001. Basis for Closure: Maximo Regulatory Commitment No. 114956954 Closure Package 11 - SSRP Summary of Actions: Completed the SSRP project scope (actions) coded to the 2014 Browns Ferry Nuclear Plant (BFN) Unit 3 Refueling Outage. The scope of work defined in action 760220-003 included six work orders. Five of the six work orders have been completed. The sixth work order was cancelled based on Engineering determination that no work was required.	05/30/2014
12	755599-012	Close the "Technical Rigor" fundamental problem in accordance with Procedure 95003-007, "Project Review Boards." Basis for Closure: Maximo Regulatory Commitment No. 114956949 Closure Package 12 - TR Summary of IIP Action Plan - Corrective Actions: Changed Engineering and Operations procedures to address timeliness, rigor, regulatory margin and documentation of Operability Determinations Trained Operations Licensed Operators regarding Operability Determinations (ODs) and examples of ODs that exceeded expectations and incorporated training into Initial License Training gap training and Licensed Operator Requalification training Developed a Training Dispatch to highlight areas from previous errors in ODs Revised the Human Performance (HU) procedure to incorporate the 5 Institute of Nuclear Power Operations (INPO) Technical Conscience Principles from INPO 10-005 document, Principles for Maintaining an Effective Technical Conscience Provided Technical Conscious, HU, and Design Input training	05/31/2014

REGULATORY COMMITMENTS

Commitment No.	IIP PER Action No.	Commitment Description	Commitment Due Date
		Developed/implemented a Plant Operations Review Committee decision-making checklist Included a Subject Matter Expert as part of the engineering Quality Review Team Developed/implemented a change management plan for the revision to the HU procedure to include required training for Operations, Maintenance, Work Control, Chemistry, Radiation Protection, Training, Modifications and Projects, and Safety and Licensing personnel Revised Engineering Leadership Expectations to include the expectation to use the appropriate HU Tools for Managers and Supervisors during pre-job briefs Established an Operability Determination Review Board	
13	755599-013	Close the "Continuous Learning Environment" fundamental problem in accordance with Procedure 95003-007, "Project Review Boards." Basis for Closure: Maximo Regulatory Commitment No. 114956943 Closure Package <u>13 - CLE Summary of IIP Action Plan - Corrective Actions:</u> Established accountabilities within the Performance Review and Development process for Department Directors and Managers Filled position/assigned personnel for a departmental specified position to manage Performance Improvement, to include Self Assessment, Benchmarking and Operating Experience (OE) Performed/presented/developed/implemented training for Continuous Learning Environment using a Training Needs Analysis Benchmarked the nuclear industry and reviewed INPO guidance specified in INPO 09-011, Achieving Excellence in Performance Improvement Utilized the results of the procedural reviews and benchmarking and revised Self Assessment and Benchmarking Performance Indicators Verified completion of the coordination with the corporate Corrective Action Program (CAP) group and addressed the weaknesses in trending Verified completion of the development of Trending High Impact Team (HIT) charter and implemented HIT meetings to improve trending process"	05/31/2014

REGULATORY COMMITMENTS

Commitment No.	IIP PER Action No.	Commitment Description	Commitment Due Date
14	755599-014	Close the "Safety Conscious Work Environment" fundamental problem in accordance with Procedure 95003-007, "Project Review Boards." Basis for Closure: Maximo Regulatory Commitment No. 114956937 Closure Package 14 - SCWE Summary of IIP Action Plan - Corrective Actions: Verified that actions to acknowledge receipt of the 2011 final SYNERGY Independent Safety Culture report & results" were completed by applicable BFN departments Revised the Third Party Independent Nuclear Safety Culture Assessment procedure and other applicable procedures to address trending of SCWE issues	05/31/2014
15	755599-015	Close the "Employee Concerns Program" fundamental problem in accordance with Procedure 95003-007, "Project Review Boards." Basis for Closure: Maximo Regulatory Commitment No. 114956929 Closure Package 15 - ECP Summary of IIP Action Plan - Corrective Actions: Developed/implemented a standards and expectations document for the fleet ECP program that included direction for ECP specialists to follow for day-to-day activities Benchmarked industry best plants for ECP procedures and best practices to determine gaps to excellence in the TVA ECP program. Included in the benchmarking activity assessing possible improvements in qualification and training requirements for Fleet ECP Specialists. Revised ECP procedures to industry standards, as necessary, and implemented industry best practices, as applicable Provided an experienced ECP specialist to review status of the ECP and identify gaps to excellence and expectations	05/31/2014
16	755599-016	Close the "Design and Configuration Control" fundamental problem in accordance with Procedure 95003-007, "Project Review Boards." Basis for Closure: Maximo Regulatory Commitment No. 114956917 Closure Package 16 - TR Summary of IIP Action Plan - Corrective Actions:	06/30/2014

REGULATORY COMMITMENTS

Commitment No.	IIP PER Action No.	Commitment Description	Commitment Due Date
		BFN Director of Engineering performed a formal brief to all BFN engineering managers identifying the expectation that the Design Change Notice (DCN) design review process, in accordance with the procedures, is detailed and rigorous Benchmarked/incorporated Design Change process metrics into Design Review Meetings, Design Review Boards, and Quality Review Teams that promote building quality into design products Verified the completion of action to implement a leadership assessment process to rigorously evaluate supervisor and management alignment to the nuclear fleet fundamentals Verified completion of actions including procedure revisions to clarify roles and responsibilities for engineering reviews, updates on qualifications of Oversight Task Engineers Performed performance observations (ePOP) to capture lessons learned from Design Review Meetings, Design Review Boards, and Quality Review Teams focusing on procedural requirements and design adequacy	
17	755599-017	Close the "Corrective Action Program" fundamental problem in accordance with Procedure 95003-007, "Project Review Boards." Basis for Closure: Maximo Regulatory Commitment No. 114956914 Closure Package <u>17 - CAP Summary of IIP Action Plan - Corrective Actions:</u> Established dedicated positions for Cause Analysis Subject Matter Experts at corporate and each TVA nuclear site Established positions for a core group of dedicated cause analysts at each site whose primary duty is to perform as the root causes analyst or as a root cause team members Updated Qualification Requirements and Training Program or Training Program Document Performance Indicator based on weaknesses identified in analyses; delivered training Implemented, with external CAP expertise, a CAP model of excellence that defines the organizations roles, responsibilities, and behaviors Revised New Employee Experience and Annual CAP Continuing Training to include the Chief Nuclear Officer message on CAP vision of excellence	06/30/2014

REGULATORY COMMITMENTS

Commitment No.	IIP PER Action No.	Commitment Description	Commitment Due Date
		Benchmarked top-performing utility Problem Evaluation Report Screening Committee (PSC) meetings Required that a PSC Meeting Gatekeeper be appointed at each PSC meeting to ensure that a current copy of the procedure is being used Developed Desktop Guidance for Performance Improvement Coordinators that illustrates steps for Common Cause Analysis (CCA) development Established monthly recognition of "4-star" CCAs Developed standard Trending Report to provide departments with capability to obtain trend data Revised NPG Cause Evaluation Manual to include a Common Cause Analysis methodology that can be used to support low level trending Added a Living List of Potential Trends to the Corrective Action Review Board (CARB) agenda to challenge daily for generation of trend PER/CCA Developed/implemented standard report to monitor application of cause codes for A and B-level PERs Completed a Training Needs/Job Task Analysis to include a skills/experience development process Developed/issued a Causal Analysis Manual to supplement the requirements of Root Cause Analysis (RCA) and Apparent Cause Evaluation procedures Developed/implemented training program for Department CARB/CARB/PICs/RCA responsible managers/RCA team members	
18	755599-018	Close the "Governance & Oversight" fundamental problem in accordance with Procedure 95003-007, "Project Review Boards." Basis for Closure: Maximo Regulatory Commitment No. 114956900 Closure Package <u>18 - GOES Summary of IIP Action Plan - Corrective Actions:</u> Developed seminar package and delivered at BFN, Sequoyah Nuclear Plant (SQN), Watts Bar Nuclear Plant (WBN), and TVA Corporate to ensure consistency in content and message to effectively reinforce the application and interrelations of the Nuclear Operating Model (NOM),	06/30/2014

REGULATORY COMMITMENTS

Commitment No.	IIP PER Action No.	Commitment Description	Commitment Due Date
		GOES model, and the implementing procedure. Conducted BFN site leadership (first-line supervisor and above) seminars to reinforce the application of the NOM Conducted corporate seminars with all Corporate Functional Area Managers (CFAMs) and Corporate Functional Managers with support from CFAMs to reinforce the application of the NOM Revised the Leadership Development Training Program Description to include training on the NOM and its application to all NPG leaders (first-line supervisors and above) Implemented agenda topics to specifically address issues related to site or corporate adherence to the standards and expectations associated with the NOM and GOES model in corporate Monthly Review Meetings and Strategic Council meetings Revised the existing GOES metric to include designated CFAM monthly performance summaries as inputs Established a GOES secondary metric, which can be used as a means to gauge alignment of the BFN organization to understanding the elements of the NOM Conducted a snapshot self-assessment to address effectiveness in implementing the NOM as discussed in upper tier apparent cause	
19	755599-019	Close the "Inappropriate Reliance on Process" fundamental problem in accordance with Procedure 95003-007, "Project Review Boards." Basis for Closure: Maximo Regulatory Commitment No. 114956896 Closure Package <u>19 - IRP Summary of IIP Action Plan - Corrective Actions:</u> Proposed revision to the peer team for the Clearance Procedure to Safely Control Energy procedure to state the program owner (i.e., Operations Manager) and the owner's roles and responsibilities Proposed revision to the peer team for the Housekeeping procedure to establish a program owner and define the owner's roles and responsibilities Proposed revision to the peer team for Plant Operations Fire Protection procedure to establish a program owner and define the owner's roles and responsibilities	06/30/2014

REGULATORY COMMITMENTS

Commitment No.	IIP PER Action No.	Commitment Description	Commitment Due Date
		Revised procedure the Foreign Material Control procedure to establish a program owner and define the owner's roles and responsibilities Developed/issued a Nuclear Operating Experience Report for WBN and SQN to review the Apparent Cause Evaluation associated with fundamental problem for lessons learned regarding process/program ownership and owner's roles and responsibilities Verified completion of Root Cause corrective action to prevent recurrence from Management and Leadership Standards: Using the NOM as a model, utilized the Excelerated Leadership Strategic Performance Management process to ensure management alignment in the ownership and accountability for leadership expectations at BFN	
22	755599-022	Close the "Procedure Use & Adherence" fundamental problem in accordance with Procedure 95003-007, "Project Review Boards." Basis for Closure: Maximo Regulatory Commitment No. 114956855 Closure Package <u>22 - PUA Summary of IIP Action Plan - Corrective Actions:</u> Implemented a leadership assessment process to rigorously evaluate supervisor and management alignment to the nuclear fleet fundamentals, and specific to this root cause, NPG leadership fundamental 6, "We Manage to a Common Set of Effective Processes and Structures, which includes a commitment to 'know, understand, and execute standard policies, programs, processes, and procedures'" Determined the population of newly hired Managers and Supervisors which need enrollment in TVA's Supervisor Academy and enrolled population not currently in process Performed a TVA oral board for each department which reinforces TVA Nuclear Fleet Leadership Fundamentals and TVA policies regarding PUA Conducted an independent review of the quality of Operations and Maintenance Procedures Issued a PUA read and sign document for "Condition of Employment" to all currently employed First Line Supervisors (FLSs) Ensured that each FLS and Manager included in their Individual Development Plans (IDPs) a reinforcement of PUA Revised the Oversight of the Human Performance Program procedure to include PUA trends in the	08/31/2014

REGULATORY COMMITMENTS

Commitment No.	IIP PER Action No.	Commitment Description	Commitment Due Date
		behavior observation program and to add consistent enforcement of correct PUA Created a HU Fundamentals observation/roll-up metric report to monitor enforcement of PUA Performed a snap shot self assessment of HU issues related to PUA by monitoring the progress of HU gap analysis corrective actions	
24	755599-024	Close the "Independent Oversight" fundamental problem in accordance with Procedure 95003-007, "Project Review Boards." Basis for Closure: Maximo Regulatory Commitment No. 114956838 Closure Package <u>24 - IO Summary of IIP Action Plan - Corrective Actions:</u> Revised NPG "Organization and Administration" procedure to require the Vice President (VP) of Oversight, Site VPs, and the Nuclear Safety Review Board (NSRB) Chair to brief the Senior VP (SVP) of Operations and the Chief Nuclear Officer (CNO) on their assessment of the health of the relationship between independent oversight and each site (and corporate) leadership team including the NPG corporate office Developed/Implemented an Independent Oversight Policy Revised Quality Assurance (QA) procedures to provide guidance for how nuclear and regulatory risk will be factored into the decisions of when audits and assessments should be conducted, when schedules are adjusted, and the risk priorities for the activities to be audited and assessed Revised the Fleet Handbook to explicitly describe the importance of independent oversight Revise the fleet metrics to include and prominently display selected indicators from the Oversight Key Performance Indicators Performed a staff assessment to determine if the staffing in QA is adequate Conducted a review of TVA board policies involving regulatory risk Revised the Nuclear Safety Oversight procedure to require the NSRB to identify and escalate issues that are not being effectively analyzed and addressed , as well report periodically to the CNO and SVP Operations	08/31/2014
29	755599-029	Close the "Training" fundamental problem in accordance with Procedure 95003-007, "Project	12/15/2014

REGULATORY COMMITMENTS

Commitment No.	IIP PER Action No.	Commitment Description	Commitment Due Date
		Review Boards." Basis for Closure: Maximo Regulatory Commitment No. 114956742 Closure Package <u>29 - Training Summary of IIP Action Plan - Corrective Actions:</u> Revised the Senior Training Council (STC) agenda to provide greater training oversight and to promote member accountability Required mentoring for new Training Advisory Committee (TAC) chairs and required the assignment of a STC member as a mentor for each station TAC Developed/implemented a long range integrated staffing plans for Maintenance, Engineering, Radiation Protection, and Chemistry Established a staffing performance indicator that will be monitored by station and corporate management Increased current Engineering Support Personnel instructor level at BFN training to 3 Had engineering assistant director, engineering director, and department training coordinator (DTC) read and sign expectations letter for DTC full time job Performed training needs analyses and established tracking of training needs and requests to improve identification of knowledge and skill deficiencies Required completing formal analysis for top 3 issues identified during Curriculum Review Committee (CRC) meetings Required two supervisors for CRC quorum Required performance analysis to be performed as part of the analysis for root cause and upper tier apparent cause level PERs or document why a performance analysis is not required Implemented Systematic Approach to Training for engineering, reinforcing department ownership and use of training to improve performance	