UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200
ATLANTA, GEORGIA 30303-1200

March 4, 2019

Mr. Joseph W. Shea
Vice President, Nuclear Regulatory
and Support Services
Tennessee Valley Authority
1101 Market Street, LP 4A
Chattanooga, TN 37402-2801

SUBJECT: ANNUAL ASSESSMENT LETTER FOR WATTS BAR NUCLEAR PLANT, UNITS 1 AND 2 - REPORT 05000390/2018006 AND 05000391/2018006

Dear Mr. Shea:

The NRC has completed its end-of-cycle performance assessment of the Watts Bar Nuclear Plant Units 1 and 2, reviewing performance indicators (PIs), inspection results, and enforcement actions from January 1, 2018, through December 31, 2018. 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 concluded that overall performance at your facility preserved public health and safety.

The NRC determined the performance at Watts Bar Nuclear Plant, Unit 1 during the most recent quarter was within the Licensee Response Column, the highest performance category of the NRC's Reactor Oversight Process (ROP) Action Matrix, because all inspection findings had very low safety significance (i.e., Green), and all PIs were within the expected range (i.e., Green). Therefore, the NRC plans to conduct ROP baseline inspections at your facility.

The NRC determined the performance at Watts Bar Nuclear Plant, Unit 2 during the most recent quarter was within the Regulatory Response Column, the second highest performance column of the NRC's ROP Action Matrix. This conclusion was based on one PI, Unplanned Scrams per 7000 Critical hours, in the Initiating Events cornerstone, crossing the White threshold in the second quarter of 2018. On December 14, 2018, the NRC completed a supplemental inspection using Inspection Procedure (IP) 95001, "Supplemental Inspection Response to Action Matrix Column 2 Inputs." Based on the results of this inspection and that the PI has returned to Green in the fourth quarter of CY 2018, the NRC determined that Watts Bar Unit 2 returned to the Licensee Response Column (Column 1) for the first quarter of CY 2019 after a Regulatory Performance Meeting was conducted on January 30, 2019, and the assessment follow-up letter for Watts Bar Unit 2 was issued on February 4, 2019.

Although plant performance for Unit 1 was within the Licensee Response Column and the plant performance for Unit 2 was within the Regulatory Response Column, the NRC has not yet finalized the significance of Apparent Violation 05000390,391/2019501-01, "Failure to Maintain the Effectiveness of the Emergency Plan and a Standard Emergency Classification Scheme Which Included Facility Effluent Parameters." The final safety significance determination may affect the NRC's assessment of plant performance and the enclosed inspection plan. Specifically, if the NRC determines that the significance of the finding is white, Unit 1 will

return to the Regulatory Response Column with Unit 2 and additional inspection of the finding will be planned.

In assessment letter dated August 31, 2018, titled Assessment Follow-up Letter and Updated Inspection Plan for Watts Bar Nuclear Plant, Units 1 and 2 (Reports 05000390, 05000391/2018005) (ML18242A458), the NRC opened a cross-cutting issue (CCI) with the aspect of Safety Conscious Work Environment (SCWE) and identified the closure criteria for the Chilling Effect Letter (CEL) and CCI. The NRC recognizes that TVA has made efforts to improve this area. The NRC will continue to monitor your staff's effort and progress in addressing the CCI by our resident inspectors, follow-up SCWE, and/or PI&R inspections.

The enclosed inspection plan lists the inspections scheduled through December 31, 2020. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. Routine inspections performed by resident inspectors are not included in the inspection plan. You should be aware that the agency is pursuing potential changes to the ROP, including changes to engineering inspections (SECY-18-0113, "Recommendations for Modifying the Reactor Oversight Process Engineering Inspections"). Should these changes to the ROP be implemented, the engineering and other region-based inspections are subject to change in scope, as well as schedule, beginning in January 2020. The inspections listed during the last twelve months of the inspection plan are tentative and may be revised. 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 ROP baseline inspections, we also plan on conducting infrequently performed inspections which include Initial License Examination, Safety Conscious Work Environment and Confirmatory Orders follow-up inspections. The NRC will be in contact with your staff to schedule completion of Temporary Instruction (TI) 2515/194, "Inspection of the Licensee's Implementation of Industry Initiative Associated With the Open Phase Condition Design Vulnerabilities In Electric Power Systems (NRC Bulletin 2012-01)." The NRC intends to complete this inspection in 2019.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, and Requests for Withholding."

Please contact Omar López-Santiago at (404) 997-4703 with any questions you may have regarding this letter.

Sincerely,

/RA/

Joel T. Munday, Director
Division of Reactor Projects

Docket Nos.: 50-390, 50-391
License Nos.: NPF-90, NPF-96

Enclosure:
Watts Bar Inspection/Activity Plan
(03/01/2019 – 12/31/2020)

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IP 22 Inspection Activity Plan Report

Watts Bar

03/01/2019 - 12/31/2020

Unit	Start	End	Activity	CAC	Title	Staff Count
FORCE-ON-FORCE PLANNING AND EXERCISE						6
1, 2	02/25/2019	03/01/2019	IP 71130.03	000735	Contingency Response - Force-On-Force Testing	
1, 2	03/18/2019	03/22/2019	IP 71130.03	000735	Contingency Response - Force-On-Force Testing	
UNIT 2 IN-SERVICE INSPECTION +SG						2
1, 2	04/22/2019	04/26/2019	IP 71111.08P	000702	Inservice Inspection Activities (PWR)	
RP OCCUPATIONAL RAD SAFETY BASELINE INSPECTION - WEEK 1						2
1, 2	04/22/2019	04/26/2019	IP 71124.01	000725	Radiological Hazard Assessment and Exposure Controls	
1, 2	04/22/2019	04/26/2019	IP 71124.02	000726	Occupational ALARA Planning and Controls	
1, 2	04/22/2019	04/26/2019	IP 71124.03	000727	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2	04/22/2019	04/26/2019	IP 71124.04	000728	Occupational Dose Assessment	
1, 2	04/22/2019	04/26/2019	IP 71124.05	000729	Radiation Monitoring Instrumentation	
RP OCCUPATIONAL RAD SAEFETY BASELINE INSPECTION - WEEK 2						3
1, 2	05/06/2019	05/10/2019	IP 71124.01	000725	Radiological Hazard Assessment and Exposure Controls	
1, 2	05/06/2019	05/10/2019	IP 71124.02	000726	Occupational ALARA Planning and Controls	
1, 2	05/06/2019	05/10/2019	IP 71124.03	000727	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2	05/06/2019	05/10/2019	IP 71124.04	000728	Occupational Dose Assessment	
1, 2	05/06/2019	05/10/2019	IP 71124.05	000729	Radiation Monitoring Instrumentation	
SECURITY BASELINE INSPECTION						1
1, 2	06/03/2019	06/07/2019	IP 71130.02	000734	Access Control	
1, 2	06/03/2019	06/07/2019	IP 71151	001338	Performance Indicator Verification	
WATTS BAR INITIAL LICENSE EXAM						3
1, 2	07/08/2019	07/12/2019	OV	000956	VALIDATION OF INITIAL LICENSE EXAMINATION (OV)	
1, 2	08/12/2019	08/16/2019	EXAD	000500	LICENSE EXAM ADMINISTRATION (EXAD)	
DESIGN BASES ASSURANCE INSPECTION (TEAM)						6
1, 2	08/12/2019	08/16/2019	IP 71111.21M	000713	Design Bases Assurance Inspection (Teams)	
1, 2	08/26/2019	08/30/2019	IP 71111.21M	000713	Design Bases Assurance Inspection (Teams)	
SCWE AND CONFIRMATORY ORDERS FOLLOWUP INSPECTIONS						2
1, 2	09/09/2019	09/13/2019	IP 92702	000238	Followup on Corrective Actions For Violations And Deviations	
1, 2	09/09/2019	09/13/2019	IP 93100	000921	Safety-Conscious Work Environment Issue of Concern Followup	

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

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Watts Bar

03/01/2019 - 12/31/2020

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EMERGENCY PREPAREDNESS EXERCISE						6
1, 2	11/04/2019	11/08/2019	IP 71114.01	000716	Exercise Evaluation	
1, 2	11/04/2019	11/08/2019	IP 71114.04	000719	Emergency Action Level and Emergency Plan Changes	
1, 2	11/04/2019	11/08/2019	IP 71114.08	000723	Exercise Evaluation □ Scenario Review	
1, 2	11/04/2019	11/08/2019	IP 71151	001397	Performance Indicator Verification	
CYBER SECURITY						4
1, 2	11/18/2019	11/22/2019	IP 71130.10P	000741	Cyber Security	
1, 2	12/02/2019	12/06/2019	IP 71130.10P	000741	Cyber Security	
TVA CORPORATE OFFICE FFD/AA/SGI INSPECTION						2
1, 2	01/06/2020	01/10/2020	IP 71130.01	000733	Access Authorization	
1, 2	01/06/2020	01/10/2020	IP 71130.06	000738	Protection of Safeguards Information	
1, 2	01/06/2020	01/10/2020	IP 71130.08	000740	Fitness For Duty Program	
SECURITY BASELINE INSPECTION						1
1, 2	02/24/2020	02/28/2020	IP 71130.01	000733	Access Authorization	
1, 2	02/24/2020	02/28/2020	IP 71130.06	000738	Protection of Safeguards Information	
1, 2	02/24/2020	02/28/2020	IP 71130.08	000740	Fitness For Duty Program	
UNIT 1 IN-SERVICE INSPECTION						1
1	03/23/2020	03/27/2020	IP 71111.08P	000702	Inservice Inspection Activities (PWR)	
SECURITY BASELINE INSPECTION						1
1, 2	06/15/2020	06/19/2020	IP 71130.02	000734	Access Control	
1, 2	06/15/2020	06/19/2020	IP 71151	001338	Performance Indicator Verification	
WATTS BAR INITIAL LICENSE EXAM						4
1, 2	07/20/2020	07/24/2020	OV	000956	VALIDATION OF INITIAL LICENSE EXAMINATION (OV)	
1, 2	08/24/2020	09/11/2020	EXAD	000500	LICENSE EXAM ADMINISTRATION (EXAD)	
RP PUBLIC RAD SAFETY BASELINE						2
1, 2	08/10/2020	08/14/2020	IP 71124.06	000730	Radioactive Gaseous and Liquid Effluent Treatment	
1, 2	08/10/2020	08/14/2020	IP 71124.07	000731	Radiological Environmental Monitoring Program	
DESIGN BASES ASSURANCE INSPECTION (PROGRAMS)						3
1, 2	09/21/2020	09/25/2020	IP 71111.21N	000714	Design Bases Assurance Inspection (Programs)	

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IP 22 Inspection Activity Plan Report

Watts Bar

03/01/2019 - 12/31/2020

Unit	Start	End	Activity	CAC	Title	Staff Count
DESIGN BASES ASSURANCE INSPECTION (PROGRAMS)						3
1, 2	10/05/2020	10/09/2020	IP 71111.21N	000714	Design Bases Assurance Inspection (Programs)	
UNIT 2 IN-SERVICE INSPECTION +SG						2
2	10/26/2020	10/30/2020	IP 71111.08P	000702	Inservice Inspection Activities (PWR)	
RP OCCUPATIONAL RAD HAZARDS & TRANSPORTATION BASELINE INSPECTION						2
1, 2	10/26/2020	10/30/2020	IP 71124.01	000725	Radiological Hazard Assessment and Exposure Controls	
1, 2	10/26/2020	10/30/2020	IP 71124.08	000732	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
WATTS BAR REQUAL INSPECTION						2
1, 2	11/02/2020	11/06/2020	IP 71111.11B	000704	Licensed Operator Requalification Program and Licensed Operator Performance (Biennial)	
SECURITY BASELINE INSPECTION						2
1, 2	11/02/2020	11/06/2020	IP 71130.04	000736	Equipment Performance, Testing, and Maintenance	
1, 2	11/02/2020	11/06/2020	IP 71130.07	000739	Security Training	
1, 2	11/02/2020	11/06/2020	IP 71151	001338	Performance Indicator Verification	

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