



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

March 3, 2020

Mr. Jim Barstow  
Vice President, Nuclear Regulatory Affairs & Support Services  
Tennessee Valley Authority  
1101 Market Street, LP 4A-C  
Chattanooga, TN 37402-2801

SUBJECT: ANNUAL ASSESSMENT LETTER FOR WATTS BAR NUCLEAR PLANT,  
UNITS 1 AND 2 - REPORT 05000390/2019006 AND 05000391/2019006

Dear Mr. Barstow:

The NRC has completed its end-of-cycle performance assessment of Watts Bar Nuclear Plant, Units 1 and 2, reviewing performance indicators (PIs), inspection results, and enforcement actions from January 1, 2019, through December 31, 2019. 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, Units 1 and 2, 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.

On August 1, 2019, the NRC issued a supplemental inspection report (NRC Inspection Report No. 05000390, 391/2019540, ML19255J600) associated with White Emergency Preparedness finding, which stated that your actions to address the performance issue were acceptable and the finding was closed. Watts Bar Units 1 and 2 returned to licensee Response Column of the ROP Action Matrix beginning on October 1, 2019.

On November 19, 2019, the NRC issued a Severity Level III Violation, with Civil Penalty of \$145,000.00, associated with 10 CFR 50.9, (NRC Inspection Report No. 05000390, 391/2019091, ML19323F546). Therefore, the NRC plans to conduct Inspection Procedure 92702, Follow-up on Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders, and Alternate Dispute Resolution Confirmatory Orders, to follow-up on the violation.

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 determined that TVA has made progress to address the CEL and CCI closure criteria based on the January 2019 NRC Problem Identification and Resolution Inspection and Confirmatory Order and SCWE Follow-up

(ML19072A067); the follow-up of Confirmatory Order and Chilling Effect Letter inspection in October 2019; and routine resident baseline inspections. The NRC is still deliberating on the appropriate time to close the Watts Bar Chilling Effect Letter and SCWE CCI. Therefore, these items will remain open. The NRC will continue to monitor TVA's activities to maintain a SCWE at Watts Bar through the Reactor Oversight Process.

The enclosed inspection plan lists the inspections scheduled through December 31, 2021. 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. 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 an Initial License Examination inspection and Inspection Procedure 92702, Follow-up on Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders, and Alternate Dispute Resolution Confirmatory Orders.

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 Thomas Stephen at (404) 997-4703 with any questions you may have regarding this letter.

Sincerely,

/RA/

Mark S. Miller, Director  
Division of Reactor Projects

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

Enclosure:  
Watts Bar Inspection/Activity  
Plan (03/01/2020 –  
12/31/2021)

cc: Distribution via ListServ

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UNITS 1 AND 2 - REPORT 05000390/2019006 AND 05000391/2019006 –  
March 3, 2020

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OFFICE	RII:DRP	RII:DRP	RII:DRP	RII:DRP		
NAME	W Deschaine	S Ninh	T Stephen	M Miller		
DATE	2/20/2020	2/20/2020	3/2/2020`	3/2/2020		

**OFFICIAL RECORD COPY**

# IP 22 Inspection Activity Plan Report

## Watts Bar

03/01/2020 - 12/31/2021

Unit	Start	End	Activity	CAC	Title	Staff Count
<b>UNIT 1 IN-SERVICE INSPECTION</b>						1
1	04/27/2020	05/01/2020	IP 71111.08P	000702	Inservice Inspection Activities (PWR)	
<b>SECURITY BASELINE INSPECTION</b>						1
1, 2	06/15/2020	06/19/2020	IP 71130.02	000734	Access Control	
1, 2	06/15/2020	06/19/2020	IP 71130.09	001656	Security Plan Changes	
1, 2	06/15/2020	06/19/2020	IP 71151	001338	Performance Indicator Verification	
<b>WATTS BAR INITIAL LICENSE EXAM</b>						4
1, 2	07/20/2020	07/24/2020	OV	000956	VALIDATION OF INITIAL LICENSE EXAMINATION (OV)	
1, 2	08/24/2020	09/04/2020	EXAD	000500	LICENSE EXAM ADMINISTRATION (EXAD)	
<b>RP PUBLIC RAD SAFETY BASELINE</b>						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	
1, 2	08/10/2020	08/14/2020	IP 71151	000746	Performance Indicator Verification	
<b>DESIGN BASES ASSURANCE INSPECTION (PROGRAMS)</b>						3
1, 2	08/31/2020	09/04/2020	IP 71111.21N	000714	Design Bases Assurance Inspection (Programs)	
1, 2	09/21/2020	09/25/2020	IP 71111.21N	000714	Design Bases Assurance Inspection (Programs)	
<b>UNIT 2 IN-SERVICE INSPECTION +SG</b>						2
2	10/26/2020	10/30/2020	IP 71111.08P	000702	Inservice Inspection Activities (PWR)	
<b>RP OCCUPATIONAL RAD SAFETY &amp; TRANSPORTATION BASELINE INSPECTION</b>						2
1, 2	11/02/2020	11/06/2020	IP 71124.01	000725	Radiological Hazard Assessment and Exposure Controls	
1, 2	11/02/2020	11/06/2020	IP 71124.08	000732	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
1, 2	11/02/2020	11/06/2020	IP 71151	000746	Performance Indicator Verification	
<b>SECURITY BASELINE INSPECTION</b>						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	
<b>TARGET SET INSPECTION</b>						1
1, 2	11/02/2020	11/06/2020	IP 71130.14	000743	Review of Power Reactor Target Sets	

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

Enclosure

# IP 22 Inspection Activity Plan Report

## Watts Bar

03/01/2020 - 12/31/2021

Unit	Start	End	Activity	CAC	Title	Staff Count
<b>WATTS BAR REQUAL INSPECTION</b>						2
1, 2	11/16/2020	11/20/2020	IP 71111.11B	000704	Licensed Operator Requalification Program and Licensed Operator Performance	
<b>EMERGENCY PREPAREDNESS PROGRAM INSPECTION</b>						2
1, 2	11/16/2020	11/20/2020	IP 71114.02	000717	Alert and Notification System Testing	
1, 2	11/16/2020	11/20/2020	IP 71114.03	000718	Emergency Response Organization Staffing and Augmentation System	
1, 2	11/16/2020	11/20/2020	IP 71114.05	000720	Maintenance of Emergency Preparedness	
1, 2	11/16/2020	11/20/2020	IP 71151	001397	Performance Indicator Verification	
<b>TRIENNIAL FIRE PROTECTION INSPECTION</b>						4
1, 2	02/01/2021	02/05/2021	IP 71111.05T	000696	Fire Protection	
1, 2	02/15/2021	02/19/2021	IP 71111.05T	000696	Fire Protection	
<b>EVALUATIONS OF CHANGES, TESTS, AND EXPERIMENTS</b>						3
1, 2	03/29/2021	04/02/2021	IP 71111.17T	000709	Evaluations of Changes, Tests, and Experiments	
<b>PROBLEM IDENTIFICATION AND RESOLUTION</b>						4
1, 2	05/03/2021	05/07/2021	IP 71152B	000747	Problem Identification and Resolution	
1, 2	05/17/2021	05/21/2021	IP 71152B	000747	Problem Identification and Resolution	
<b>TRIENNIAL HEAT SINK PERFORMANCE</b>						1
1, 2	07/12/2021	07/16/2021	IP 71111.07T	000700	Heat Sink Performance	
<b>SECURITY BASELINE INSPECTION</b>						1
1, 2	09/13/2021	09/17/2021	IP 71130.02	000734	Access Control	
1, 2	09/13/2021	09/17/2021	IP 71130.09	001656	Security Plan Changes	
1, 2	09/13/2021	09/17/2021	IP 71151	001338	Performance Indicator Verification	
<b>UNIT 1 IN-SERVICE INSPECTION +SG</b>						2
1	09/20/2021	09/24/2021	IP 71111.08P	000702	Inservice Inspection Activities (PWR)	
<b>RP OCCUPATIONAL RAD SAFETY INSPECTION</b>						3
1, 2	09/20/2021	09/24/2021	IP 71124.01	000725	Radiological Hazard Assessment and Exposure Controls	
1, 2	09/20/2021	09/24/2021	IP 71124.02	000726	Occupational ALARA Planning and Controls	
1, 2	09/20/2021	09/24/2021	IP 71124.03	000727	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2	09/20/2021	09/24/2021	IP 71124.04	000728	Occupational Dose Assessment	
1, 2	09/20/2021	09/24/2021	IP 71124.05	000729	Radiation Monitoring Instrumentation	

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

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## Watts Bar

03/01/2020 - 12/31/2021

Unit	Start	End	Activity	CAC	Title	Staff Count
<b>RP OCCUPATIONAL RAD SAFETY INSPECTION</b>						3
1, 2	09/20/2021	09/24/2021	IP 71151	000746	Performance Indicator Verification	
1, 2	10/04/2021	10/08/2021	IP 71124.01	000725	Radiological Hazard Assessment and Exposure Controls	
1, 2	10/04/2021	10/08/2021	IP 71124.02	000726	Occupational ALARA Planning and Controls	
1, 2	10/04/2021	10/08/2021	IP 71124.03	000727	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2	10/04/2021	10/08/2021	IP 71124.04	000728	Occupational Dose Assessment	
1, 2	10/04/2021	10/08/2021	IP 71124.05	000729	Radiation Monitoring Instrumentation	
1, 2	10/04/2021	10/08/2021	IP 71151	000746	Performance Indicator Verification	
<b>MATERIAL CONTROL &amp; ACCOUNTING</b>						1
1, 2	10/01/2021	12/31/2021	IP 71130.11	000742	Material Control and Accounting (MC&A)	
<b>EMERGENCY PREPAREDNESS EXERCISE</b>						5
1, 2	11/14/2021	11/27/2021	IP 71114.01	000716	Exercise Evaluation	
1, 2	11/14/2021	11/27/2021	IP 71151	001397	Performance Indicator Verification	