



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, SW, SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

August 31, 2006

Tennessee Valley Authority  
ATTN: Mr. Karl W. Singer  
Chief Nuclear Officer and  
Executive Vice President  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: MID-CYCLE PERFORMANCE REVIEW AND INSPECTION PLAN - WATTS  
BAR NUCLEAR PLANT

Dear Mr. Singer:

On August 2, 2006, the NRC staff completed its performance review of the Watts Bar Nuclear Plant for the first half of the calendar year 2006 assessment cycle. Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results over the previous twelve months. The purpose of this letter is to inform you of our assessment of your safety performance during this period and our plans for future inspections at your facility.

This performance review and the enclosed inspection plan do not include physical protection information. A separate letter designated and marked as "Exempt from Public Disclosure in Accordance with 10 CFR 2.390" will include the physical protection review and a resultant inspection plan.

Overall, Watts Bar operated in a manner that preserved public health and safety and fully met all cornerstone objectives. Plant performance for Watts Bar Unit 1 for the most recent quarter was in the Regulatory Response Column of the NRC's Action Matrix of Inspection Manual Chapter 305, "Operating Reactor Assessment Program," due to a White inspection finding in the Barrier Integrity Cornerstone. The White inspection finding is related to the failure to implement shutdown procedures which resulted in multiple actuations of pressurizer power operated relief valves. The White finding was identified in the third quarter of calendar year 2005. In accordance the NRC's Action Matrix, a White inspection finding reflected performance at a level requiring increased regulatory response. On June 2, 2006, in accordance with the NRC's Action Matrix, a supplemental inspection was completed using Inspection Procedure 95001, "Inspection for One or Two White Inputs In a Strategic Performance Area." Supplemental Inspection Report 05000390/2006010 documented that the licensee's problem identification and root cause analysis was acceptable and that completed and proposed corrective actions adequately addressed the results of the root cause evaluation. A regulatory performance meeting was held on August 29, 2006 with the licensee to discuss the performance deficiency and corrective actions associated with the White inspection finding.

Package - ML062430343

Because the NRC has completed its planned regulatory actions for this White inspection finding, we plan to conduct reactor oversight process (ROP) baseline inspections at your facility. In addition, we plan to conduct non-ROP inspections involving containment sump blockage, Steam Generator Replacement, Reactor Vessel Head Penetration Nozzles, verification of the Mitigating Systems Performance Index, and Unit 2 Lay-up.

The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through March 31, 2008. The inspection plan is provided to minimize the resource impact on your staff and to allow for the resolution of any scheduling conflicts and personnel availability issues well in advance of inspector arrival onsite. Routine resident inspections are not listed due to their ongoing and continuous nature. The inspections in the last twelve months of the inspection plan are tentative and may be revised at the end-of-cycle review meeting.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made 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).

If circumstances arise which cause us to change the inspection plan, we will contact you to discuss the change as soon as possible. Please contact me at (404) 562-4550 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

*/RA/*

Malcolm T. Widmann, Chief  
Reactor Projects Branch 6  
Division of Reactor Projects

Docket Nos. 50-390, 50-391  
License No. NPF-90 and Construction  
Permit No. CPPR-92

Enclosure: Watts Bar Inspection/Activity Plan

cc w/encl: (See page 3)

cc w/encl:

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**Watts Bar**  
**Inspection / Activity Plan**  
**09/01/2006 - 03/31/2008**

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	Planned Dates End	Inspection Type
	<b>2515/169 - TI 2515/169 - MSPI VERIFICATION</b>		<b>1</b>			
1	IP 2515/169	Mitigating Systems Performance Index Verification		08/01/2006	12/31/2006	Safety Issues
	<b>PS2-EP - EP INSP</b>		<b>1</b>			
1	IP 7111402	Alert and Notification System Testing		09/04/2006	09/08/2006	Baseline Inspections
1	IP 7111403	Emergency Response Organization Augmentation Testing		09/04/2006	09/08/2006	Baseline Inspections
1	IP 7111404	Emergency Action Level and Emergency Plan Changes		09/04/2006	09/08/2006	Baseline Inspections
1	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies		09/04/2006	09/09/2006	Baseline Inspections
1	IP 71151	Performance Indicator Verification		09/04/2006	09/09/2006	Baseline Inspections
	<b>OL EXAM - INITIAL EXAM</b>		<b>3</b>			
1	V23241	WATTS BAR/SEPTEMBER 2006 EXAM AT POWER FACILITIES		09/05/2006	09/15/2006	Not Applicable
	<b>EB3-SGRP - SG REPLACEMENT</b>		<b>1</b>			
1	IP 50001	Steam Generator Replacement Inspection		09/08/2006	09/08/2006	Other Routine
	<b>RP BR6 - UNIT 2 SYSTEMS LAY-UP INSPECTION</b>		<b>1</b>			
1	IP 92050	Review Of Quality Assurance For Extended Construction Delays		09/25/2006	09/29/2006	Other Routine
	<b>EB3-ISI - U1 INSERVICE INSPECTION</b>		<b>1</b>			
1	IP 7111108P	Inservice Inspection Activities - PWR		10/02/2006	10/06/2006	Baseline Inspections
	<b>EB3SGRP - SG REPLACEMENT</b>		<b>3</b>			
1	IP 50001	Steam Generator Replacement Inspection		10/02/2006	10/06/2006	Other Routine
	<b>PSB1-RP - RP BASELINE OCCUPATIONAL &amp; S/G REPL-WK1</b>		<b>2</b>			
1	IP 50001	Steam Generator Replacement Inspection		10/02/2006	10/06/2006	Other Routine
1	IP 7112101	Access Control to Radiologically Significant Areas		10/02/2006	10/06/2006	Baseline Inspections
1	IP 7112102	ALARA Planning and Controls		10/02/2006	10/06/2006	Baseline Inspections
1	IP 71151	Performance Indicator Verification		10/02/2006	10/06/2006	Baseline Inspections
	<b>EB3-SGRP - SG REPLACEMENT</b>		<b>2</b>			
1	IP 50001	Steam Generator Replacement Inspection		10/16/2006	10/20/2006	Other Routine
	<b>PSB1-RP - RP BASELINE OCCUPATIONAL &amp; S/G REPL WK2</b>		<b>1</b>			
1	IP 50001	Steam Generator Replacement Inspection		10/16/2006	10/20/2006	Other Routine
1	IP 7112101	Access Control to Radiologically Significant Areas		10/16/2006	10/20/2006	Baseline Inspections
	<b>EB3-SGRP - SG REPLACEMENT</b>		<b>2</b>			
1	IP 50001	Steam Generator Replacement Inspection		10/30/2006	11/03/2006	Other Routine
	<b>EB1-SUMP - PWR CONTAINMENT SUMP BLOCKAGE TI (U-1)</b>		<b>2</b>			
1	IP 2515/166	Pressurized Water Reactor Containment Sump Blockage [NRC GENERIC LETTER 2004-02		11/05/2006	11/11/2006	Safety Issues
	<b>EB1-CDB - COMPONENT DESIGN BASES INSPECTION</b>		<b>5</b>			
1	IP 7111121	Component Design Bases Inspection		01/29/2007	02/02/2007	Baseline Inspections
1	IP 7111121	Component Design Bases Inspection		02/12/2007	02/16/2007	Baseline Inspections

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

Enclosure

**Watts Bar**  
**Inspection / Activity Plan**  
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	<b>EB1-CDB</b>	<b>- COMPONENT DESIGN BASES INSPECTION</b>	<b>5</b>			
1	IP 7111121	Component Design Bases Inspection		02/26/2007	03/02/2007	Baseline Inspections
1	IP 7111121	Component Design Bases Inspection		03/12/2007	03/16/2007	Baseline Inspections
	<b>PSB1-RP</b>	<b>- RP PRE-INSPECTION VISIT</b>	<b>1</b>			
1	IP 7112101	Access Control to Radiologically Significant Areas		04/30/2007	05/04/2007	Baseline Inspections
	<b>TFP</b>	<b>- TFP INFO TRIP</b>	<b>5</b>			
1	IP 7111105T	Fire Protection [Triennial]		05/08/2007	05/10/2007	Baseline Inspections
	<b>PSB1-RP</b>	<b>- RP OCCUPATIONAL BASELINE INSPECTION</b>	<b>3</b>			
1	IP 7112101	Access Control to Radiologically Significant Areas		05/21/2007	05/25/2007	Baseline Inspections
1	IP 7112102	ALARA Planning and Controls		05/21/2007	05/25/2007	Baseline Inspections
1	IP 7112202	Radioactive Material Processing and Transportation		05/21/2007	05/25/2007	Baseline Inspections
1	IP 71151	Performance Indicator Verification		05/21/2007	05/25/2007	Baseline Inspections
	<b>TFP</b>	<b>- TRIENNIAL FIRE PROTECTION INSPECTION</b>	<b>5</b>			
1	IP 7111105T	Fire Protection [Triennial]		05/28/2007	06/01/2007	Baseline Inspections
1	IP 7111105T	Fire Protection [Triennial]		06/11/2007	06/15/2007	Baseline Inspections
	<b>EB3-HS</b>	<b>- HEAT SINK</b>	<b>2</b>			
1	IP 7111107B	Heat Sink Performance		06/25/2007	06/29/2007	Baseline Inspections
	<b>RPB6-PIR</b>	<b>- BIENNIAL PI&amp;R INSPECTION</b>	<b>4</b>			
1	IP 71152B	Identification and Resolution of Problems		08/27/2007	08/31/2007	Baseline Inspections
1	IP 71152B	Identification and Resolution of Problems		09/10/2007	09/14/2007	Baseline Inspections
	<b>EB1-MODS</b>	<b>- MODIFICATIONS-10CFR50.59</b>	<b>3</b>			
1	IP 7111102	Evaluation of Changes, Tests, or Experiments		10/29/2007	11/02/2007	Baseline Inspections
1	IP 7111117B	Permanent Plant Modifications		10/29/2007	11/02/2007	Baseline Inspections
	<b>PS2-EP</b>	<b>- EP EXERCISE</b>	<b>2</b>			
1	IP 7111401	Exercise Evaluation		11/05/2007	11/09/2007	Baseline Inspections
1	IP 7111404	Emergency Action Level and Emergency Plan Changes		11/05/2007	11/09/2007	Baseline Inspections
1	IP 71151	Performance Indicator Verification		11/05/2007	11/09/2007	Baseline Inspections
	<b>EB3-MR</b>	<b>- MR EFFECTIVENESS</b>	<b>1</b>			
1	IP 7111112B	Maintenance Effectiveness		12/10/2007	12/14/2007	Baseline Inspections
	<b>OL PREP</b>	<b>- INITIAL EXAM PREP</b>	<b>3</b>			
1	V23277	WATTS BAR/JANUARY 2008 EXAM AT POWER FACILITIES		01/07/2008	01/11/2008	Not Applicable
	<b>OL EXAM</b>	<b>- INITIAL EXAM</b>	<b>2</b>			
1	V23277	WATTS BAR/JANUARY 2008 EXAM AT POWER FACILITIES		01/28/2008	02/08/2008	Not Applicable
	<b>EB3-ISI</b>	<b>- UNIT 1 - ISI</b>	<b>1</b>			
1	IP 7111108P	Inservice Inspection Activities - PWR		02/18/2008	02/22/2008	Baseline Inspections

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**09/01/2006 - 03/31/2008**

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<b>EB3RPV - REACTOR HEAD PENETRATIONS TI150</b>						
1	IP 2515/150	Reactor Pressure Vessel Head and Vessel Head Penetration Nozzles (NRC ORDER EA-03-	1	02/18/2008	02/22/2008	Safety Issues

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