



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

September 3, 2013

Mr. Michael D. Skaggs  
Senior Vice President  
Nuclear Construction  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

**SUBJECT: MID-CYCLE ASSESSMENT LETTER – WATTS BAR NUCLEAR PLANT  
UNIT 2 (NRC INSPECTION REPORT 05000391/2013606)**

Dear Mr. Skaggs:

On August 12, 2013, the U. S. Nuclear Regulatory Commission (NRC) staff completed its performance review of the Watts Bar Nuclear Plant (WBN) Unit 2 construction project. Our technical staff reviewed inspection results for the period from July 1, 2012, through June 30, 2013. 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.

During the most recent quarter the NRC identified three violations associated with your commercial grade dedication program that were characterized as a Severity Level III problem in accordance with the NRC's Enforcement Policy and assessed a \$70,000 Civil Penalty. These violations are described in Inspection Report 05000391/2013614, dated June 18, 2013 (ADAMS Accession Number ML 13169A030). Consistent with the guidance in Inspection Manual Chapter 2517, Watts Bar 2 Construction Inspection Program, which defines a Severity Level III violation as a significant performance issue, the NRC plans to increase inspections for WBN Unit 2. Specifically, the NRC plans to perform an additional inspection using the guidance in Inspection Procedure 92702, Follow-up on Traditional Enforcement Actions including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders and Alternate Dispute Resolution Confirmatory Orders. This inspection will review your corrective actions to these violations to verify that your commercial grade dedication program is in compliance with regulations and that the corrective actions were adequate to prevent recurrence. Because planning for this inspection is continuing, we have not yet scheduled the inspection. Once the date for this inspection date is identified, we will inform your staff.

During the first three quarters of the assessment period, and in the 4<sup>th</sup> quarter with the exception noted above, WBN Unit 2 construction activities were generally conducted in a manner that complied with the Commission's rules and regulations, the conditions of your construction permit, and the Unit 2 regulatory framework commitments. Overall, the corrective action program implementation activities, including initiation, classification, disposition, and trending were deemed satisfactory. This overall conclusion was based on the results of the annual Problem Identification and Resolution (PI&R) team inspection, focus sample PI&R inspections, and the ongoing assessment of your corrective action program as part of routine inspections. No Substantive Cross-Cutting Issues were identified during this period.

The NRC staff expended a large effort toward the WBN Unit 2 project during the 12-month Mid-Cycle Assessment period. Specifically, the Region II office has spent over 12,000 hours performing inspections, assessments, public meetings, allegation follow-up, and inspection program support for WBN Unit 2. The NRC staff anticipates this level of effort will increase over the next 12-month assessment cycle as WBN Unit 2 construction activities continue and pre-operational testing is performed on additional safety-related systems.

As a result of reviewing your construction schedule and through interaction with your staff, the enclosed inspection plan contains those projected inspection activities that we have currently identified. Many of the inspections listed in the enclosed inspection plan were scheduled based on information your staff provided to the NRC. This information involved dates for completion of construction activities that would be subject to the corresponding NRC inspections. Therefore, it is crucial that you keep us apprised of any changes to the scheduled completion dates, in order to maintain our inspection plan current. As additional details of your project schedule become available, we will plan other inspections specified in IMC 2517. Your staff will be given ample notification of changes to upcoming inspection activities or newly identified inspections as they become finalized in order to allow for the resolution of any scheduling conflicts and personnel availability. Routine inspections performed by the resident staff are not listed on the inspection plan due to their ongoing and continuous nature.

As you begin preoperational testing, the NRC will implement IMC 2313, Light Water Reactor Inspection Program – Preoperational Testing and Operational Preparedness Phase. We have not listed preoperational testing inspections in the enclosed inspection plan due to likelihood that the inspection dates will change as adjustments to your preoperational testing schedule occur.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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 Robert Haag at (404) 997-4446 with any questions you may have regarding this letter or our planned inspections.

Sincerely,

/RA/

Joel T. Munday, Director  
Division of Construction Projects

Docket No. 50-391  
Construction Permit No: CPPR-92

Enclosure:  
Watts Bar Unit 2 Inspection Plan

cc w/encl: (See next page)

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PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE       SENSITIVE       NON-SENSITIVE

ADAMS: Yes      ACCESSION NUMBER: **ML13246A462**      SUNSI REVIEW COMPLETE

OFFICE	RII:DCP	RII: DCP	RII: DCP				
SIGNATURE	CJE	JBB5	RCH				
NAME	C Even	J. Baptist	R. Haag				
DATE	09/02/2013	09/02/2013	08/28/2013				
E-MAIL COPY?	YES	NO					

OFFICIAL RECORD COPY      DOCUMENT NAME: G:\CC\DCP\CPB3\WATTS BAR 2\ASSESSMENT\2013 MID-CYCLE\WB2 MID\_CYCLE LETTER 2013 REV2.DOCX

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Letter to Michael D. Skaggs from Joel T. Munday dated September 3, 2013.

SUBJECT: MID-CYCLE ASSESSMENT LETTER – WATTS BAR NUCLEAR PLANT  
UNIT 2 (NRC INSPECTION REPORT 05000391/2013606)

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## *Watts Bar Unit 2*

### *Inspection Plan*

*54 Items*

<i>Type</i>	<i>Item #</i>	<i>Title</i>	<i>Scheduled Inspection</i>
TI	2512/022	Fire Protection corrective action program (CAP)	09/09/2013
TMI	I.D.1	Control Room Design Review	09/09/2013
TMI	II.K.3.5	Auto trip of reactor coolant pumps: a) propose mods; b) modify	09/09/2013
VIO	87-05-01	Failure to consider vendor requirements in design of hydrogen analyzer system/failure to specify classes of cleanness in specifications or drawings	09/09/2013
CDR	89-05	Failure of auxiliary feedwater (AFW) steam generator level controllers	09/09/2013
BL	79-27	Loss of non-Class 1E I&C power system bus during operation	09/16/2013
CDR	86-21	Non-quality assurance data used in calculations for cable tray and conduit loading	09/16/2013
TI	2512/028	QA Records CAP	09/23/2013
TI	2515/120	Multi-Plant Action Item A-22, Station Blackout Rule	09/30/2013
TI	2512/021	Equipment Seismic CAP	10/07/2013
BL	85-01	Steam Binding of Auxiliary Feedwater pumps	10/07/2013
TI	2515/69	Steam Binding of Auxiliary Feedwater Pumps BL 85-01	10/07/2013
		QA Inspection – Team Inspection	10/21/2013
IP	49053	Employee Concerns Program	11/04/2013
OTHER	Hist. Part 21's	Review Historical Part 21's	11/04/2013
IFI	86-14-05	Analysis of QC inspected spring nuts	11/04/2013

Enclosure

<b>Type</b>	<b>Item #</b>	<b>Title</b>	<b>Scheduled Inspection</b>
TI	2512/037	Master Fuse List SP	11/18/2013
GL	06-02	Grid reliability and impact on plant risk and operability of offsite power	11/18/2013
TI	2515/165	Offsite power and impact on plant risk	11/18/2013
CDR	85-37	AMP PID G terminal lugs	11/18/2013
SER	SSER App HH Item 7	Verify commitment completion and review electrical design calculations	11/18/2013
BL	76-02	Relay coil failures	01/20/2014
TI	2500/20, R2	ATWS rule, GL 83-28 & 85-06	01/20/2014
SER	SSER App HH Item 64	TVA stated, "Post modification testing will be performed to verify design change corrects Eagle 21, Rack 2 RTD accuracy issue prior to WBN U2 fuel load." This issue is open pending NRC review of testing results (Section 7.2.1.1)	01/20/2014
		Engineering Field Change Control Inspection Team Inspection	01/27/2014
TMI	I.C.1	Short term accident and procedure review	02/01/2014
TI	2515/142	Draindown during shutdown and common-mode failure (GL 98-02)	02/03/2014
GL	98-02	Loss of Reactor Coolant Inventory and Associated Potential for Loss of Emergency Mitigation Functions While in a Shutdown Condition	02/03/2014
		Problem Identification and Resolution Inspection – Team Inspection	02/17/2014
CDR	86-08	Incorrect tubing configuration on containment isolation valves (CIV) actuators	02/24/2014
BL	03-02	Leakage from reactor pressure vessel lower head penetrations and reactor coolant pressure boundary integrity (PWRs)	03/03/2014
TMI	II.D.1	Relief and safety valve test requirements	03/03/2014
TI	2512/017	Cable Tray and Supports CAP	03/24/2014
TMI	II.D.3	Valve position indication	03/24/2014



<i>Type</i>	<i>Item #</i>	<i>Title</i>	<i>Scheduled Inspection</i>
TMI	II.E.3.1	Emergency power for pressurizer heaters	03/24/2014
CDR	89-06	Inadequate qualification of cable tray supports & fittings	03/24/2014
SER	SSER App HH Item 33	Verify completion of design change notification of 125V dc vital battery system prior to issuance of Unit 2 OL (Section 8.3.2.3)	03/24/2014
TI	2512/036	Environmental Qualification SP	04/21/2014
BL	80-04	Analysis of PWR main steam line break with continuous feedwater addition	04/21/2014
TMI	II.E.1.2	Auxiliary feedwater system initiation and flow	04/21/2014
TI	2515/87	MPA A-17: RG 1.97	04/21/2014
CDR	87-10	Failure of Category "C" devices may adversely affect Category "A" devices	04/21/2014
TI	2512/026	Instrument Lines CAP	05/05/2014
CDR	86-11	Lack of thermal qualification for Systems 43 & 90 piping	05/05/2014
CDR	86-24	Inadequate flexibility of instrument tubing attached to steel containment vessel	05/05/2014
GL	89-19	Request for actions related to resolution of unresolved safety issue A-47, Safety implication of control systems in LWR nuclear power plants, pursuant to 10CFR50.54(f)	05/19/2014
GL	96-01	Testing of safety-related circuits	05/19/2014
TI	2515/139	GL 96-01, Testing of safety-related logics circuits	05/19/2014
CDR	95-05	Loose connections found in vendor wire safety-related panels	05/19/2014
BL	88-11	Pressurizer surge line thermal stratification	07/07/2014
TMI	II.K.1.10	Operability status	07/07/2014
TMI	II.K.3.10	Applicant's proposed anticipatory trip at high power	07/07/2014
TI	2515/65, R2	TMI action plan requirement follow-up	08/01/2014

<b>Type</b>	<b>Item #</b>	<b>Title</b>	<b>Scheduled Inspection</b>
URI	87-19-06	Nonsafety-related cable in close proximity to safety-related cable in electrical panels	08/25/2014

Acronyms Used in Enclosure

BL	Bulletin
CDR	construction deficiency report
GL	Generic Letter
IFI	inspector followup item
IP	inspection procedure
SER	safety evaluation report
TI	temporary instruction
TMI	three mile island
URI	unresolved item
VIO	violation