



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

April 7, 2015

EA-14-179

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

SUBJECT: NOTICE OF VIOLATION (NRC INSPECTION REPORT NO. 05000391/2015614,
AND INVESTIGATION REPORT NO. 2-2013-011, WATTS BAR NUCLEAR
PLANT)

Dear Mr. Skaggs:

This refers to an investigation completed on October 30, 2014, by the U.S. Nuclear Regulatory Commission's (NRC) Office of Investigations (OI) at Tennessee Valley Authority's (TVA) Watts Bar Nuclear Plant (Watts Bar), Unit 2, as described in NRC Inspection Report (IR) 05000391/2014616 dated January 12, 2015.

The purpose of the investigation was to determine whether contract employees working at Watts Bar Unit 2 deliberately violated a TVA procedure during anchor bolt installation for overhead base plates on Unit 2 hangers. The inspection report documented the identification of one apparent violation, involving the deliberate failure to follow TVA Procedure MAI-5.1B, for anchor bolt installation for overhead base plates on Unit 2 hangers 86-1541 and 86-1545, which occurred in December of 2011. The apparent violation was considered for escalated enforcement in accordance with the NRC's Enforcement Policy.

In the letter transmitting the inspection report, we provided you the opportunity to address the apparent violations identified in the report by either attending a pre-decisional enforcement conference, providing a written response before we made our final enforcement decision, or requesting Alternative Dispute Resolution. At your request, a pre-decisional enforcement conference was held on March 6, 2015, to discuss the apparent violation, its significance, root causes, and your corrective actions. During the meeting, your staff accepted the facts as described in the inspection report, including the willful aspects, and provided details of your corrective actions to preclude recurrence.

Based on the information developed during the investigation and the information that you provided at the pre-decisional enforcement conference on March 6, 2015, the NRC has determined that a violation of NRC requirements occurred. This violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report (IR 05000391/2014616). To summarize, the violation

involved a contract foreman assigned to install anchor bolts for overhead base plates on hangers 86-1541 and 86-1545 in December of 2011. The foreman willfully failed to remove and replace or obtain site engineering approval for newly installed wedge anchor bolts exceeding the 5 degrees of perpendicular as required by TVA Procedure MAI-5.1B.

Based on the NRC's review, the violation did not result in any actual consequences. In this case, the facility remained under construction and the issue was identified and corrected.

The potential consequences of the quality of construction and its resulting effect on the safety of the facility are of concern to the NRC. The potential existed to install Hanger 86-1545 and Hanger 86-1541 with bent (weakened) bolts, diminishing the quality of construction. The hangers are used to support safety-related heating ventilation and cooling (HVAC) equipment in containment.

In addition to the importance of the quality of construction, of greater concern to the NRC is the fact that contract personnel, specifically the foreman, conspired and/or engaged in deliberate misconduct such that anchor bolts were not installed to within 5 degrees of perpendicular as required by procedure. The contract foreman requested one of the contract employees to fabricate a non-approved modified tool. At the direction of the contract foreman, the tool was then used to straighten the wedge anchor bolts to within 5 degrees of perpendicular. The contract foreman was also observed by others to use the modified tool to straighten the wedge anchors bolts. All four overhead base plates of hangers 86-1541 and 86-1545 had at least one bent bolt. As discussed in the NRC Enforcement Policy, willful violations are of particular concern because the NRC's regulatory program is based on licensees and their contractors, employees, and agents acting with integrity and communicating with candor. Based on the above, this violation has been categorized in accordance with the NRC Enforcement Policy at Severity Level III.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$70,000 is considered for a Severity Level III violation. Because your facility has been the subject of escalated enforcement actions within the last 2 years¹ and because the violation was willful, the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section 2.3.4 of the Enforcement Policy.

Identification credit is warranted because TVA identified the issue and determined that corrective action was needed. Regarding the factor of *Corrective Action*, TVA initiated Problem Evaluation Report (PER) 675331 to evaluate the issue and determine the extent of condition. Corrective actions included, but were not limited to: (1) immediate stoppage of anchor bolt work; (2) anchor bolt retraining with emphasis on strict procedure use/adherence; (3) structural repair including the removal of bent anchor bolts, repair of concrete, and installation of new anchor bolts and baseplates; and (4) disciplinary action against the responsible individuals, including the removal of site access for the foreman. Based on the above, credit is warranted for the factor of *Corrective Action*.

Therefore, to emphasize the importance of prompt identification and comprehensive correction of violations, I have been authorized, after consultation with the Director, Office of Enforcement, not to propose a civil penalty in this case. However, significant violations in the future could

¹ On June 18, 2013 (EA-13-019) a SLIII violation was issued associated with the commercial grade dedication program (ADAMS Accession No. ML13169A030)

result in a civil penalty. The NRC plans to conduct a followup inspection in accordance with Inspection Procedure 92702, "Followup on Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders, and Alternative Dispute Resolution Confirmatory Orders." The followup inspection will verify that adequate corrective actions have been implemented, the root cause has been identified, generic implications have been addressed, and that your programs and practices have been appropriately enhanced to prevent recurrence. The NRC requests that your staff provide notification of your readiness for the NRC to conduct the traditional enforcement followup inspection to review the actions taken to address the Severity Level III violation.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

For administrative purposes, this letter is issued as NRC Inspection Report 05000391/2015614. Apparent Violation (AV) 05000391/2014616-01, "Failure to Follow Site Procedure for Installation of Anchor Bolts," has been re-designated as Violation 05000391/2015614-01, "Failure to Follow Site Procedure for Installation of Anchor Bolts."

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter, it's enclosure, and your response will be made available electronically for public inspection in the NRC Public Document Room and in the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such information, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information).

M. Skaggs

4

The NRC also includes significant enforcement actions on its Web site at (<http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions/>).

Sincerely,

/RA/

Victor M. McCree
Regional Administrator

Docket No. 50-391

Enclosure:
Notice of Violation

cc w/encl: (See next page)

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Sincerely,

/RA/

Victor M. McCree
Regional Administrator

Docket No. 50-391

Enclosure:
Notice of Violation

cc w/encl: (See next page)

• PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE • NON-SENSITIVE

ADAMS: Yes ACCESSION NUMBER: **ML15097A307** SUNSI REVIEW COMPLETE FORM 665 ATTACHED

OFFICE	RII:DCP	RII:DCP	RII: DCP	RII: EICS	RII:ORA	HQ:OE	HQ:NRR
SIGNATURE	AAW	RCH	WBJ	DLG2	SAP1	KXH7	JCP5 via email
NAME	A Wilson	R Haag	W Jones	D Gamberoni	S Price	K. Hanley	J. Poole
DATE	03/13/2015	03/18/2015	03/23/2015	03/25/2015	03/25/2015	03/31/2015	03/29/2015
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO
OFFICE	HQ:OGC	RII:ORA	RII:RA				
SIGNATURE	DMC4 via e-mail	WBJ for	VMM				
NAME	D. Cylkowski	F Brown	V McCree				
DATE	03/31/2015	4/1/15	4/7/15				
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

cc w/encl:

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cc email distribution w/encl:

Greg Scott
Tennessee Valley Authority
Electronic Mail Distribution

Watts Bar 2 Licensing
Tennessee Valley Authority
Electronic Mail Distribution

Letter to Michael D. Skaggs from Victor M. McCree dated April 7, 2015.

SUBJECT: NOTICE OF VIOLATION (NRC INSPECTION REPORT NO. 05000391/2015614,
AND INVESTIGATION REPORT NO. 2-2013-011, WATTS BAR NUCLEAR
PLANT)

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NOTICE OF VIOLATION

Tennessee Valley Authority
Watts Bar Nuclear Plant, Unit 2

Docket No. 50-391
EA-14-179

During an NRC investigation completed on October 30, 2014, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

- A. 10 CFR 50, Appendix B, Criterion V, *Instructions, Procedures, and Drawings*, requires that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

TVA Procedure MAI-5.1B, Wedge Bolt (WB) Anchor Installation, Revision 21, is the implementing/controlling process for anchor bolt installation, and includes the requirements for perpendicularity of newly installed wedge bolt anchors.

MAI-5.1B, Revision 21, Section 6.2.6.D, states that wedge bolt anchors shall be installed to within 5 degrees of perpendicular. Newly installed wedge bolt anchors exceeding this requirement are removed and replaced per Section 6.4 or approval of the deviation obtained from Site Engineering.

Contrary to the above, on or about December 19, 2011, contract employees assigned to install anchor bolts for overhead base plates, which support safety related ventilation in the containment building, willfully failed to remove and replace, or obtain site engineering approval for, newly installed wedge bolt anchors that exceeded 5 degrees of perpendicular, as required by TVA Procedure MAI-5.1B. Specifically, out of tolerance anchor bolts on hangers 86-1541 and 86-1545 were bent (straightened) to within 5 degrees of perpendicular utilizing a non-approved modified tool. All four overhead base plates of hangers 86-1541 and 86-1545 had at least one bent (weakened) bolt.

This is a Severity Level III violation (Enforcement Policy Sections 2.2.1.d, 6.5).

Pursuant to the provisions of 10 CFR 2.201, the Tennessee Valley Authority is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region II, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation; EA-14-179" and should include for the violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for

Enclosure

Information may be issued as to why the construction permit should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 7th day of April 2015