



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

November 16, 2017

Mr. Joseph W. Shea  
Vice President, Nuclear Licensing  
Tennessee Valley Authority  
1101 Market Street, LP 3D-C  
Chattanooga, TN 37402-2801

**SUBJECT: PUBLIC MEETING SUMMARY – STATUS OF TENNESSEE VALLEY  
AUTHORITY’S ACTION TO ADDRESS CHILLED WORK ENVIRONMENT AT  
THE WATTS BAR NUCLEAR PLANT, DOCKET NO. 50-390 AND 50-391**

Dear Mr. Shea:

This refers to the meeting conducted at our request at the Comfort Inn in Athens, TN on November 2, 2017, at 6:00 p.m. The purpose of the meeting was to discuss the licensee’s chilled work environment issue at Watts Bar Nuclear Plant and discuss the U.S. Nuclear Regulatory Commission (NRC) actions associated with the chilled work environment. The NRC issued the Chilling Effect Letter (CEL) and a Confirmatory Order to Watts Bar Nuclear Plant in an effort to ensure that the Tennessee Valley Authority (TVA) understands the seriousness of the work environment issues and ensure that TVA will take appropriate steps to promote openness and prompt resolution of safety issues. Enclosed are a list of attendees and the presentation handouts.

The NRC discussed the history, basis of the CEL and Confirmatory Order, as well as NRC activities after issuance of the CEL and a Confirmatory Order. These activities included the increase in inspector emphasis on Safety Conscious Work Environment (SCWE), the additional NRC and TVA management engagement, additional NRC inspections related to SCWE, and continued NRC actions to confirm safe operations. The NRC noted that the chilled environment at Watts Bar has improved since the last November 3, 2016, public meeting and the NRC plans to conduct a team inspection in 2018 to assess the status of licensee’s actions and implementation to address the NRC’s CEL and Confirmatory Order items. The TVA management discussed their Watts Bar Nuclear Plant chilled work environment update which included a supplemental response letter for focus areas, additional focus area, and assessment of progress. Topic focus areas included: 1) Safety has priority over production, 2) Corrective Action Program is effective, 3) Management and employee mutual respect; 4) Nuclear Safety Culture is understood and reinforced, and 5) Leadership Safety Values and Actions. The TVA management just completed the third party safety culture survey and they have not completely reviewed or analyzed the survey results.

In closing, the NRC acknowledged that TVA actions have resulted in some improvements in the SCWE, however, sustaining these improvements remains a focus of the NRC. The NRC noted that no serious safety violations or instances involving significant plant safety issues associated with the work environment were identified. The NRC will continue increased management and inspection focus on Watts Bar Nuclear Plant SCWE.

This letter, its enclosures, 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, Requests for Withholding" (Public Electronic Reading Room).

Should you have any questions concerning this meeting, please contact Anthony Masters at (404) 997-4465.

Sincerely,

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Anthony D. Masters, Chief  
Reactor Projects Branch 5  
Division of Reactor Projects

Docket No.: 50-390, 50-391  
License No.: NPF-90, 96

Enclosures:

1. List of Attendees
2. NRC Meeting Slides
3. TVA Meeting Slides

cc w/encls Distribution via ListServ

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November 16, 2017

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NAME	SNinh	AMasters			
DATE	11/16/2017	11/16/2017			

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**LIST OF ATTENDEES**

**NRC MEETING SLIDES**

**TVA MEETING SLIDES**

**NRC PARTICIPANTS**

C. Haney, Regional Administrator, Region II  
A. Masters, Chief, Reactor Projects Branch 5, DRP, RII  
J. Nadel, Senior Resident Inspector, Watts Bar, DRP, RII  
Stephanie Morrow, Human Factors Engineer, RES

**TVA PARTICIPANTS**

P. Simmons – TVA, WBN Site VP  
Tom Marshall, Plant Manager  
B. Jenkins – TVA, Engineering Director  
K. Hulvey – TVA, WBN Site Licensing Manager

**Member of Public on the bridge call**

J. Palmer  
M. Snyder  
G. Stoner  
S. Sweet

### ATTENDANCE LIST

DATE: November 2, 2017

MEETING TITLE/PURPOSE: Status of Tennessee Valley Authority's Action to Address Chilled Work Environment at the Watts Bar Nuclear Plant.

LOCATION: Comfort Inn in Athens, Alabama

Name	Organization
Dave Lochbaum	Union of Concerned Scientists
<del>Robert</del> LOCHBAUM	SELF
SON NINH	NRC
Anthony Masters	NRC
Tom, Nezaric	NRC
Stephanie Morrow	NRC
Stephen A Monague	NRC
William Satterfield	NRC
GORDON P. Arent	TVA
JOSE LITO CARRE	TVA
Lee Sanders	TVA.
Jared Nadel	NRC
Kim Hulvey	TVA

ATTENDANCE LIST

DATE: November 2, 2017

MEETING TITLE/PURPOSE: Status of Tennessee Valley Authority's Action to Address Chilled Work Environment at the Watts Bar Nuclear Plant.

LOCATION: Comfort Inn in Athens, Alabama

Name	Organization
Paul Simmons	TVA
Melissa Meade	TVA
Steve Seeger	TN RAD Health
Erin Henderson	TVA
Jim Hopson	TVA
Meshelle Ferguson	TVA -
Tom Kozak	Purdue
Tony Pate	TVA
DARREL REET	TVA

ATTENDANCE LIST

DATE: November 2, 2017

MEETING TITLE/PURPOSE: Status of Tennessee Valley Authority's Action to Address Chilled Work Environment at the Watts Bar Nuclear Plant.

LOCATION: Comfort Inn in Athens, Alabama

Name	Organization
Willfred Saxon	TVA Communications

# Watts Bar Chilled Work Environment

November 2, 2017  
Nuclear Regulatory Commission – Region 2

Enclosure 2



# Agenda

- Introduction/Meeting Purpose
- Summary of Issue and NRC Actions
- Update from TVA
- NRC On-going / Future Activities
- Questions



# Meeting's Purpose

- Discuss the licensee's chilled work environment issue at Watts Bar
- Discuss NRC actions associated with the chilled work environment



# **Chilled Work Environment Summary and NRC Actions**

- **Chilling Effect Letter**
- **NRC Inspections**
- **Confirmatory Order**





# TVA Presentation



# NRC On-going / Future Activities



- **Resident Inspectors**
  - Weekly discussions with the Site VP or Plant Manager
  - Regularly attend the Nuclear Safety Culture Monitoring Panel meetings for safety conscious work environment insights
  - Heightened sensitivity to chilled work environment issues when performing field inspections and engaging with plant employees one-on-one
  - Frequent observations of major plant evolutions
  - Frequent interaction and observation of the control room and plant
- **Monitoring and assessment of inspections and resources**
- **January 2018 – Team Inspection**
- **1<sup>st</sup> Quarter of 2018 – Watts Bar Units 1 & 2 End of Cycle Assessment**



# NRC Social Media Channels



- Blog: <http://public-blog.nrc-gateway.gov/>
- Flickr: <http://www.flickr.com/photos/nrcgov/>
- Twitter: <https://twitter.com/#!/nrcgov>
- YouTube: <http://www.youtube.com/user/NRCgov>
- RSS: <http://www.nrc.gov/public-involve/listserver.html#rss>

# End of Presentation

Nuclear Regulatory Commission

Region #2

Athens, TN

November 2, 2017



# Watts Bar Nuclear Plant Chilled Work Environment Update

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November 2, 2017

## Opening Remarks

Paul Simmons, Site Vice President Watts Bar Nuclear Plant

Simmons

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## Supplemental Response Letter

### Focus Areas

- Safety has priority over production
- Corrective Action Program is effective
- Management and employee mutual respect
- Nuclear Safety Culture is understood and reinforced

Metrics developed to measure progress

Hulvey

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## Supplemental Response Letter

### Additional Focus Area

- Leadership Safety Values and Actions
  - Reflection of progress
  - Workforce feedback
  - Recommended by external oversight

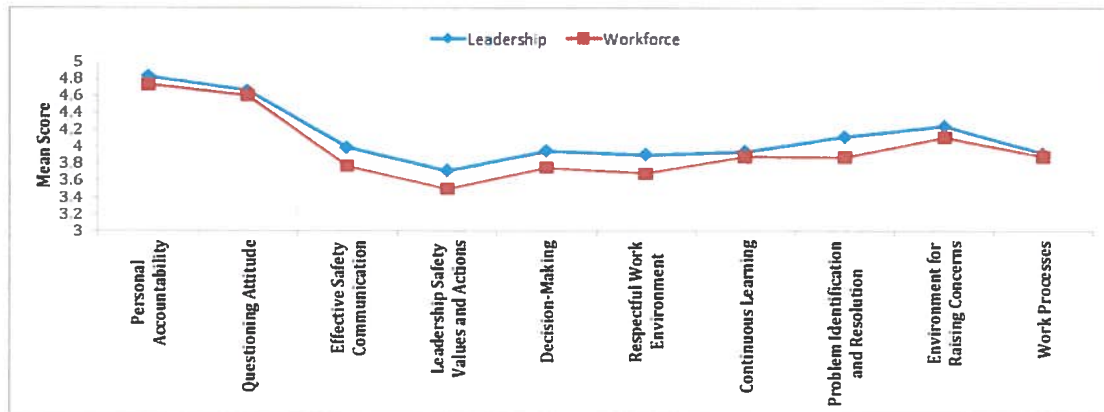
Hulvey

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## Assessment of Progress

### Survey – Comparison of Workforce to Leadership



Jenkins

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## Assessment of Progress

### Safety has priority over production

- Positive feedback
  - Shift manager clearly in charge of plant operations
  - Workforce willingness to raise safety concerns without fear of retaliation
- Continuous Improvement Opportunities
  - Timeliness of issue resolution
  - Work procedures too general

Jenkins

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## Assessment of Progress

### Nuclear Safety Culture is understood and reinforced

- Positive feedback
  - Teamwork between workgroups during outage
  - Reinforcement of expectations at turnovers and key meetings
- Continuous Improvement Opportunities
  - Timeliness of issue resolution
  - Challenge work activities and schedule
  - Communication overly positive and optimistic

Jenkins

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## Assessment of Progress

### Leadership Safety Values and Actions

- Positive feedback
  - Shift manager clearly in charge of plant operations
  - Increased positive recognition
  - Personal Accountability and Questioning Attitude
- Continuous Improvement Opportunities
  - Resources – Qualified Personnel
  - Work procedures too general
  - Field Presence

Jenkins

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Questions?

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