



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION IV  
1600 E. LAMAR BLVD.  
ARLINGTON, TX 76011-4511

April 18, 2016

Jeremy Browning, Site Vice President  
Arkansas Nuclear One  
Entergy Operations, Inc.  
1448 SR 333  
Russellville, AR 72802-0967

SUBJECT: SUMMARY OF MEETING TO DISCUSS SUPPLEMENTAL INSPECTION  
RESULTS AND ANNUAL ASSESSMENT MEETING WITH ENTERGY  
OPERATIONS INC. REGARDING 2015 PERFORMANCE OF ARKANSAS  
NUCLEAR ONE

Dear Mr. Browning:

This refers to the public meeting conducted at the Reeves E. Ritchie Training Center, Russellville, Arkansas on April 6, 2016, between the U.S. Nuclear Regulatory Commission (NRC) and your staff. Approximately 160 people attended the public meeting, including members of the general public, with representatives from U.S. Senator Boozman's Office, the Arkansas Department of Health and the Pope County Community Foundation.

During the meeting, the NRC presented the results of the annual assessment of safety performance at Arkansas Nuclear One for the period of January 1 through December 31, 2015, and discussed the results of the combined supplemental inspection's following Arkansas Nuclear One's entry into the Multiple/Repetitive Degraded Cornerstone Column (Column 4) of the NRC's Reactor Oversight Process. The NRC maintains a website to summarize the issues that resulted in the Column 4 assessment and the inspection process while Arkansas Nuclear One remains in Column 4 (<http://www.nrc.gov/info-finder/reactors/ano/special-oversight.html>).

You and your staff did not provide a presentation, but you responded to the NRC's assessment observations and exit meeting comments. During the public comment/question and answer portion of the meeting, the only questions involved whether ANO was getting increased funding to be able to support the planned improvement efforts; you responded that funding was available. A copy of the NRC presentation from the meeting is enclosed.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the 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).

Should you have any questions concerning this matter, we will be pleased to discuss them with you.

Sincerely,

/RA/

Neil O'Keefe, Chief  
Project Branch E  
Division of Reactor Projects

Docket No. 50-313 and 50-368  
License No. DPR-51 and NPF-6

Enclosure:

1. NRC Presentation

Distribution:

See next page

ADAMS ACCESSION NUMBER: ML16109A364

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DATE	4/18/16	4/18/16	4/18/16	

**OFFICIAL RECORD COPY**

Letter to Mr. Jeremy Browning from Mr. Neil O'Keefe dated April 18, 2016

SUBJECT: SUMMARY OF MEETING TO DISCUSS SUPPLEMENTAL INSPECTION RESULTS AND ANNUAL ASSESSMENT MEETING WITH ENTERGY OPERATIONS INC. REGARDING 2015 PERFORMANCE OF ARKANSAS NUCLEAR ONE

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## ***Meeting to Discuss Arkansas Nuclear One Performance***

2015 Annual Assessment & 95003 Exit

April 6, 2016

1



## ***NRC Staff Introductions***

- **Marc Dapas**
  - Regional Administrator, Region IV
- **Troy Pruett**
  - Director, Region IV Division of Reactor Projects
- **Nell O'Keefe**
  - Branch Chief, Region IV
- **Brian Tindell**
  - Senior Resident Inspector at ANO

2

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## *ANO Introductions*

**Jeremy Browning**

**Site Vice President  
Arkansas Nuclear One  
Entergy Operations, Inc.**

3

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## *Purpose of Meeting*

- **Annual Assessment for Arkansas Nuclear One from January 1 through December 31, 2015**
- **95003 Inspection results**

4

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## Agenda

- NRC Action Matrix Overview
- NRC Oversight
- 2015 Assessment Results
- 95003 Inspection Results
- ANO Presentation
- NRC Closing Remarks
- Public Comments and Questions

6

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## 2015 Annual Assessment

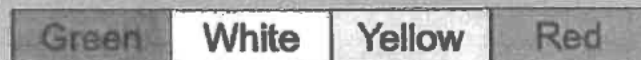
**Brian Tindell**  
Senior Resident Inspector

6



## Significance Thresholds

### Inspection Findings and Performance Indicators



**Increasing Safety Significance**

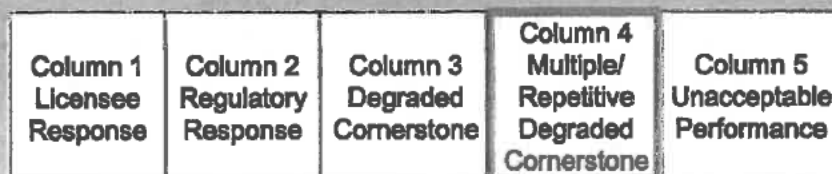
**Increased NRC inspections and oversight**

7

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## Action Matrix Columns



- **Increasing Safety Significance of inputs**
- **Increasing NRC Oversight**

8

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## **Basis for Column 4 Oversight**

- **Yellow Finding – Units 1 and 2**
  - Inadequate oversight of heavy load lift
- **Yellow Finding – Units 1 and 2**
  - Failure to maintain plant flood protection design features
- **White Performance Indicator (PI) – Unit 2**
  - Unplanned Reactor Scrams

9

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## **Oversight Milestones**

- ✓ Increased independent oversight (Ongoing)
- ✓ Commission meetings (May 2015, June 2016)
- ✓ Public meeting (September 2015)
- ✓ Supplemental Inspections (2016)
- ☐ Comprehensive Recovery Plan
- ☐ Confirmatory Action Letter
- ☐ Confirmatory Action Letter Inspections

10

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## 2015 Assessment Results

- Focus on plant safety
- One scram
- Outage performance improving
- Corrective action program improving
- Challenges recognizing and managing maintenance risk

11

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## 95003 Exit

**Neil O'Keefe**

Team Leader

12



## ***ANO Recovery Evaluation Process***

- Root cause evaluations for Yellow and White issues
- Safety Culture Assessments
- Individual and Collective Evaluations
- Root Cause Level Evaluations
- **Develop Comprehensive Recovery Actions**

13

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## ***Fundamental Problem Areas***

- Leadership Fundamentals
- Organizational Capacity
- Corrective Action Program
- Preventive Maintenance
- **Decision Making and Risk Management**
- **Design and Licensing Basis**
- **Corporate and Independent Oversight**
- **Vendor Oversight**

14

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## *Problem Areas*

- Nuclear Fundamentals
- Procedure and Work Instruction Quality
- Plant Health
- Training
- Safety Culture

15

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## *Causal Factors for Declining Performance*

- Multiple resource reductions
- Staff turnover and loss of experience
- Ineffective performance monitoring and oversight
- Declining Corrective Action Program effectiveness
- Leadership

16

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## Major Finding Reviews

- The White unplanned scrams PI was adequately addressed
- Corrective actions for the Yellow flood protection finding created new problems
- **Corrective actions for the Yellow stator drop finding involving contractor oversight not yet fully effective**

17

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## Team Assessments

- Safe to continue power operation
- ANO identified most performance problems
- **The Recovery Team was very selective in deciding which problems received root cause evaluations**
- **Limited Improvement actions taken prior to completion of the Comprehensive Recovery Plan**

18

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## ***Comprehensive Recovery Plan***

- Still in development when inspection began
- **Safety culture not adequately addressed**
- **Training/Benchmarking not leveraged**
- **Limited interim actions to improve staffing**
- **Actions to improve CAP not fully effective**

19

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## ***Other Inspection Insights***

- Risk Recognition and Management not adequately addressed
- Engineering Program problems
- **Operating Experience not used effectively**
- **Engineering staffing/experience may limit speed of improvement in some areas**

20

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## Challenges Going Forward

- Corrective Action Program
- Performance assessment
- Equipment reliability
- Procedure adherence and quality
- **Loss of experience and worker turnover**

21

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## Findings

- Engineering program implementation issues
- Equipment reliability issues
- **Corrective Action Program implementation issues**

22

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## *Next Steps*

- Document inspection results
- Identify the key actions from the **Comprehensive Recovery Plan in a Confirmatory Action Letter**
- **Monitor performance improvements**
- **Conduct follow-up inspections**

23

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## *ANO Response*

**Jeremy Browning**

**Site Vice President  
Arkansas Nuclear One  
Entergy Operations, Inc.**

24

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## *NRC Closing Remarks*

**Marc Dapas**

**Regional Administrator**

**NRC Region IV**

25

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## *Public Comments and Questions*

**Any Questions or Comments?**

26

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## Reference Sources

- **Reactor Oversight Process**
  - <http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html>
- **Public Electronic Reading Room**
  - <http://www.nrc.gov/reading-rm.html>
- **Public Document Room**
  - 1-800-397-4209 (Toll Free)

27

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## 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>

28

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## *Contacting the NRC*

- Report an emergency
  - (301) 816-5100 (call collect)
- Report a safety concern
  - (800) 695-7403
  - [Allegation@nrc.gov](mailto:Allegation@nrc.gov)
- General information or questions
  - [www.nrc.gov](http://www.nrc.gov)
  - Select “What We Do” for Public Affairs