



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

May 21, 2015

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

**SUBJECT: SUMMARY OF ANNUAL ASSESSMENT MEETING WITH ENTERGY
OPERATIONS INC. REGARDING ARKANSAS NUCLEAR ONE 2014
PERFORMANCE**

Dear Mr. Browning:

This refers to the public Annual Assessment meeting conducted at the Lakepoint Conference Center, Russellville, Arkansas on May 12, 2015 between the Nuclear Regulatory Commission (NRC) and your staff. Approximately 70 members of the public attended the meeting.

During the meeting, NRC staff provided an overview of inspection activities, findings, and overall performance assessment for the station. Arkansas Nuclear One operated safely in 2014, although the NRC determined the performance at Arkansas Nuclear One, Units 1 and 2, during the most recent quarter was within the Multiple/Repetitive Degraded Cornerstone Column of the NRC's Reactor Oversight Process (ROP) Action Matrix, because of one Yellow finding in the Initiating Events Cornerstone for Units 1 and 2, and one Yellow finding in the Mitigating Systems Cornerstone for Units 1 and 2.

The meeting was attended by about 30 members of the public, including representatives from several federal, state and local government agencies, and about 40 Entergy employees. During the public comment portion of the meeting, the NRC staff responded to a number of questions from members of the public including concerns about inadequate work packages and procedures; NRC oversight during and after the stator drop event; availability of reactor cooling after the stator drop event; identification of degraded flood seals and deficiencies in the your flooding walk-downs; and your company's oversight of contractor personnel.

Copies of the NRC's 2014 assessment letter and feedback forms were made available. A copy of the NRC presentations is included as Enclosure 1, and a copy of your presentation to the NRC is included as Enclosure 2.

J. Browning

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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

Enclosures:

1. NRC Presentation
2. Entergy Presentation

cc w/Enclosure:
Electronic Distribution for Arkansas Nuclear One

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See next page

ADAMS ACCESSION NUMBER: ML15132A175

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SIGNATURE	/RA/	/RA by NTaylor/			
DATE	5/21/15	5/21/15			

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ROPreports



U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

***Arkansas Nuclear One
Annual Assessment
Meeting***

Reactor Oversight Process – 2014

**U.S. Nuclear Regulatory Commission - Region IV
Russellville, AR
May 12, 2015**

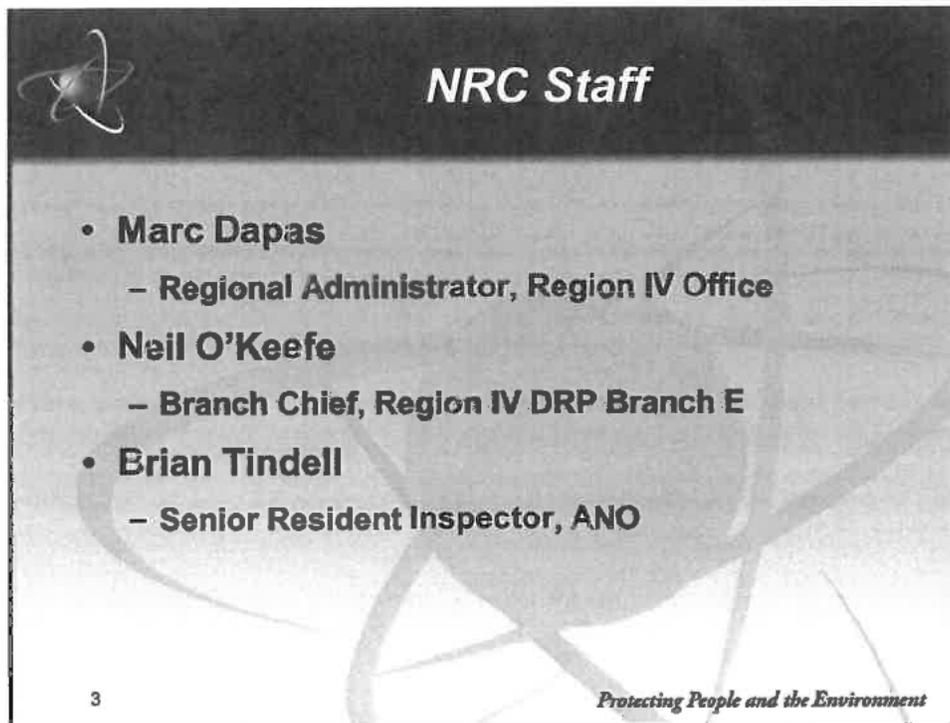


Agenda

- **Welcome and Introductions**
- **Overview of Inspection Process**
- **NRC Discussion of Plant Performance**
- **ANO Response and Comments**
- **Closing Remarks**
- **Public Comments and Questions**

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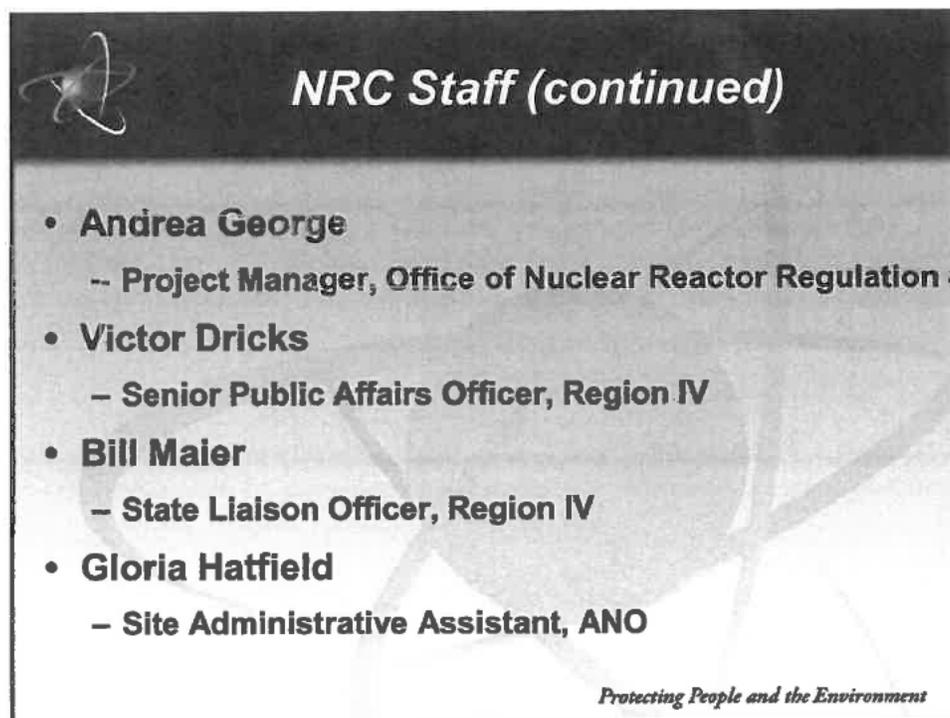


The slide features a dark header with the NRC logo on the left and the title "NRC Staff" in white. The main content area has a light background with a faint image of a person. A small number "3" is in the bottom left, and the slogan "Protecting People and the Environment" is in the bottom right.

NRC Staff

- **Marc Dapas**
 - Regional Administrator, Region IV Office
- **Neil O’Keefe**
 - Branch Chief, Region IV DRP Branch E
- **Brian Tindell**
 - Senior Resident Inspector, ANO

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The slide features a dark header with the NRC logo on the left and the title "NRC Staff (continued)" in white. The main content area has a light background with a faint image of a person. The slogan "Protecting People and the Environment" is in the bottom right.

NRC Staff (continued)

- **Andrea George**
 - Project Manager, Office of Nuclear Reactor Regulation
- **Victor Dricks**
 - Senior Public Affairs Officer, Region IV
- **Bill Maier**
 - State Liaison Officer, Region IV
- **Gloria Hatfield**
 - Site Administrative Assistant, ANO

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ANO Introductions

Jeremy Browning

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

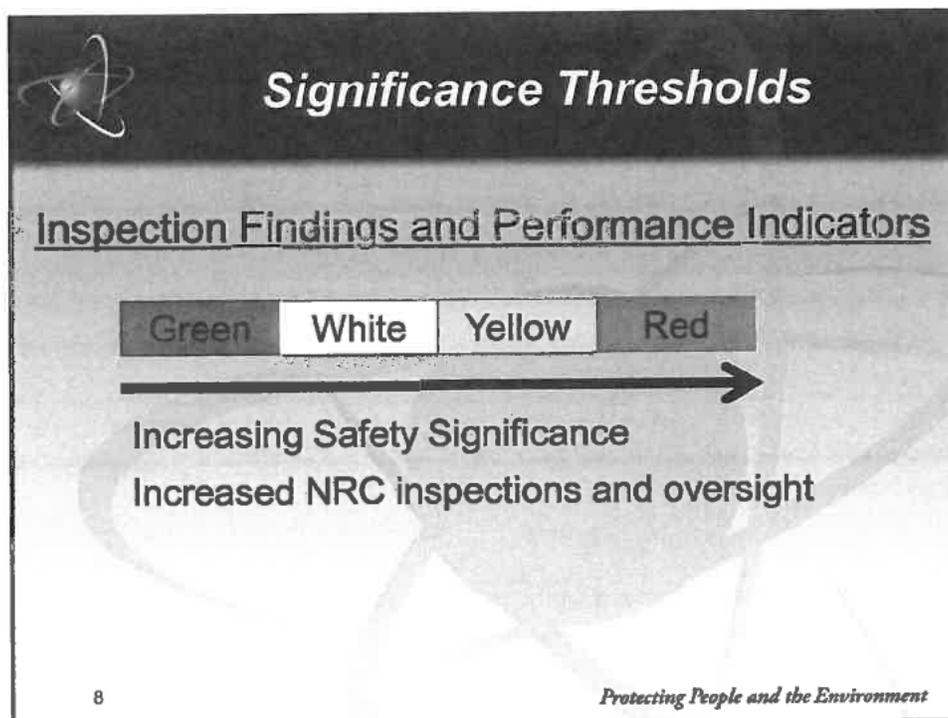
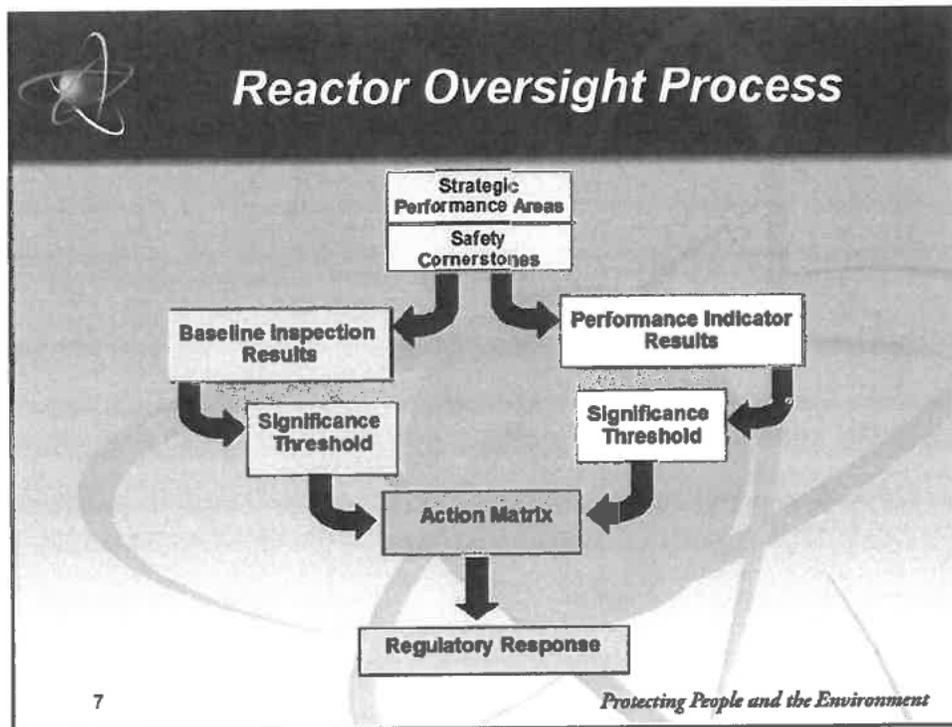
5 *Protecting People and the Environment*

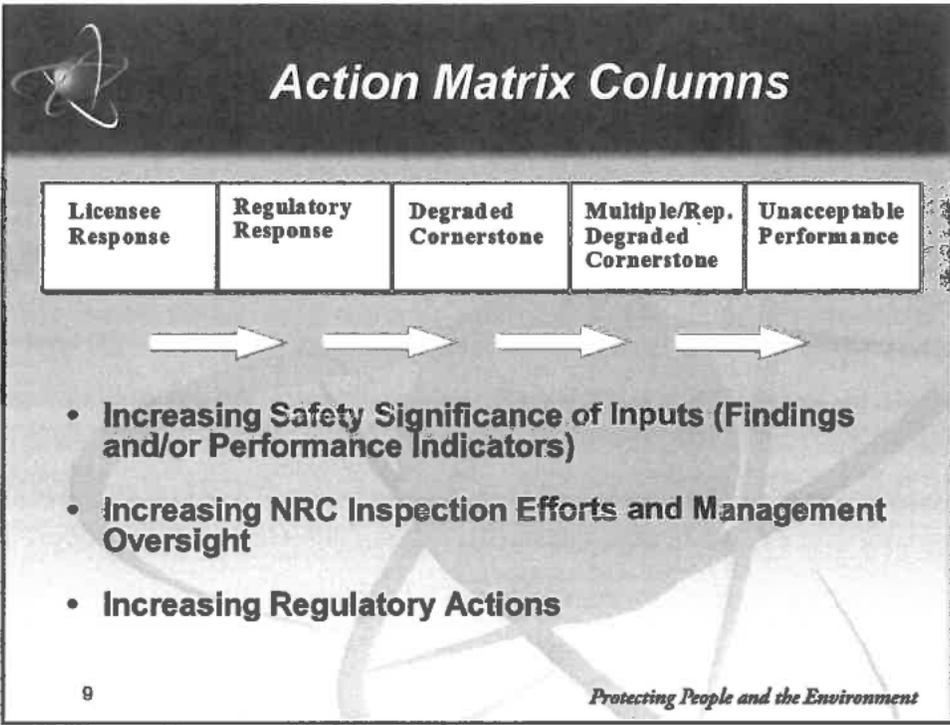


NRC Performance Goals

- **Safety: Ensure adequate protection of public health and safety and the environment.**
- **Security: Ensure adequate protection in the secure use and management of radioactive materials.**

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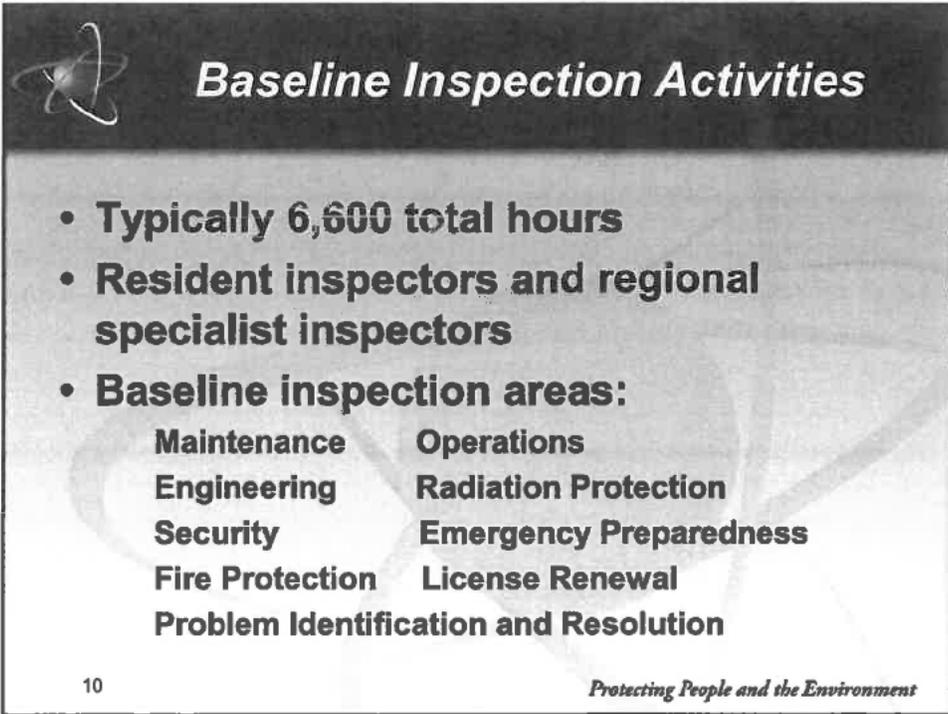
Action Matrix Columns

Licensee Response	Regulatory Response	Degraded Cornerstone	Multiple/Rep. Degraded Cornerstone	Unacceptable Performance
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- **Increasing Safety Significance of Inputs (Findings and/or Performance Indicators)**
- **Increasing NRC Inspection Efforts and Management Oversight**
- **Increasing Regulatory Actions**

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Baseline Inspection Activities

- **Typically 6,600 total hours**
- **Resident inspectors and regional specialist inspectors**
- **Baseline inspection areas:**
 - Maintenance
 - Operations
 - Engineering
 - Radiation Protection
 - Security
 - Emergency Preparedness
 - Fire Protection
 - License Renewal
 - Problem Identification and Resolution

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2014 Inspection Activities at ANO

- **Total Hours ~9,100 hours**
- **Augmented Inspection Team (AIT)
Follow-up Inspection**
 - **Follow-up on 2013 Dropped Stator Event AIT**
- **Special Inspection and Supplemental Inspection for security-related issue**
- **Flood Protection Inspection**

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Safety Significant Findings or PIs

- **Yellow Finding – Units 1 and 2**
 - **2013 Stator Drop**
- **Yellow Finding – Units 1 and 2**
 - **Flood protection deficiencies**
- **Greater-Than-Green Finding – Units 1,2**
 - **Security-related issue**
- **White Performance Indicator (PI) – Unit 2**
 - **Unplanned Reactor Scrams**

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Assessment Results

- **Current performance in both units at ANO is consistent with the Multiple/Repetitive Degraded Cornerstone Column (Column 4) of ROP Action Matrix**
 - **2 Yellow Findings**
 - **1 White Performance Indicator**

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Column 4 Oversight Activities

- **Supplemental inspections to review corrective actions for each significant issue**
- **Supplemental inspection to assess all strategic areas**
- **Independent Safety Culture Assessment**
- **Meetings between ANO and NRC management**
- **Confirm performance improvement commitments**
- **Baseline inspections**

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NRC Summary

Marc Dapas

Regional Administrator
NRC Region IV

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ANO Response

Jeremy Browning

Site Vice President
Arkansas Nuclear One
Entergy Operations, Inc.

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NRC Closing Remarks

Marc Dapas

Regional Administrator

NRC Region IV

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Questions and Comments

- **Speak into a microphone**
- **State your name**
- **Please keep comments to 3 minutes**

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Arkansas Nuclear One Annual Assessment Meeting

Reactor Oversight Process – 2014

**U.S. Nuclear Regulatory Commission - Region IV
Russellville, AR
May 12, 2015**



Contacting the NRC

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



Actions in Response to the Japan Nuclear Accident

- **Actions in response to Japan Nuclear Accident**
Website: <http://www.nrc.gov/japan/japan-info.html>
- **Mailbox for comments on staff actions:**
JLD_Public.Resource@nrc.gov
- **Office of Public Affairs Point of Contact:**
OPA.resource@nrc.gov or 301-415-8200

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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>**

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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)

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Arkansas Nuclear One

End-of-Cycle Assessment Meeting

May 12, 2015



Opening Comments



- Arkansas Nuclear One (ANO) and Entergy recognize the significance of the performance deficiencies and the need for improvement
- The station is committed to do thorough and rigorous assessments to identify gaps to excellence that led to performance issues



Objectives



- Perform rigorous comprehensive assessments and causal analysis that yield effective corrective actions for sustained performance improvement
- Create and sustain a healthy continuous improvement culture
- Maintain an Operational Focus that minimizes risk to the safe operation of the plants



Stator and Flooding Causes



- Root Cause Efforts
 - Outside Expertise
 - Cause Analysis
 - Safety Culture
 - Comprehensive Historical Review for Flooding Deficiencies
 - Broad Extent of Condition and Cause



Stator



- **Causes**
 - Project not organized or managed to provide sufficient oversight
 - Project management procedures insufficient to manage risk



Stator



- **Corrective Actions**
 - **Address Behaviors**
 - Procedure Use
 - Decision Making
 - Supervisor Field Presence
 - **Improve Procedures**
 - Guidance for risk in projects
 - Oversight of supplemental personnel
 - Structured approvals for project teams
 - Material Handling



Flooding



- Causes
 - Challenge and verification of existing plant configuration in relation to license basis requirements for mitigation of flooding events
 - Detailed design requirements of flooding features were not documented



Flooding



- Corrective Actions
 - Establishing detailed design basis for internal and external flooding
 - Walk-downs to verify integrity of external flood boundary
 - Addressing use of silicon foam seals
 - Labeling flood barriers
 - Maintenance Rule monitoring
 - Addressing Preventative Maintenance deficiencies
 - Strengthening various programmatic controls



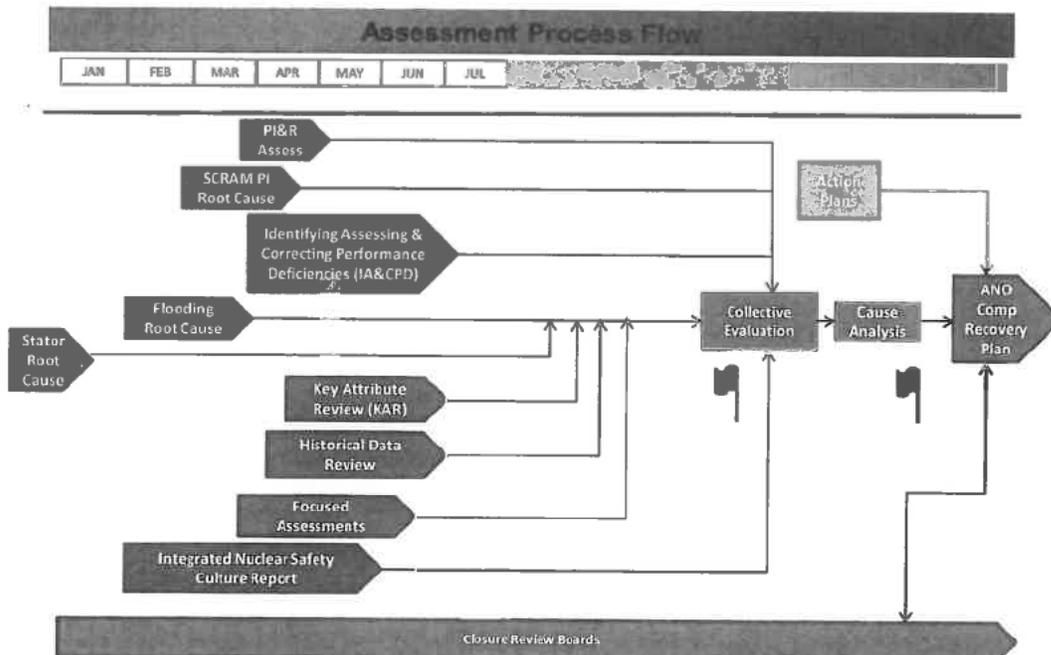
Recovery to One



- Recovery Process
 - Based on benchmarks of other successful recoveries
 - Dedicated Entergy leadership
 - Outside resources with recovery expertise
 - Addresses NRC 95003 Inspection Procedure and refines processes by other recoveries
 - 25,000 person hours budgeted for assessment portion
 - Corporate participation
 - Rigorous oversight structure



Recovery to One



Closing Comments



- Mission to identify fundamental problems that are affecting performance and implement effective and sustainable corrective actions to drive to excellence