



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

August 20, 2012

Mr. Joseph Shea
Vice President, Nuclear Licensing
Tennessee Valley Authority
4B Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: PUBLIC MEETING SUMMARY FOR BROWNS FERRY NUCLEAR PLANT,
DOCKET NO. 50-259

Dear Mr. Shea:

This refers to the meeting conducted near the Browns Ferry Nuclear Plant on August 9, 2012. The purpose of this meeting was to discuss the status of the Tennessee Valley Authority's preparations for NRC supplemental inspection in accordance with Inspection Procedure 95003, "Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or One Red Input" at the Browns Ferry Nuclear Plant.

A list of attendees and a copy of the presentation handouts are enclosed.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be made 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).

Should you have any questions concerning this meeting, please contact me at (404) 997-4662.

Sincerely,

/RA/

Eugene F. Guthrie, Chief
Special Project, Browns Ferry
Division of Reactor Projects

Docket No.: 50-259
License No.: DRP-33

Enclosures: 1. List of Attendees
2. Licensee Handouts
3. NRC Handouts

cc w/encls: (See page 2)

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X PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE X NON-SENSITIVE
ADAMS: ☐ Yes ACCESSION NUMBER: _____ X SUNSI REVIEW COMPLETE

OFFICE	RII:DRP	RII:DRP					
SIGNATURE	EFG /RA for/	EFG /RA/					
NAME	CKontz	EGuthrie					
DATE	08/20/2012	08/20/2012					
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

J. Shea

2

cc w/encls:
K. J. Polson
Site Vice President
Browns Ferry Nuclear Plant
Tennessee Valley Authority
Electronic Mail Distribution

James L. McNees, CHP
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Office of Radiation Control
Alabama Dept. of Public Health
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Montgomery, AL 36130-3017

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Browns Ferry Nuclear Plant
Tennessee Valley Authority
Electronic Mail Distribution

James E. Emens
Manager, Licensing
Browns Ferry Nuclear Plant
Tennessee Valley Authority
Electronic Mail Distribution

Manager, Corporate Nuclear Licensing -
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Tennessee Valley Authority
Electronic Mail Distribution

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Assistant General Counsel
Tennessee Valley Authority
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T. A. Hess
Tennessee Valley Authority
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Chairman
Limestone County Commission
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Athens, AL 35611

Donald E. Williamson
State Health Officer
Alabama Dept. of Public Health
RSA Tower - Administration
Suite 1552
P.O. Box 30317
Montgomery, AL 36130-3017

J. Shea

3

Letter to J. Shea from Eugene F. Guthrie dated August 20, 2012

SUBJECT: PUBLIC MEETING SUMMARY FOR BROWNS FERRY NUCLEAR PLANT,
DOCKET NO. 50-259

Distribution w/encls:

C. Evans, RII

L. Douglas, RII

OE Mail

RIDSNRRDIRS

PUBLIC

RidsNrrPMBrownsFerry Resource

NRC ATTENDEES

L. Wert, Deputy Regional Administrator, Region II
J. Yerokun, Deputy Director, Division of Construction Inspection, Region II
E. Guthrie, Chief, Special Project, Browns Ferry, DRP, RII
D. Dumbacher, Senior Resident Inspector, Browns Ferry, DRP, RII
L. Presley, Resident Inspector, Browns Ferry, RII
J. Ledford, Public Affairs Specialist, RII



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Browns Ferry Public Meeting
Decatur, AL
August 9, 2012

<u>Name (Print)</u>	<u>Title and Organization</u>
DOVE Dumbacher	NRC SRI
JOE SHCA	TVA VP NUCLEAR LICENSING
JIM NESSITT	TVA BROWNS FERRY - COMMS
RICHARD SPARKS	S&L SITE MANAGER - BFN
ANNY Reagan	TVA BFN - COMMS
JAMES EMERY'S	BFN SITE LICENSING MGR
Stewart Horn	Self BREOL & BEST
John R Colgan	Retired TVA
Jackie Posky	Shoals Env. Alliance ect.
CAROL BUCHHEIT	BFN Quality Assurance
Sam Courts	BFN QA
(Robert Maxley)	TVA - BFN PI
Michael Henderson	BFN - ENG
M. MORROW	PUBLIC
Tonya Appleyard	AL Rad Control
GERARD J Doyle	Director 95003 TEAM
Betty J Wascom (BJ)	Public

Browns Ferry Public Meeting
Decatur, AL
August 9, 2012

Title and Organization

BREDL / BEST / MATRR



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Browns Ferry Nuclear Plant NRC Public Meeting

August 9, 2012





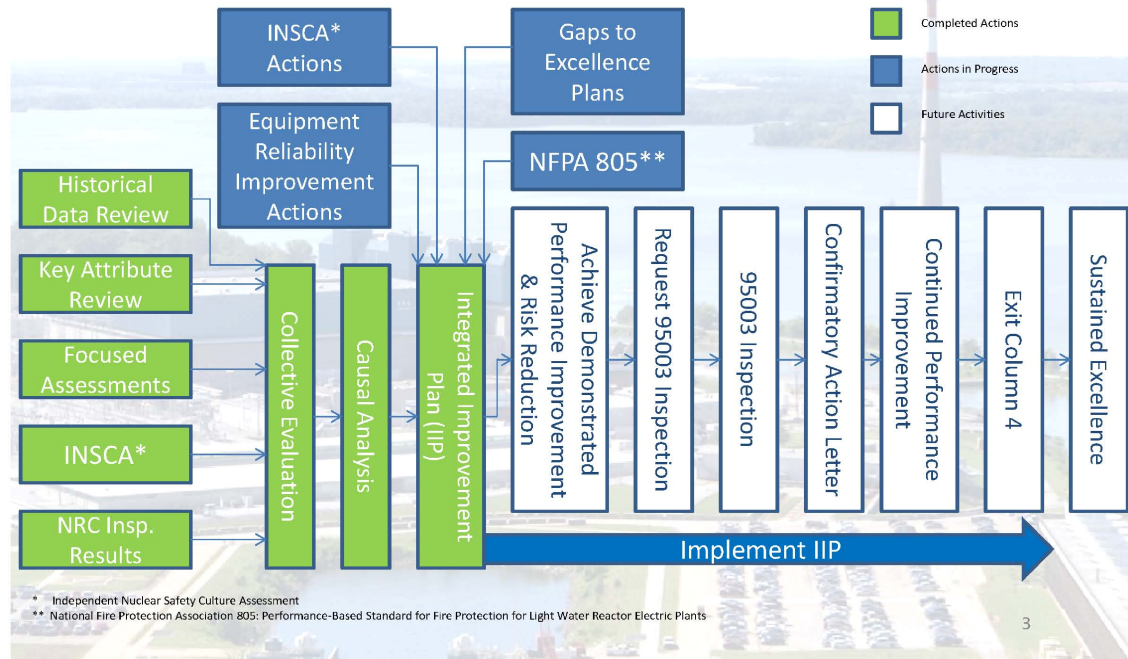
Opening Remarks

Keith Polson
Browns Ferry Site Vice President





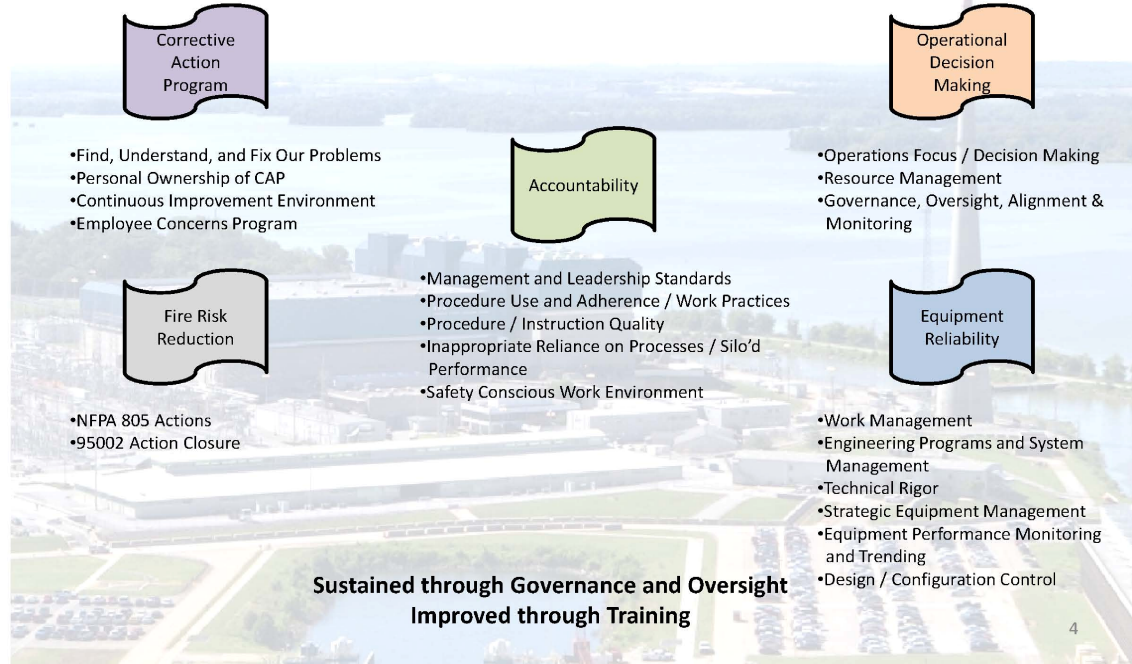
Integrated Improvement Plan





Nuclear

Integrated Improvement Plan





Nuclear

Integrated Improvement Plan

- Independent Nuclear Safety Culture Assessment (Synergy)
- Identified weaknesses mapped to the Fundamental Problems
- Two areas required additional analysis
 - Safety Conscious Work Environment
 - Employee Concerns Program



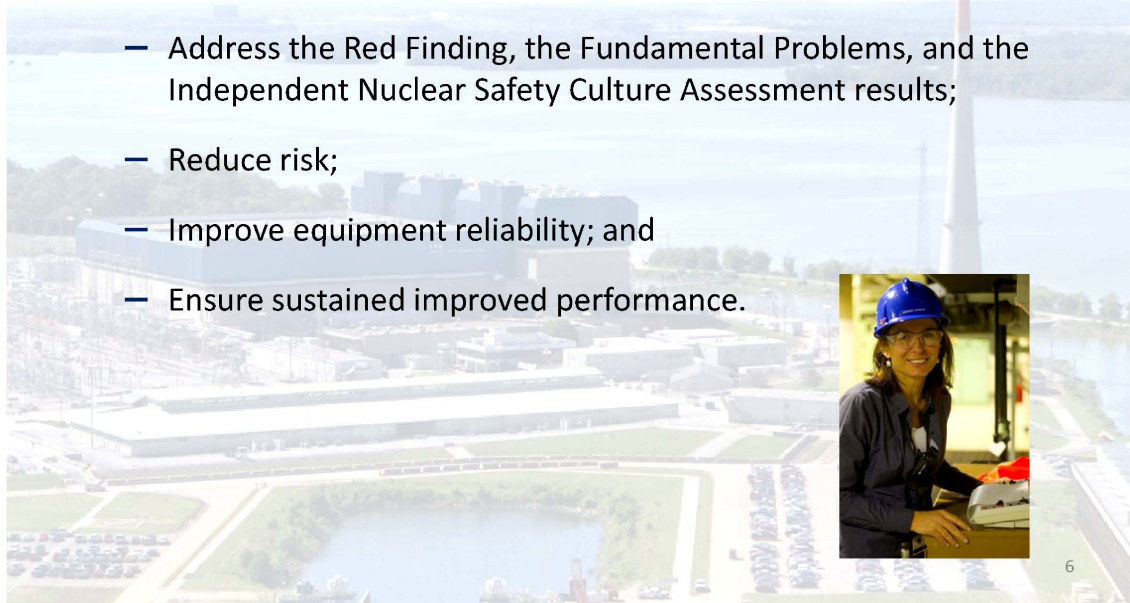
Addressing the 5 focus areas and correcting the Fundamental Problems will result in the desired safety culture onsite.



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Integrated Improvement Plan

- Integrated Improvement Plan developed to:
 - Address the Red Finding, the Fundamental Problems, and the Independent Nuclear Safety Culture Assessment results;
 - Reduce risk;
 - Improve equipment reliability; and
 - Ensure sustained improved performance.





Nuclear

Integrated Improvement Plan

- Integrated Improvement Plan (IIP) has been finalized
 - The IIP is a “Living Plan”
 - The IIP consists of approximately 1000 actions
 - Approximately 40% of the IIP actions are complete
 - Approximately 75% of the IIP actions will be complete by the end of the year

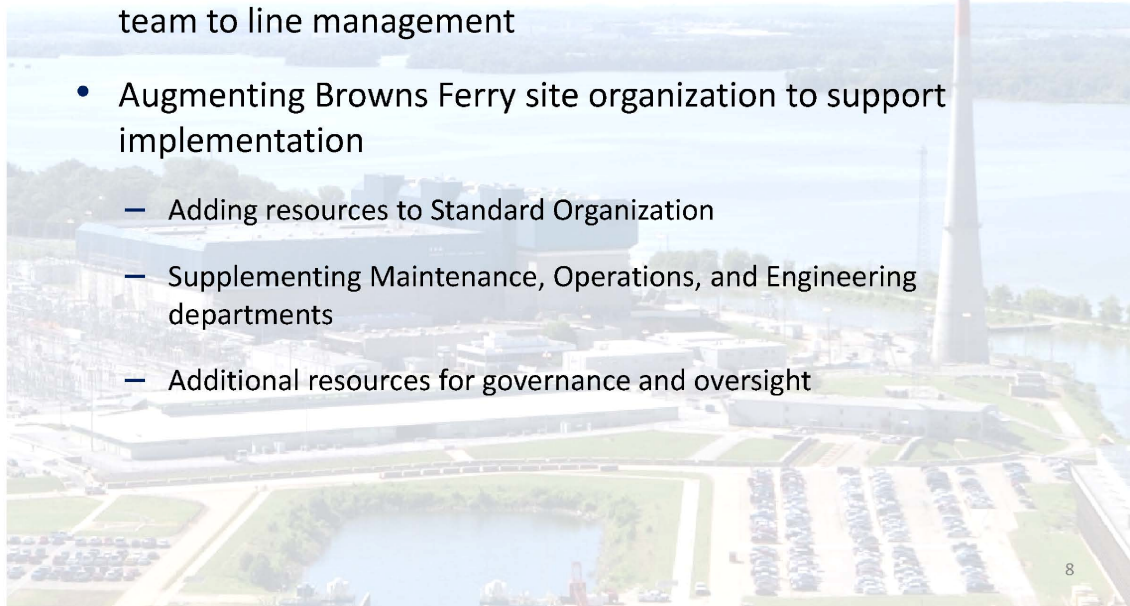




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Integrated Improvement Plan

- Ownership transitioned from Corporate led 95003 project team to line management
- Augmenting Browns Ferry site organization to support implementation
 - Adding resources to Standard Organization
 - Supplementing Maintenance, Operations, and Engineering departments
 - Additional resources for governance and oversight





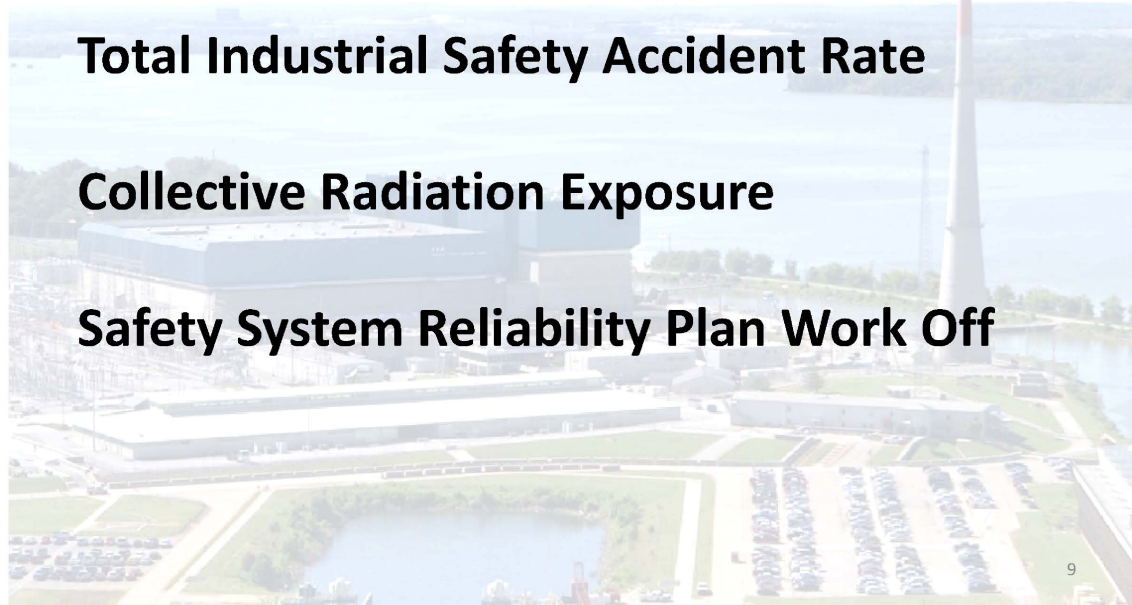
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Results Achieved

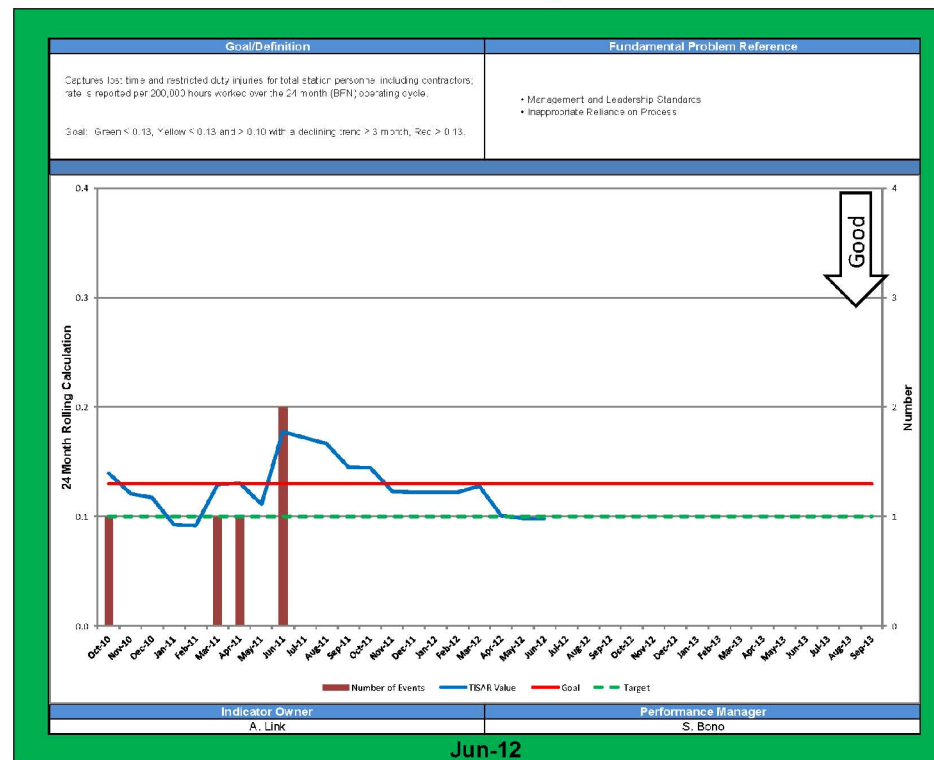
Total Industrial Safety Accident Rate

Collective Radiation Exposure

Safety System Reliability Plan Work Off

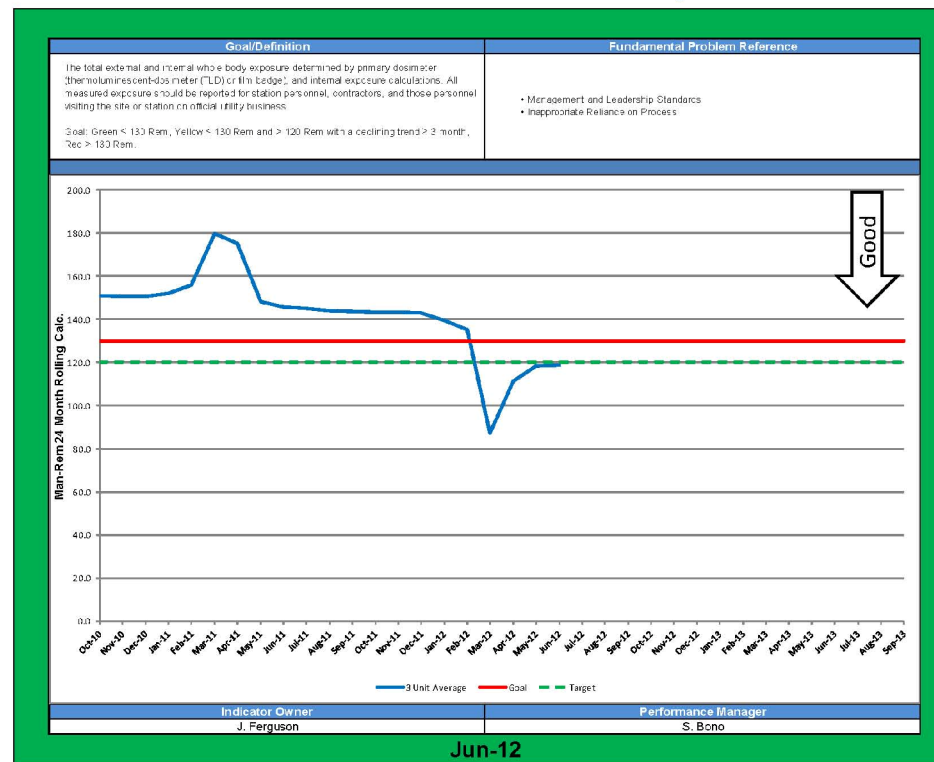


Total Industrial Safety Accident Rate

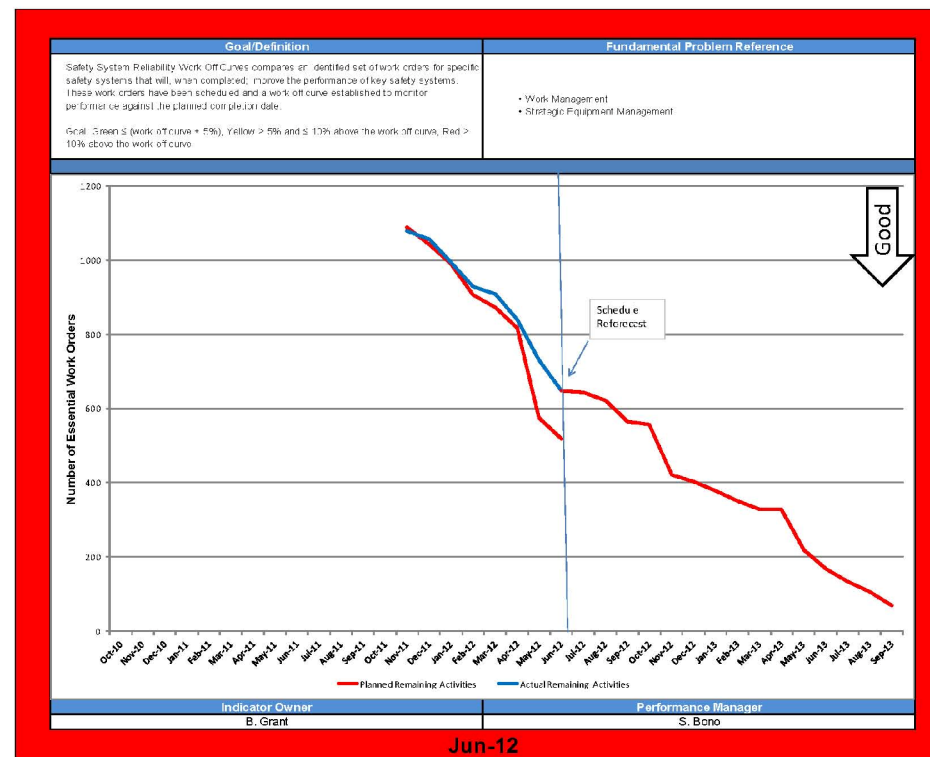


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Collective Radiation Exposure



Safety System Reliability Plan Work Off Curve



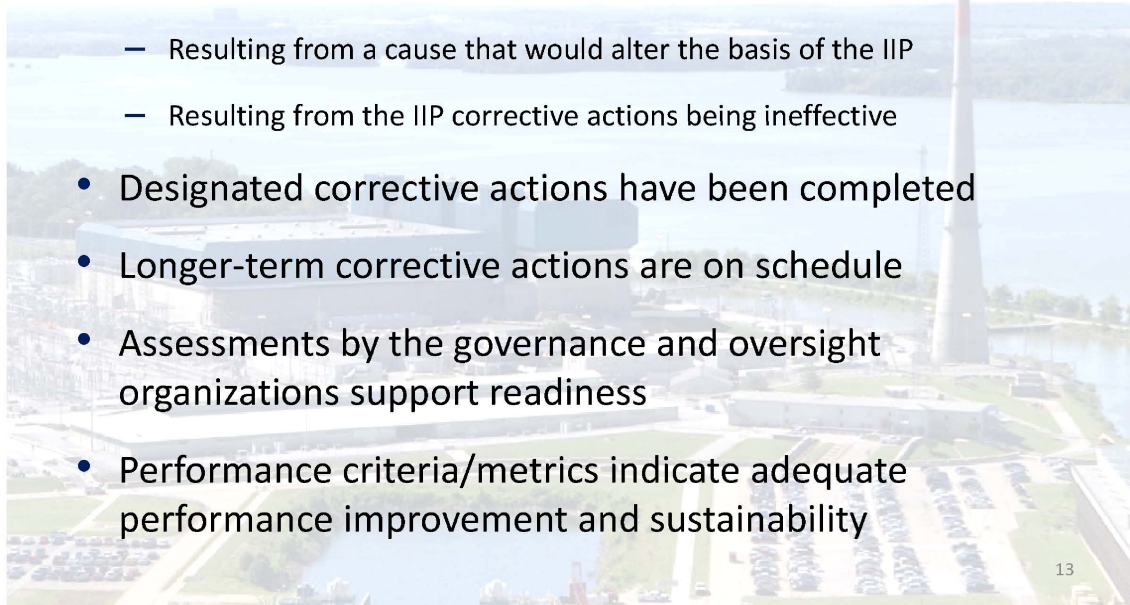
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Criteria for NRC Inspection Readiness

- No risk significant event or condition
 - Resulting from a cause that would alter the basis of the IIP
 - Resulting from the IIP corrective actions being ineffective
- Designated corrective actions have been completed
- Longer-term corrective actions are on schedule
- Assessments by the governance and oversight organizations support readiness
- Performance criteria/metrics indicate adequate performance improvement and sustainability

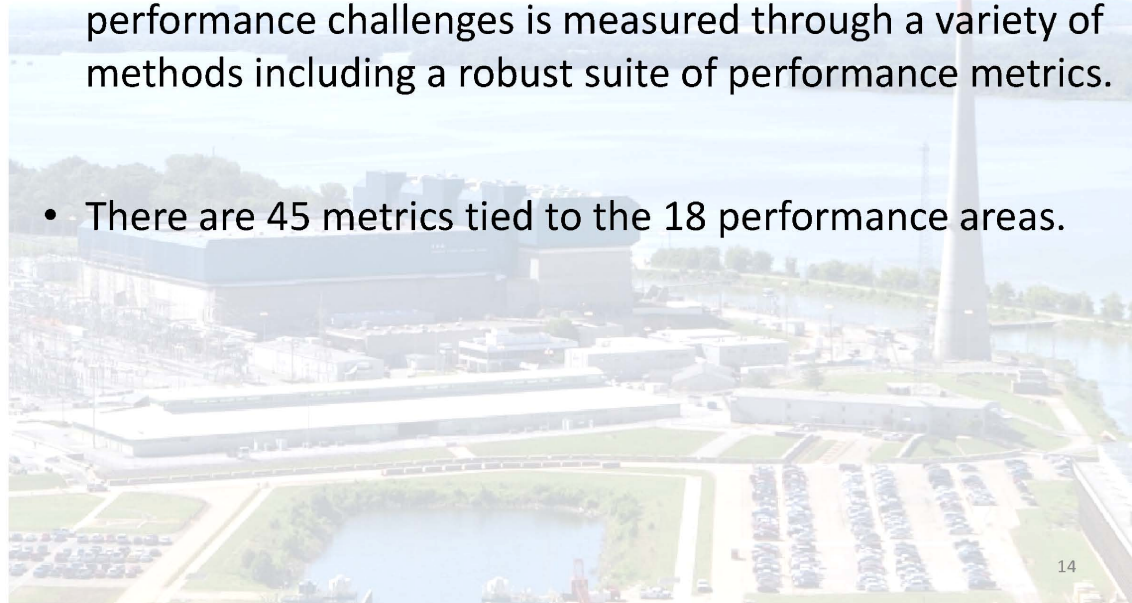




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Performance Metric Overview

- The effectiveness of actions to address Browns Ferry's performance challenges is measured through a variety of methods including a robust suite of performance metrics.
- There are 45 metrics tied to the 18 performance areas.

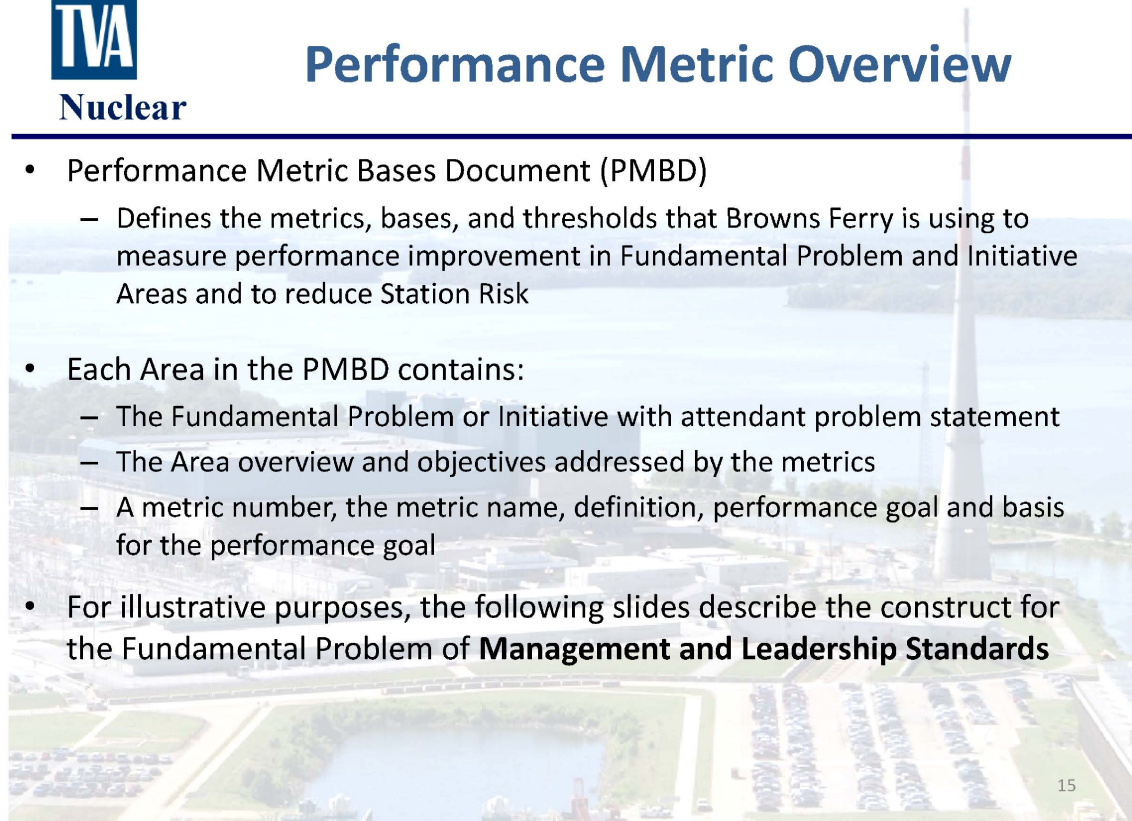




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Performance Metric Overview

- Performance Metric Bases Document (PMBD)
 - Defines the metrics, bases, and thresholds that Browns Ferry is using to measure performance improvement in Fundamental Problem and Initiative Areas and to reduce Station Risk
- Each Area in the PMBD contains:
 - The Fundamental Problem or Initiative with attendant problem statement
 - The Area overview and objectives addressed by the metrics
 - A metric number, the metric name, definition, performance goal and basis for the performance goal
- For illustrative purposes, the following slides describe the construct for the Fundamental Problem of **Management and Leadership Standards**





Performance Metrics Basis Document

Nuclear

Management and Leadership Standards: Page 1 of 3				
Leaders at all levels are not effectively modeling or reinforcing high standards to drive sustained positive performance changes and are tolerating less than acceptable standards of performance.				
Metric Overview and Objective: Six measures (Total Industrial Safety Accident Rate (TISAR), Site Human Performance Error Rate, Collective Radiation Exposure, Operational Focus Aggregate Impact, Equipment Reliability Index (ERI), Corrective Action Program (CAP) Health Index) provides a broad view of performance by individuals, processes, and the collective organization. They reflect how well the site is meeting and aligned to the site standards and expectations. TISAR, Site Human Performance Error Rate, and Collective Radiation Exposure indicators show how individuals are aligned to standards with respect to personnel safety, radiological safety, and nuclear safety. The Operational Focus Aggregate Impact, Equipment Reliability Index, and CAP Health Index provide indication of the site organization alignment or standards to improve and sustain nuclear safety and plant performance.				
Graph	Metric	Metric Definition	Performance Goal	Performance Goal Basis
1	Total Industrial Safety Accident Rate - (TISAR)	Captures lost time and restricted duty injuries for total station personnel including contractors; rate is reported per 200,000 hours worked over the 24 month (BFH) operating cycle.	Goal: ≤ 0.13	The goal was chosen based on the site's historical performance since October 2010. This metric is based on performance measured over a 24 month period so the measured value lags site performance. Performance improvement will be demonstrated by a measured value of ≤ 0.13. Sustainability will be demonstrated by maintaining a stable or improving trend for ≥ 3 months. A target was established as ≤ 0.13.
2	Site Human Performance Error Rate	The number of site clock resets per 10,000 person-hours worked (including supplemental workers). Error rate is calculated as an 18-Month rolling calculation.	Goal: ≤ 0.014	The goal was chosen based on the site's historical performance since October 2010. This metric is based on performance measured over an 18 month period so the measured value lags site performance. Performance improvement will be demonstrated by a measured value of ≤ 0.014. Sustainability will be demonstrated by maintaining a stable or improving trend for ≥ 3 months. A target was established as ≤ 0.012.



Performance Metrics Basis Document

Nuclear

Management and Leadership Standards: Page 2 of 3				
Graph	Metric	Metric Definition	Performance Goal	Performance Goal Basis
3	Collective Radiation Exposure	The total external and internal whole body exposure determined by primary dosimeter (thermoluminescent-cosimeter (TLD) or film badge), and internal exposure calculations. All measured exposure should be reported for station personnel, contractors, and those personnel visiting the site or station on official utility business.	Goal ≤ 130 Rem (3 Unit Average)	This value reflects the current performance, which has been on an improving trend, and encourages continued improvement. This value is impacted by both source term reduction, which is only influenced by plant or process changes, and behavior modification, which can be demonstrated with an observable trend. The metric is also subject to "spikes" due to outages and dose-intensive jobs. Performance improvement will be demonstrated by a measured value of ≤ 130 Rem. Sustainability will be demonstrated by maintaining the 3-unit average ≤ 130 Rem for ≥ 3 months. A target was established as ≤ 120 Rem.
4	Operational Focus Aggregate Impact	This index represents the overall impact to the Operating staff of key indicators such as Operator Workarounds, Operator Burdens, Control Room Deficiencies and others.	Goal ≥ 87	This indicator has multiple elements which can be influenced within a 3 month period. The numerical value of 87 is challenging relative to current performance, yet represents a value consistent with modest improvement when averaged over 3 months. Performance improvement will be demonstrated by a measured value of ≥ 87. Sustainability will be demonstrated by maintaining a stable or improving trend for ≥ 3 months. A target was established as ≥ 90.

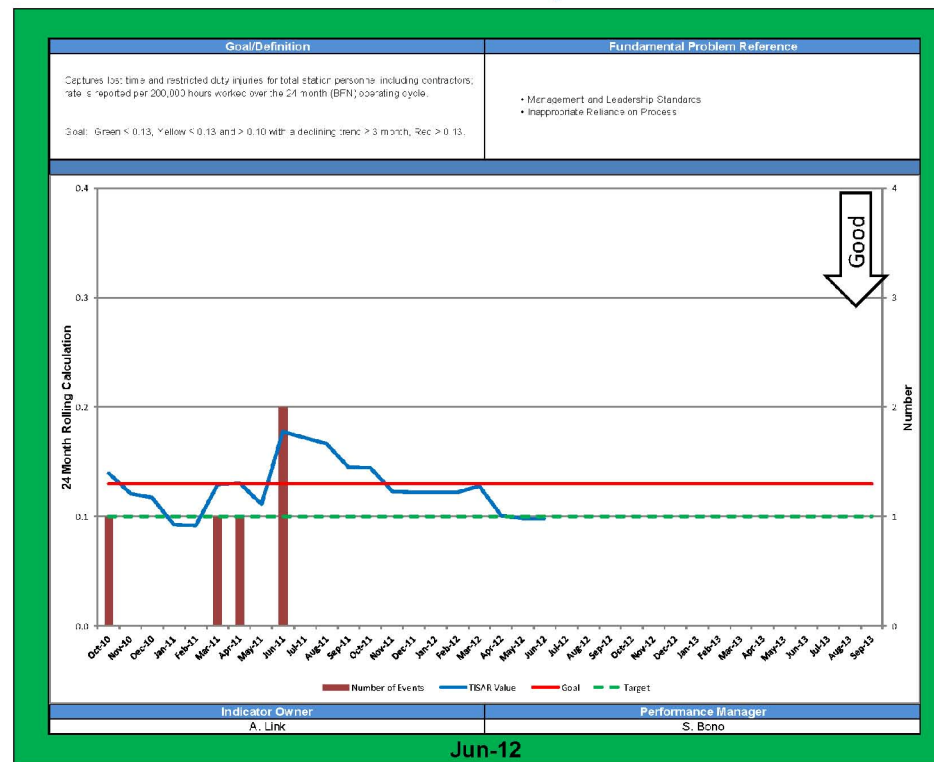


Performance Metrics Basis Document

Nuclear

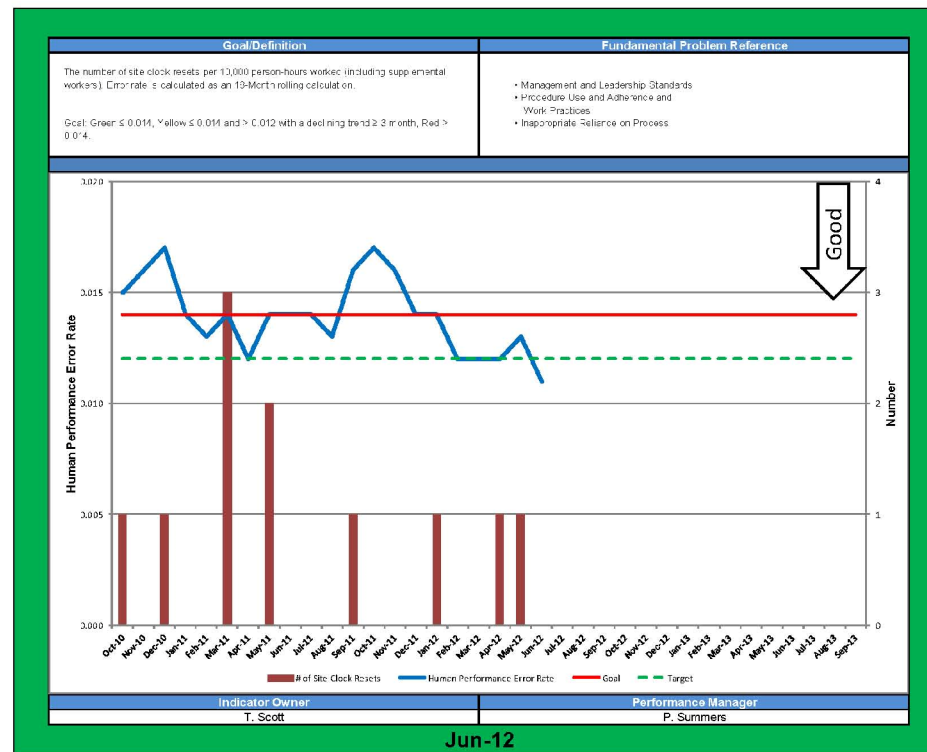
Management and Leadership Standards: Page 3 of 3				
Graph	Metric	Metric Definition	Performance Goal	Performance Goal Basis
5	Equipment Reliability Index	This index provides an overall picture of equipment performance by using a weighted performance index consisting of 12-leading and 7-lagging Key Performance Indicators (KPIs) in the areas of electrical generation, challenges to Operations, system health, Maintenance, Work Management, long term planning, monitoring and trending, and AP-913 process (industry standard) and program management.	Goal ≥ 75 (3-Unit Average)	This value was chosen to provide a level of challenge to the station to improve performance yet recognize the nature of the multiple factors that influence the indicator magnitude and rate of change. For ERI, there are elements that are slow moving such as Scrams, while others are within the sites "immediate" influence such as Planning Feedback and Backlogs. Performance improvement will be demonstrated by a measured value of ≥ 75 for a 3-Unit Average. Sustainability will be demonstrated by maintaining a stable or improving trend for ≥ 3 months. A target was established as ≥ 76.
6	Monthly CAP Health	The CAP Health performance indicator is based on weighted index of certain key indicators such as percent of new D-level self identified PERs, cycle time of A-level CAPs, number of open corrective actions greater than 180 days and others.	Goal ≥ 80 .	This value was chosen based on the site's historical performance since March 2011 and represent average performance values which are challenging and representative of improvement in performance. Performance improvement will be demonstrated by a measured average value of ≥ 80. Sustainability will be demonstrated by maintaining a stable or improving trend for ≥ 3 months. A target was established as ≥ 80.

Total Industrial Safety Accident Rate



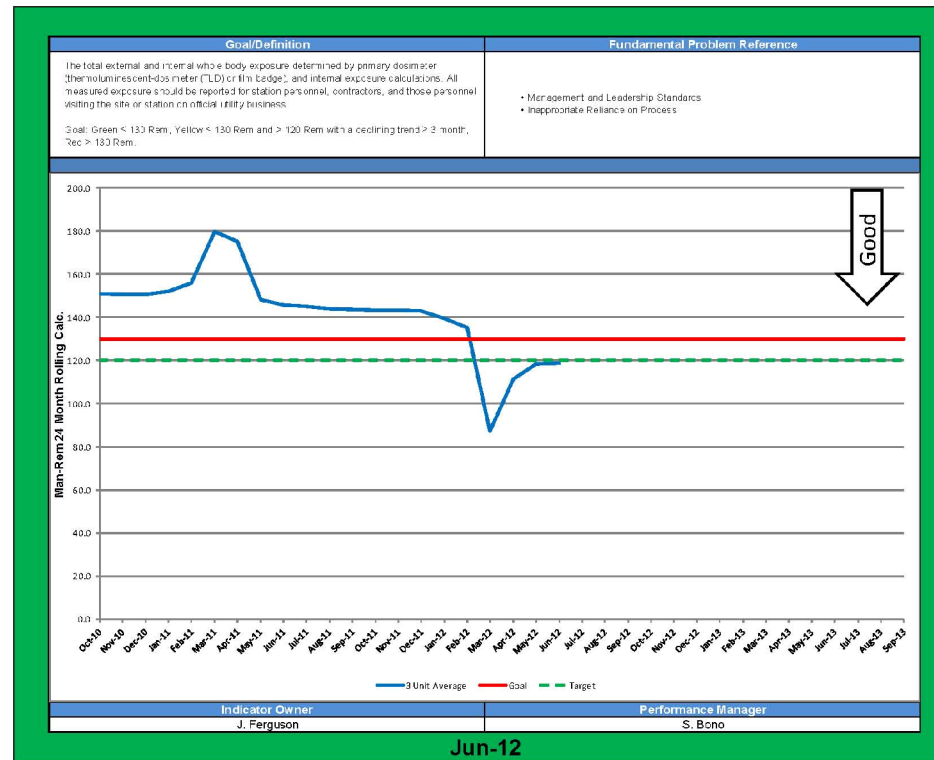
19

Site Human Performance Error Rate

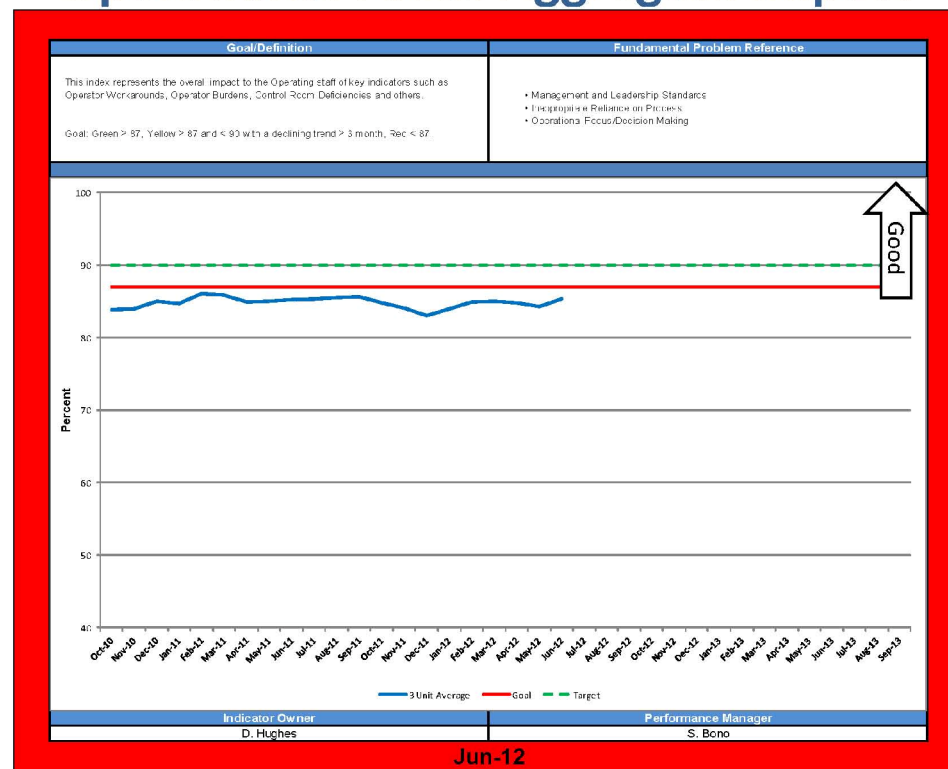


20

Collective Radiation Exposure

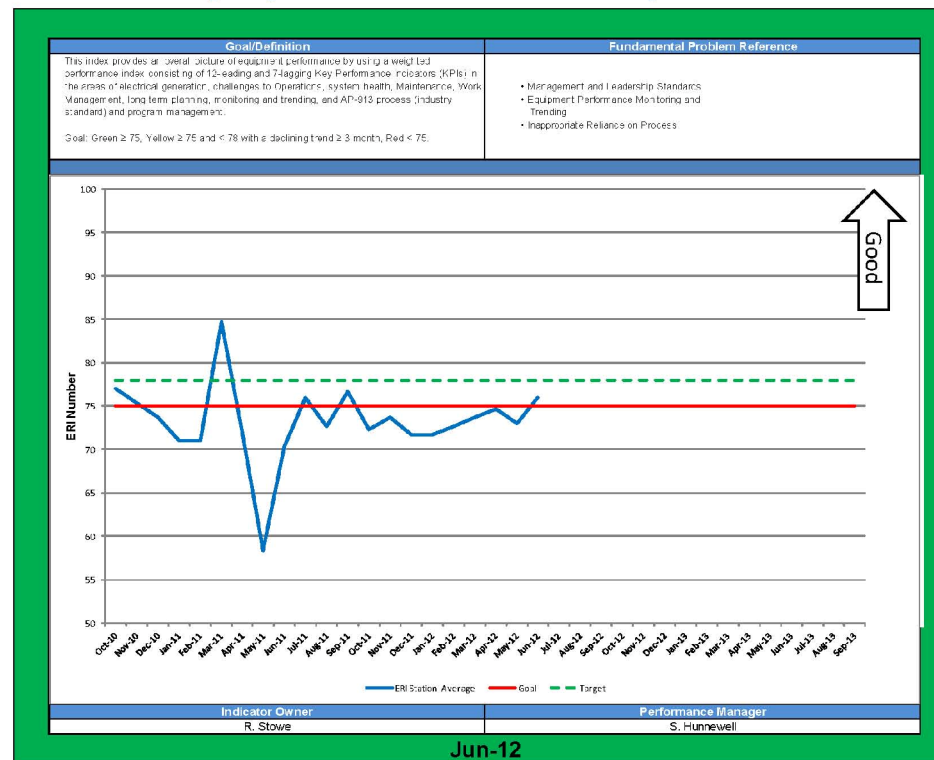


Operational Focus Aggregate Impact



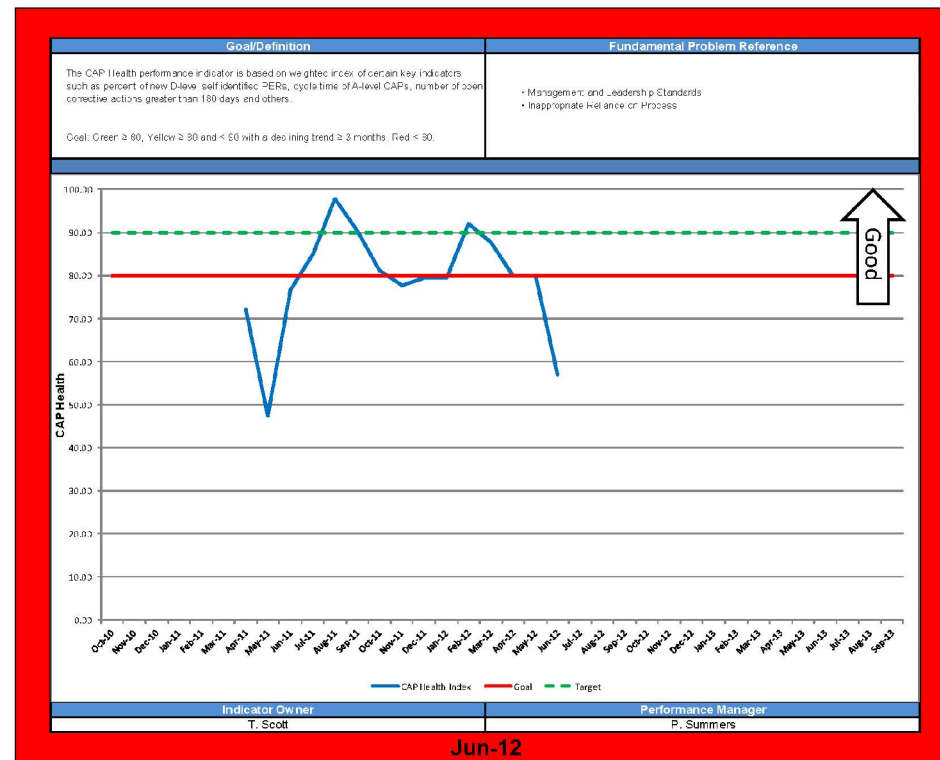
22

Equipment Reliability Index



23

Monthly CAP Health



24



Closing Remarks

Preston Swafford
Chief Nuclear Officer, TVA



End of Presentation

Nuclear Regulatory Commission
Region 2



Browns Ferry Reactor Oversight Supplemental Inspection Status

Nuclear Regulatory Commission – Region 2

Introduction



Agenda

- Inspection Status
- TVA Presentation
- NRC Closing Remarks
- Public Questions



NRC Reactor Oversight Process (ROP) Implementation



Unit 1 Performance Assessment

- Multiple Repetitive Degraded Cornerstone on Agency Action Matrix (Column 4)
 - High Safety Significance Finding
 - Residual heat removal (RHR) system flow control valve failure on October 23, 2010



ROP - Increased Oversight



Supplemental Inspection Procedure 95003 required by Multiple Repetitive Degraded Cornerstone (Column 4)

- Review of programs and processes
- Comprehensive, intrusive, and diagnostic



Increased Oversight Inspections



Supplemental Inspection (IP 95003) conducted in three parts:

☐ Part 1 - Component Testing Programs

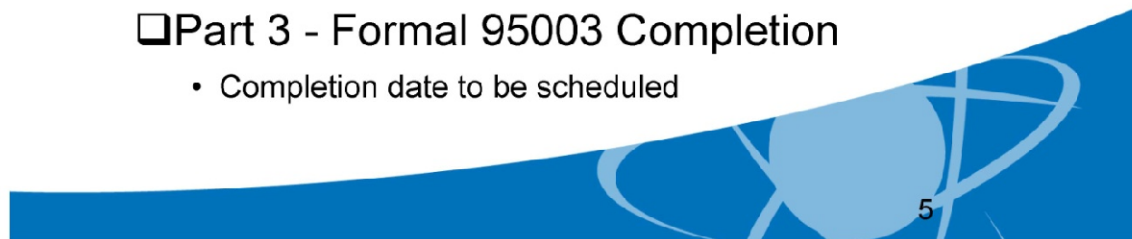
- Completed September 2011 - IR 05000259/2011011

☐ Part 2 - Maintenance Programs

- Completed December 2011 - IR 05000259/2011012

☐ Part 3 - Formal 95003 Completion

- Completion date to be scheduled



Increased Oversight Inspections



95003 Part 3 Inspection Overview

- Performed after TVA states that they are ready for the inspection
- Involves all major site program areas
- Includes review of third-party safety culture assessment and independent NRC inspection of safety culture

Increased Oversight Inspections



95003 Inspection Overview:

- Evaluate licensee corrective actions and the long term plan for improvement
 - Implementation of Integrated Improvement Plan
 - Industry precedence established for similar inspections
 - NRC requires corrective action and improvement



Increased Oversight Inspections



How will NRC measure success?

- Corrective actions that have shown evidence of improving performance
- Confidence that performance is improving and will continue to improve



Increased Oversight Inspections



NRC follow up activities after the Part 3 Inspection

- Verify completion of corrective actions
- ROP, including Assessment, continue





TVA Presentation



Open to the Public



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- At www.nrc.gov, you can:
 - Find public meeting dates and transcripts;
 - Read NRC testimony, speeches, press releases, and policy decisions; and
 - Access the agency's Electronic Reading Room to find NRC publications and documents.

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
- Contact Browns Ferry Resident Inspectors
 - 256-729-6196