



**Vogtle Electric Generating Plant  
NRC Region II Status Meeting  
May 17, 2007**

**Tom Tynan – Vogtle Vice President**

**Russ Dedrickson – Plant Manager**

**Jack Stringfellow – Licensing Manager**

**Southern Nuclear Operating Company**



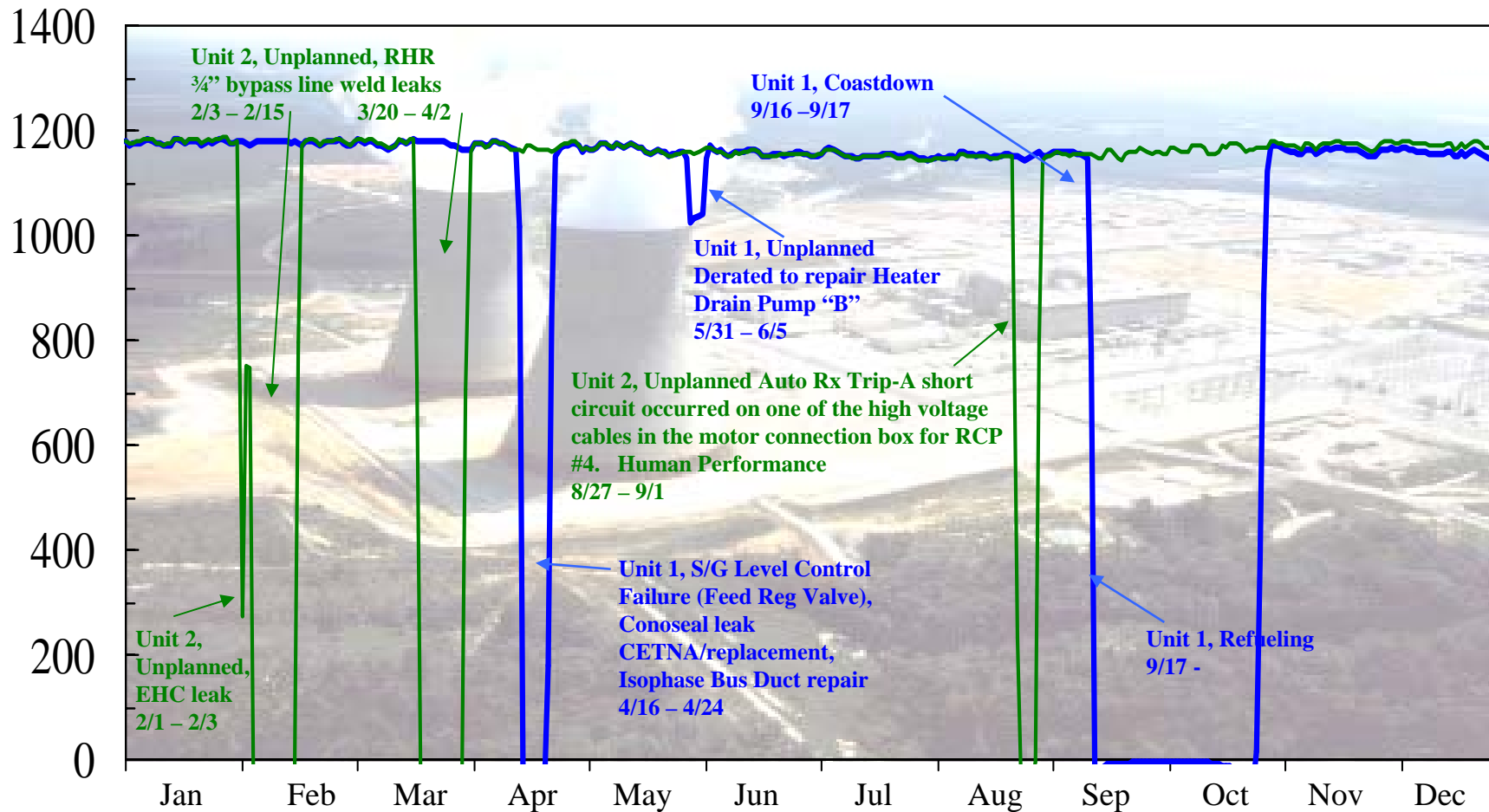
# Agenda



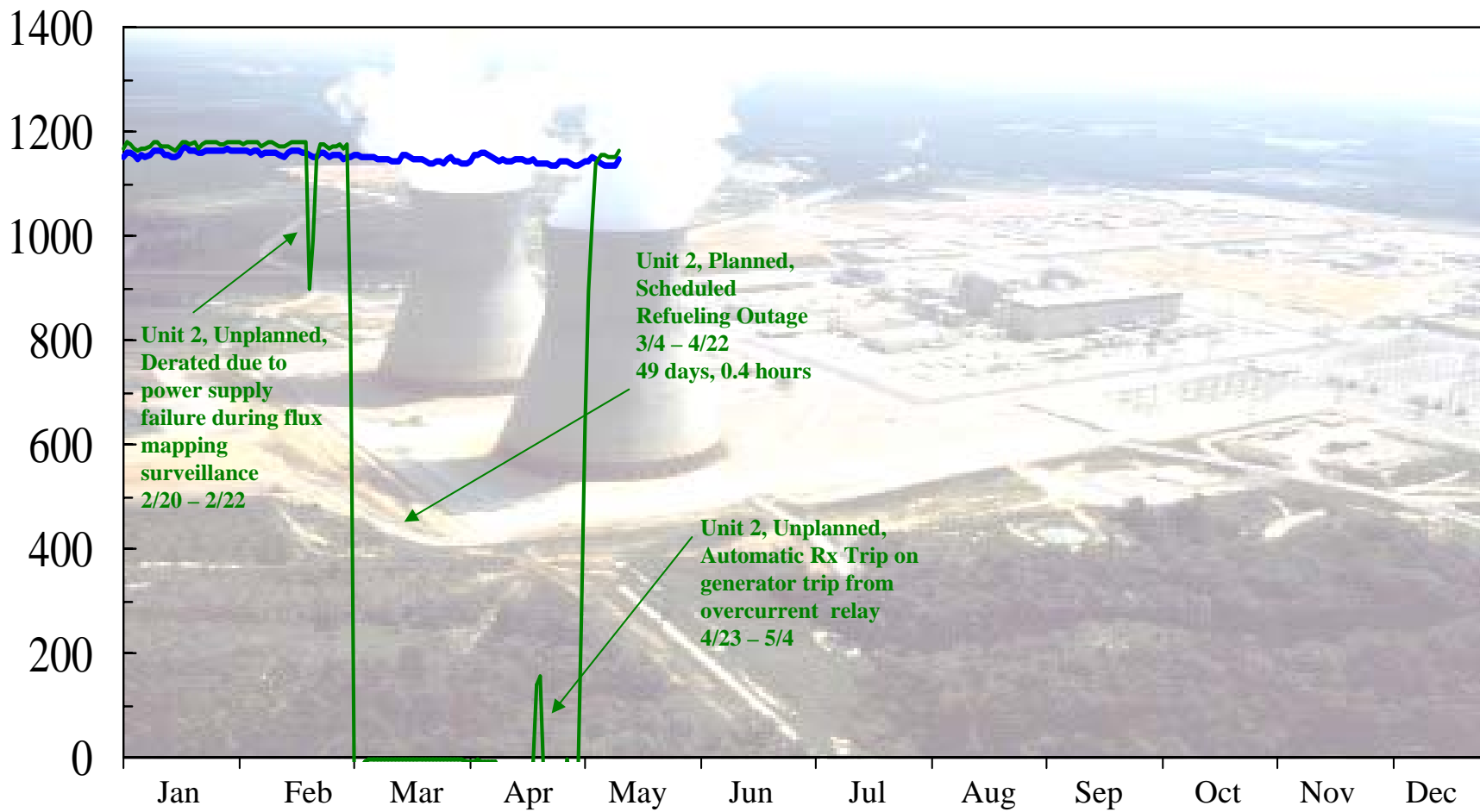
- Introduction
- Vogtle Project Overview
  - Plant Performance
  - Site Vice President Reorganization
- Major Focus Areas
- Major Projects
  - Pressurizer Nozzle Structural Weld Overlays
  - Measurement Uncertainty Recapture Power Uprate
  - ECCS Sumps and Downstream Effects Modifications
  - Steam Generator Chemical Cleaning
  - Pipeline Replenishment
- Open Discussion

# Plant Performance

# 2006 Plant Vogtle Average Daily Power Levels



# 2007 Plant Vogtle Average Daily Power Levels



# Unit 2 Reactor Trip April 23, 2007



- On April 23, 2007, Unit 2 experienced an automatic reactor trip on P-9 due to a main generator trip (fault protection relay).
- The cause was determined to be a fault which resulted from a very small water leak from a cooling line to the "A" phase generator bushing.
- Over time, water from the leak seeped into the tape around the bushing eventually resulting in a fault.
- Root cause analysis is underway.



# Unit 2 Reactor Trip April 23, 2007

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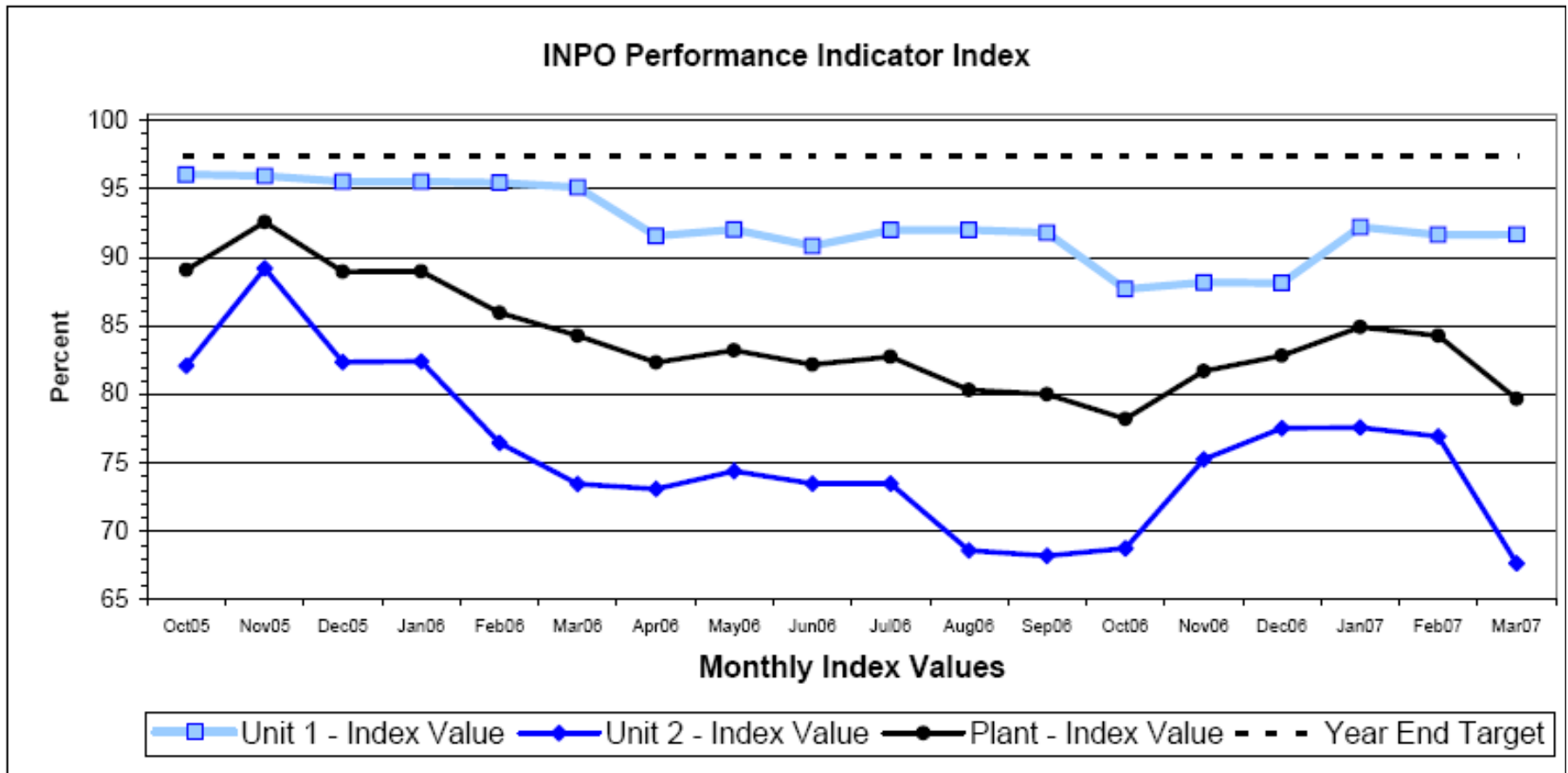


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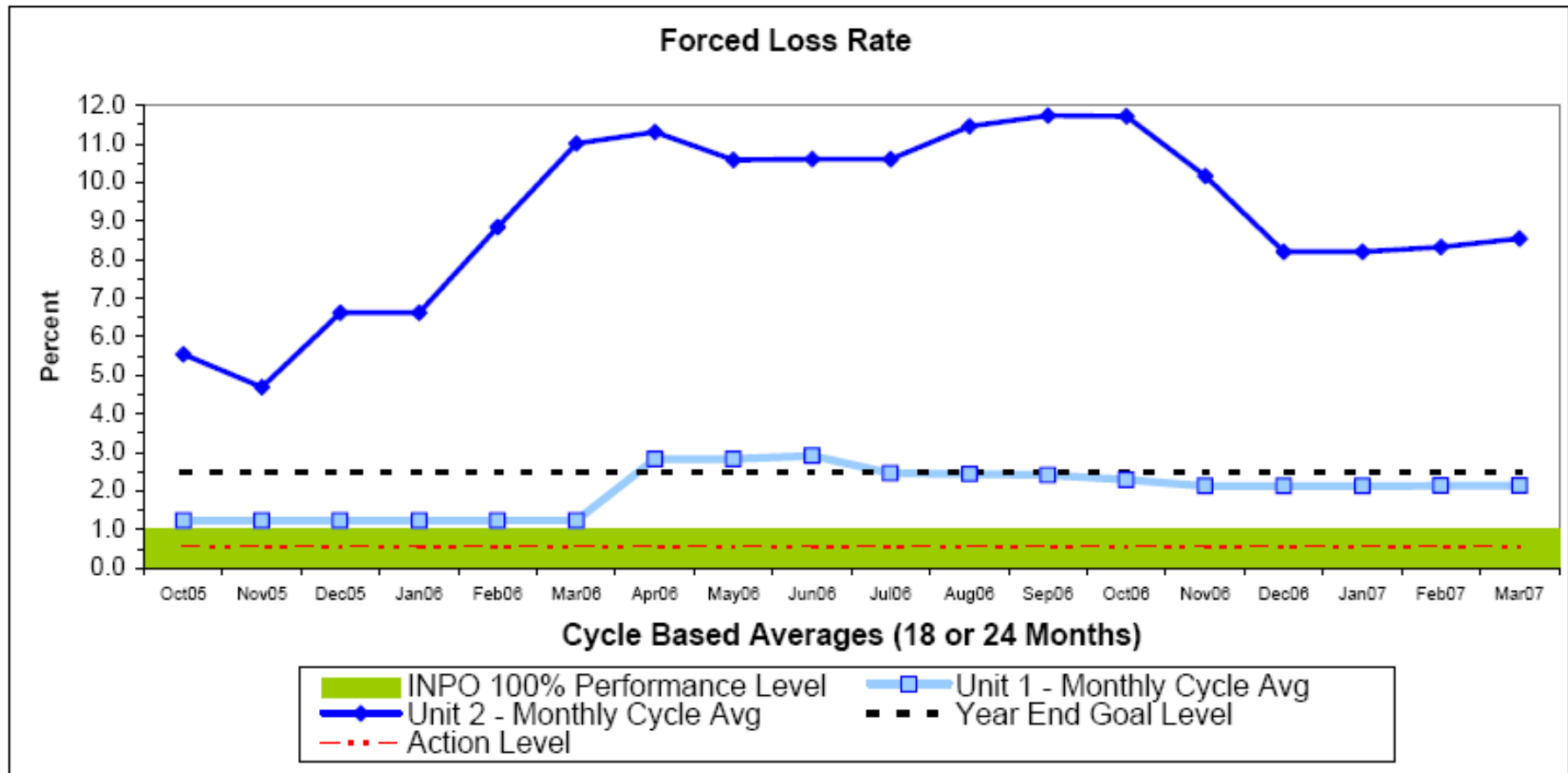
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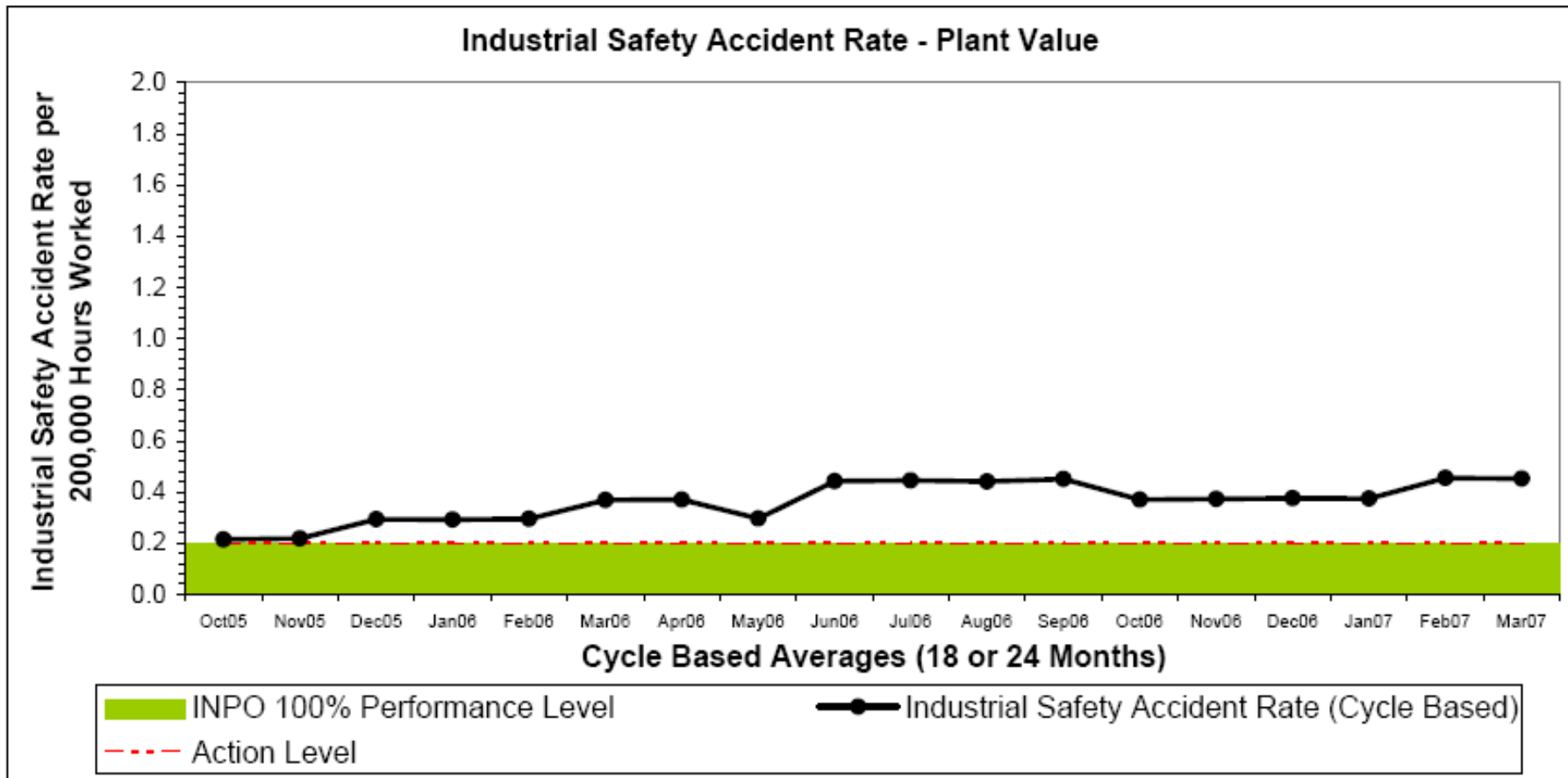
# INPO Index - Vogtle



# Forced Loss Rate - Vogtle



# Industrial Safety - Vogtle



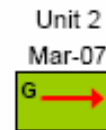
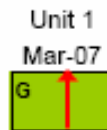
# NRC Performance Indicators - Vogtle



## Overall Summary of NRC Plant Performance Indicators

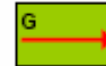
### Initiating Events

Unplanned Scrams per 7,000 Critical Hours



Unit 1 - Oct 2005 event rolled out

Scrams with Loss of Normal Heat Removal



Unplanned Power Changes per 7,000 Critical Hours



Unit 2 - March 2006 RHR bypass line leak event rolled out

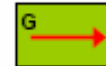
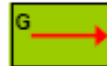
### Mitigating Systems

Safety System Functional Failures

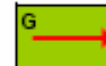


Unit 1 - SSFF due to Accumulator overfill event (LER 1-2006-00)

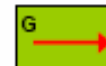
MSPI - Emergency AC Power System



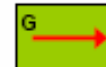
MSPI - High Pressure Injection System



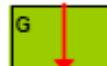
MSPI - Heat Removal System



MSPI - Residual Heat Removal System



MSPI - Cooling Water System



U2 CWS went white Sept 2006 due to NSCW failures  
U1 CWS declined in Feb 2007 due to NSCW failure



# NRC Performance Indicators - Vogtle

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## Barriers

Reactor Coolant System Specific Activity



Reactor Coolant System Identified Leak Rate

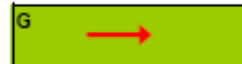


## Emergency Preparedness

Emergency Response Organization Drill/Exercise Performance



Emergency Response Organization Participation



Alert and Notification System Reliability



## Occupational and Public Radiation Safety

Occupational Exposure Control Effectiveness



RETS/ODCM Radiological Effluent Occurrences



## Physical Protection

PA Security Equipment Performance Index



Personnel Screening Program Performance










FFD/Personnel Reliability Program



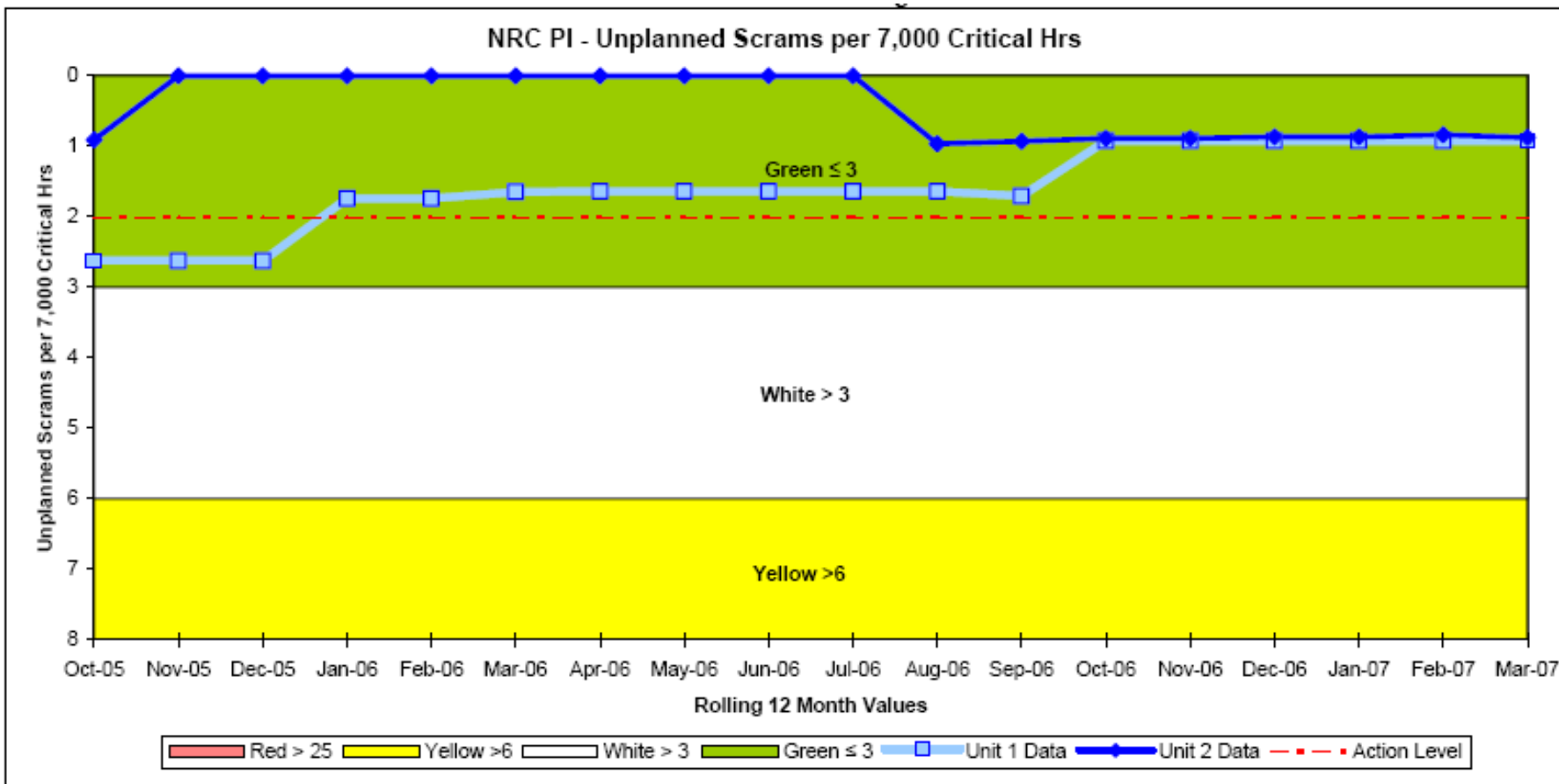
# NRC Performance Indicators - Vogtle

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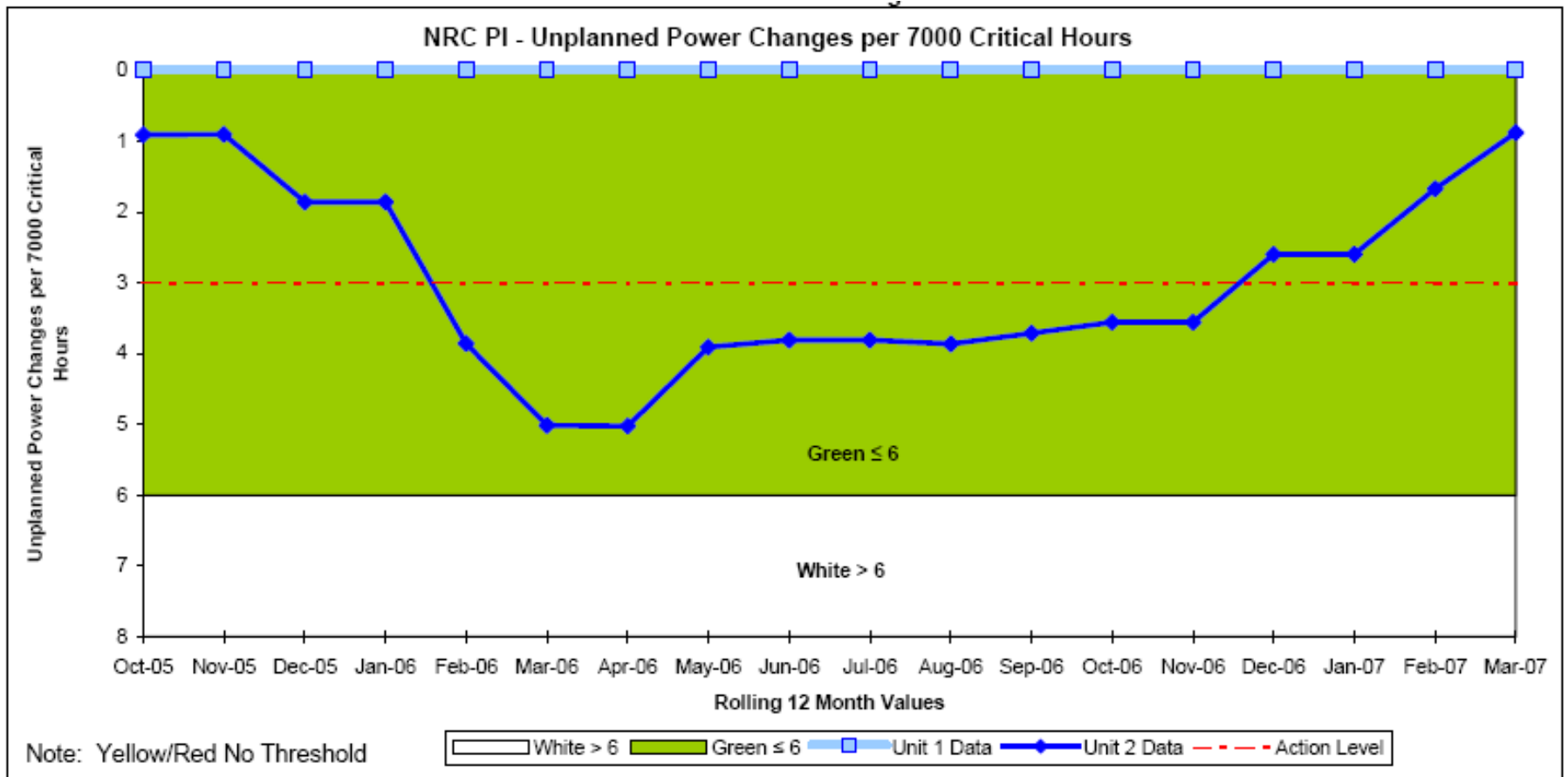
	= Significant improvement over the previous 6 months (2 quarters)		= No significant change in trend over the previous 6 months (2 quarters)		= Significant degradation over the previous 6 months (2 quarters)
	<b>GREEN</b> <i>Licensee Response Band</i> Cornerstone objectives fully met. Nominal risk with normal deviation from expected performance			<b>White</b> <i>Increased Regulatory Response Band</i> Cornerstone objectives met with minimal reduction in safety margin	
	<b>Yellow</b> <i>Required Regulatory Response Band</i> Cornerstone objectives met with significant reduction in safety margin			<b>Red</b> <i>Plants Not Normally Permitted to Operate Within This Band</i> Plant performance significantly outside design basis. Loss of confidence in ability of plant to provide assurance of public health and safety with continued operation	

# NRC Performance Indicators - Vogtle

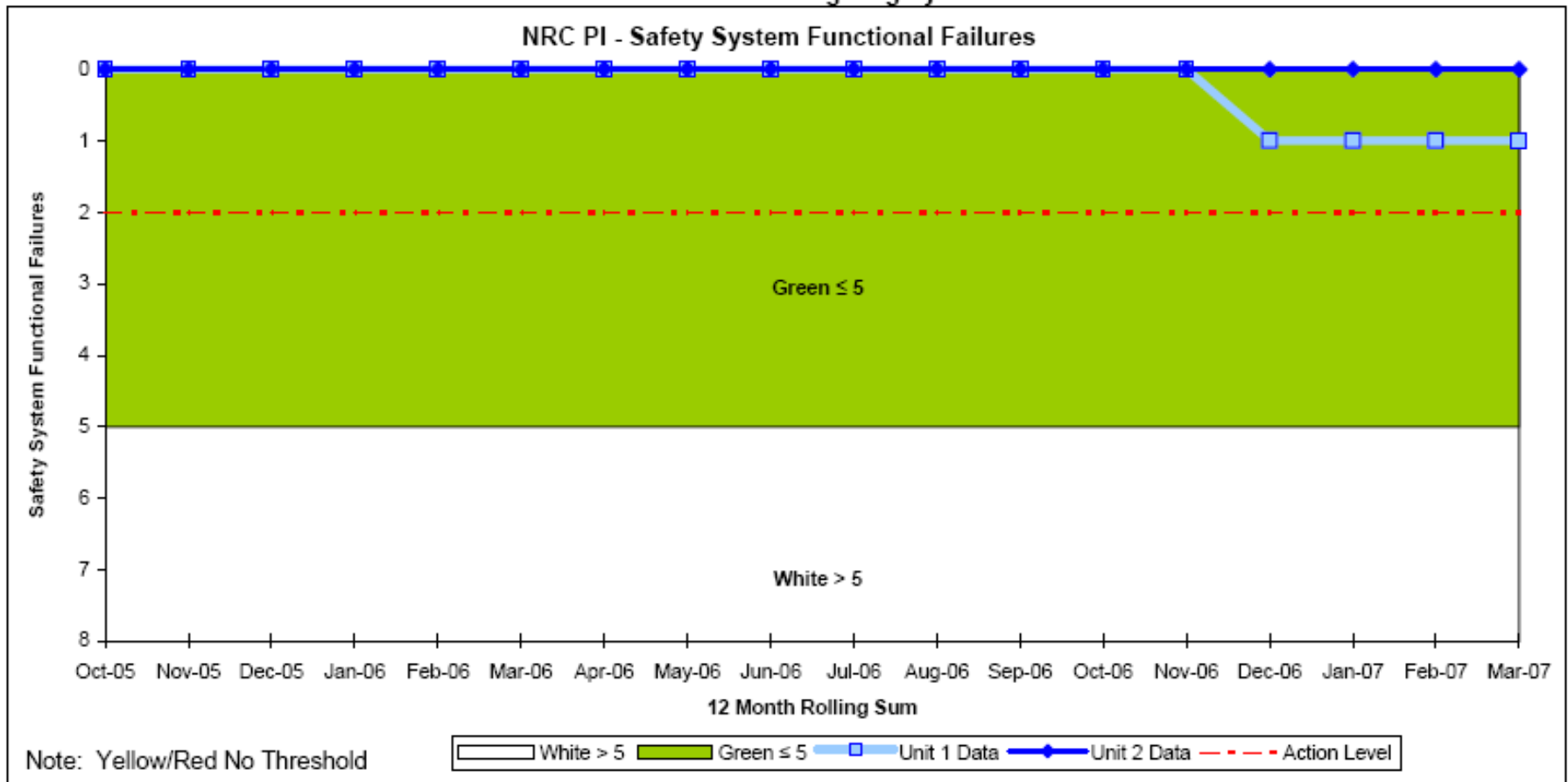
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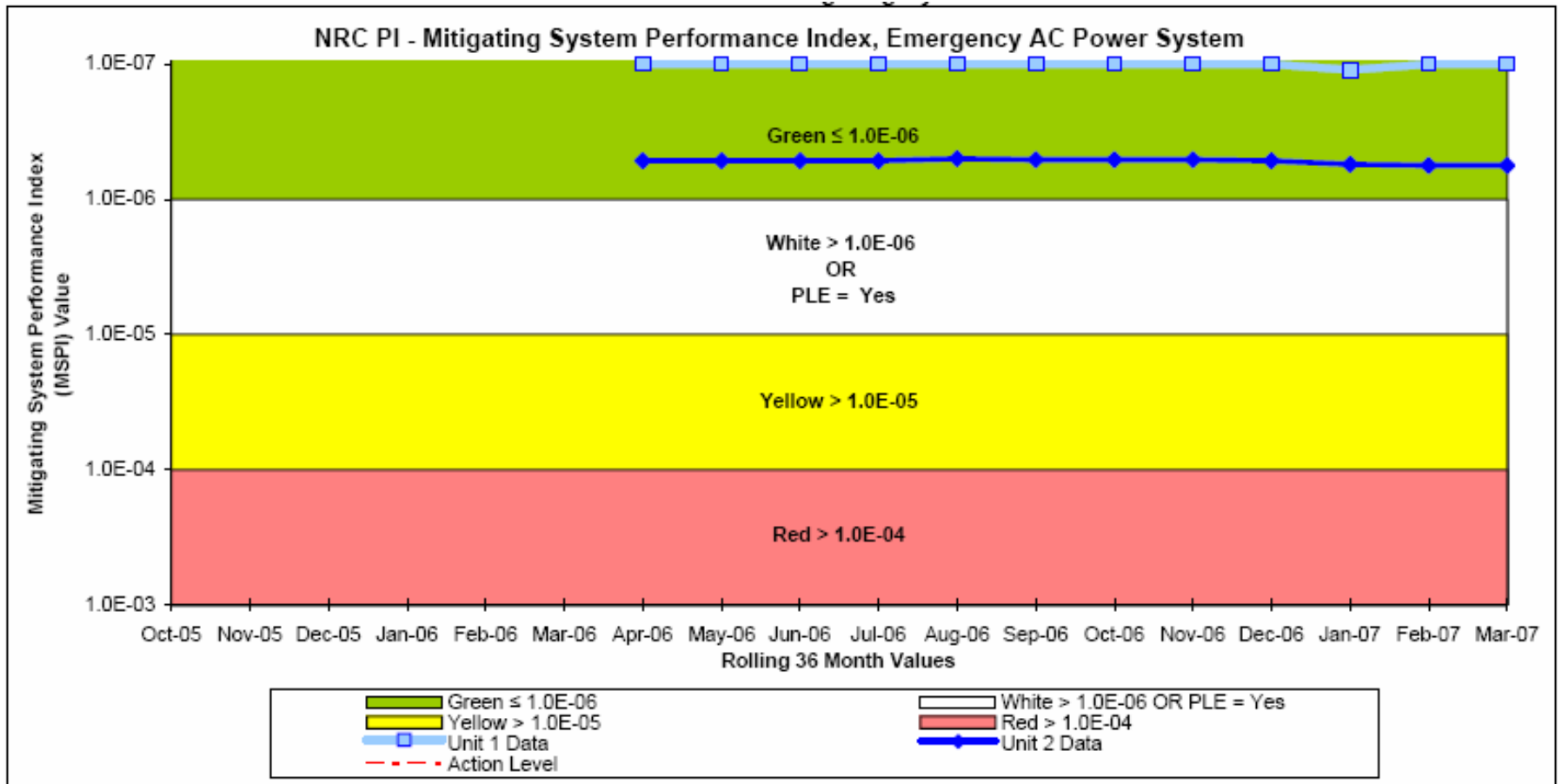


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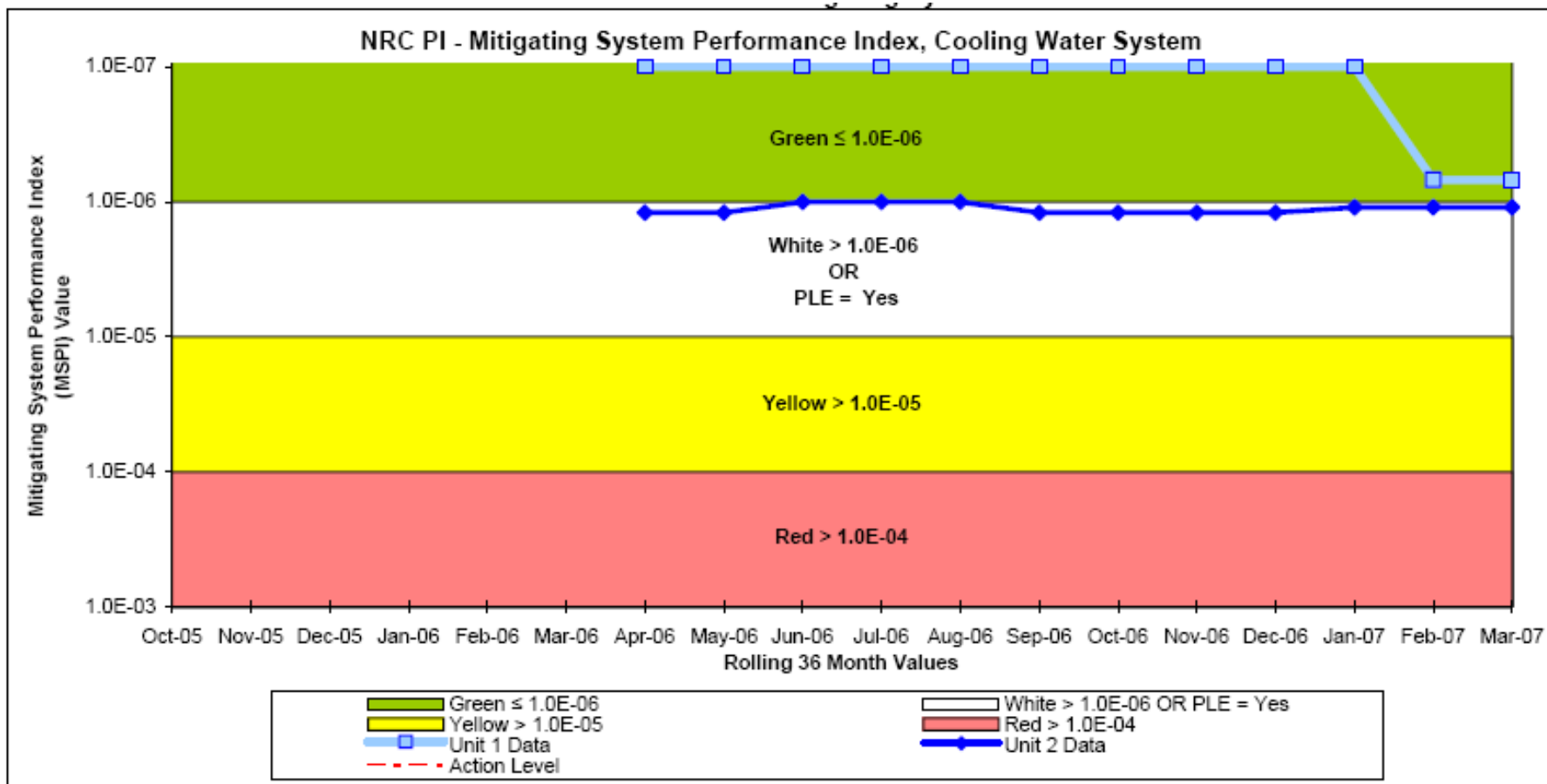




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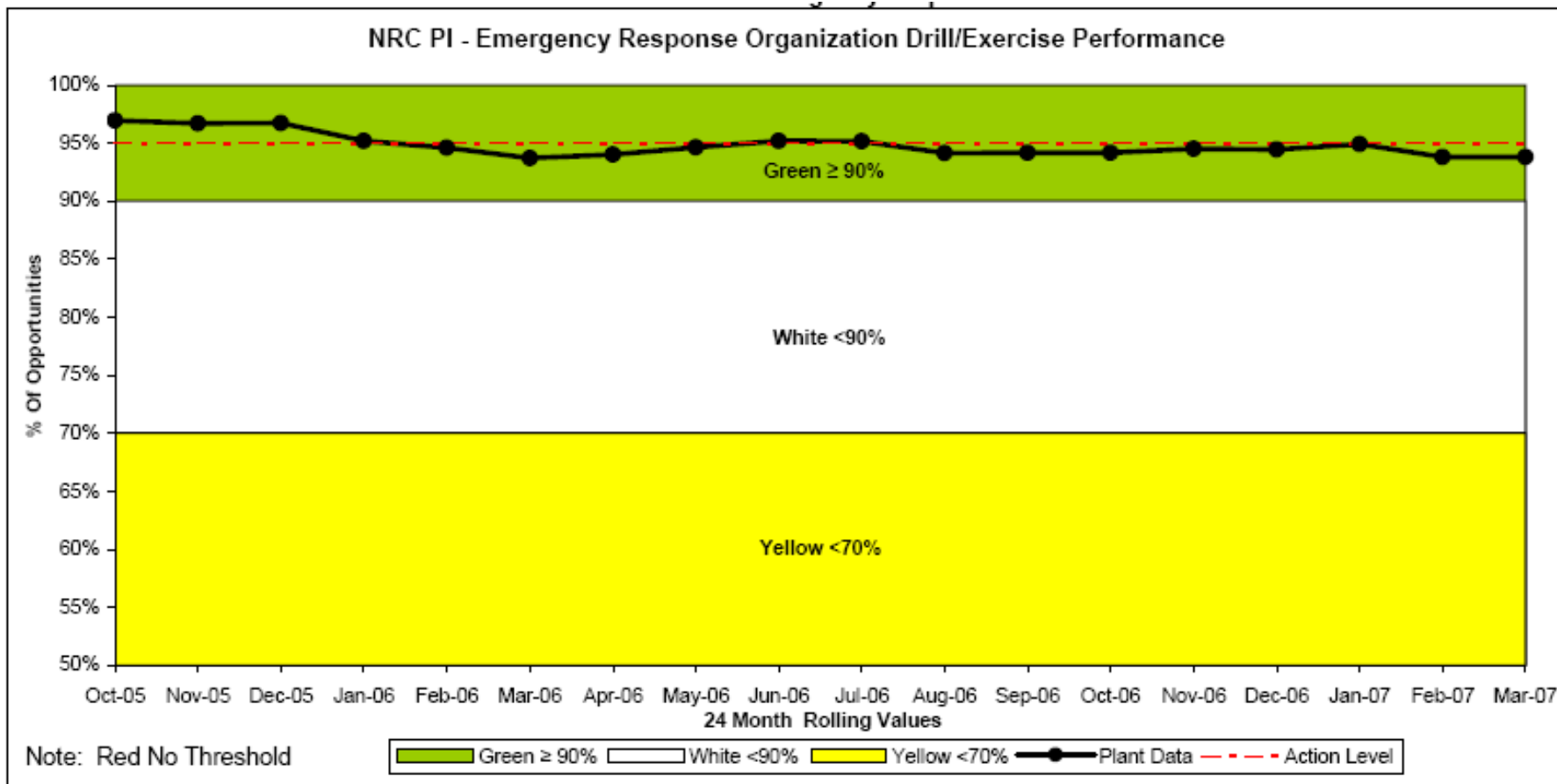


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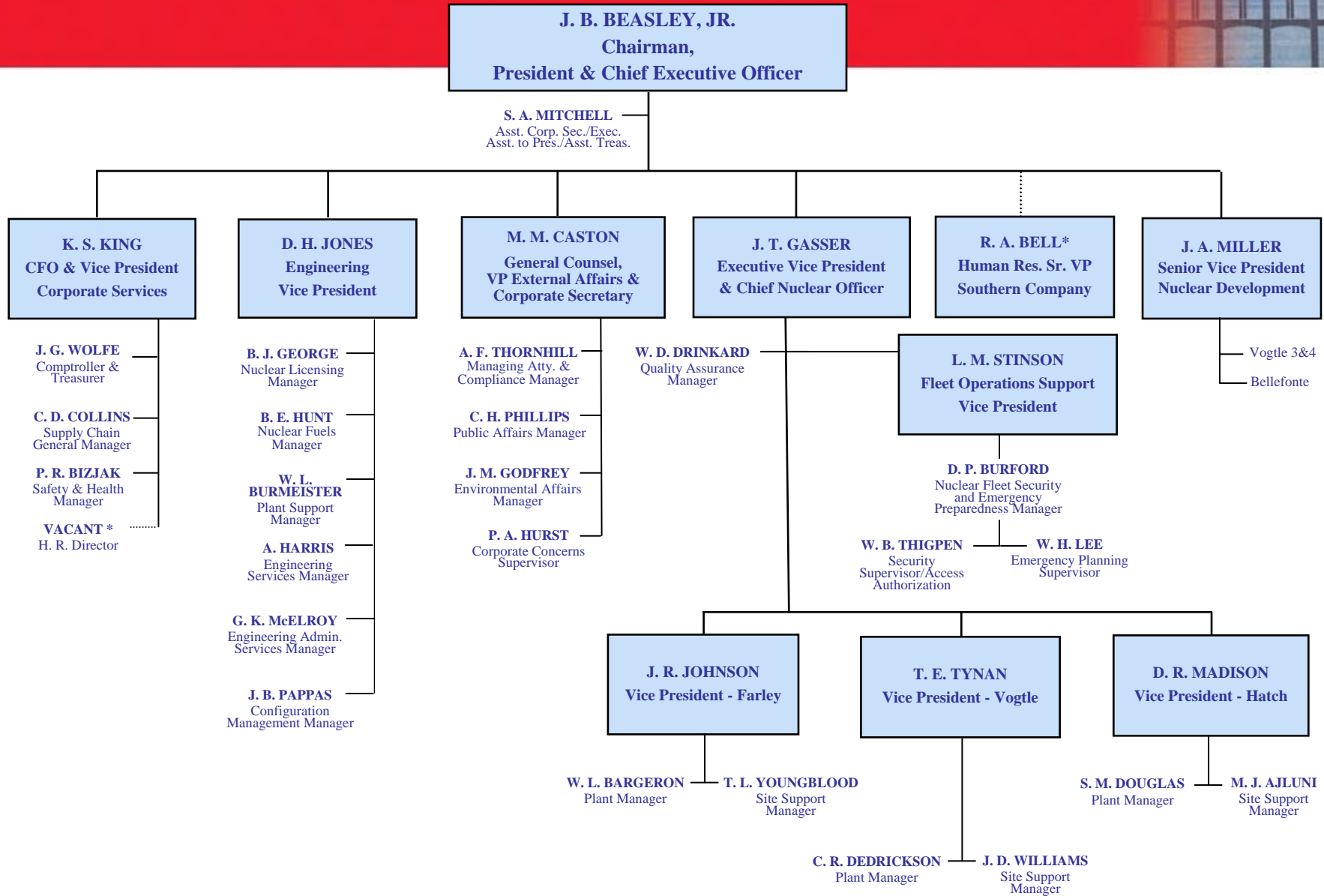
# NRC Performance Indicators - Vogtle

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# Site Vice President Reorganization

# Site Vice President Reorganization – January 2007



0407

\*SCS Employee



# Major Focus Areas

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- Equipment Reliability
  - Implementing Effective Design Modifications
- Corrective Action Program
  - Trending
- Work Force Engagement
  - Engage workforce on major problems and solutions
- Plant Status Control
  - Misposition Performance Indicator

# Major Projects

# Major Projects



- Pressurizer Structural Weld Overlays
  - NRC Approved Alternative ISI-GEN-ALT-06-03 March 8, 2007 and Revised April 3, 2007
  - Six Unit 2 Alloy 82/182 pressurizer nozzles completed during Spring 2007 (2R12) Refueling Outage
  - Unit 1 scheduled for Spring 2008
    - Contingent on enhanced RCS leakage monitoring, action levels, and actions (March 6, 2007 letter, J.T. Gasser to USNRC)
    - Commitment and contingency plans to shut down in 2007 if further industry developments do not support reasonable assurance of waiting until Spring 2008
    - Confirmatory Action Letter dated March 12, 2007

# Major Projects



- Measurement Uncertainty Recapture Power Uprate
  - Approximately 1.7% increase in Rated Thermal Power
  - Based on installation of Caldon Feedwater Flow Measurement Instrumentation
  - In addition, other major modifications include new high pressure turbine and higher capacity heater drain pumps
  - Scheduled for implementation Spring 2008 for Unit 1 and Fall 2008 for Unit 2
  - NRC Submittal Summer 2007



# Major Projects



- ECCS Sumps and Downstream Effects Modifications
  - New Unit 1 sumps installed Fall 2006
  - Extension on downstream effects modifications for Unit 1 granted by NRC until Spring 2008
  - New Unit 2 sumps AND downstream effects modifications completed during Spring 2007 outage
  - RHR sump screens increase in surface area by ~1400% and containment spray screens by ~1075%
  - Downstream effects modifications involve installation of header orifice to allow throttle valves to be opened up

# Major Projects



- Steam Generator Chemical Cleaning

- Unit 1 completed Fall 2006
- Unit 2 completed Spring 2007

- Materials removed during chemical cleaning (in pounds from all

4 steam generators):	Unit 1	Unit 2
– Iron Oxide	5990	4303
– Copper (metal)	91	66
– Nickel Oxide	205	128
– Other Oxides	196	119
– Sludge	337	341
– Total Material Removed	6819	4957

# Major Projects



- Pipeline Replenishment
  - Strategies for hiring entry level workers and engineers
  - License classes
    - 14 candidates to finish this summer
    - 15 candidates to start in Fall 2007
    - 16 candidates to start in Fall 2008
    - Average class size of 16
  - All other initial programs up and running (Chemistry, HP, Maintenance, etc.)

# Open Discussion

