

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

October 22, 2007

Charles D. Naslund, Senior Vice
President and Chief Nuclear Officer
Union Electric Company
P.O. Box 620
Fulton, MO 65251

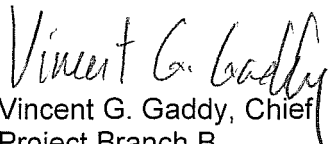
SUBJECT: MEETING SUMMARY CONCERNING CALLAWAY PLANT PUBLIC
MEETING ON OCTOBER 19, 2007

Dear Mr. Naslund:

This refers to the public meeting conducted at the NRC Region IV office in Arlington, Texas, on October 19, 2007. At this meeting, NRC and AmerenUE management discussed various topics, including: essential service water; the current problem identification and resolution crosscutting issue; recent human performance improvements; circumstances leading to the September 6, 2007, emergency declaration; and, safety culture.

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 NRC's document management system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,


Vincent G. Gaddy, Chief
Project Branch B
Division of Reactor Projects

Docket: 50-483
License: NPF-30

Enclosures:

1. Attendance List
2. Presentation Slides

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ATTENDANCE SHEET – CALLAWAY PUBLIC MEETING (10/19/07)

Name	Organization
Luke Graessle	Ameren UE
Keith Mills	Ameren UE
Charles Naslund	Ameren UE
Adam Heflin	Ameren UE
TIM HERRMANN	AMEREN UE
FADI DIYA	AMEREN UE
David Dumbacher	NRC
Rick Deese	NRC
Linda Smith	NRC
William Jones	NRC
Elmo Collins	NRC
Art Howell	NRC
Vince Gaddy	NRC
Dwight Chamberlain	NRC
Neil O'Keefe	NRC
PHONE	
MICHAEL PECK	NRC
SCOTT MAGGLIO	AMEREN UE
DAVID LOCKBAUM	UCS
LARRY CRISCIONE	AMEREN UE



Public Meeting

NRC Region IV

October 19, 2007

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Introduction

Chuck Naslund
Senior Vice President
and Chief Nuclear Officer



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Agenda

- Introduction
 - Chuck Naslund
- PI&R Cross Cutting Issue
 - Adam Heflin
- ESW Update
 - Tim Herrmann
- Human Performance - Procedure Use and Adherence
 - Fadi Diya
- PRA Improvements and Actions to Meet RG 1.200
 - Luke Graessle
- Safety Culture Update
 - Chuck Naslund



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2Q2007 Callaway Plant NRC Performance Indicator Status

Cornerstone	NRC Performance Indicator		Callaway Threshold	NRC White Threshold	NRC Status	Industry Avg/Median	Comments
Initiating Events	Unplanned SCRAMs per 7000 Critical Hrs		0	> 3	Green 0.0	0.67 / 0.80	Manual reactor trip following condenser tube leak March, 2007 - control of steam generator level.
	Unplanned SCRAMs with Loss of Normal Heat Removal (Complicated SCRAM)		0	> 2	Green 0	0.30 / 0	
	Power Transients > 20% per 7000 Critical Hrs		0	> 6	Green 0.0	0.72 / 0.80	Unplanned power change following chemistry excursion due to condenser tube leak - March 2007
Mitigating Systems	Mitigating Systems Performance Index (MSPI)	Emergency Diesel Generators	5E-7 or 50% of PLE Level	> 1.0E-6 or PLE* = Yes	Green 2.4E-6	-3.2E-7 / -0.5E-8	
		High Pressure Safety Injection			Green 3.9E-6	-1.6E-8 / -2.7E-8	
		Auxiliary Feedwater			Green 7.4E-7	-1.1E-7 / -5.8E-8	
		Residual Heat Removal			Green 2.4E-7	-1.5E-7 / -1.9E-8	
		Cooling Water Systems			Green 7.0E-7	-2.4E-7 / -1.9E-8	
	Safety System Functional Failures		1	> 5	Green 3	0.68 / 0	LER 2006-006 LER 2006-007 LER 2006-008

* PLE - Performance Limit Exceeded: this value limits the number of allowed failures for any given monitored component without turning the monitored system White under MSPI. If this limit is exceeded, the MSPI for the monitored system is White, regardless of the calculated value of the index. All PLE values for second quarter 2007 are less than 50 percent.



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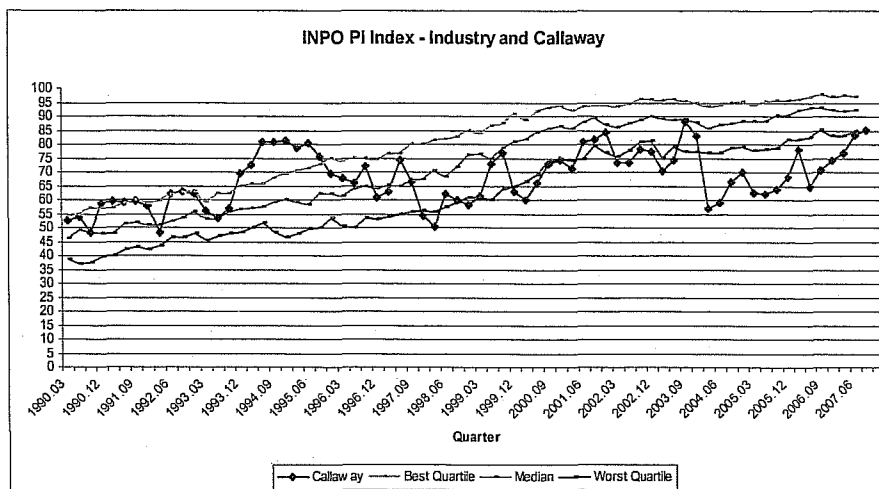
2Q2007 Callaway Plant NRC Performance Indicator Status

Cornerstone	NRC Performance Indicator	Callaway Threshold	NRC White Threshold	NRC Status	Industry Avg/Median	Comments
Barrier Integrity	Reactor Coolant System Specific Activity (% of T/S)	1%	> 50%	Green 0.3%	0.39 / 0.05	
	Reactor Coolant System Identified Leakage (% of T/S)	20%	> 50%	Green 0.2%	1.1 / 1.32	
Emergency Preparedness	Emergency Response Organization Drill/Exercise Performance	95%	< 90%	Green 97.2	96.14 / 96.2	
	Emergency Response Organization Drill/Exercise Participation	90%	< 80%	Green 95.4	98 / 98.7	
	Alert and Notification System (Siren Performance)	95%	< 94%	Green 100	99.4 / 99.6	
Occupational Radiation Safety	Occupational Exposure Control Effectiveness (Event Based)	0	> 2	Green 0	0.2 / 0	
	Public Radiation Safety	0	> 1	Green 0	0 / 0	
Physical Protection	Protective Area Security Equipment Performance Index	0.04	> 0.08	Green 0.004	0.020 / 0.015	
	Personnel Screening Process	0	> 2	Green 0	0 / 0	
	Personnel Reliability Program	0	> 2	Green 0	0 / 0	



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INPO Performance Index

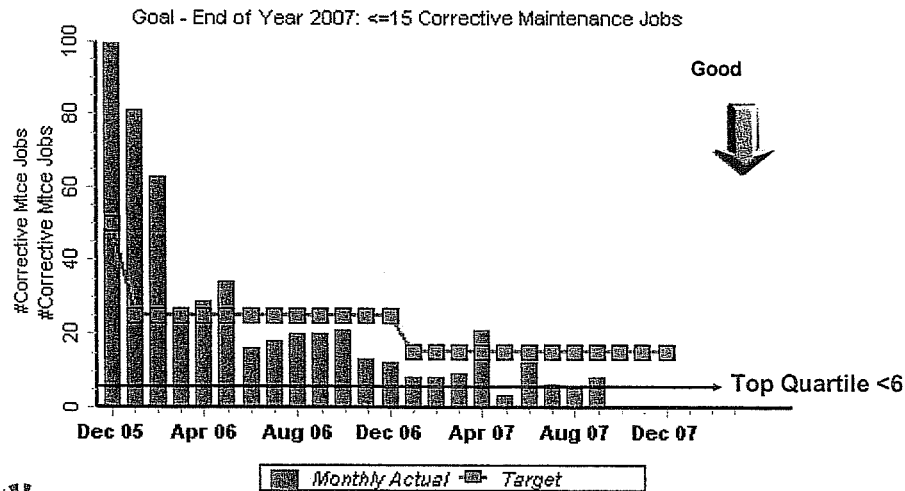


Third Quarter PI = 85.33 --- Projected Fourth Quarter PI = 97.91



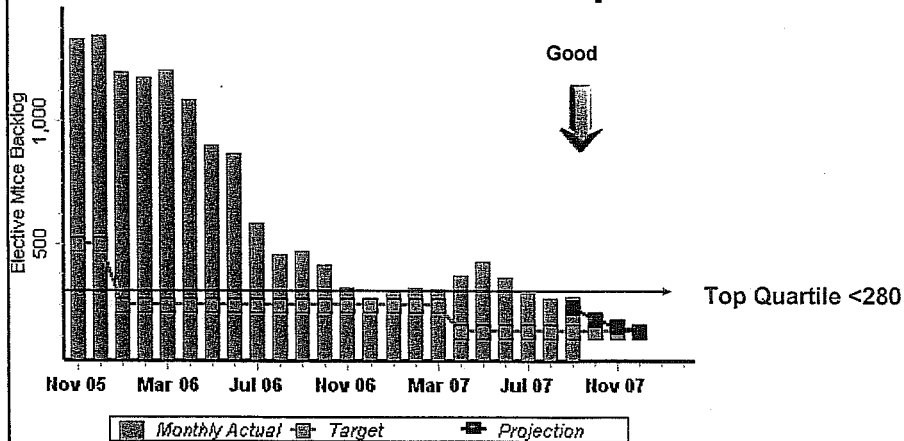
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Corrective Maintenance Requests



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Elective Maintenance Requests



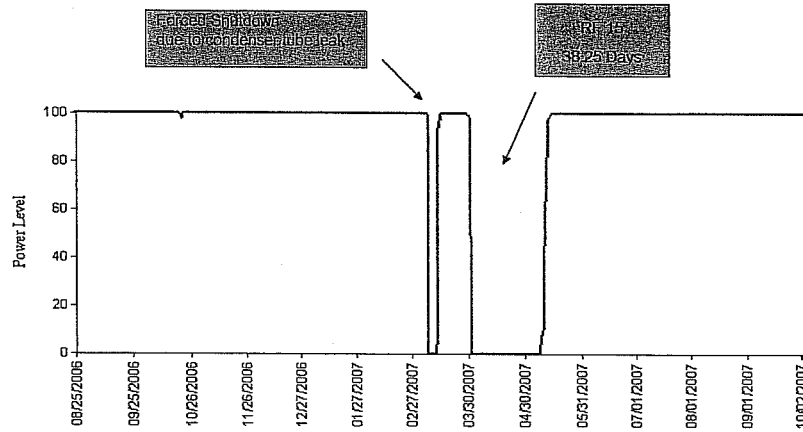
- Goal of <150 by 1/1/2008
- Industry best at 187



Improving job screening, planning and materials

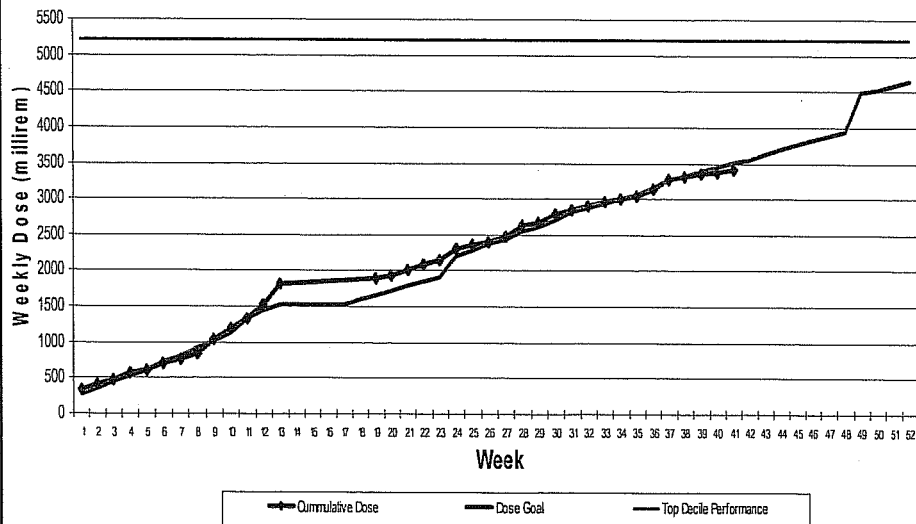
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Daily Average Power



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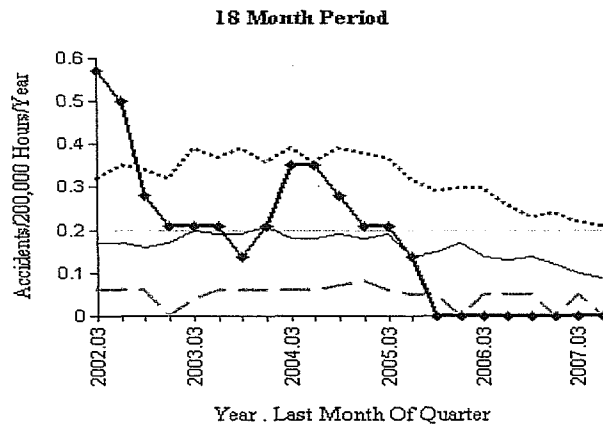
Cumulative Plant Dose 2007



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Industry Performance

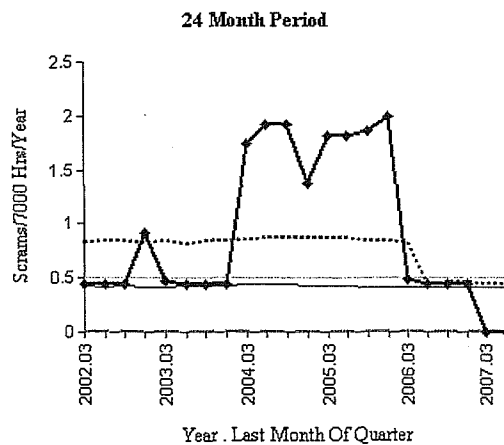
Industrial Safety Accident Rate



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Industry Performance

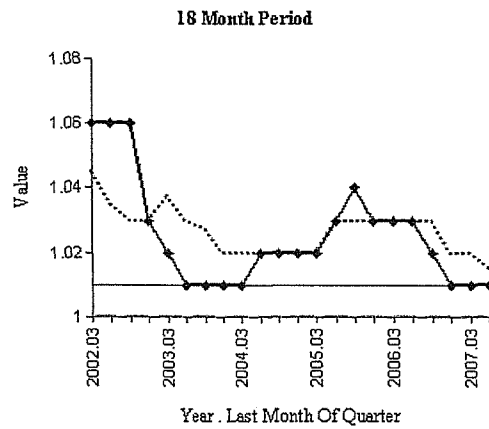
Unplanned Automatic Scrams



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Industry Performance

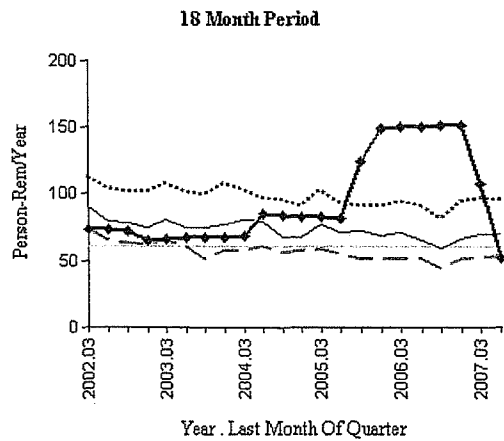
Chemistry Performance Indicator



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Industry Performance

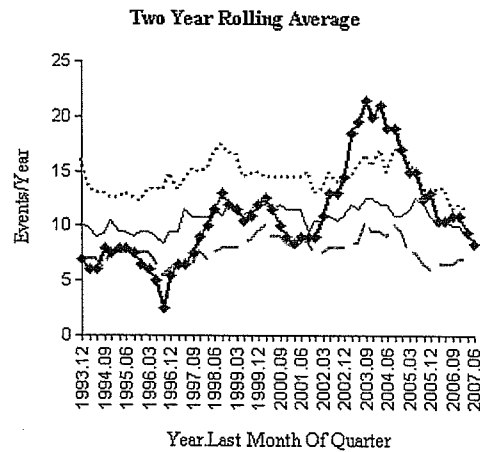
Radiation Exposure



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Industry Performance

INPO Screened Events—Human Performance



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PI&R Cross Cutting Issue

Adam Heflin
Vice President, Nuclear

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PI&R Cross-Cutting Issue

- Letter received March 2, 2007
- There were 14 findings related to Problem Identification and Resolution
- Root Cause pointed at oversight and behaviors
- Benchmarking and process improvements were already in place
- We are getting the right results now



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Corrective Actions

Behaviors currently in place

- Lower and broader identification threshold is clear and being implemented
- Extensive training on Operability Determinations and RIS 2005-20 has resulted in consistently accurate high quality Operability Determinations owned by the shift managers
- Management engagement in establishing corrective actions and proper close out of issues is required and occurring
- Senior leadership established expectations for managers, superintendents and supervisors and the team is holding each other accountable to meeting expectations



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Corrective Actions

Oversight in place

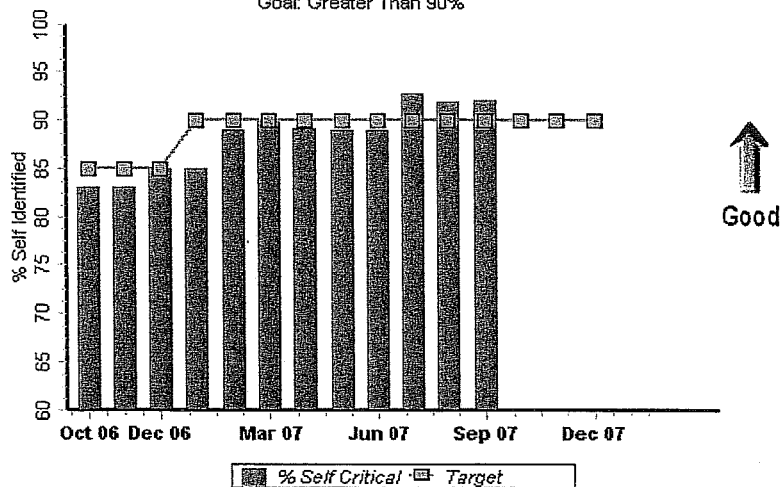
- Established the plant director as the CARB Chairman
- Improved root cause team support and management engagement with the team
- Retrained and requalified all CARB members to improve knowledge of CAP fundamentals and CARB oversight expectations
- Implemented a Daily CARS Leadership Review Meeting



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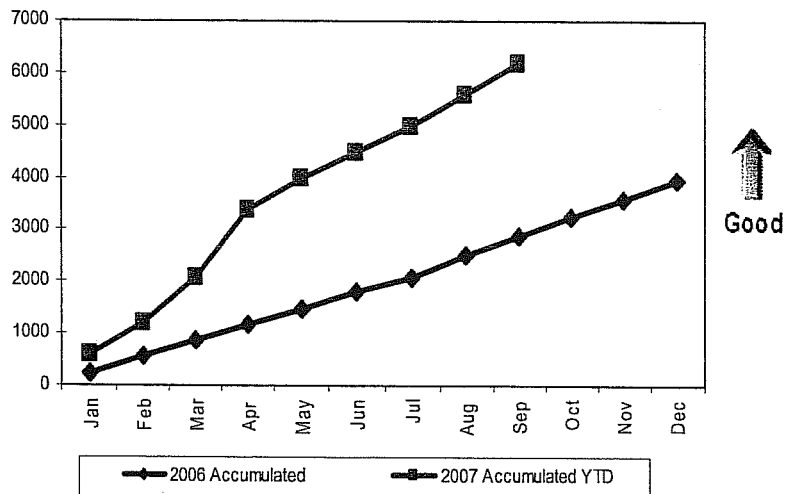
Self Identification Ratio

Goal: Greater Than 90%



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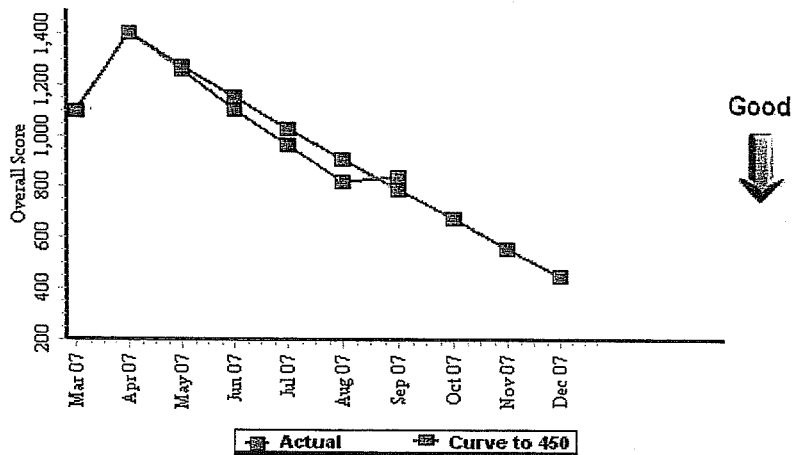
CAR Generation Rate



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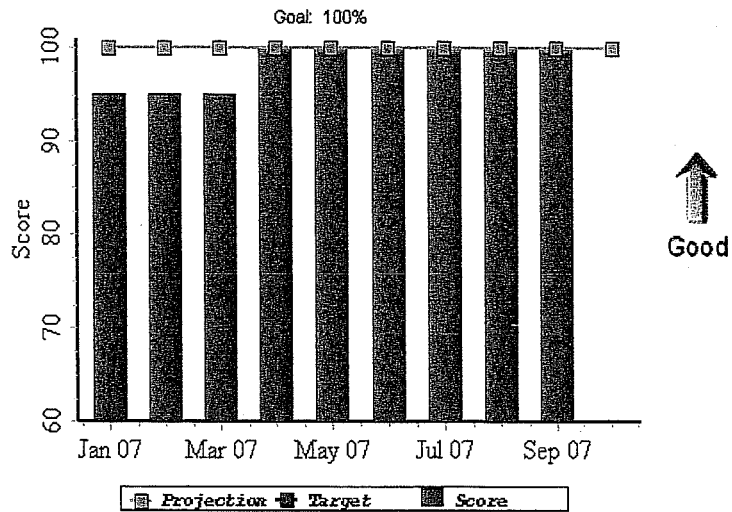
Adverse Condition Inventory

Goal: Less than 450 by EOY 2007



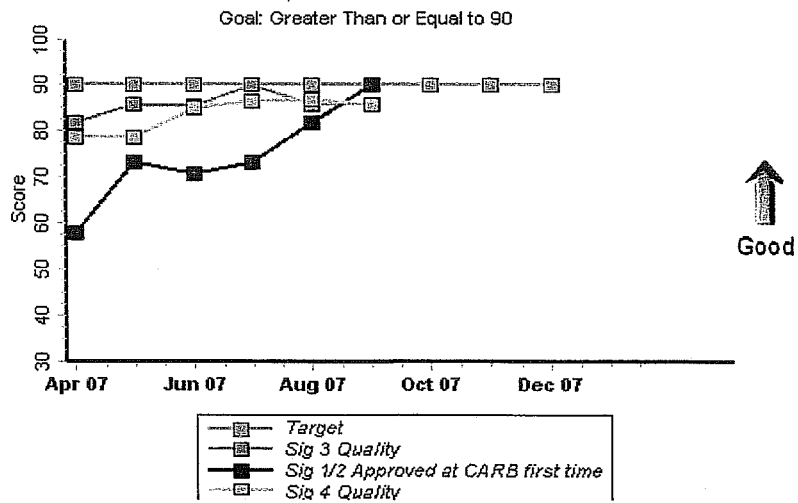
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SCAQ (Sig 1) CARs w/o Recurrence

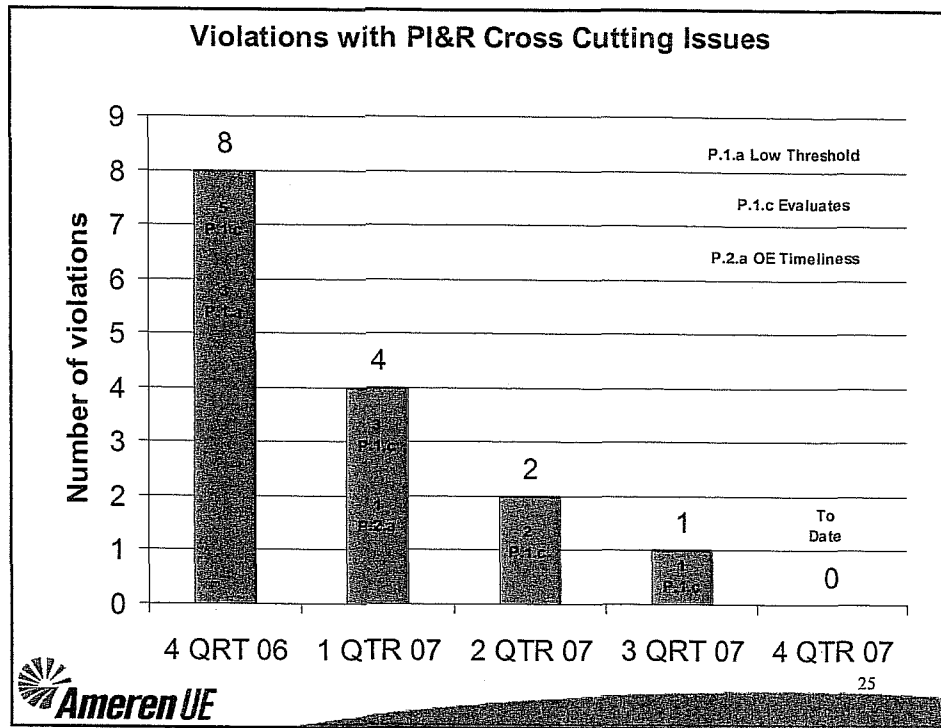


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Quality of Cause Analysis



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Key Points

- **Process and Procedure Changes** are in place.
- **Management Engagement and Accountability** have and will continue to improve behaviors.
- **Results are improving.**

ESW Update

Tim Herrmann
Vice President, Engineering

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ESW System Update

Refuel 15 Piping Accomplishments

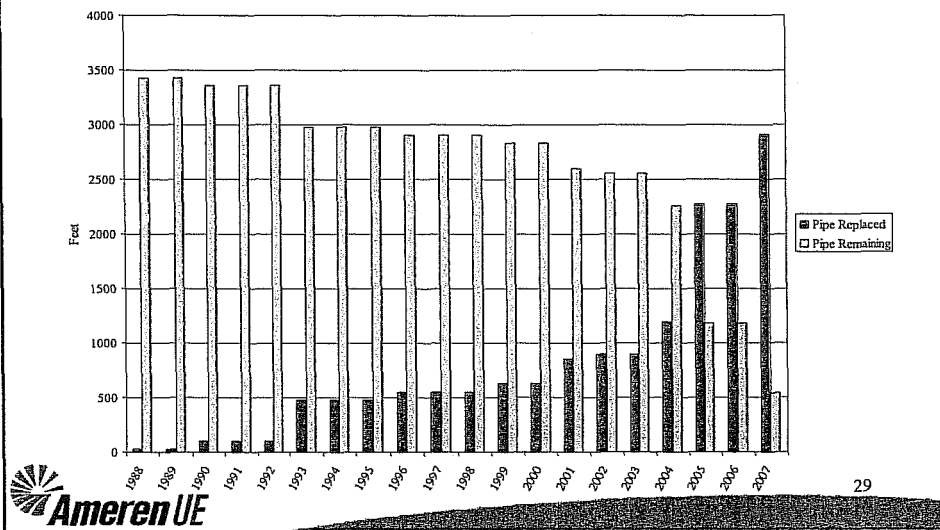
- Planned replacement of small bore pipe
- Inspected portions of 30", 8" and 6" diameter pipe
 - Replaced portions of 30", 8" and 6" diameter pipe based on inspection results
 - Repaired portions of 30" diameter pipe using internal base metal repairs and external weld overlay repairs
- Inspected a sample of vent and drain lines
 - Replaced a few vent and drain lines based on inspection results



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ESW System Update

Small Bore ESW Pipe Replacement Status (Both Trains)



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ESW System Update

Cycle and Refuel 16 Planned Activities

- Replacing remainder of small bore piping by the end of Refuel 16
- Replacing majority of buried large bore ESW piping with HDPE material by the end of Cycle 16 (intent is to route and connect in Cycle 16 using a requested LCO extension.)
- Replacing 'B' ESW pump



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ESW System Update

Inspection Program

- The scope of the inspection program is based on:
 - What has not been inspected
 - Pipe that will not be replaced by the end of Refuel 16
 - Monitoring repaired pits
 - Monitoring non-repaired pits
- Future replacements will be driven by the inspection program



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ESW System Update

- Overall reliability of the ESW System has improved:
 - Reduction in frequency of small bore leaks (over 2 years since last leak)
 - No structural concerns for the pipe degradation found in ESW System
 - Piping replacement has increased flow margin to ESW System heat loads and reduced probability of through-wall leakage
- Additional pipe replacement will further increase flow margin and reduced probability of through-wall leakage



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Human Performance

Fadi Diya
Plant Director

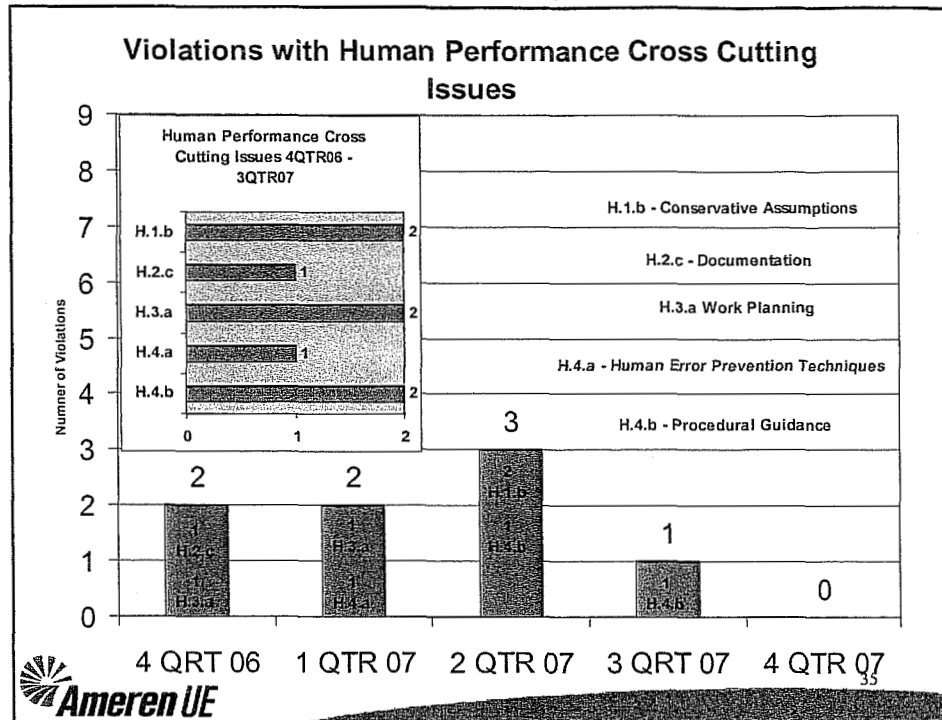
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Human Performance

- Continuing the Use and Reinforcement of Human Performance Event Prevention Tools
- Continuing the Use of Coaching Observations:
 - Over 1100 Documented Observations Per Month
- Consequential Error Rate at 0.069 Per 10,000 Hours Worked



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PRA Improvements and Actions to Meet RG 1.200

Luke Graessle
Manager, Regulatory Affairs

CALLAWAY PROBABILISTIC RISK ASSESSMENT (PRA) UPDATE

- Training & Qualification of new PRA Engineers
- PRA Model Upgrade to RG 1.200
- Future Projects

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Safety Culture Update

Chuck Naslund
Senior Vice President and
Chief Nuclear Officer

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Questions/Discussion

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