



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
612 EAST LAMAR BLVD, SUITE 400
ARLINGTON, TEXAS 76011-4125

October 14, 2008

Randall K. Edington,
Executive Vice President,
Nuclear and Chief Nuclear
Officer
Mail Station 7602
Arizona Public Service Company
P.O. Box 52034
Phoenix, AZ 85072-2034

SUBJECT: MEETING SUMMARY FOR PUBLIC MEETING WITH ARIZONA PUBLIC SERVICE COMPANY

Dear Mr. Edington:

On September 30, 2008, the NRC held a public meeting to discuss the current status of the Palo Verde Nuclear Generating Station performance improvement initiatives at the Tonopah Valley High School Auditorium in Tonopah, Arizona. The meeting attendance list and a copy of the NRC presentation and licensee presentation are included as Enclosures 1, 2, and 3.

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's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the Public Electronic Reading Room page of the NRC's public web site at www.nrc.gov/reading-rm/adams.html.

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

Sincerely,

A handwritten signature in black ink that reads "Michael C. Hay".

Michael Hay, Chief
Project Branch D
Division of Reactor Projects

Dockets: 50-528, 50-529, 50-530
Licenses: NPF-41, NPF-51, NPF-74

Enclosures:

1. Meeting Attendance List
2. Nuclear Regulatory Commission Presentation
3. Palo Verde Nuclear Generating Station Presentation

Distribution:

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Maricopa County Board of Supervisors
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Arizona Radiation Regulatory Agency
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Regulatory Affairs
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Mr. Dwight C. Mims
Vice President
Regulatory Affairs and Plant Improvement
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Assistant General Counsel
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El Paso, TX 79901

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Los Angeles Department of Water & Power
Southern California Public Power Authority
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Los Angeles, CA 90051-0100

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Public Service Company of New Mexico
2401 Aztec NE, MS Z110
Albuquerque, NM 87107-4224
Mr. Geoffrey M. Cook
Southern California Edison Company
5000 Pacific Coast Hwy. Bldg. D21
San Clemente, CA 92672

Mr. Robert Henry
Salt River Project
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Scottsdale, AZ 85251

Mr. Brian Almon
Public Utility Commission
William B. Travis Building
P.O. Box 13326
1701 North Congress Avenue
Austin, TX 78701-3326

Ms. Karen O' Regan
Environmental Program Manager
City of Phoenix
Office of Environmental Programs
200 West Washington Street
Phoenix, AZ 85003

Mr. John C. Taylor
Director, Nuclear Generation
El Paso Electric Company
340 East Palm Lane, Suite 310
Phoenix, AZ 85004

Chief, Radiological Emergency Preparedness Section
National Preparedness Directorate
Technological Hazards Division
Department of Homeland Security
1111 Broadway, Suite 1200
Oakland, CA 94607-4052

NRC PUBLIC MEETING ATTENDANCE

LICENSEE/FACILITY	Palo Verde Nuclear Generating Station	
DATE/TIME	September 30, 2008; 6:30 to 8:30 pm (PST)	
LOCATION	Tonopah Valley High School Auditorium	
NAME (PLEASE PRINT)	ORGANIZATION	PHONE
Dwayne Carnes	PV APM	x 1787
J. Rick By	PV	
TERY L RADHA	APS	
STEVE OLSEN	A CC	602-542-7270
LUAN NHUYEN	LADWP/SCPPA	213-367-0553
KEVIN WIDMER	WHP	623 327 1170
Mary WIDMER	Mary E. Widmer	623 327 1170
TERRY YOUNG	APS	623 393 5300
Paul Root	FoSun	602-370-8062
ED DUTTON	APS	623-393-5625
ANDREW PARMITHAN	APS	623-393-6726
GRACE ANDREWS	APS	623-393-5709
Mike Novin	APS	623-293-3101
MICHAEL PRIGGE	APS	623-393-3525
SOOT RITZLOFF	TVCC	623-386-9143
CTM McDonald	APS	602-321-3738

NRC PUBLIC MEETING ATTENDANCE

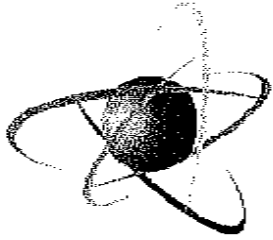
LICENSEE/FACILITY	Palo Verde Nuclear Generating Station	
DATE/TIME	September 30, 2008; 6:30 to 8:30 pm (PST)	
LOCATION	Tonopah Valley High School Auditorium	
NAME (PLEASE PRINT)	ORGANIZATION	PHONE
Rosemarie Majors	Tonopah ^{District 5} Valley Council	623-866-3835
Jim Molden	APS	623-986-9438
Brian Turner	Town member	623-987-6213
Brian Ramey	PVNGS-APS	(623) 393-5020
John Hess	PVNGS APS	623-393-5553
MIKE RENFROE	PVNGS APS	(623) 393-6145
MONICA RAY	PVNGS APS	623 393 6778
Wayne Pien	PVNGS APS	623 393 6096
Bob Bement	PVNGS	623 393 6116
A.K. Krainik	PVNGS	623/393-6910
FJ. BURDICK	PVNGS	623-393-6371
Kent Chavet	PVNGS	623-393-6220
MIKE POWELL	PVNGS	623-393-6064
MO KAKBASSIAN	PVNGS	623-393-5970
HENRY DAY	PVNGS	623-393-6567
HABIB DURRANI	PVNGS	205-918-6055

NRC PUBLIC MEETING ATTENDANCE

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DATE/TIME	September 30, 2008; 6:30 to 8:30 pm (PST)	
LOCATION	Tonopah Valley High School Auditorium	
NAME (PLEASE PRINT)	ORGANIZATION	PHONE
Kevin Swanson	APS	623 393-5049
LINDA RAMSEYER	APS	623-393-6376
Bob Lotts	APS	623 593 3000
W. ADRIAN HAZEL	APS	623-393-2625
MATTHEW BENAC	APS	623-393-5423
ERIC SHANE	El Paso Electric	623-393-5938
Chleen Waver	APS	606-623-1905
William Smith	APS	623 249 9915
Fred Lake	APS	623-249-0871
Bill Post	APS	602 250 2588
JN Weber	APS	602-651-2031
RUSSELL STROUD	APS	623 640 5551
Don Wheeler	APS	623-877-2060
DEANNA FRENCH	DZ / APS	623-251-7994
DC BURNS	APS	623 243 3814
Joett Bauer	APS	623-393-5978

NRC PUBLIC MEETING ATTENDANCE

LICENSEE/FACILITY	Palo Verde Nuclear Generating Station	
DATE/TIME	September 30, 2008; 6:30 to 8:30 pm (PST)	
LOCATION	Tonopah Valley High School Auditorium	
NAME (PLEASE PRINT)	ORGANIZATION	PHONE
Rob Henry	SRP	602-236-6446
LOUIS CONTOPASSI	APS	393-2002
MARIA LACAL	APS	602-908-7286
MARLENA RONNE	APS	760 784 5938
Thomas Albright	APS	602 616 1829
MORIS WEISBERG	TONOPAH VALLEY ASSN (APNE'S + PERMANENT-OLD MEMBER)	623-386-5154
Luis Valencia	CAI / APS	217-622-8102
STEVE SAWTSCHENKO	APS	602 463 6183
Geoff Cook	SCE	749 368-9008
DAN WOOL	APS	602 250 3127
Gary Shanker	APS	623-393-6896
W. Baer	APS	
Judith melody	APS	623-824-6192
Wen Sundberg	APS	480-272-7039
Dwight Mims	APS	623-393-5403
Jim COMPAS	Westinghouse	623-393-6551



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Protecting People and the Environment

Palo Verde Nuclear Generating Station Performance Improvement Meeting

Nuclear Regulatory Commission – Region IV

September 30, 2008

Enclosure 2



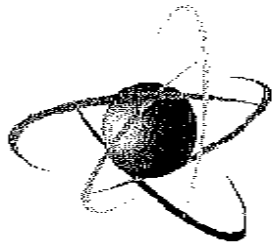
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Protecting People and the Environment

Purpose of Today's Meeting

A public forum for discussion of Palo Verde's
performance improvement initiatives



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Protecting People and the Environment

NRC Representatives

- Tony Vogel, Deputy Director, DRP
- Michael Hay, Branch Chief, DRP
- Victor Dricks, RIV, Office of Public Affairs
- Balwant Singal, Senior Project Manager, NRR
- Michelle Catts, PVNGS Resident Inspector
- Jim Melfi, PVNGS Resident Inspector



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Protecting People and the Environment

Overview

- Confirmatory Action Letter (CAL) issued June 2007 and revised in February 2008
 - 12 Key Performance Areas Identified for Improvement
- NRC Plans to perform five quarterly CAL inspections and has completed three of those inspections
- Continuous inspections performed by regional and resident inspectors



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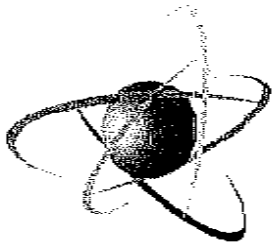
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Protecting People and the Environment

Confirmatory Action Letter

- Actions that need to be satisfactorily implemented to address the fundamental causes for performance problems at Palo Verde

- 12 Key Areas:
 - Yellow finding
 - White finding
 - Problem identification and resolution
 - Human performance
 - Engineering programs
 - Resolution of past problems



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Confirmatory Action Letter (cont.)

- 12 Key Areas (cont.):
 - Safety culture survey
 - Accountability
 - Change management
 - Emergency Preparedness
 - Longstanding equipment concerns
 - Backlog

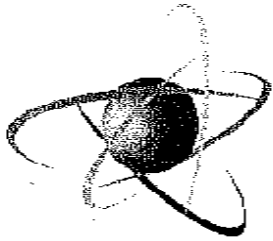


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Protecting People and the Environment

Palo Verde Nuclear Generating Station Presentation



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Protecting People and the Environment

Questions and Answers

Facilitated by

Jim Melfi



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Protecting People and the Environment

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
- Victor Dricks, Public Affairs Officer, RIV
 - 817-860-8128
 - Victor.Dricks@nrc.gov
- Feedback Forms available today



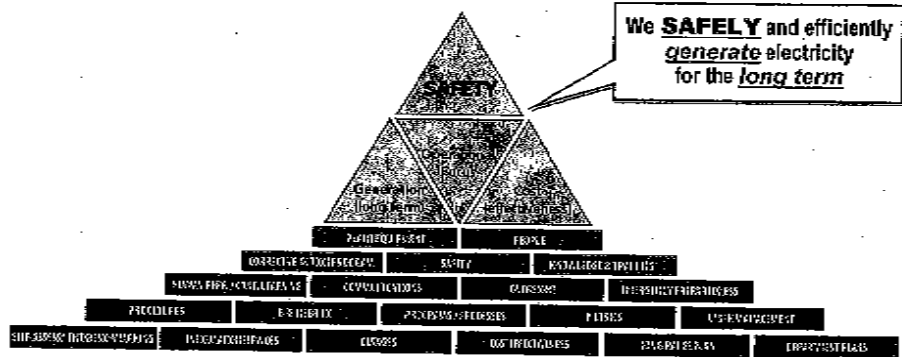
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Protecting People and the Environment

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)



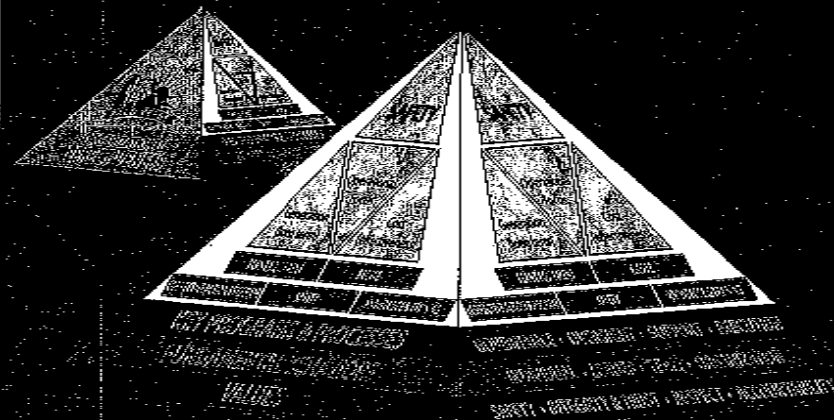
Randy Edington

Executive Vice President and
Chief Nuclear Officer



Enclosure 3

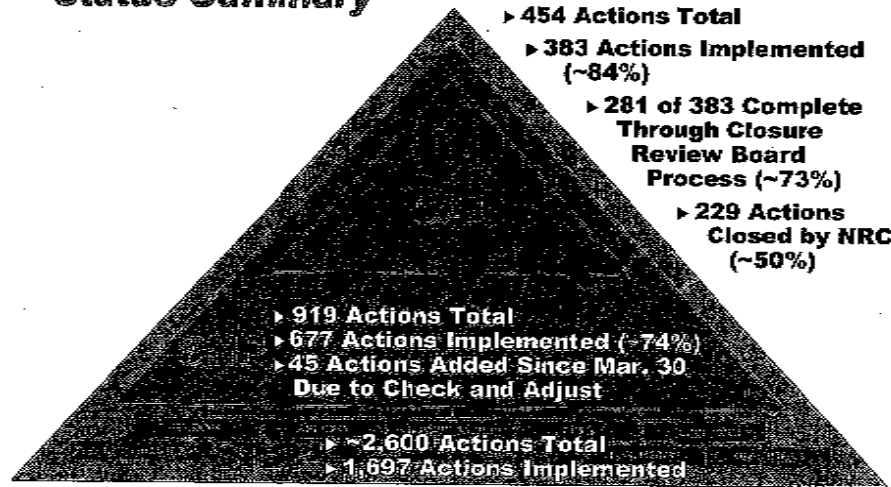
Leadership Model



Agenda

- **Confirmatory Action Letter Status**
– Presenter: Maria Lacal
- **Recirculation Actuation Signal (RAS) Status**
– Presenter: Brian Ramey
- **Problem Identification and Resolution Substantive Cross-cutting Issue**
– Presenter: Lou Cortopassi
- **Human Performance Substantive Cross-cutting Issue**
– Presenter: Bob Bement
- **Engineering**
– Presenter: John Hesser
- **Closing Remarks**
– Presenter: Randy Edington

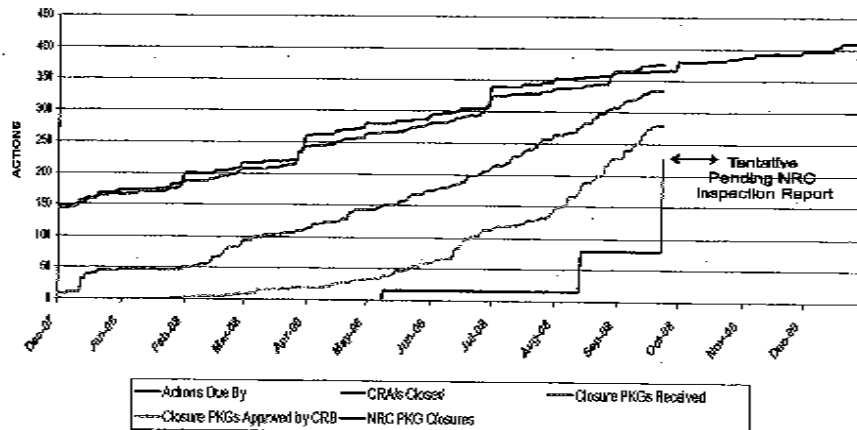
SIBP / SIIP / CAL Status Summary



Objectives for Beyond CAL

- **SAFETY**
- Applying Industry Lessons Learned
- Core Business Areas
- Performance Indicators — “Raising the Bar”
- Beyond Confirmatory Action Letter (CAL) Planning

Schedule Adherence CAL Actions and CRB Closure Packages



Dwight Wims

Vice President
Regulatory Affairs and Plant Improvement

Maria Lacal

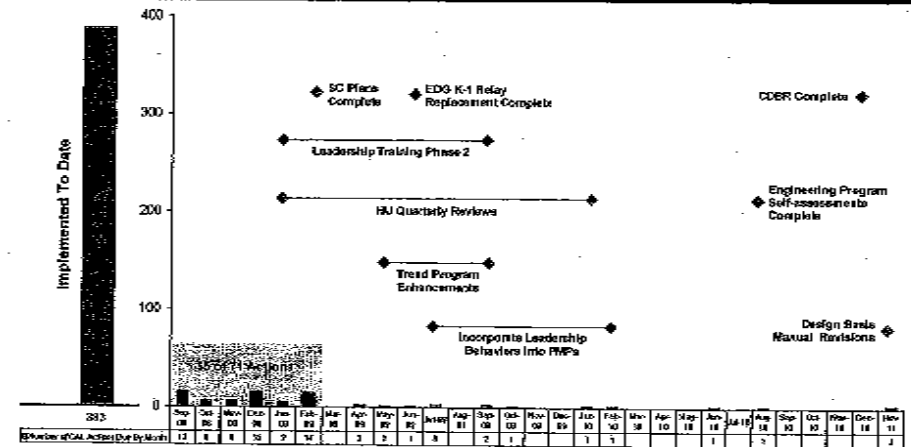
Director
Executive Projects and Plant Support /
Implementation and Monitoring Team



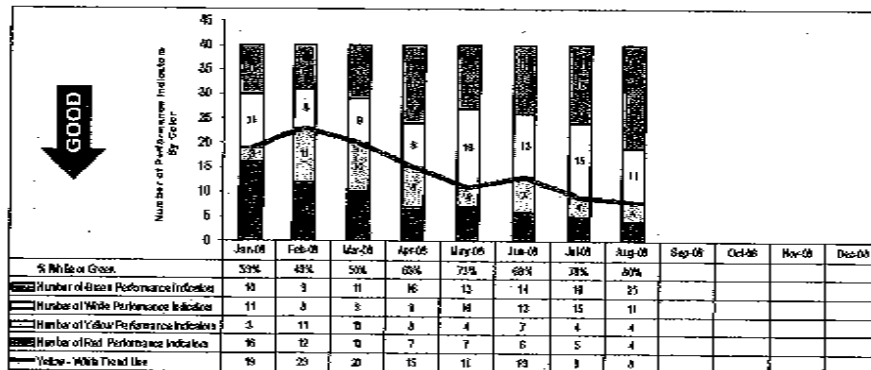
Status of Key Performance Areas

Key Performance Area (KPA)	Total Actions	Implemented Actions	Closure Review Board Complete	Preliminarily Closed by NRC
KPA-7 Safety Culture	46	23	14	10
KPA-8 Standards and Expectations	58	46	27	10
KPA-9 Change Management	5	5	3	3
KPA-10 Emergency Preparedness	17	16	13	6
KPA-11 Long-standing Equipment Issues	9	9	9	8
KPA-12 Backlog Tracking and Prioritization	32	31	30	28

CAL Actions Implemented versus Remaining



Status of Core Performance Indicators



Status of Key Performance Areas

Key Performance Area (KPA)	Total Actions	Implemented Actions	Closure Review Board Complete	Preliminarily Closed by NRC
KPA-1 RAS	179	160	125	114
KPA-2 EDG K-1 Relay	17	14	14	17
KPA-3 Problem Identification and Resolution	47	44	23	11
KPA-4 Human Performance	33	20	11	5
KPA-5 Engineering Programs	38	33	29	21
KPA-6 Quality of Equipment Evaluation	9	7	6	5

Brian Ramey

Department Leader
Nuclear Engineering



Palo Verde Nuclear Generating Station

SIIP Performance Indicators

Category	Q1-08			Q2-08			Q3-08			Q4-08		
	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Operator												
Engineer												
Site Programs and Processes												
Organization												

Strong Satisfaction
 Improvement Needed
 Critical Attention

August 2008

Recent RAS Action Plan Activities

- Assigned Initiative Lead and support team
- Reviewed previous RAS action plans
- Reviewed previous inspection reports
- Reviewed 95003 Inspection results
- Reviewed and assigned Focus Area Owners
- Reviewed SIIP/SIBP actions for better corrective actions
- Selected SIIP/SIBP actions/confirmed previous actions/wrote new actions
- Reviewed/revised performance indicators
- Evaluated existing/wrote new effectiveness reviews
- Challenge Boards completed
- Executive Review completed
- Revised CAL Submittal on 3/31/08
- May RAS Readiness Review for Focus Areas 1, 5 and 9
- August RAS Readiness Assessment for all Focus Areas

Site Operational Focus Indicator

CRS Aggregate Impact	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08
Operator Work Hours												
Operator Burdens	14	46	20	18	20	15	15	18	21	15		
HR Announcements												
CRDLs										30	31	
Long Term Tapouts	31	43	33	33	33	33	33	33	33	33	33	33
Fire Assemblies (FSCCRs)												
Temporary Modifications (T-Mods)	22	27							43	41	46	
Unplanned LCOs	11	14	15	18		13						
Corrective Maintenance Inventory					43	47						
Plant Electric Maintenance Inventory									153			
Window Color	Yellow	White	Yellow	White	Yellow	Yellow	White	White	Yellow	White		

Focus Area Action Status

Focus Area	Total CAL Actions	CAL Actions Inspected and Preliminarily Closed
Focus Area 6 – Limited Or Weak Operating Experience Program	26	13
Focus Area 7 – Limited Experience And Training	17	11
Focus Area 8 – Limited Resources	10	8
Focus Area 9 – Limited Nuclear Assurance Department Oversight	9	9
Focus Area 10 – Limited Procedural Guidance (DBM Writer's Guide)	16	6

RAS CAL Action Plan Summary

- **Total RAS CAL Actions = 179**
- **RAS CAL Actions through Closure Process = 125 (70%)**
 - RAS CAL Actions preliminarily closed by NRC = 114 (64%)
- **RAS CAL Actions Currently in Closure Process = 35**
- **RAS CAL Actions not yet Implemented = 19 (11%)**
 - 4 of these RAS CAL Actions to implement by Sept. 30
 - 11 of these RAS CAL Actions to implement by Dec. 31
 - 4 (2%) RAS CAL Actions remaining after Dec. 31

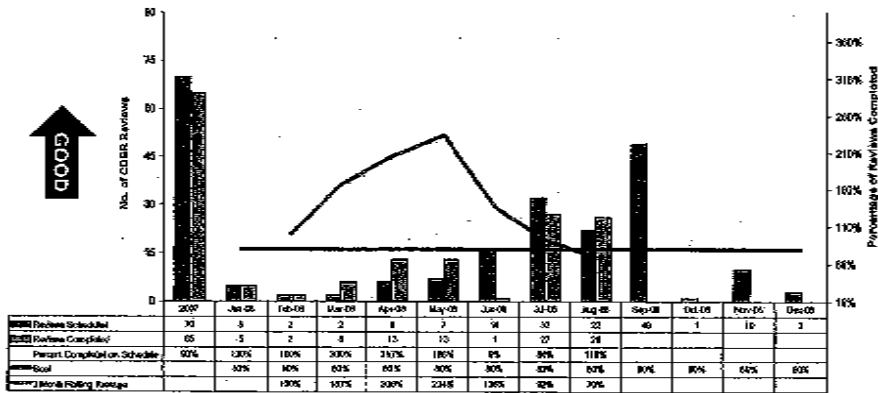
RAS SIP Performance Indicators

- **CAP Quality Index**
- **Operability Determination Quality**
- **Engineering Work Product Quality**
- **CDBR Project Schedule Adherence**
- **Quality of Resolution of CDBR Actions**
- **Engineering CRDR/CRAI Reduction**
- **Timeliness of Operating Experience Screening**

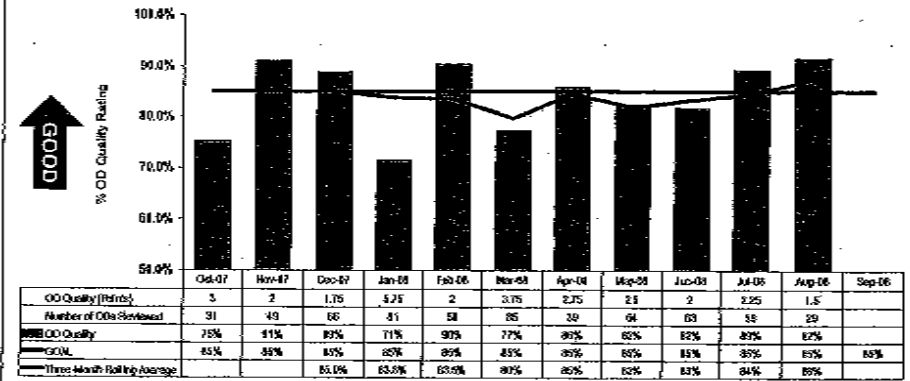
Focus Area Action Status

Focus Area	Total CAL Actions	CAL Actions Inspected and Preliminarily Closed
Focus Area 1 - Procedures Did Not Contain Necessary Requirements	14	14
Focus Area 2 – Lack Of Specific Provisions In The Licensing And Design Basis	21	11
Focus Area 3 – Lack Of Questioning Attitude And Technical Rigor Of Individuals / Operability Determinations	Part 1 – 21 Part 2 – 23	Part 1 – 14 Part 2 – 19
Focus Area 4 – Inadequate Communication Of Design Information	33	15
Focus Area 5 – Inadequate Problem Identification and Resolution	12	10

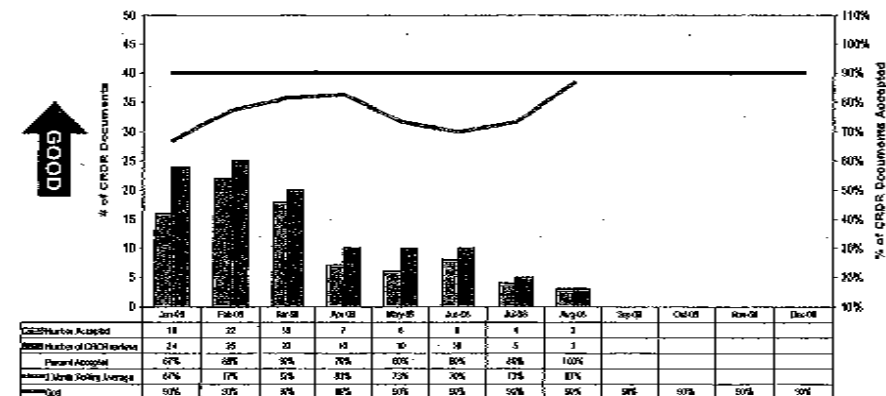
CDBR Project Schedule Adherence



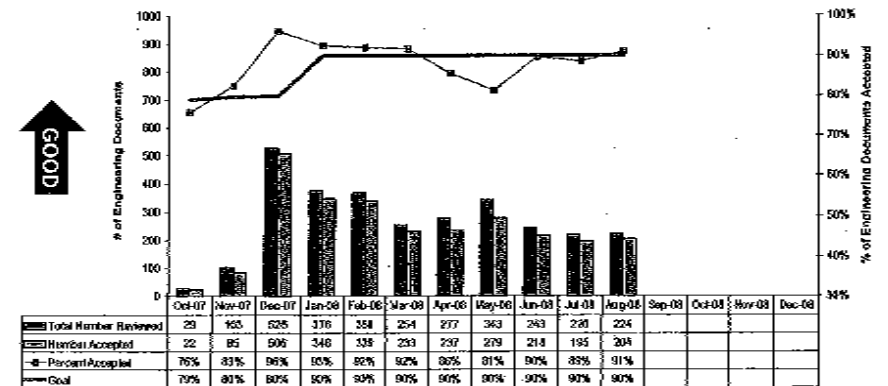
Operability Determination



Quality of Resolution of CDBR Related Actions



Engineering Work Product Quality



August RAS Readiness Assessment

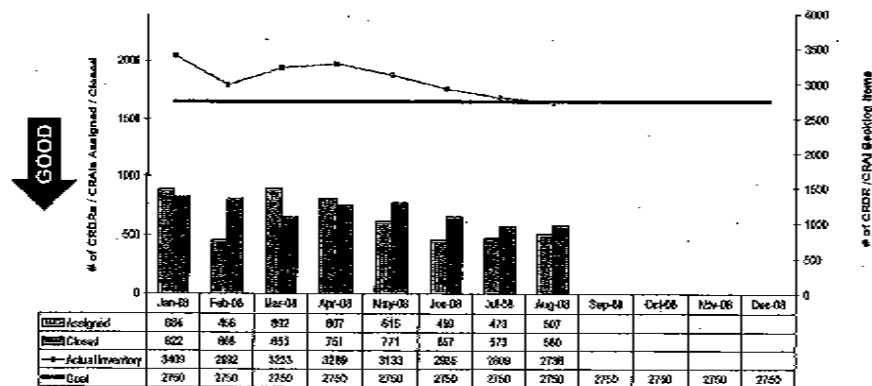
Positives

- Overall significant progress in the last year
- Detailed plans, good action progress, effectiveness reviews and closure documentation
- Good Senior Management engagement

Areas for Improvement

- Some legacy documentation does not meet today's standards requiring additional work
- Inconsistent use of Operating Experience in Maintenance
- Lessons learned from a recent industry gas voiding event require further review

Engineering CRDR/CRAI Reduction



Lou Cortopassi

Plant Manager

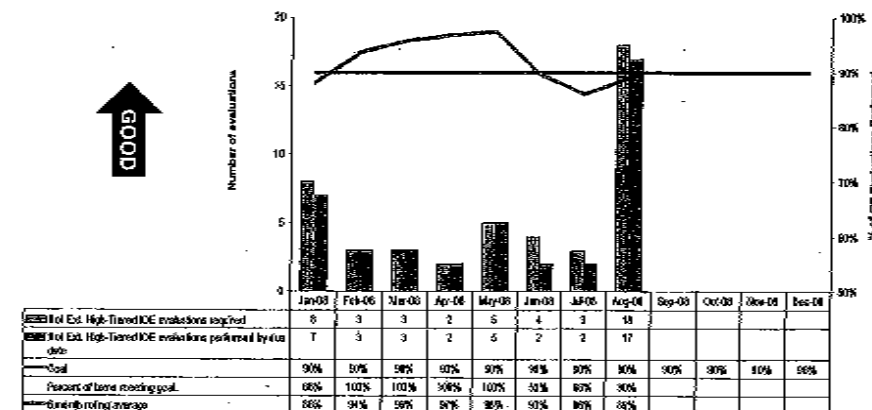
George Andrews

Director

Performance Improvement



Timeliness of Operating Experience Screening

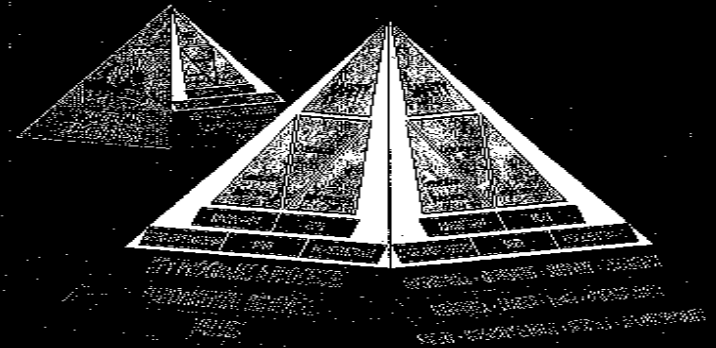


Problem Identification and Resolution

- **Performance Indicators**

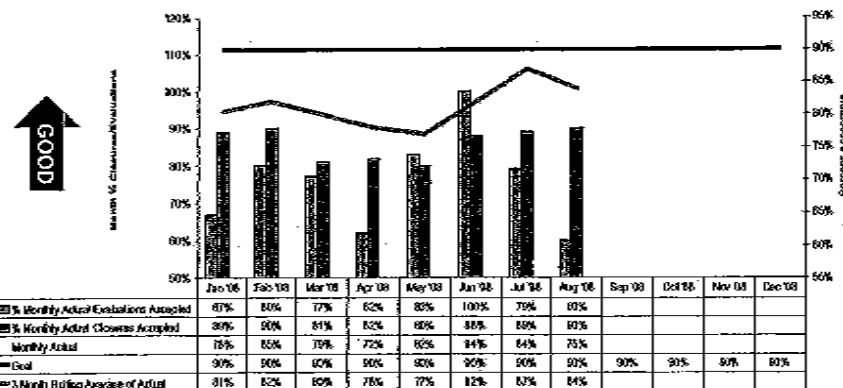
- Quality: Evaluations and Closures
- Timeliness: Evaluations
- Timeliness: Corrective Actions to Prevent Recurrence (CAPR)
- Inventory

Problem Identification and Resolution



Corrective Action Program (CAP) — The heart of our continuous improvement effort

CAP Quality Index



Problem Identification and Resolution

- **Culture**
- **Knowledge and Training**
- **Operating Experience**
- **Management Involvement**
- **Performance Feedback**

Major Actions Completed

- Revised and implemented *Standards & Expectations*, including Human Performance Fundamentals
- Implemented an Observation Program
- Established the advocate's role in trending process
- Developed and implemented graded approach for Human Performance tools

Bob Bennett

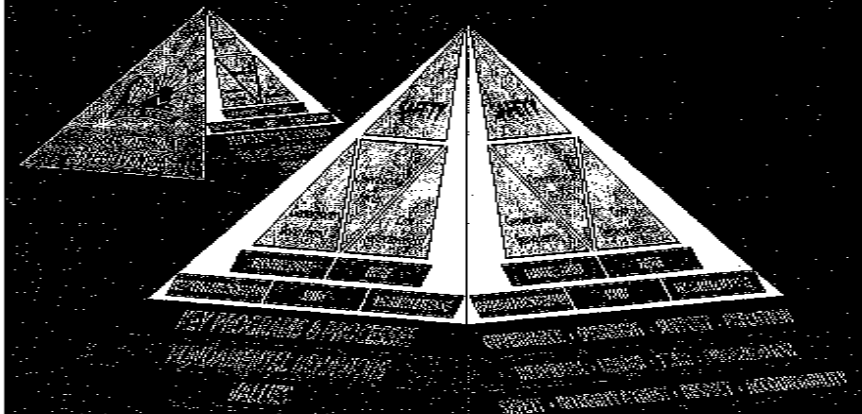
Vice President
Nuclear Operations



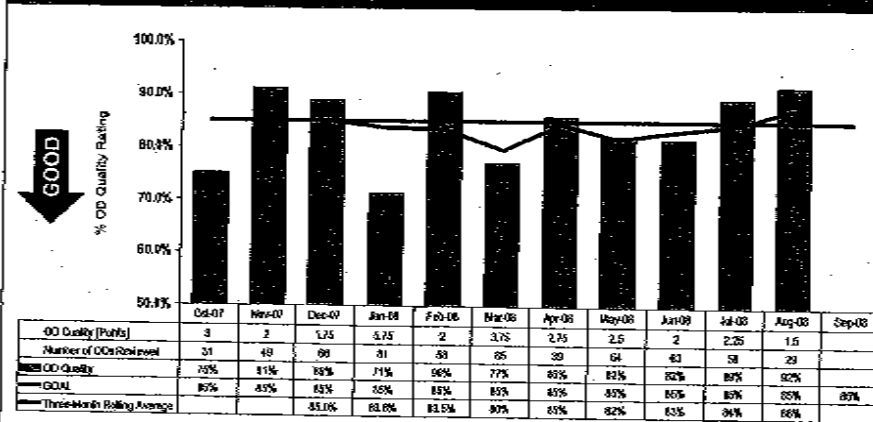
Major Actions Completed

- Completed Human Performance Tools Training utilizing Human Performance simulators and dynamic learning tools
- Issued Leadership Model
- Implemented training to improve Questioning Attitude and Technical Rigor

Leadership Model



Operability Determinations



Decision-making Corrective Actions

- **Routing Palo Verde Action Requests (PVARs) through Operations**
 - Operability/functionality assessment
- **Revised Operability Determination (OD) procedure**
 - Checklists
 - Extent of condition
 - Technical rigor
 - Validation of assumptions
- **Established daily challenge board for ODs**
- **Reviewed backlog of ODs for quality**

Cross-cutting Aspects

- **Decision-making**
 - Systematic process
 - Assumptions
- **Work control**
 - Planning of work
- **Work practices**
 - Human error prevention techniques
 - Procedure compliance

Decision-making Corrective Actions

- **OD Grading and Metrics**
- **Implemented Systematic Troubleshooting procedure**
- **Implemented Site-wide Operational Decision Making**
- **Conducted training for ODs and Troubleshooting**
- **Quarterly aggregate reviews of open ODs**
- **EMPHASIS: Shift Managers leading the station on ODs and Troubleshooting**

John Hesser

Vice President
Nuclear Engineering

Jim Holden

Director
Engineering Performance Improvement



Work Control and Work Practices Aspects

- For the aspects of **Planning Work, Human Error Prevention Techniques, and Procedure Compliance** the themes are:
 - Deviating from original work plan without resetting
 - Use of self-checking/verification practices
 - Relying on invalid or unverified assumptions

Engineering Performance Improvements

- **Staffing**
- **Technical Rigor**
- **Equipment Reliability/Operational Focus**
- **Engineering Programs**

Work Control and Work Practices Corrective Actions

- **Revised and implemented standards and expectations, including Human Performance Fundamentals**
- **Implemented an Observation Program**
- **Completed human performance tools training utilizing Human Performance simulators and dynamic learning tools**
- **Implemented training to improve Questioning Attitude and Technical Rigor**

Equipment Reliability / Operational Focus

- **Engineering support of the Top Ten Equipment List**
 - Focus and prioritization of Engineering resources
- **Engineering-Fix-It-Now**
 - First responders to emergent equipment issues
 - Allows Engineering to focus on core business
- **System Health Recovery Improvement**
 - Strengthened criteria
 - Upgraded recovery plan
 - Integrated into Work Management process
 - Plant Health Committee oversight
- **Strong focus on Major and Minor Modifications**

Staffing

- **Strengthened Leadership and Technical Teams**
 - Hired 13 and promoted 19 new leaders
 - Hired 87 engineers and 14 technical staff
 - Lost 21 engineers via attrition
- **Staffing Focus**
 - Critical knowledge and skills retention/recovery
 - Over-complement for anticipated attrition
 - Tools and processes to transfer knowledge
 - Future staff
 - Legacy Program in place for four years
 - Key focus on initial qualification and training

Equipment Reliability / Operational Focus

- **15 Minor Modifications have been designed and 12 more in design phase.**
- **Minor modifications installed:**
 - Diesel generator K-1 relay replacement
 - Diesel generator Woodward governor replacement
 - Sight glass replacement for condensate demineralizer vessels

Improved Technical Rigor

- **Focused on Operability Determinations (OD) and Troubleshooting Plans**
- **Implemented guidelines and training for use of Engineering Human Performance tools**
- **Established the Engineering Product Review Board (EPRB)**
- **Implemented Engineering leader workplace Observation Program**
- **Improving process for technical response quality**
- **Monitoring through oversight processes**
 - Management Review Meeting (MRM)
 - Engineering Product Review Board (EPRB)
 - Engineering Management Review Meeting (E-MRM)

Randy Edington

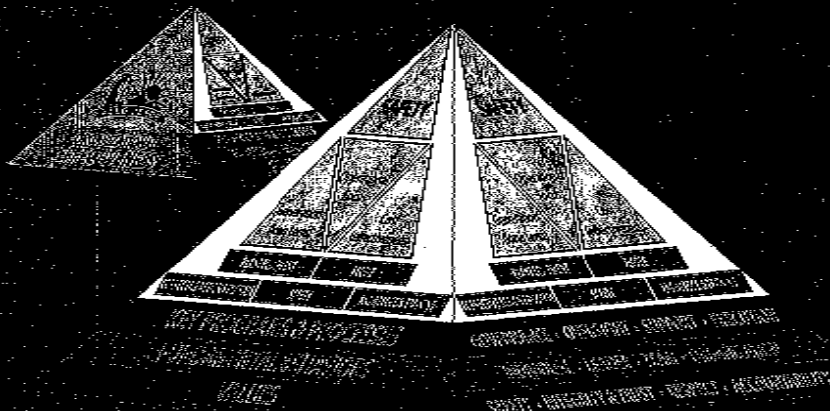
Executive Vice President and
Chief Nuclear Officer



Engineering Programs

- Established Engineering Programs Department
- Assigned dedicated program owners with qualification requirements
- Implemented program maintenance, self-assessments and benchmarking expectations
- Completed 12 program self-assessments and/or benchmarks
 - Industry peer participation
- Program metrics reviewed by station oversight process
 - Site Integrated Improvement Plan (SIIP) Metrics
 - Station Management Review Meeting
 - Plant Health Committee

Leadership Model



Engineering Programs

- Revising program health metrics based on industry best practice
- Nine programs show improvement
 - Examples:
 - Maintenance Rule
 - Boric Acid Corrosion Control
 - Air-operated Valves
 - In-service Inspection
 - Pump and Valve In-service Testing
 - Surveillance Testing