



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

50-315/316

April 13, 1999

Mr. Robert P. Powers
Senior Vice President
Nuclear Generation Group
American Electric Power Company
500 Circle Drive
Buchanan, MI 49107-1395

SUBJECT: SUMMARY OF THE FEBRUARY 11, 1999, PUBLIC MEETING TO DISCUSS
THE STATUS OF DONALD C. COOK NUCLEAR PLANT RESTART ACTIVITIES

Dear Mr. Powers:

On February 11, 1999, staff of the Office of Nuclear Reactor Regulation held a public meeting at U.S. Nuclear Regulatory Commission (NRC) headquarters in Rockville, Maryland, in accordance with the NRC's Inspection Manual Chapter 0350 associated with the restart of Donald C. Cook Nuclear Plant, Units 1 and 2 (DC Cook). Formal presentations were made by American Electric Power (AEP) staff. A copy of the slides used by AEP staff is provided as Enclosure 1. Enclosure 2 is a list of attendees for the meeting.

The public 0350 meetings with the licensee and NRC staff are designed to provide a mechanism for review of AEP's corrective action program and to ensure that it addresses identified problems and weaknesses; to periodically provide assessment of licensee performance and corrective actions to NRC management; and to allow the public to oversee the process. High level management from the NRC's Office of Nuclear Reactor Regulation and from AEP participated in the meeting.

The AEP staff presentations outlined restart activities for DC Cook. Following introductions and updates, Michael Rencheck, Vice President of Nuclear Engineering, outlined the new expanded system readiness reviews (ESRRs), which are more comprehensive than the initial reviews performed by AEP. Paul Barrett, Director of Performance Assurance (PA), explained the process by which PA would independently review the engineering team's ESRR efforts to ensure rigorous oversight activities. Dave Kunsemiller, Director of Regulatory Affairs, discussed the regulatory readiness plan to ensure all licensing issues are resolved prior to restart. John Sampson, former Site Vice President, gave a presentation on organizational readiness and restart milestones.

AEP staff did not provide any expected dates for restart of either unit, nor did they identify which unit AEP would attempt to bring online first. AEP is scheduled to complete the ESRR for DC Cook by the end of May 1999, and provide a revised restart schedule on June 1, 1999. NRC staff stressed the importance of following through with the initiatives outlined in the presentations and using lessons learned from the past reviews. AEP staff accepted NRC's challenge to show results in implementing their corrective action program.

9904190070 990413
PDR ADOCK 05000315
P PDR

DF011/
NRC FILE CENTER COPY

۱۰۰

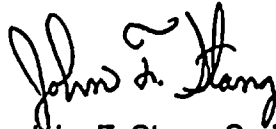
The Importance of the

Robert P. Powers

-2-

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC's Public Document Room.

Sincerely,



John F. Stang, Sr. Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-315, 50-316
License Nos. DPR-58, DPR-74

Enclosures: 1. AEP slide presentation
2. List of attendees

cc w/encls: See next page

Robert P. Powers

-2-

April 13, 1999

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC's Public Document Room.

Sincerely,

Original signed by:

John F. Stang, Sr. Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-315, 50-316
License Nos. DPR-58, DPR-74

Enclosures: 1. AEP slide presentation
2. List of attendees

cc w/encls: See next page

Distribution:

Hard Copy (w/ encls):

Docket File PUBLIC
PD3-3R/F J. Stang
OGC ACRS
C. Sochor J. Caldwell, RIII

E-mail:

SJC NRC Participants
JAZ GFD
EEB RPZ
COT T. Hiltz (TGH)
GEG RIII, DRS (2)
RIII PRR JFS2

DOCUMENT NAME: 2-11SUM.WPD

OFFICE	PGEB E	LA:PDIII-1 E	PM:PDIII-1 E	RIII	PD:PDIII
NAME	CSochor ^{ASS}	EBarnhill EPR	JStang		GThomas
DATE	4/7/99	4/6/99 4/13/99	4/13/99	4/1/99	4/1/99

OFFICIAL RECORD COPY

Robert P. Powers

-2-

April 13, 1999

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC's Public Document Room.

Sincerely,

Original signed by:

John F. Stang, Sr. Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-315, 50-316
License Nos. DPR-58, DPR-74

Enclosures: 1. AEP slide presentation
2. List of attendees

cc w/encs: See next page

Distribution:

Hard Copy (w/ encs):

Docket File PUBLIC
PD3-3R/F J. Stang
OGC ACRS
C. Sochor J. Caldwell, RIII

E-mail:

SJC NRC Participants
JAZ GFD
EEB RPZ
COT T. Hiltz (TGH)
GEG RIII, DRS (2)
RIII PRR JFS2

DOCUMENT NAME: 2-11SUM.WPD

OFFICE	PGEB E	LA:PDIII-1 E	PM:PDIII-1 E	RIII	PD:PDIII
NAME	CSochor ^{SS}	EBarnhill ^{EP}	JStang		GThomas
DATE	4/7/99	4/6/99 4/13/99	4/13/99	4/ /99	4/13/99

OFFICIAL RECORD COPY

Robert P. Powers
Indiana Michigan Power Company

Donald C. Cook Nuclear Plant
Units 1 and 2

cc:

Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
801 Warrenville Road
Lisle, IL 60532-4351

Attorney General
Department of Attorney General
525 West Ottawa Street
Lansing, MI 48913

Township Supervisor
Lake Township Hall
P.O. Box 818
Bridgman, MI 49106

U.S. Nuclear Regulatory Commission
Resident Inspector's Office
7700 Red Arrow Highway
Stevensville, MI 49127

Jeremy J. Euto, Esquire
Indiana Michigan Power Company
Nuclear Generation Group
500 Circle Drive
Buchanan, MI 49107

Mayor, City of Bridgman
P.O. Box 366
Bridgman, MI 49106

Special Assistant to the Governor
Room 1 - State Capitol
Lansing, MI 48909

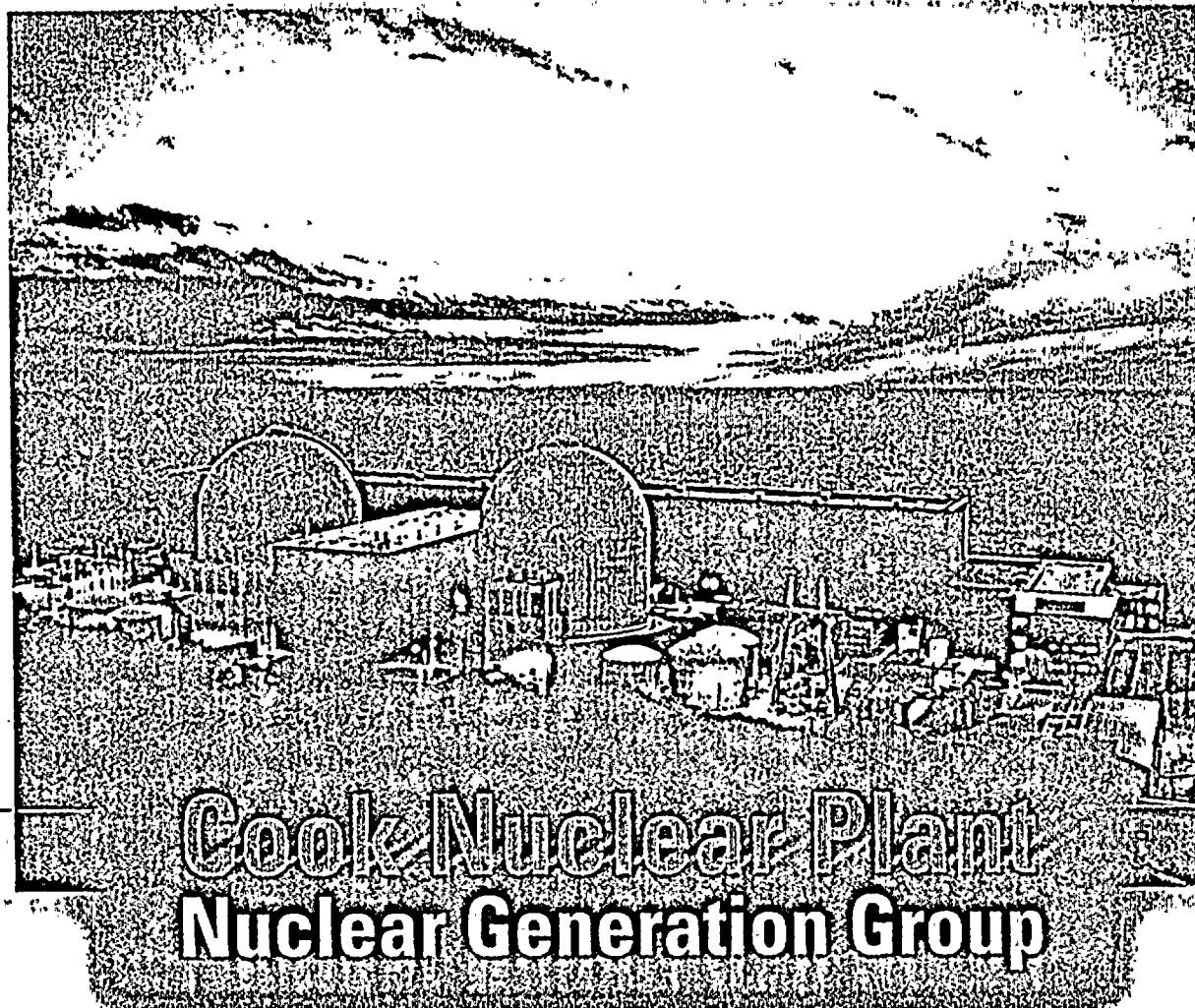
Drinking Water and Radiological
Protection Division
Michigan Department of
Environmental Quality
3423 N. Martin Luther King Jr Blvd
P.O. Box 30630 CPH Mailroom
Lansing, MI 48909-8130

David F. Kunsemiller
Director, Regulatory Affairs
Indiana Michigan Power Company
Nuclear Generation Group
500 Circle Drive
Buchanan, MI 49107

David A. Lochbaum
Union of Concerned Scientists
1616 P Street NW, Suite 310
Washington, DC 20036-1495

A. Christopher Bakken, Site Vice President
Indiana Michigan Power Company
Nuclear Generation Group
One Cook Place
Bridgman, MI 49106

Michael W. Rencheck
Vice President, Nuclear Engineering
Indiana Michigan Power Company
Nuclear Generation Group
500 Circle Drive
Buchanan, MI 49107



Restart Meeting

February 11, 1999

AEP AMERICAN
ELECTRIC
POWER

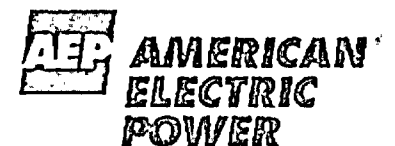
AEP: America's Energy Partner™

Agenda

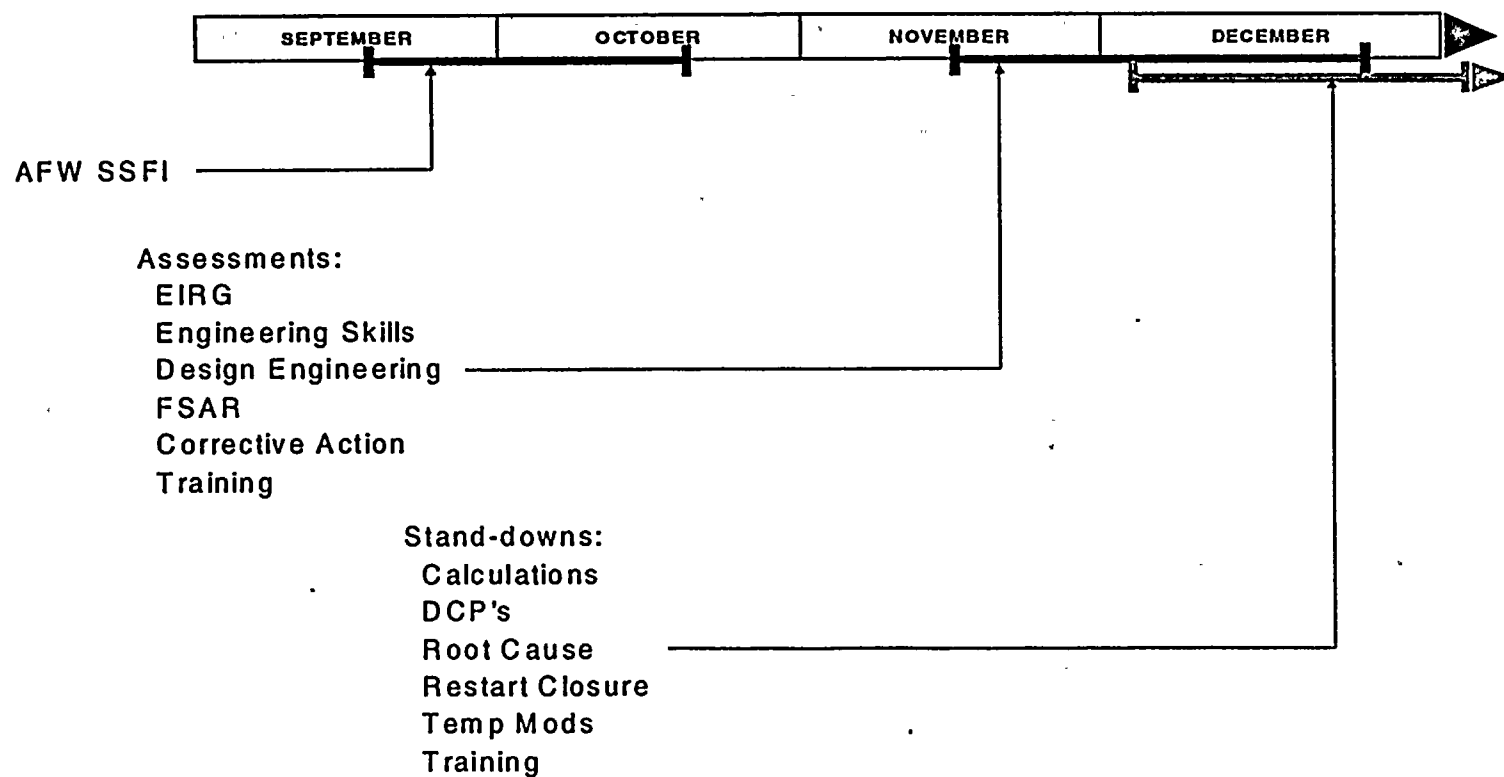
<u>Presentations</u>	<u>Speaker</u>	<u>Page</u>
Introduction / Update	R. Powers	1
Expanded System Readiness Reviews	M. Rencheck	7
PA Oversight	P. Barrett	34
Regulatory Readiness	D. Kunsemiller	42
Organizational Readiness	J. Sampson	46
Closing Remarks	R. Powers	52

Introduction / Update

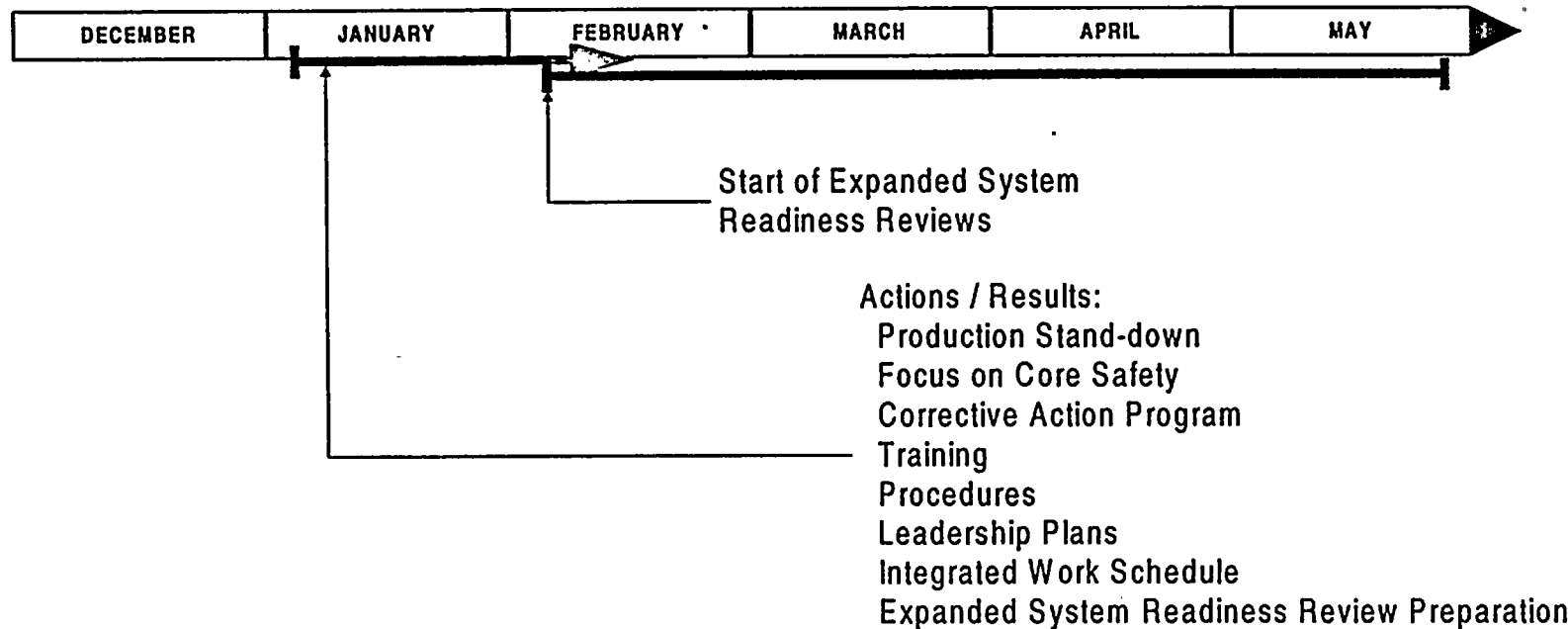
Bob Powers
Senior Vice President



Why Expand Discovery?



Expanding Discovery

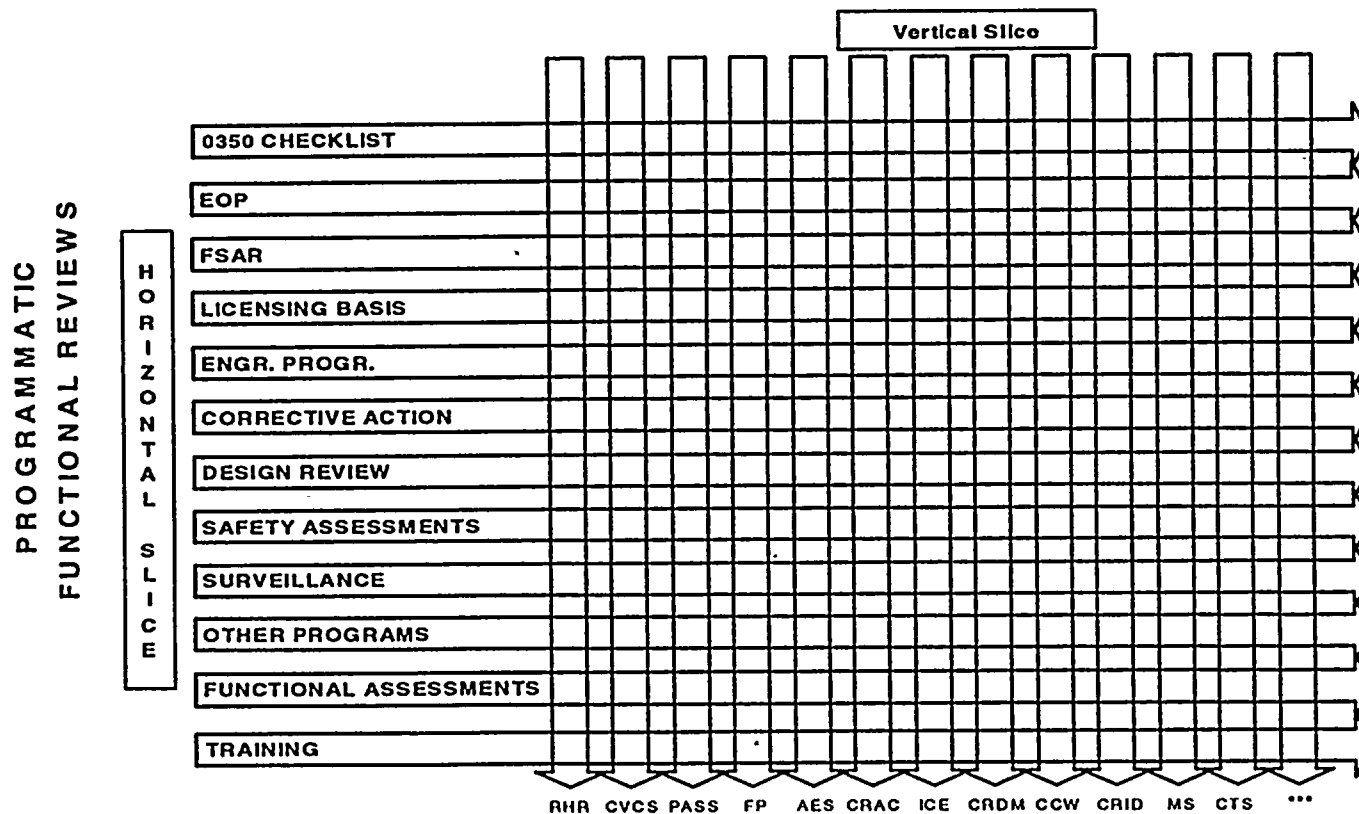


Keys to Success

- Experienced People
- Industry Proven Process
- Strong Oversight

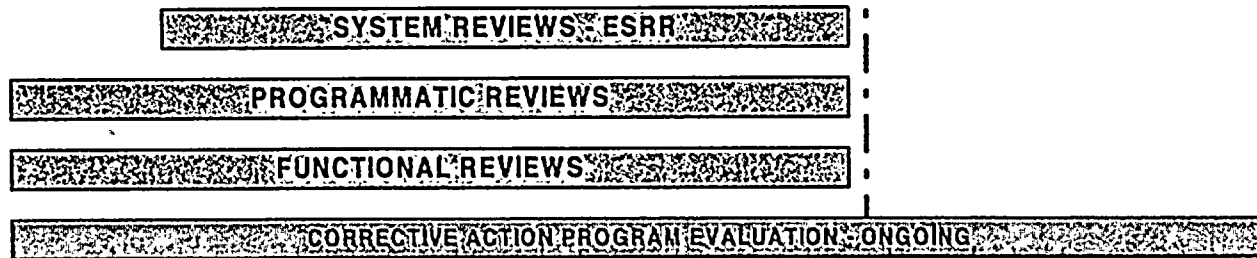
Comprehensive Discovery

SYSTEM READINESS REVIEWS



Discovery Plan

JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUN			RESTART
---------	----------	-------	-------	-----	-----	--	--	---------



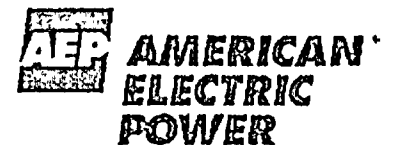
Publish Restart
Schedule 6/1

INTEGRATED SCHEDULE DEVELOPMENT	RESTART SCHEDULE
---------------------------------	------------------

INTEGRATED SCHEDULE MILESTONE

Nuclear Engineering

Mike Rencheck
Vice President



What Have We Learned?

- Integrated Discovery Efforts
- Comprehensive Documentation Reviews
- Design and Licensing Basis Reviews
- Industry Operating Experience
- Multidisciplined Teams
- Aggregate Impact
- Oversight

Reasonable Assurance Because ...

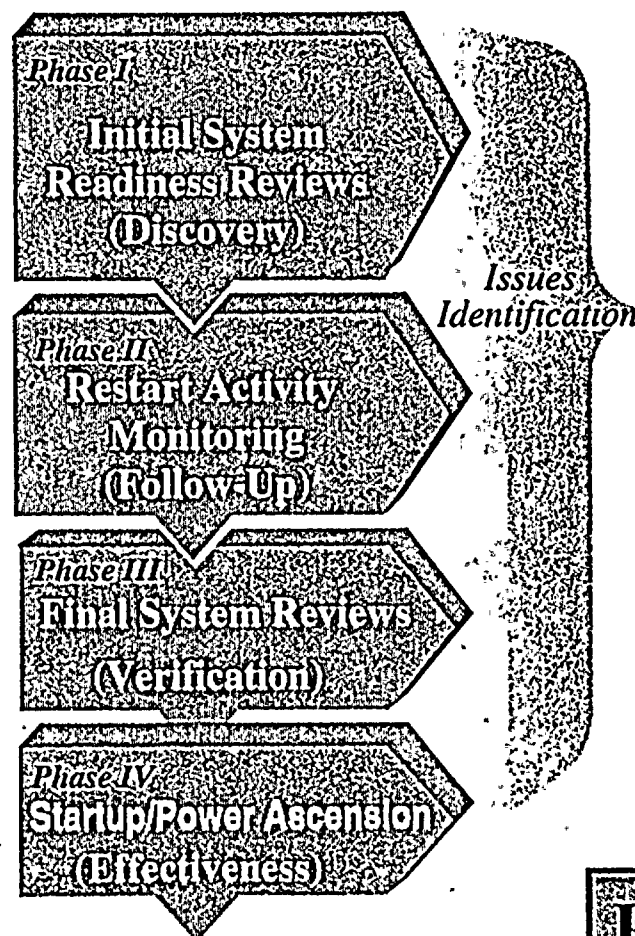
- Industry Proven Process
 - Expanded System Readiness Reviews
 - Design and Licensing Basis Reviews
- Industry Proven Methods
 - Vertical Slice
 - Horizontal Slice
- Experienced People
- Comprehensive Documentation
- Rigorous Oversight

Reasonable Assurance

- Key Systems Are Capable of Meeting Their Safety and Accident Mitigation Functions.

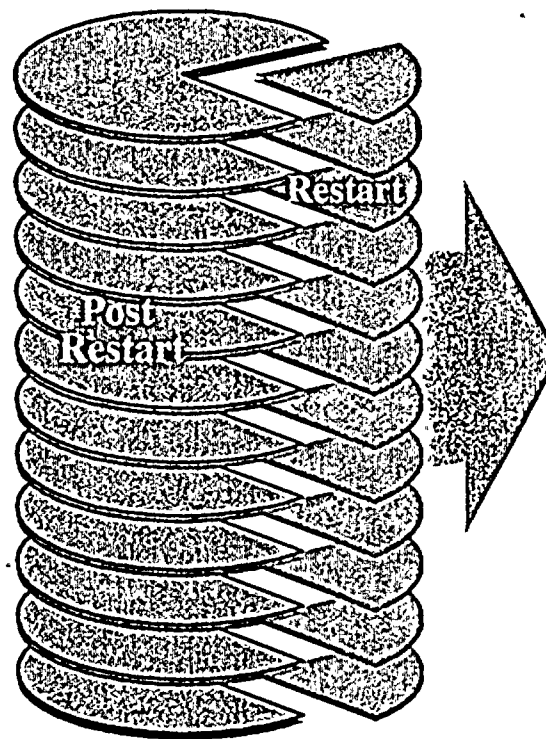
Overall Plan

SYSTEM READINESS REVIEW PROGRAM.



Plant Operation

SYSTEM INDEX DATABASE



RESTART SCHEDULE

Systems/Mode

Mode 5	Mode 4	Mode 3	Mode 2	Mode 1
☐	☐	☐	☐	☐
☐	☐	☐	☐	
☐	☐	☐		
☐	☐			
☐				
☐				

P
O
W
E
R

O
P
E
R
A
T
I
O
N

REASONABLE ASSURANCE

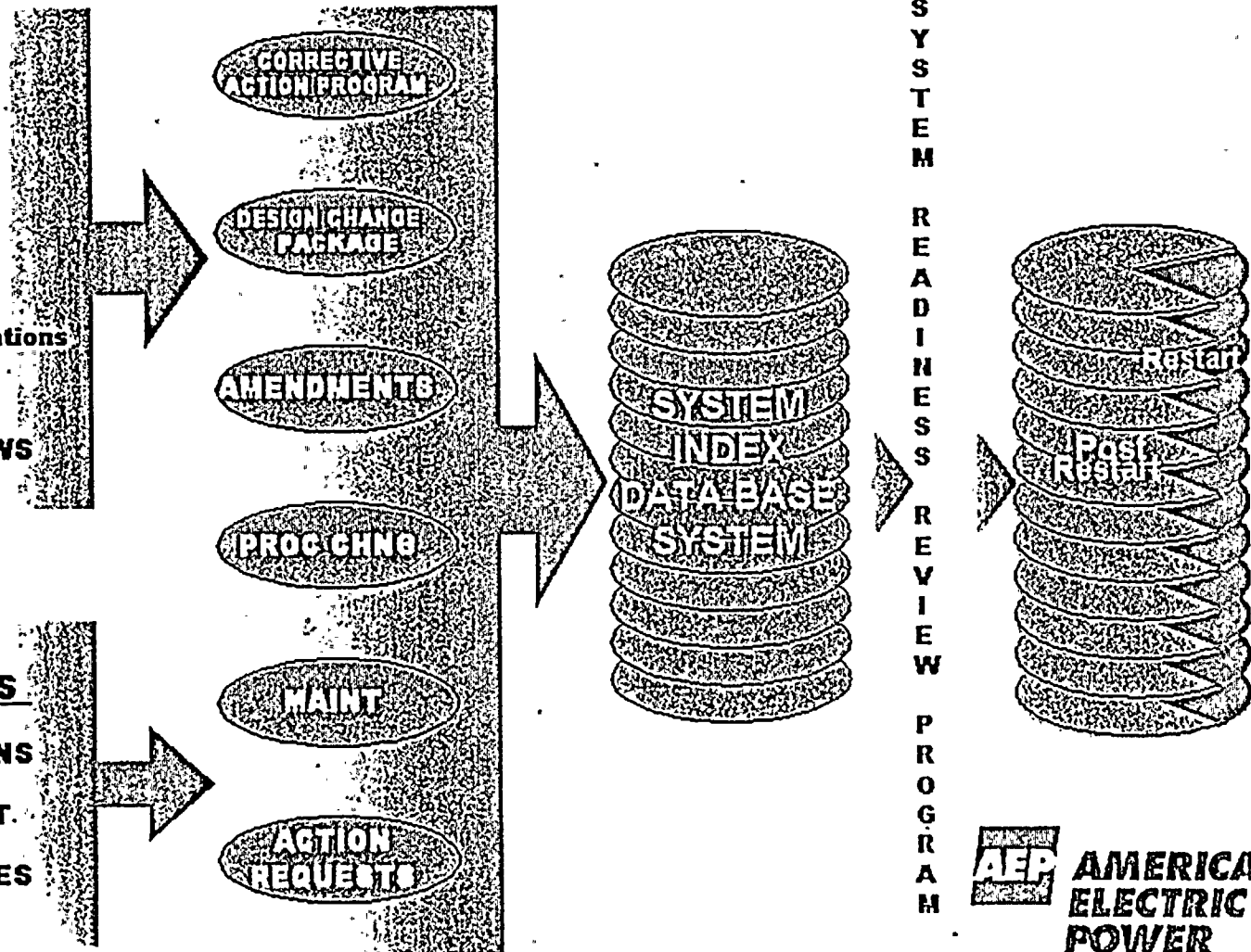
Systems Index Database

NEW METHODS

- **SYSTEM REVIEWS**
 - Operating Experience
 - Condition Reports
 - Safety Evaluations
 - Operability Determinations
- **PROGRAM REVIEWS**
- **FUNCTIONAL REVIEWS**

EXISTING METHODS

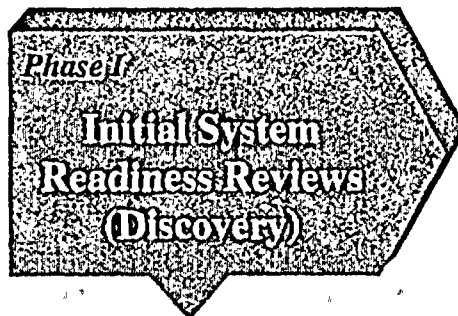
- **CORRECTIVE ACTIONS**
- **WORK MANAGEMENT**
- **SYSTEMS/PROCESSES**



**AMERICAN
ELECTRIC
POWER**

Comprehensive Assessment

SYSTEM READINESS REVIEW PROGRAM



Phase II

Phase III

Phase IV

Phase V

- Team Formation
- Training
- Review Design Basis / Licensing Basis
- Define System Attributes
- Set Scope of Review
- Review Condition Doc.
- Perform Assessment
- Perform Walkdown
- Assessment / Walkdown Documentation
- Assessment Database
- Initiate Actions
- Evaluate Extent of Condition
- Document Results
- SIDS Database
- Determine Restart Work
- Prepare Initial System Readiness Report
 - Evaluate Extent of Condition
 - Functional and Programmatic Issues

Assessment Database

- Provides Structured Approach to Perform ESRR Assessments
- Provides Documentation of ESRR Discovery Process
- Facilitates Identification and Documentation of Plant-wide Issues
- Tracks ESRR Progress

Vertical Slice Review

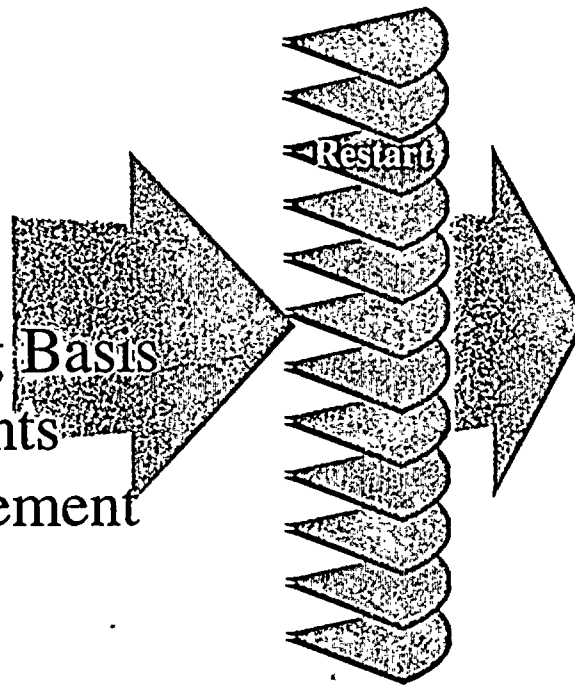
System Assessment Matrix

ATTRIBUTE NUMBER		ASSESSMENT ATTRIBUTES		MAJOR TOPICS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
				DESIGN BASIS											LICENSING DOCUMENTS				OPERATIONS			MAINTENANCE			SURV.		PHYSICAL PLANT			PROGRAMS, PROCESS & PROCEDURES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
				Electrical Cals / Analysis				I & C Cals / Analysis																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

Restart Work Scope

Restart Criteria

- Nuclear Safety
- Operability
- Design Basis
- License and Licensing Basis
- Licensing Commitments
- Configuration Management
- Reliability
- Post Restart Issues

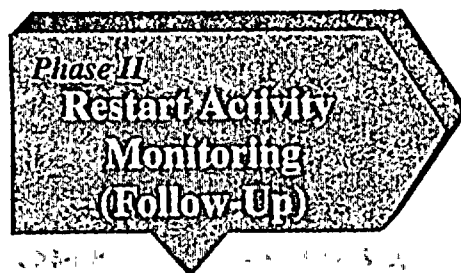


Systems/Mode					POWER OPERATION
Mode 5	Mode 4	Mode 3	Mode 2	Mode 1	
☐	☐	☐	☐	☐	
☐	☐	☐	☐		
☐	☐	☐			
☐	☐				
☐	☐				
☐					

Restart Work Scheduled/Completed

SYSTEM READINESS REVIEW PROGRAM

Phase I



Phase III

Phase IV

Plant Operation

- Review Ongoing Corrective Actions
- Identify and Scope Emergent Actions
- Schedule Restart Work
- Intrusive Examination of Field Work
- Manage through Performance Indicators and Priorities
- Update SIDS Database
- Initiate System Test Plans

Design and Licensing Basis Established

SYSTEM READINESS REVIEW PROGRAM

Phase I

- Final Restart Work Closure
- Final System Readiness Reviews
- Final System Walkdowns
- Final System Readiness Report
- Final System Test Plans
- Emergent Work Management
- Update SIDS Database

Phase II

Phase III

Final System Reviews
(Verification)

Phase IV

Plant Operation

RELEASED FOR PUBLIC USE

Reasonable Assurance - Safe Operation

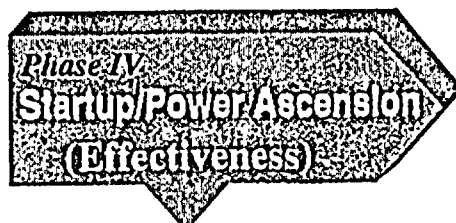
SYSTEM READINESS REVIEW PROGRAM

Phase I

- Emergent Work Prior to Affirmation
- Readiness Affirmation
- Work Closure
- Test Plans
- Startup Testing
- Emergent Work After Affirmation
- Emergent Work Management
- Update SIDS Database

Phase II

Phase III



Plant Operation

REASONABLE ASSURANCE

Implementation

- Preparation
- System Selection
- Mobilize People
- Schedule
- Oversight

Preparations

• Technical Training

— 1st Week (System Manager)

- Human Error Reduction Techniques
- Design and Licensing Basis
- 50.59 Screens and Evaluations
- Operability Determinations

— 3rd Week (System Team)

- System Readiness Review Database Overview
- Corrective Action Program
- Communication - Elevating Issues to Management
- Causal Analysis
- Expanded System Readiness Review Process

— 2nd Week (System Manager)

- Systems Self Study
- INPO Database/NRC Web Page

— 4th Week (System Team)

- PRA/Maintenance Rule
- Environmental Qualification
- EOP's
- ISI / IST
- FSAR
- HELB
- GL's
- Fundamentals

Preparations (Cont.)

● Documentation

— Design Basis

- P&IDs Elementary and One Line Diagrams
- DBDs and Associated Notebooks
- Calculations
- Modifications
- Safety Evaluations and Screenings
- TMODs
- Component Evaluations
- Design Change Determinations

— Work Management

- Work Orders
- Condition Reports
- Technical Memo's
- Operability Determinations
- Action Requests
- Procedure Changes

— License Basis

- UFSAR, FSAR & SER Including Amendments
- General Design Criteria and FSAR Q&A
- Licensing History Books
- Commitment Database
- Reg Guides
- LERs and NOV's
- Tech Specs and Bases
- NRC Open Item List

Preparations (Cont.)

- Information Management

- System Indexed Database System
- Assessment Database
- Electronic Corrective Action Program
- EPIX (INPO Database)
- NRC Web Page
- Folio Infobases
 - Computer-Aided Regulatory Library
 - NRC Correspondence
 - Safety Review Memos
 - Reportability Reviews
 - Operability Reviews
 - FSAR
 - Safety Evaluation Reports
- Professional Society Web Sites (ASME, ANSI, etc.)

System Readiness Teams

- 21 Teams of 96 People
- Composition
 - System Engineers
 - Operations
 - Maintenance Representatives
 - Licensing
 - Design Engineering
 - Industry Expertise

Team Experience

- ~ 2000 Years Total Experience
- ~ 95 Years / Team
- Broad Knowledge Base

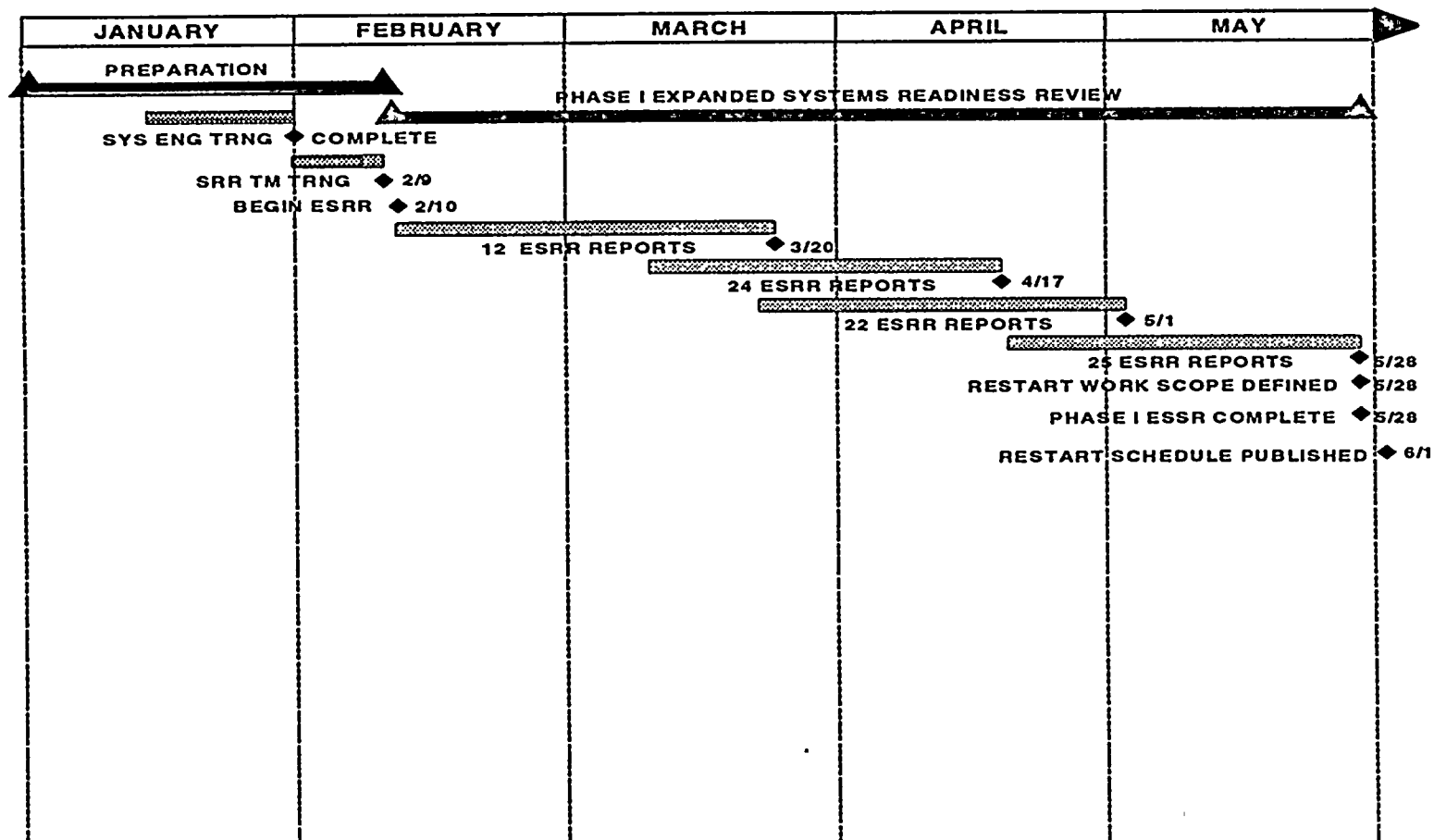
Level 1 Systems Scope

- Classification
 - Maintenance Rule Risk Significant Systems
 - Support Safe Shutdown
 - Attendant/Support Systems
 - Corrective Maintenance Considerations
- 39 Reviews of 56 Systems

Level 2 Systems Scope

- Classification
 - All Remaining Systems Except the Security System
- 44 Reviews of 71 Systems

Phase 1 Schedule



Restart Schedule

- Discovery Complete By 5/28
- Restart Work Scope Defined - 5/28
- Integrated Restart Schedule Published - 6/1

Oversight - SRRB Composition

- Membership

- Chaired By Director, Plant Engineering
- VP, Nuclear Engineering
- Key Engineering Managers
- Operations Representative
- Westinghouse (NSSS) Representative
- External Consultants

Oversight - SRRB Experience

- Multi-disciplined Involvement
- Proven Individuals From Past Assessments
 - 22 Years Average Nuclear Experience
 - 6 PE
 - 6 SRO (2 Licensed)

Oversight - SRRB Charter

- System Based, Multi-disciplined, Technical Review
- Ensure Consistent Application Of Restart Criteria
- Reasonable Assurance Of Safe, Reliable Startup and Achieve Safe, Reliable, and Efficient Post Startup Operating Cycle
- Mentoring Of Organization

ESRR Oversight

Preparation

Phase I
Initial ESRR

Phase II
Restart Activity
Monitoring

Phase III
Final ESRR

Phase IV
Startup and Power
Ascension

CONTINUOUS AEP Oversight by System Engineering Managers/Supervisors

- Staffing •
- Training •

- System Attributes •
- ISRR Report •

- Restart Items •
- Restart Work •

- Final SRR Report •
- Integrated SRR Report •

- Readiness Affirmations •

CONTINUOUS AEP Oversight by System Readiness Review Board (SRRB)

- Procedures •

- System Attributes •
- ISRR Report •

- Restart Items •
- Restart Work •

- Final SRR Report •
- Integrated SRR Report •
- Test Plans •

- Readiness Affirmations •

CONTINUOUS AEP Oversight by Plant Nuclear Safety Review Committee (PNSRC)

- Procedures •

- ISRR Report •

- Emergent Items •
- Restart Work •

- Final SRR Report •
- Integrated SRR Report •
- Test Plans •

- Readiness Affirmations •

Independent Assessments by ISRG, NSDRC, and Third Parties

Continuous AEP Oversight by Performance Assurance (PA)

- Procedures •

- Training •

- System Readiness Validations •
- Vertical Slice Four Systems •
- Horizontal Slice for Generic and Programmatic •

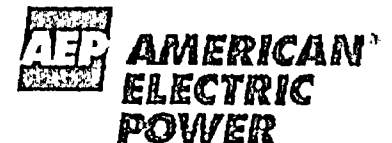
NRC Oversight

Oversight of System Readiness

Paul Barrett

Director

Performance Assurance



Plan

- Methodology
- Team Composition
- Schedule

Vertical Slice

- 4 Assessments By Two Teams
- Multi-disciplined Focus
- Criteria For Selection
 - PRA Risk
 - Maintenance
- First Two Systems - CCW, ESW
- Selected Active and Passive Components

Vertical Areas To Be Assessed

- Design And Configuration Control
- Operations
- Maintenance
- Surveillance Testing

Horizontal Assessment

- Assessment By Third Team
 - Consistent ESRR Procedure Implementation
 - Generic Implication Review

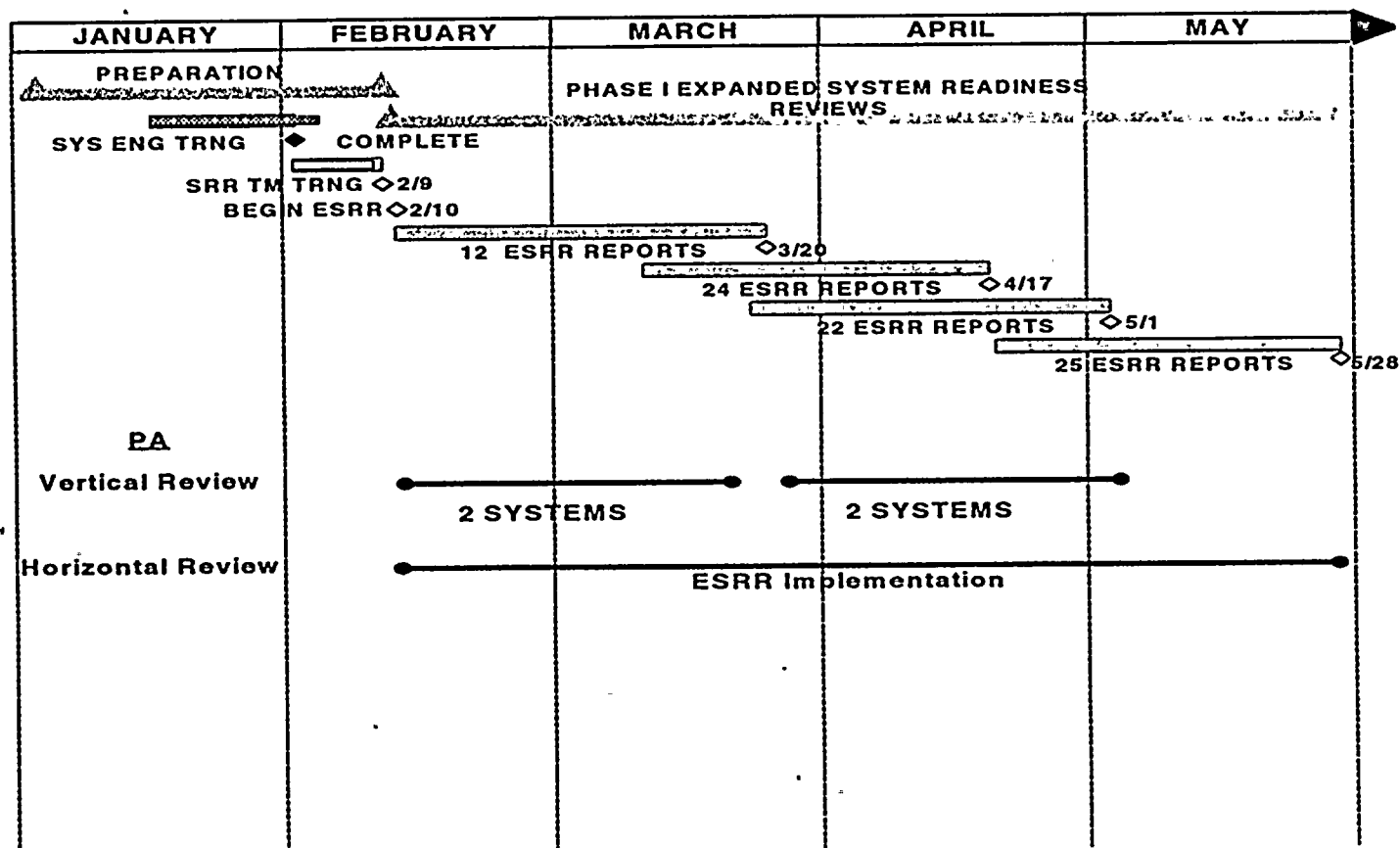
Team Experience

- 3 Teams Totaling 15 People
- Over 300 Years of Combined Industry Experience
- Over 20 SSFI Type Inspections
- 6 Registered Professional Engineers
- 4 SRO / RO Licenses / Certificates

Team Members Qualifications

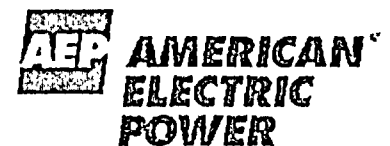
POSITION	NAME	HIGHLIGHTS
Team leader	Bob Kalinowski AEP	20 years experience (8 auditing), PE, participated in D.C. Cook CTS SSFI, SWSOPI, and SBICI, Certified Lead Auditor, BSME. Team leader for the 1998 AFW SSFI.
Team Leader	Mike Mierau AEP	22 years experience, former STA supervisor, former SRO, BSME. Participated in 1998 AFW SSFI.
Engineer	Paul Beinecke DE&S	15 years experience, PE, performed 2 SSFIs, 1 SSEI, 1 SWSOPI, and 2 A/E inspections for utilities, BSME. Participated in 1998 AFW SSFI.
Engineer	Joe Panchison DE&S	28 years experience, PE, 3 SSEIs of other utilities, BSME. Participated in 1998 CTS SSFI.
Engineer	Walter Marcis	16 years experience, PE, BSEE.
Engineer	Randy Huey Martin-Sigmon	32 years experience, previous SRO certification, former NRC manager, BSNE.
Maintenance	Gerald Stein Martin-Sigmon	25 years experience, previous SRO certification, BSME
Surveillance & Testing	Dennis Myers DE&S	22 years experience, former NRC resident, 2 SSFI, BSME. Participated in 1998 AFW SSFI.
Operations	Mark Palen AEP	20 years experience, RO license.

PA Oversight



Regulatory Readiness

Dave Kunsemiller
Director
Regulatory Affairs



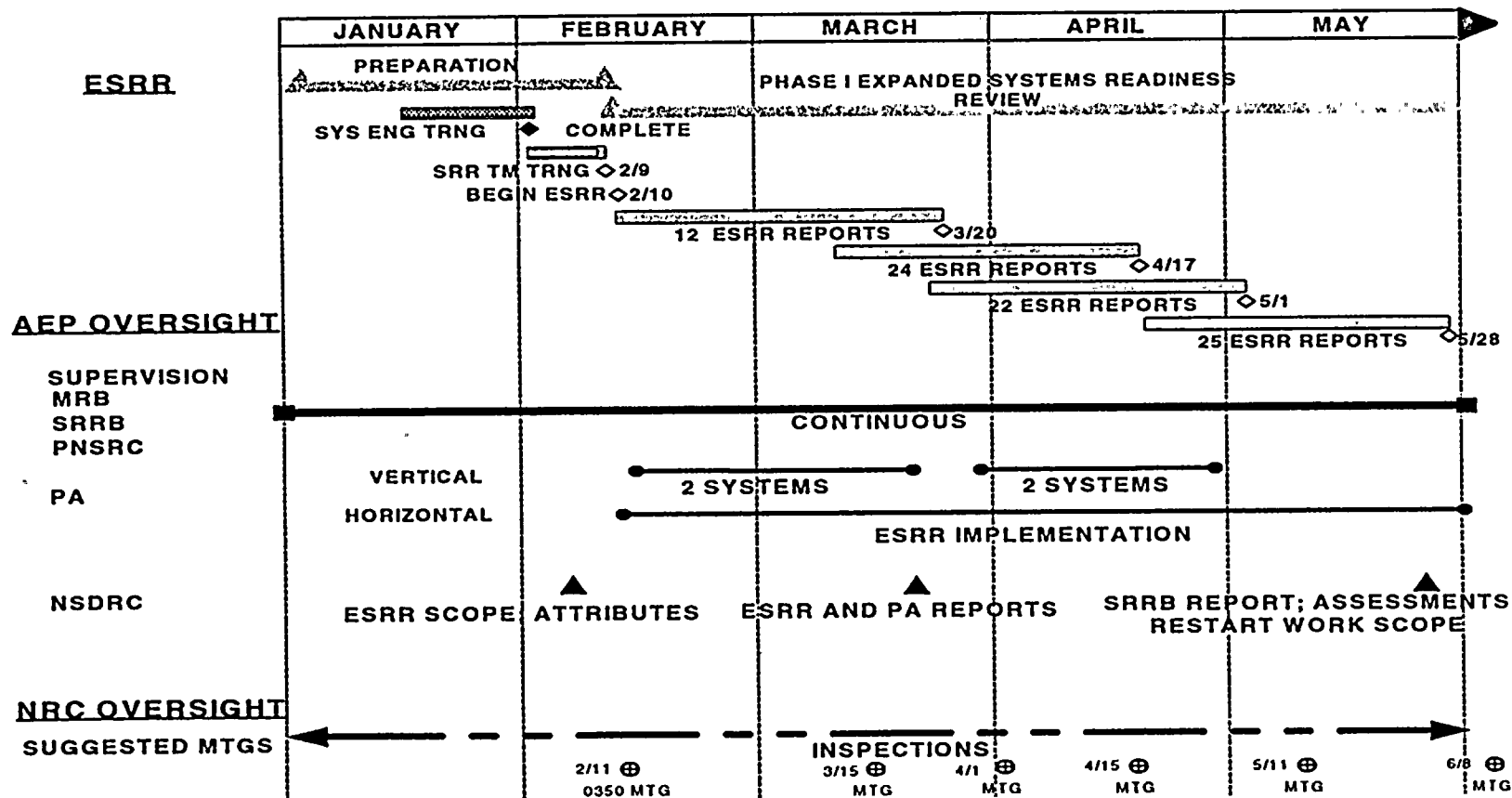
Regulatory Strategy

- Regulatory Readiness Plan
 - Communication and Coordination of Oversight and Inspection Schedules
 - Management Meetings To Discuss
 - Results of Discovery
 - Oversight Assessment Results
 - Technical Issues
 - NRC Inspection Results

Permits Independent Oversight

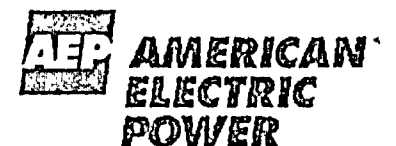
- Process Delivers Results At Key Intervals
- Many Opportunities For Independent, Intrusive, In-line Inspections

Oversight



Organizational Readiness

John Sampson
Site Vice President



Operations

- Operations Leadership Plan
 - Active Involvement in ESRR
 - Shift Operations Review Team
 - Ownership of Training
 - Shift Mentors / Industry Experience

Maintenance

- Maintenance Leadership Plan
 - Active Involvement in ESRR
 - Line Management Ownership
 - Proficiency Evaluations
- New Maintenance Director, Jim Molden
- New Restart Director, Bruce Hickie
 - Upgrade Work Control Process
 - Unit Approach to Restart

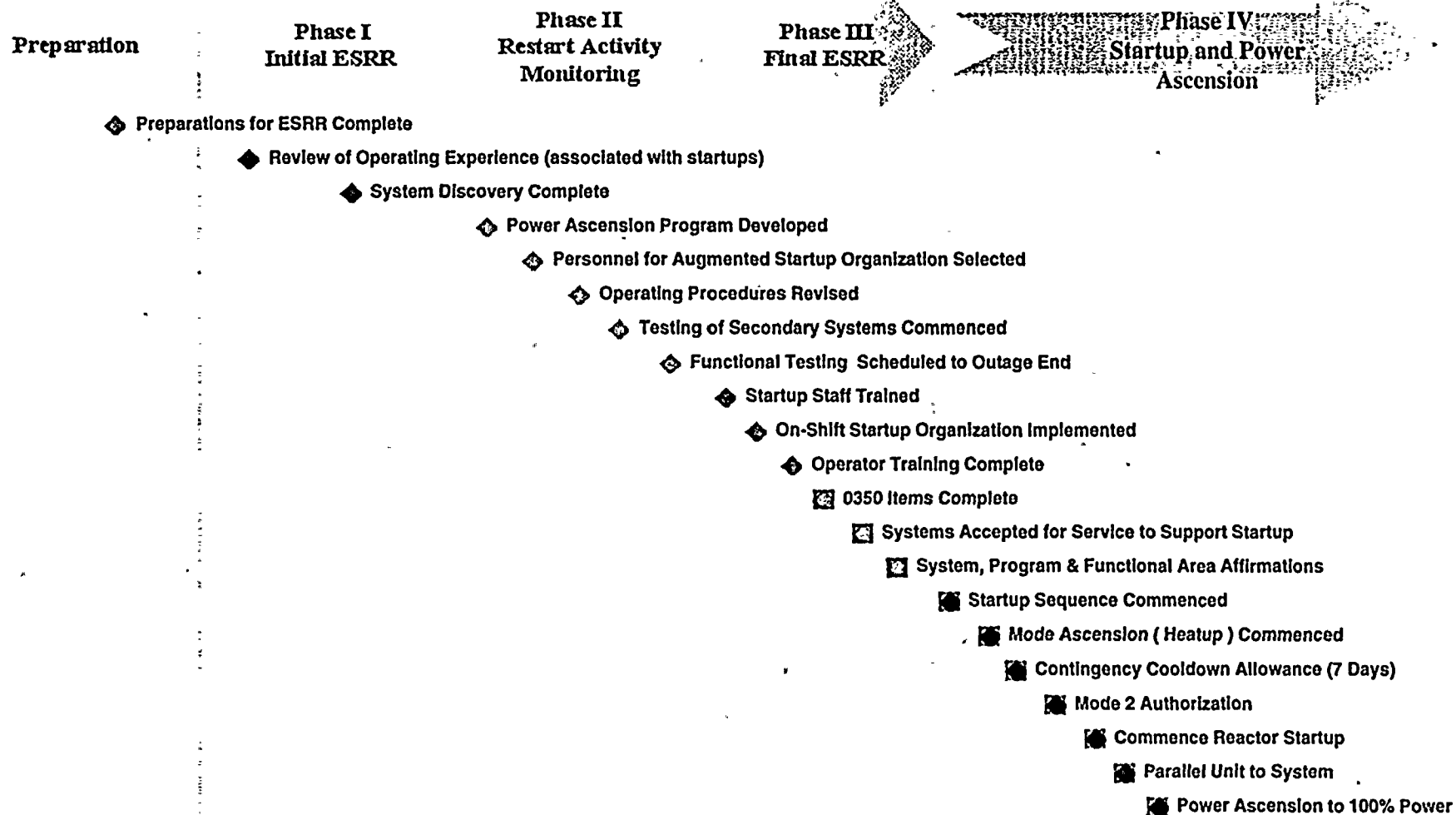
Engineering

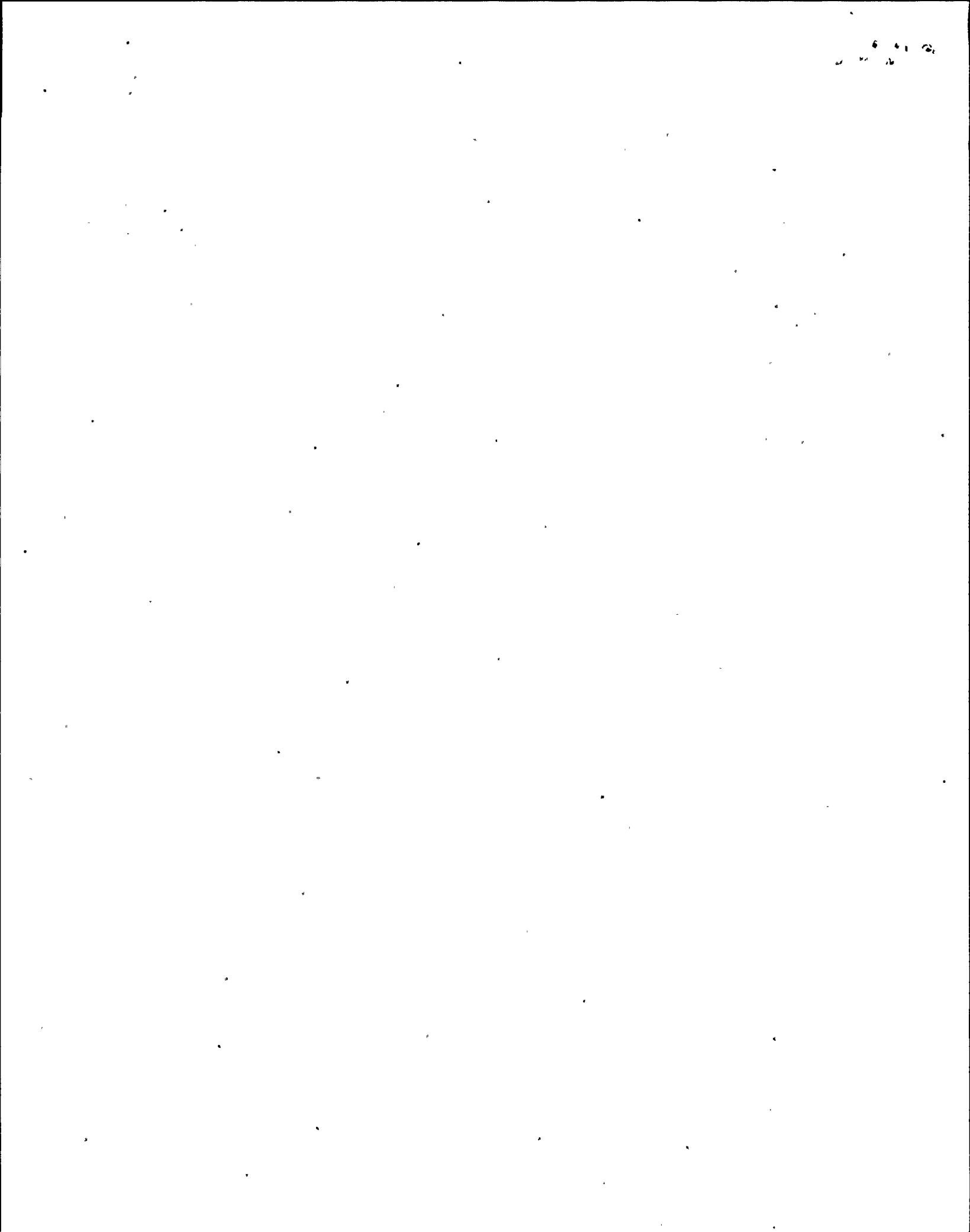
- System Engineering, Operations, and Maintenance Partners for ESRR
- System Readiness Review Board
- Partnering Agreement with Architect Engineering Firm
- Engineering Support to Plant Operations Strengthened

Corrective Action Program

- Self Assessment Complete, Ready for ESRR
- Line Management Ownership
- Root Cause Analysis Strengthened
- Oversight Committees
- Identification Rate Very Positive
- Electronic CAP Rollout in Progress

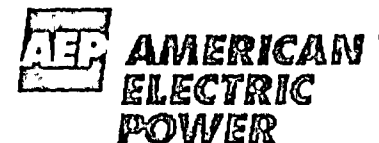
Restart Milestones





Closing Remarks

Bob Powers
Senior Vice President



Summary

- Rigorous Discovery Effort Underway
- The Plan Will Provide Reasonable Assurance
- Restart Schedule By June 1, 1999

PUBLIC MEETING TO DISCUSS THE D.C. COOK RESTART ACTIVITIES

FEBRUARY 11, 1999

ATTENDEES

Melvin Holmberg	NRC
Cynthia Sochor	NRC
Rob Jolly	NRC
Cecil Thomas	NRC
Bruce Bartlett	NRC
J. Dyer	NRC
Jack Grobe	NRC
Sam Collins	NRC
Gordon Arent	AEP
Paul Barrett	AEP
Guy Kerby	AEP
James G. Piazza	AEP
Jon Harner, Jr.	AEP
John Sampson	AEP
Bill Schaler	AEP
Bob Kalinowski	AEP
Lanny Thornsberry	AEP
Jeremy Euto	AEP
Robert Powers	AEP
Daniel Garner	AEP
W. Daniel Etheridge	AEP
Doug Mason	AEP
Joel Gebbie	AEP
Keith Steinmetz	AEP
S.K. Farlow	AEP
Jon Polloch	AEP
David Kunsemiller	AEP
Mike Rencheck	AEP
M.J. Finissi	AEP
A.L. Ego	AEP
John O'Neill	Shaw, Pittman
Gerald Vaughn	Central & Southwest
Dan Salter	HGP, Inc.
Dave Lochbaum	Union of Concerned Scientists
Dan Oginsky	SAB
J. Gallo	G&R
Wayne Barber	McGraw Hill
K. Green	Sciencetech
Cathy Strong	AP
Lockie McGregor	Michigan Public Service Commission



Attendance List
D. C. Cook Restart Public Meeting Held September 29, 1998

<u>Name</u>	<u>Company</u>	<u>Telephone No.</u>
John Stang	NRC	301-415-1345
Chris Nolan	NRC	301-415-2612
Donald R. Hafer	AEP	616-466-2404
Gerald Vaughn	CSW	512-881-5301
John O'Neill	Shaw Pittman/AEP	202-663-8148
John Sampson	AEP	616-466-2409
Jeremy Euto	AEP	616-697-5004
Douglas E. Cooper	AEP	616-466-2438
Mark Kelly	AEP	616-465-5901 ext. 1482
Dave Lochbaum	UCS	202-332-0900
Jeff Bass	Westinghouse	412-374-4262
Bill Schalk	AEP	616-465-6107
Robert Powers	AEP	616-697-5000
Terry Wagoner	AEP	616-466-2628
Paul Schoepf	AEP	616-466-2408
Gordon Arent	AEP	616-697-5064
Jeb B. Kingseed	AEP	616-697-5008
Catherine Strong	Associated Press	202-776-9543
Mary Ann Ashley	NRC	301-415-1073
Mel Holmberg	NRC	630-829-7748
J. A. Gavula	NRC	630-829-9755
Chris O'Hara	Brichfield	202-342-0800
Rich Whale	MPSC	517-334-7218
Mark Ackerman	AEP	616-466-2604
Eric Eckstein	AEP	616-466-2404
Bruce Bartlett	NRC	616-465-6775
Bruce Burgess	NRC	630-829-9629
John A. Grobe	NRC	630-829-9700
Cynthia Carpenter	NRC	301-415-1340
Bruce Boger	NRC	301-415-1403
Sam Collins	NRC	301-415-1270
Ronald Bellamy	NRC	301-415-1389
Tom Hiltz	NRC	301-415-1727



Agenda

- Introduction J. Grobe, NRC
- Licensee Opening Remarks J. Sampson, AEP
- Restart Strategies J. Sampson, AEP
- Bounding of Engineering Issues D. Hafer, AEP
- Schedule and Performance Indicators T. Wagoner, AEP
- Regulatory Interface J. Kingseed, AEP
 - NRC Submittals
 - UFSAR Status
- Closing Remarks J. Caldwell, NRC



Background

- August 1997 - NRC AE Team Inspection starts.
- September 1997 - Both Units voluntarily shut down by the licensee due to operability issues raised by the AE Team.
- September 1997 - NRC inspector identifies fibrous material inside of containment.
- September 1997 - NRC issues Confirmatory Action Letter addressing AE team and fibrous material issues.
- January 1998 - Region III inspects D C Cook ice condensers for issues identified in Union of Concerned Scientists 10 CFR 2.206 petition and identifies numerous other problems.
- March 1998 - Licensee issues Restart Plan. Estimated Unit 1 startup in fourth quarter 1998 with Unit 2 startup 90 days later.
- July 1998 - NRC establishes MC 0350 restart panel and issues Case Specific Checklist
- September 1998 - Licensee issues revised restart schedule to include ice condenser time line extension. Estimated Unit 1 startup in first quarter 1999 with Unit 2 startup 90 days later.

Restart Issues

- Programmatic breakdown in surveillance testing
- Corrective action programmatic breakdown
- Programmatic breakdown in the maintenance of the design basis
- Safety evaluations: Failure to perform and inadequate evaluations
- Operator training issues
- Ice Condensers
- Hydrogen Recombiners
- Distributed Ignition System
- Containment Spray System
- Hydrogen Mitigation System (CEQ)
- Containment Liner Pitting
- Diesel Generator Cabling
- Licensing Issues

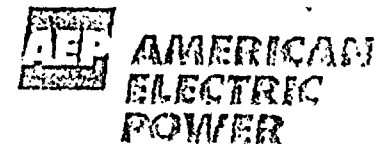
Inspection Plan

(Based on fourth quarter 1998 Unit 1 restart)

- Motor Operated Valve Inspection
(9/28 - 10/12/98)
- Assessment of Licensee's Auxiliary Feedwater Water Safety
System Functional Inspection
(9/21 - 12/4/98)
- Restart Readiness Assessment Team Inspection (RRATI)
(Phase One 10/98)
- Restart Readiness Assessment Team Inspection
(Phase Two 12/98)
- Emergency Preparedness
(10/98)
- Engineering and Corrective Action Team Inspection (ECATI)
(11/98)
- Radiation Protection
(12/7 - 12/11/98)

Schedule and Restart Strategies

John Sampson
Site Vice President



Cook Nuclear Plant

Restart Meeting

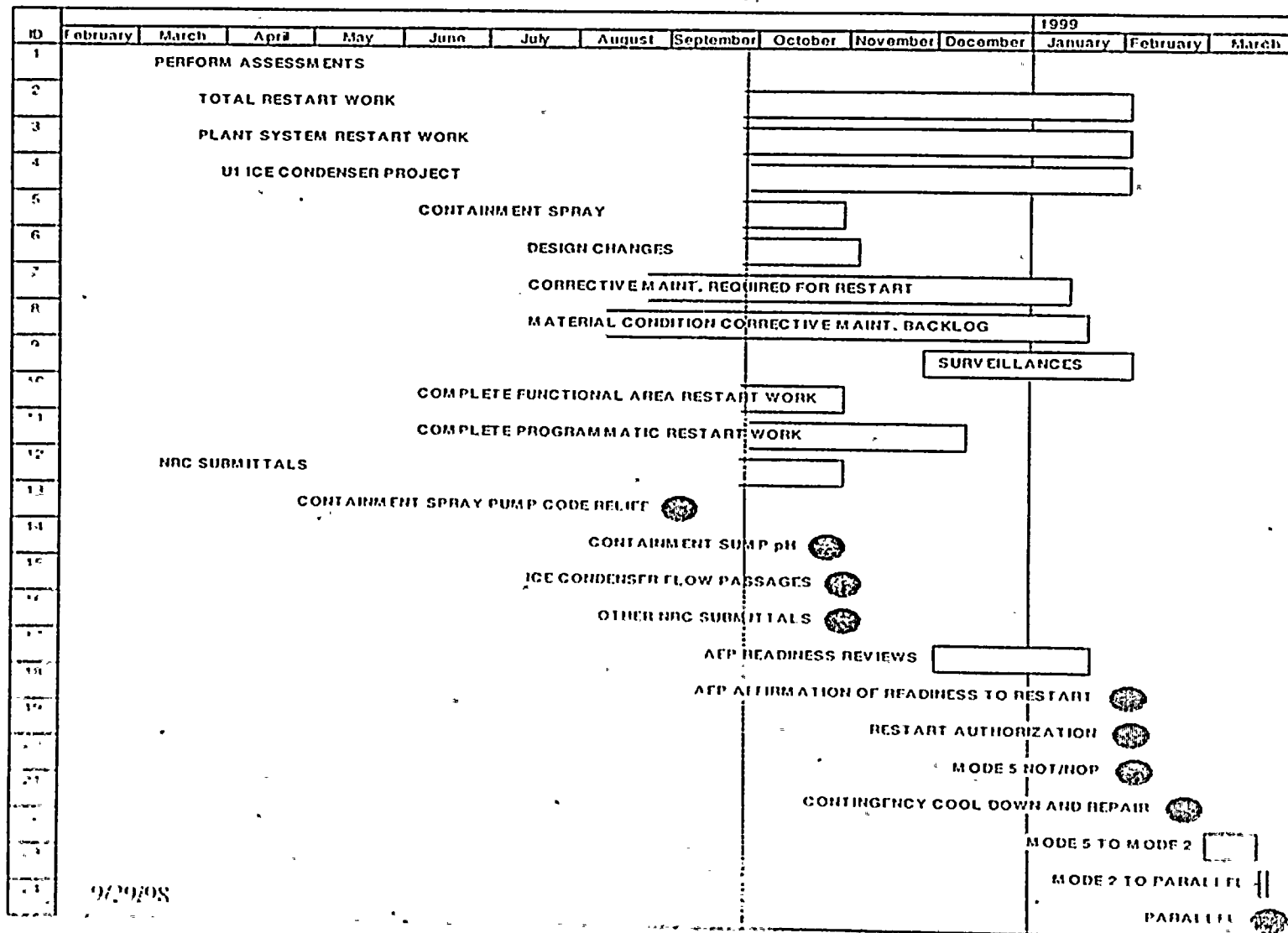
September 29, 1998

Presentations

- Schedule / Restart Strategies (J. Sampson)
- Bounding Engineering Issues (R. Eckstein)
- Restart Readiness Metrics (D. Cooper)
- Regulatory Issues (J. Kingseed)
 - NRC submittals
 - UFSAR restart program
- Closing Remarks (R. Powers)

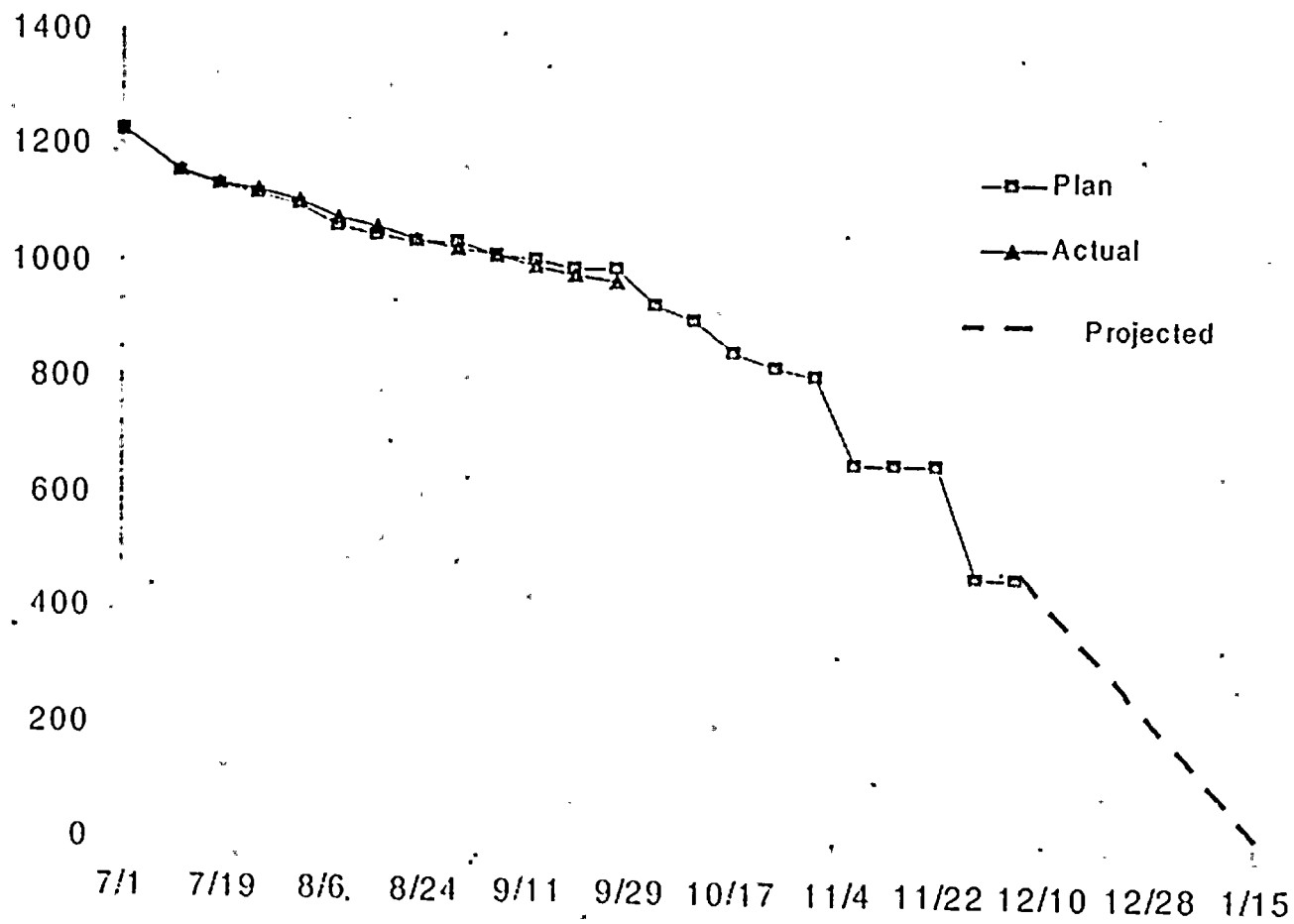


Restart Schedule





Total Restart Items

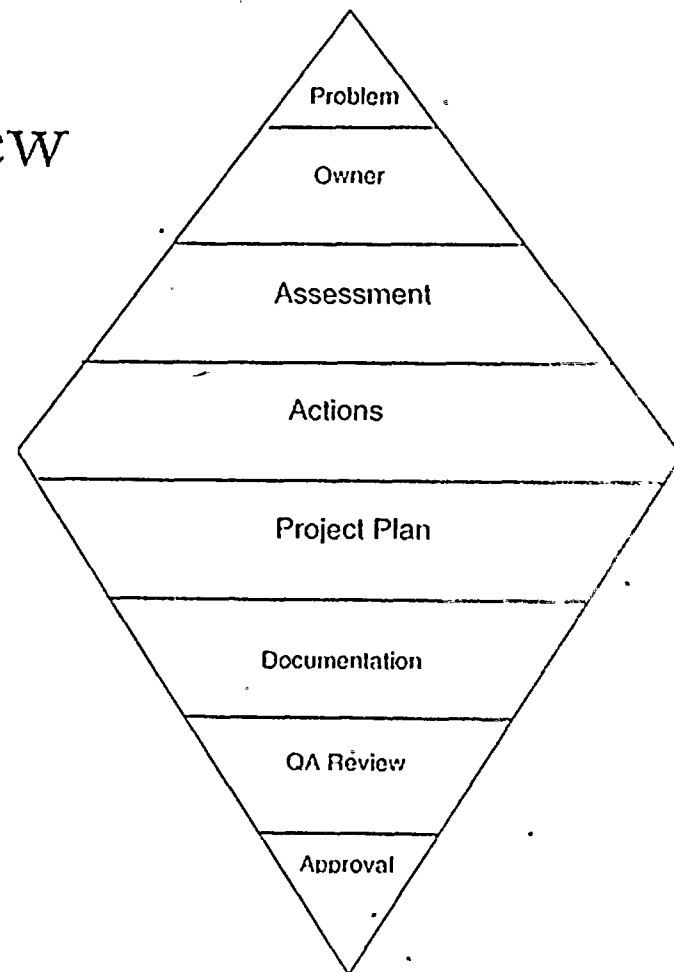


Restart Strategies

- Why now?
 - thorough / complete
 - check and adjust
 - integration

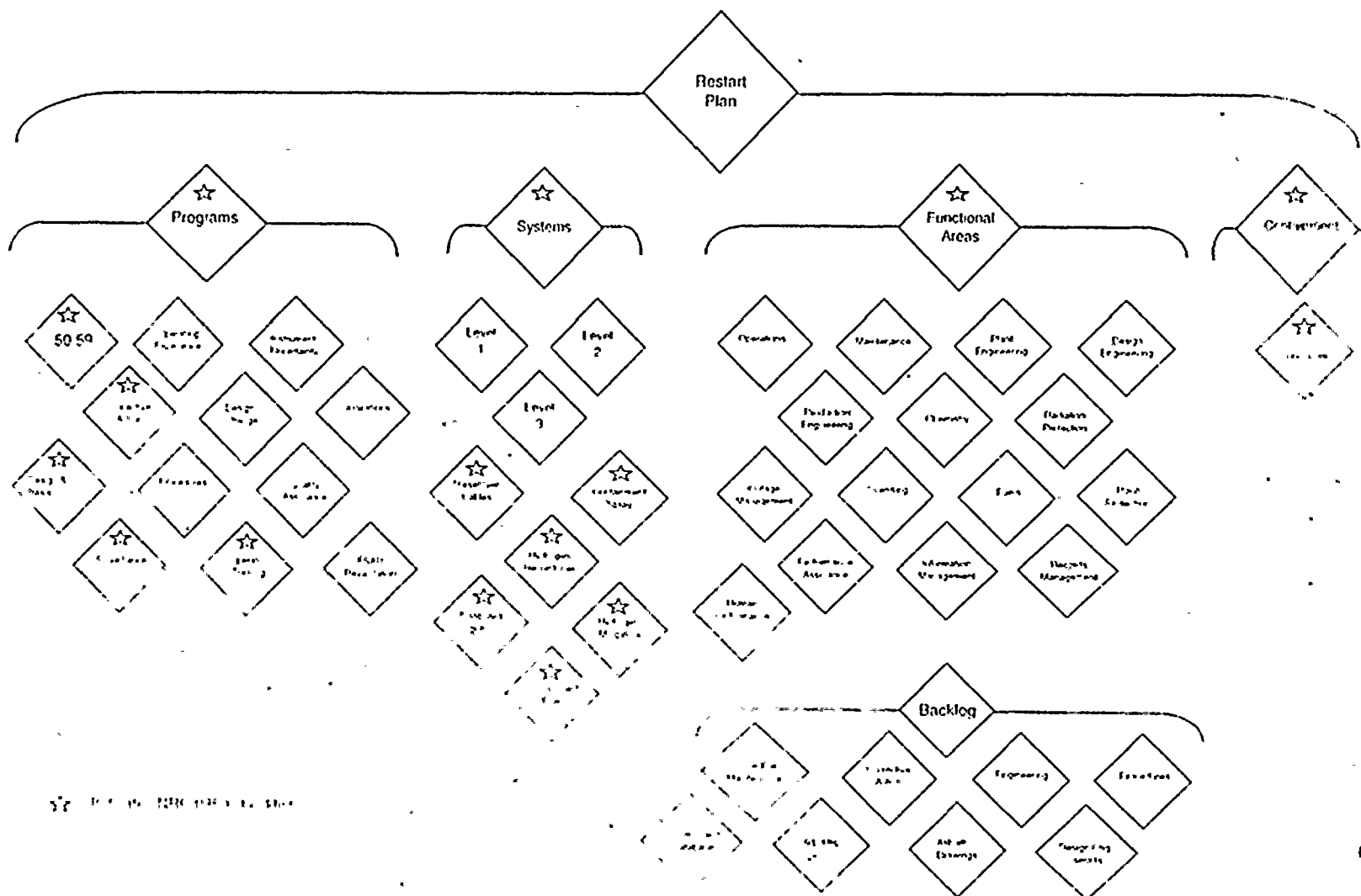
Restart Strategy Diamond

- Comprehensive overview
- Issue resolution
 - objectives
 - action plans
- Communication
 - internal
 - external



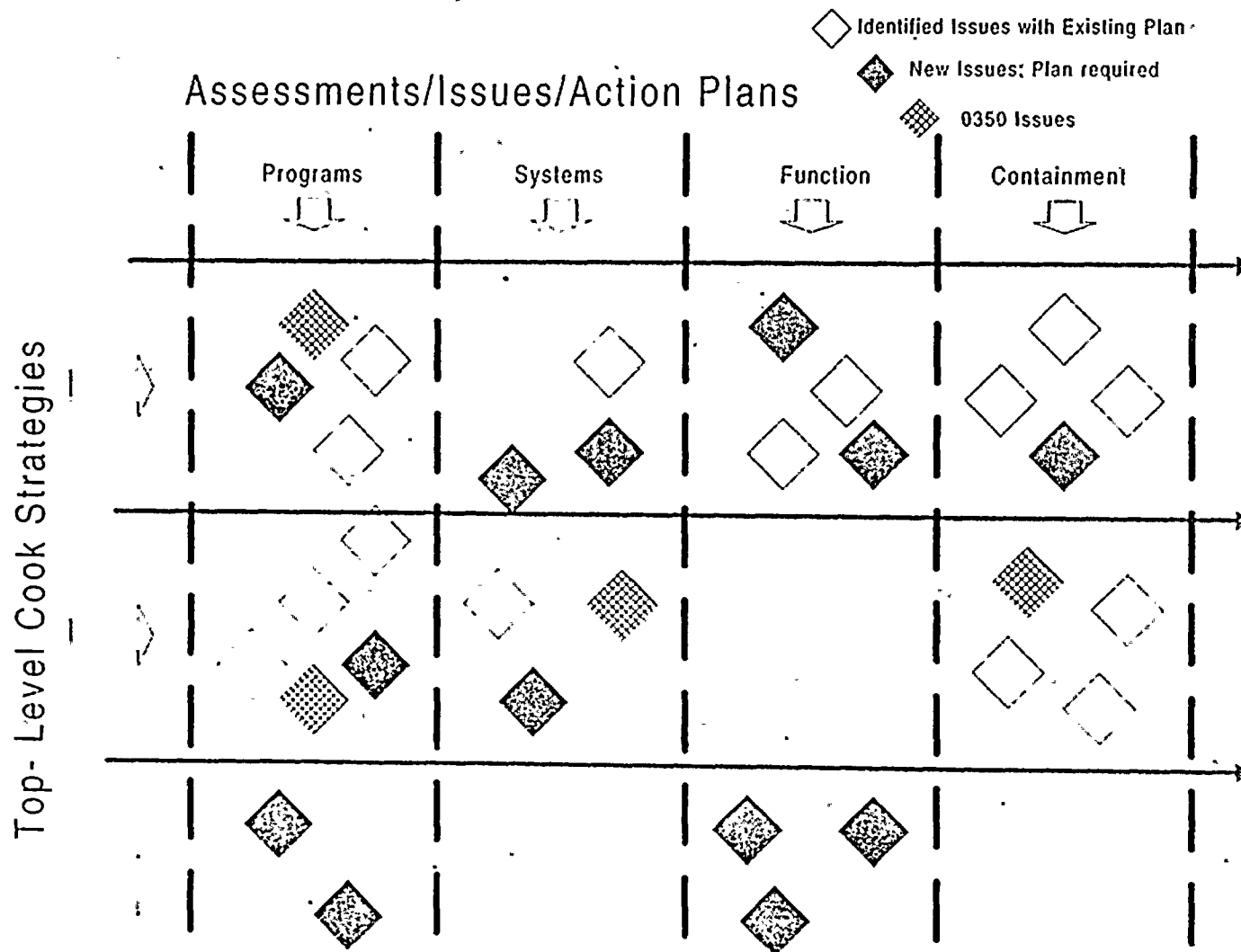


Restart Strategies





Common Causes



Development of Top-Level Strategies

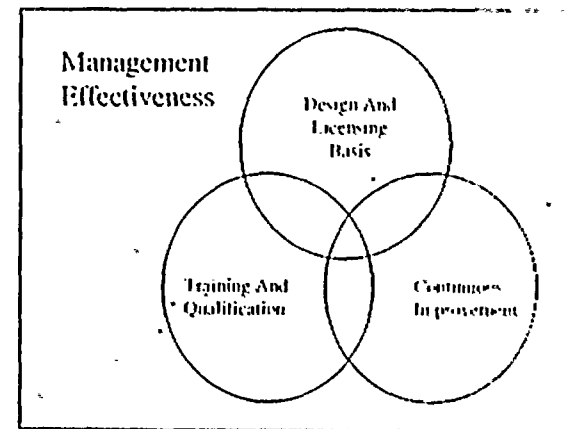
- Manager's workshop
- Review assessment results
- Develop top level strategies

Performance Improvement

Restart Plan



Top Level Strategies



- Identified Problems Corrected
- Performance Improved To Prevent Recurrence

Restart Authorization

World Class Performance

Results of Workshop

- Top level strategies developed
 - management effectiveness
 - training and qualification
 - design and licensing basis
 - continuous improvement
- Implementing strategies
- Expectations and results for start-up

Proposed Inspection Schedule

Item	Description	Ready for Inspection
1	Surveillance Testing	1/4/99 (11/16/98)
2	Corrective Action	12/15/98
3	Design Basis Maintenance	TBD
4	Safety Evaluation	11/16/98
5	Operator Training	10/19/98

Proposed Inspection Schedule

Item	Description	Ready for Inspection
6	Ice Condenser	1/18/99 (11/16/98)
7	EDG Cables	11/2/98
8	Hydrogen Recombiner T/S Implementation	10/19/98
9	Distributed Ignition T/S Submittal	10/9/98
10	Containment Spray	12/7/98



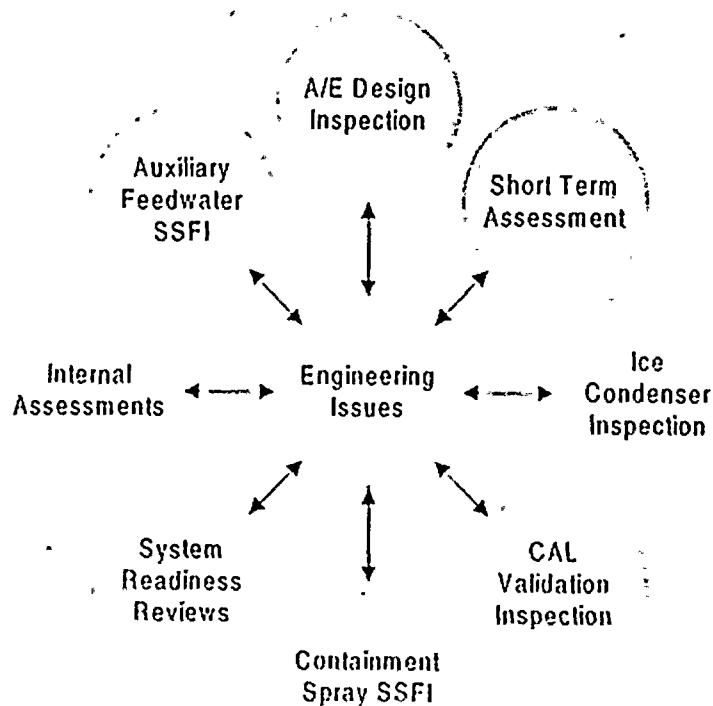
Proposed Inspection Schedule

Item	Description	Ready for Inspection
11	Hydrogen Mitigation	11/30/98
12	Containment Liner Pitting	10/12/98
13	System Readiness Level 1 Level 2 and 3 Containment	11/9/98 12/7/98 1/18/99
14	Programmatic Readiness	TBD
15	Functional Area Readiness	12/15/98

Bounding the Engineering Issues

Rick Eckstein
Chief Nuclear Engineer

Key Engineering Issues



Issues

- 50.59 program
- design change process
- calculations
- instrument uncertainty
- plant procedures
- surveillance program
- design / licensing basis
- materiel condition

Strategy

- Restart plan readiness reviews
 - systems
 - programs
 - functional areas
 - containment

Restart Plan

- System readiness reviews
 - design basis / materiel condition
 - led by system engineers
 - operations / maintenance support
 - 110 systems
 - graduated approach
 - approximately 100 personnel
 - approximately 23,000 manhours



System Readiness Reviews

- Major review elements (for 21 systems)
 - walkdowns by multi-functional team
 - 2,500+ condition reports
 - hundreds of work orders
 - functional design requirements
 - maintenance rule performance

System Readiness Reviews (cont'd)

- Major review elements (for 21 systems)
 - outstanding operability determinations
 - surveillance test procedures and results
 - pre-op test reports
 - 40 temp mods
 - 300 technical memos
 - 400 operating experience reports

Programmatic Readiness Reviews

- Major programs
 - 50.59 program
 - instrument uncertainty
 - design change program
 - calculations
 - design and licensing basis
 - procedures
 - surveillance program
 - UFSAR revalidation/update process
 - 21 systems prior to restart

Functional Area Readiness Reviews

- Addresses

- training / qualification
- organizational and managerial issues
- backlog reviews
- procedural adequacy for restart
- program adequacy



Other Assessment Initiatives

- Self assessments
 - 50.59 evaluations and bypass review
 - surveillance program
 - 600 procedures
 - 10,000 manhours
 - review of 52 EOP's against ERGs
 - design change package quality
 - additional calculation reviews
 - ongoing design change process reviews
 - condition report triage review



Other Assessment Initiatives (Cont'd)

- Independent assessments
 - 50.59 evaluations (industry expert)
 - calculations
 - containment vertical review
 - system readiness review effectiveness

SSFIs

- Containment spray
- Auxiliary feedwater (in progress)
 - complex system
 - many modifications / upgrades
 - AEP design with vendor interface
 - routinely tested



Outreach Initiatives

- Benchmarking visits and interactions
 - Crystal River
 - LaSalle
 - Salem
 - Point Beach
- Management consultants
 - Crystal River
 - ComEd
 - Salem
 - Brunswick
 - Cooper

Results

- System reviews identified significant issues
 - valve failure modes and stroke times in UFSAR
 - calculations
 - NRC commitment database
 - testing / test procedures
 - temporary modifications
- Ice condenser
 - ice thaw and restoration
 - design criteria and assumptions
 - quality reviews of design change products



Results (cont'd)

- 1,130 condition reports written by engineering
- Self assessments identified significant issues
 - 50.59 screens / evaluations
 - grading system implemented
 - design changes
- Containment spray SSFI
 - calculation review expanded
 - EOP reviews strengthened

Results (cont'd)

- UFSAR revalidation resolving discrepancies
- Procedures and plant documents revised
- Training courses
- Vendor relationship strengthened
- Major analyses reperformed

Summary

ISSUE AREAS	ACTIONS TO BOUND ISSUES AND PROTECT THE DESIGN & LICENSING BASIS										
	SYSTEM READINESS REVIEW	CONTAINMENT REVIEW	PROGRESS REVIEW	FUNCTIONAL AREA REVIEWS	UFSAR VALIDATION	CALCULATION REVIEWS	BACKLOG SCREENING	CR TRIAGE EFFORT	PERFORMANCE ASSURANCE - BYPASS REVIEW	SSFI'S	PROCEEDURE UPGRADE & TRAINING
CALCULATIONS	X		X	X	X	X				X	X
DESIGN & LICENSING BASIS	X	X	X	X	X	X	X			X	X
DESIGN CHANGE PROCESS	X		X	X	X		X		X	X	X
SAFETY EVALUATIONS	X		X	X			X		X	X	X
PROCEDURE DEFICIENCIES	X			X	X	X	X			X	
MATERIEL CONDITION	X	X								X	
INSTRUMENT UNCERTAINTY	X		X	X		X					
SURVEILLANCE PROGRAM	X	X	X	X	X					X	



Conclusion

Reasonable assurance exists that the engineering issues will be bounded by restart.



Restart Readiness Metrics

Doug Cooper
Plant Manager

Readiness Categories

- Organizational readiness
- Operations readiness
- System and containment readiness
- Programmatic readiness
- Regulatory readiness
- Communications readiness



Cook Nuclear Plant Unit 1 Restart Metrics

METRICS	Goal at Startup	Current Status
I ORGANIZATIONAL READINESS		
• Management/Leadership	Top level strategies implemented	On Track
• Self-Identified Condition Reports	50% or greater	Achieved
• Root Cause Quality	Increasing	Metric by 10/15
• Corrective Actions Effectiveness	Metric in place	Data Compilation
• Restart Item Work Completion	Zero to complete	966 Items
II OPERATIONS READINESS		
• Operator Training	Training Complete	Training Scheduled
• Operations Procedures for Startup and Power Ascension	Zero to change	107 to change
• Operator Distractions	100 or less	282
• Surveillance Procedure Re-Validation	Zero to change	Metric by 10/15
III SYSTEM AND CONTAINMENT READINESS		
• Restart Modification Completion	Zero to Complete	25
• Systems Accepted by Operations	All systems accepted	None Accepted
• Temporary Modifications	< 10	25



Cook Nuclear Plant Unit 1 Restart Metrics

METRICS	Goal at Startup	Current Status
III SYSTEM AND CONTAINMENT READINESS (Continued)		
• Corrective Maintenance Backlog	< 100 Backlog (based on 10% of current items identified)	980 items identified
IV PROGRAMMATIC READINESS		
• 50.59 Quality	B Avg. and Improving	B Average
• FSAR Re-Validation 50.59s	Zero to complete	70
• Calculation Quality	TBD by 10/15	Metric by 10/15
• As-Built Drawing Backlog	TBD by 10/15	Metric by 10/15
V REGULATORY READINESS		
• Licensing Submittals	Zero to Submit	Metric by 10/15
• License Amendments Implemented	Zero to Implement	Metric by 10/15
• 0350 Closeout packages	Zero to close	None closed
VI COMMUNICATIONS READINESS		
• Internal Communications	Metric in place	Initial Assessment Complete
• External Communications	Restart sessions conducted	Session planning in progress

Summary

- Restart Plan
 - strategies will be implemented
 - restart metrics will be on track
 - 0350 issues will be closed
- Long term improvement plan
 - comprehensive performance indicators
 - intrusive self assessment
 - routine check and adjust

Regulatory Activities

Jeb Kingseed
Regulatory Affairs Director



Presentation Scope

- ✓ NRC submittals
- UFSAR restart program



NRC Submittals

Submittal Topic	Submittal Date	Restart Requirement (Yes/No)	Required Action	Need Date	Comment
Boric Acid Concentration Reduction	6/10/98	Yes	T/S Amendment	8/31/98	Approved 8/31/98
Hydrogen Recombiner	3/3/98	Yes	T/S Amendment	N/A	Approved 9/17/98
Containment Spray Pump Code Relief	9/4/98	Yes	Code Relief Approval	ASAP	Long Lead Contingency
Ice Condenser Flow Passages (area blockage)	10/30/98 (est)	Yes	T/S Amendment	1/15/99	
Sump pH	10/25/98 (est)	Yes	T/S Amendment	1/15/99	Mode 4 Constraint

NRC Submittals

Steam Generator Eddy Current Testing Surveillance Change (unit 1)	8/28/98	No	T/S Amendment	11/15/98	Compliance Ends 4/8/99
Safety Injection Pump Runout Flow	9/14/98	No	T/S Amendment	N/A	Admin. Controls in Place
Load Shed Cables	8/31/98	No	None	N/A	LER Retraction
Hydrogen Subcompartment Analysis USQ (Unit 2, Cycle 12)	10/23/98 (est)	No	License Amendment	N/A	GL 91-18 Rev. 1 to be performed
Generic Letter 96-06, Response to RAI	10/9/98 (est)	No	Review/Approve Response	N/A	No Mods Required
RCS Recirculation Flow (Mode 4/5)	10/2/98	No	T/S Amendment	11/15/98	Outage Work Related



NRC Submittals

Distributed Ignition System	10/9/98 (est)	No	T/S Amendment	N/A	Admin. Control in place
Ice Condenser Sublimation Rate	10/25/98 (est)	No	T/S Amendment	N/A	GL 91-18 Rev. 1 to be performed
Main Steam Line Wall Thickness	10/9/98 (est)	No	Status Letter	N/A	Weld Repairs
Post-LOCA Offsite Dose USQ	11/1/98 (est)	No	License Amendment	N/A	GL 91-18 Rev. 1 to be performed
Control Room Habitability	11/1/98 (est)	No	Review	N/A	Revised Analysis
Containment Overpressure Post-LOCA	10/23/98 (est)	No	T/S Bases Change	N/A	---

Presentation Scope

- NRC Submittals
- ✓ UFSAR Restart Program



UFSAR Restart Program Purpose

- Stewardship
- Accuracy and consistency
- Licensing and design basis understanding



UFSAR Actions Prior to Restart

- UFSAR update process procedure
- UFSAR update by 12/11/98
 - 11/11/98 cutoff date
 - 21 risk significant systems (looking for USQs)
 - inventoried items

UFSAR Actions Prior to Restart

- Electronic “living” UFSAR development
- Quality effectiveness review
 - revalidation process
 - resolution process



UFSAR Program Continued Actions

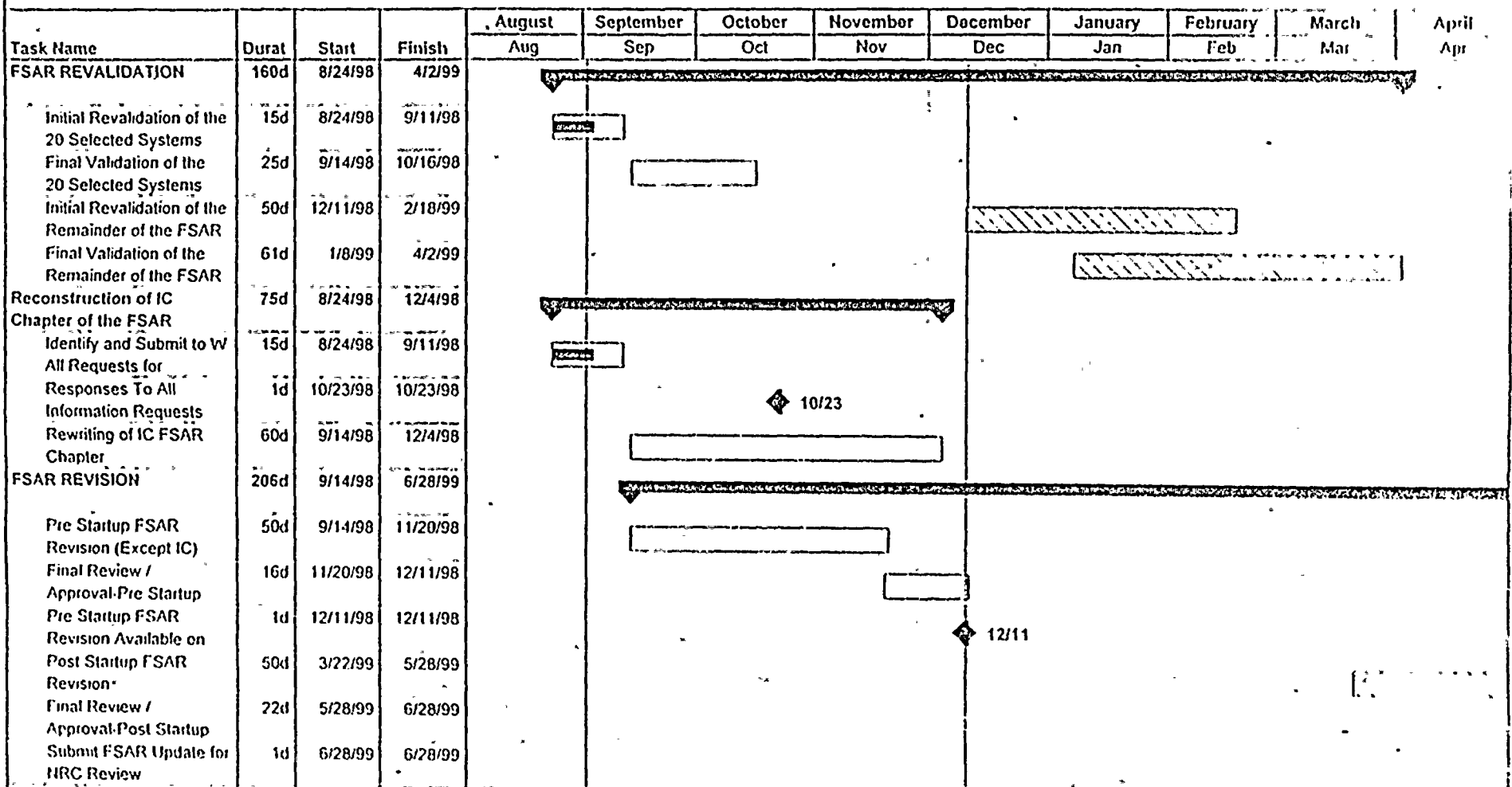
- Revalidation of remainder of UFSAR
- “Living” UFSAR implementation

UFSAR Program Result

- Improved accuracy and consistency
- Design and licensing basis maintenance
- Proper stewardship
- Facilitation of 50.59s via “living” UFSAR



FSAR PROJECT SCHEDULE



Project
Date 6/2/99

Task Pre Startup

Task Post Startup

Progress

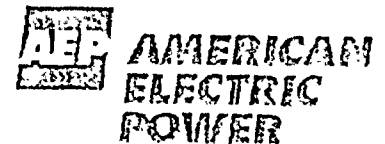
Milestone

Summary



Closing Remarks

Robert Powers
Senior Vice President





Goals for Restart

- Operate within design and licensing basis
- Address root causes for shutdown
- Establish a foundation for world class performance
- Complete efforts in an efficient and timely manner

Challenges To Restart Plan Goals

- Delay in issuance of Restart Plan
 - Restart Plan Rev. 0 issued March 1998
- Implementation
 - self-critical evaluation
 - ownership and accountability
 - experience base

Actions - Cook is Changing

- Management expectations communicated
 - reality
 - ownership and accountability
- Restart Plan implementation
 - increased detail in revision 3
 - workdown curves
 - schedule
- New personnel
 - performance gaps
 - experience base expansion

Cook Staffing Changes Since Shutdown

- R. P. Powers* Senior Vice President
- J. R. Sampson Site Vice President
- R. Eckstein* Acting Chief Nuclear Engineer
- D. Cooper* Plant Manager
- J. Kingseed Acting Regulatory Affairs Director
- L. Weber* Operations Superintendent
- B. Wallace* Training Manager
- W. Walschot* Corrective Action Manager
- R. Gillespie Work Control Manager

* New to D. C. Cook

Staff Augmentation

- R. Cudlin Management
- J. Mason Management
- J. Durham Engineering
- B. Hickie Plant and Restart Management
- D. Kunsemiller Regulatory Affairs
- W. Kropp Quality Assurance
- C. Vanderneit Quality Assurance
- Others Training, Operations

Summary

- Progress is being made
 - physical plant
 - processes
 - culture
- More changes may be needed
- We will accomplish our goals



Attendance List
D. C. Cook Restart Public Meeting Held September 29, 1998

<u>Name</u>	<u>Company</u>	<u>Telephone No.</u>
John Stang	NRC	301-415-1345
Chris Nolan	NRC	301-415-2612
Donald R. Hafer	AEP	616-466-2404
Gerald Vaughn	CSW	512-881-5301
John O'Neill	Shaw Pittman/AEP	202-663-8148
John Sampson	AEP	616-466-2409
Jeremy Euto	AEP	616-697-5004
Douglas E. Cooper	AEP	616-466-2438
Mark Kelly	AEP	616-465-5901 ext. 1482
Dave Lochbaum	UCS	202-332-0900
Jeff Bass	Westinghouse	412-374-4262
Bill Schalk	AEP	616-465-6107
Robert Powers	AEP	616-697-5000
Terry Wagoner	AEP	616-466-2628
Paul Schoepf	AEP	616-466-2408
Gordon Arent	AEP	616-697-5064
Jeb B. Kingseed	AEP	616-697-5008
Catherine Strong	Associated Press	202-776-9543
Mary Ann Ashley	NRC	301-415-1073
Mel Holmberg	NRC	630-829-7748
J. A. Gavula	NRC	630-829-9755
Chris O'Hara	Brichfield	202-342-0800
Rich Whale	MPSC	517-334-7218
Mark Ackerman	AEP	616-466-2604
Eric Eckstein	AEP	616-466-2404
Bruce Bartlett	NRC	616-465-6775
Bruce Burgess	NRC	630-829-9629
John A. Grobe	NRC	630-829-9700
Cynthia Carpenter	NRC	301-415-1340
Bruce Boger	NRC	301-415-1403
Sam Collins	NRC	301-415-1270
Ronald Bellamy	NRC	301-415-1389
Tom Hiltz	NRC	301-415-1727

ENCLOSURE 1

Agenda

- Introduction J. Grobe, NRC
- Licensee Opening Remarks J. Sampson, AEP
- Restart Strategies J. Sampson, AEP
- Bounding of Engineering Issues D. Hafer, AEP
- Shedule and Performance Indicators T. Wagoner, AEP
- Regulatory Interface J. Kingseed, AEP
 - NRC Submittals
 - UFSAR Status
- Closing Remarks J. Caldwell, NRC

Background

- August 1997 - NRC AE Team Inspection starts.
- September 1997 - Both Units voluntarily shut down by the licensee due to operability issues raised by the AE Team.
- September 1997 - NRC inspector identifies fibrous material inside of containment.
- September 1997 - NRC issues Confirmatory Action Letter addressing AE team and fibrous material issues.
- January 1998 - Region III inspects D C Cook ice condensers for issues identified in Union of Concerned Scientists 10 CFR 2.206 petition and identifies numerous other problems.
- March 1998 - Licensee issues Restart Plan. Estimated Unit 1 startup in fourth quarter 1998 with Unit 2 startup 90 days later.
- July 1998 - NRC establishes MC 0350 restart panel and issues Case Specific Checklist
- September 1998 - Licensee issues revised restart schedule to include ice condenser time line extension. Estimated Unit 1 startup in first quarter 1999 with Unit 2 startup 90 days later.

Restart Issues

- Programmatic breakdown in surveillance testing
- Corrective action programmatic breakdown
- Programmatic breakdown in the maintenance of the design basis
- Safety evaluations: Failure to perform and inadequate evaluations
- Operator training issues
- Ice Condensers
- Hydrogen Recombiners
- Distributed Ignition System
- Containment Spray System
- Hydrogen Mitigation System (CEQ)
- Containment Liner Pitting
- Diesel Generator Cabling
- Licensing Issues



Inspection Plan

(Based on fourth quarter 1998 Unit 1 restart)

- Motor Operated Valve Inspection
(9/28 - 10/12/98)
- Assessment of Licensee's Auxiliary Feedwater Water Safety
System Functional Inspection
(9/21 - 12/4/98)
- Restart Readiness Assessment Team Inspection (RRATI)
(Phase One 10/98)
- Restart Readiness Assessment Team Inspection
(Phase Two 12/98)
- Emergency Preparedness
(10/98)
- Engineering and Corrective Action Team Inspection (ECATI)
(11/98)
- Radiation Protection
(12/7 - 12/11/98)

Cook Nuclear Plant

Restart Meeting September 29, 1998

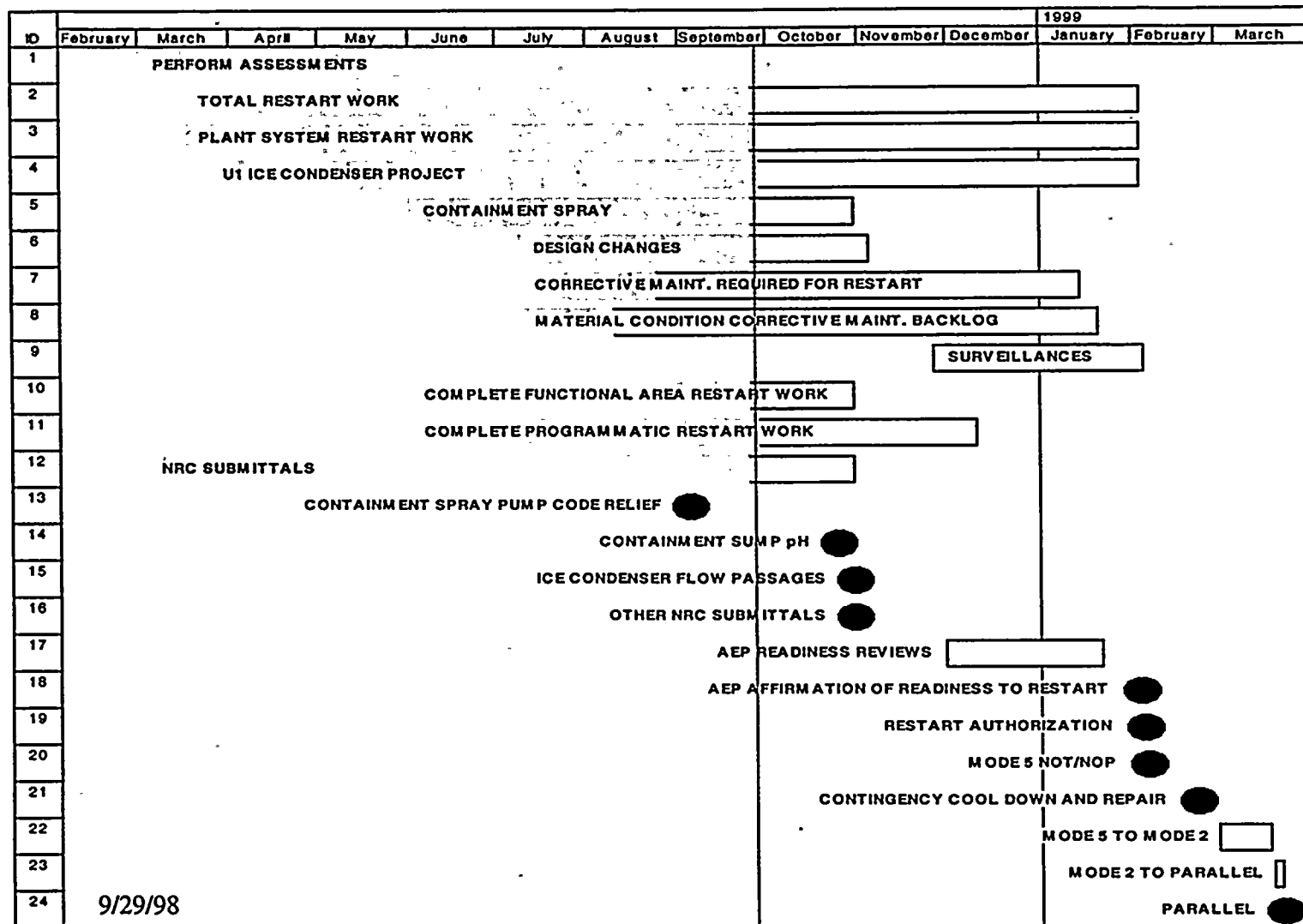
Presentations

- Schedule / Restart Strategies (J. Sampson)
- Bounding Engineering Issues (R. Eckstein)
- Restart Readiness Metrics (D. Cooper)
- Regulatory Issues (J. Kingseed)
 - NRC submittals
 - UFSAR restart program
- Closing Remarks (R. Powers)

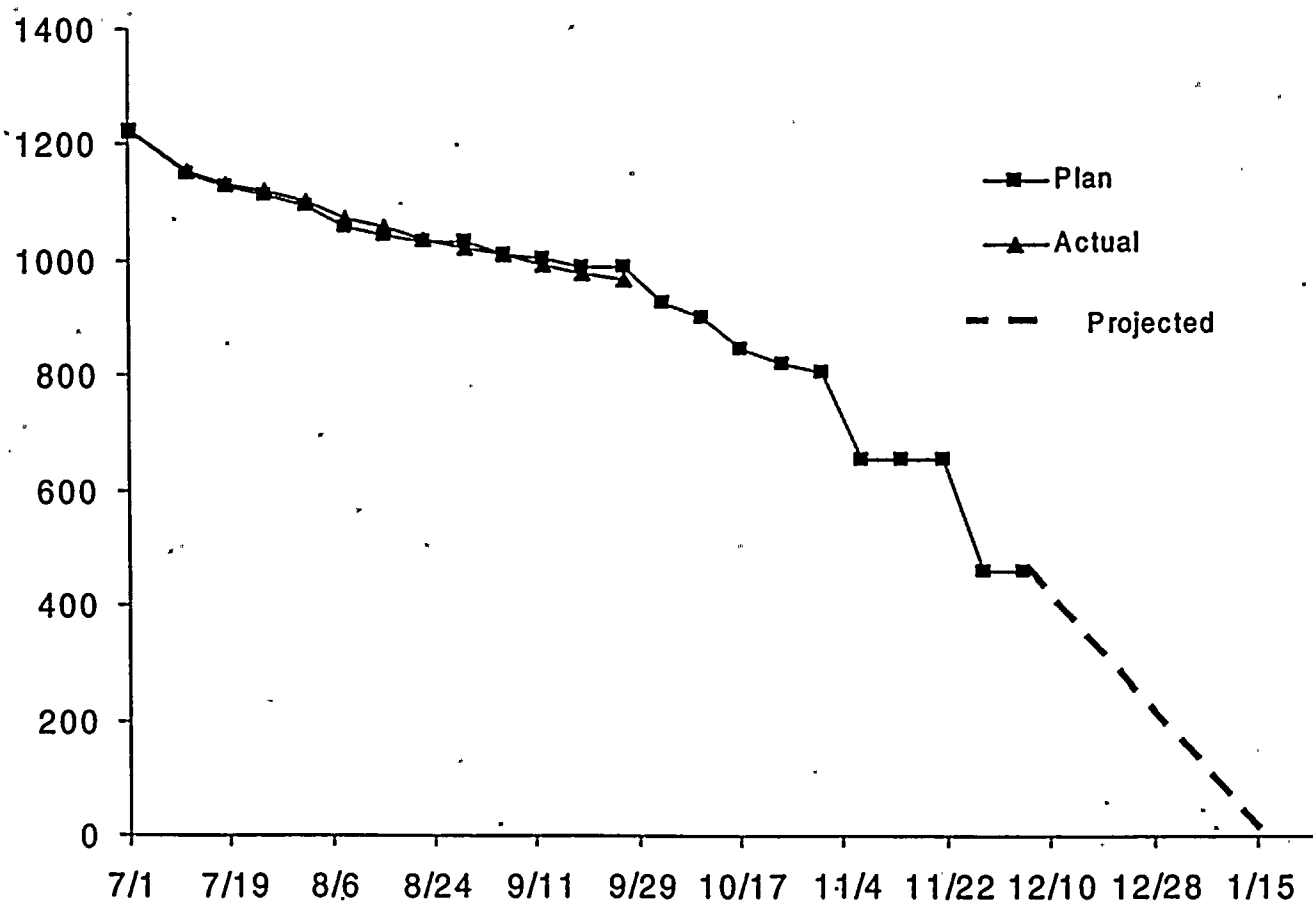
Schedule and Restart Strategies

John Sampson
Site Vice President

Restart Schedule



Total Restart Items





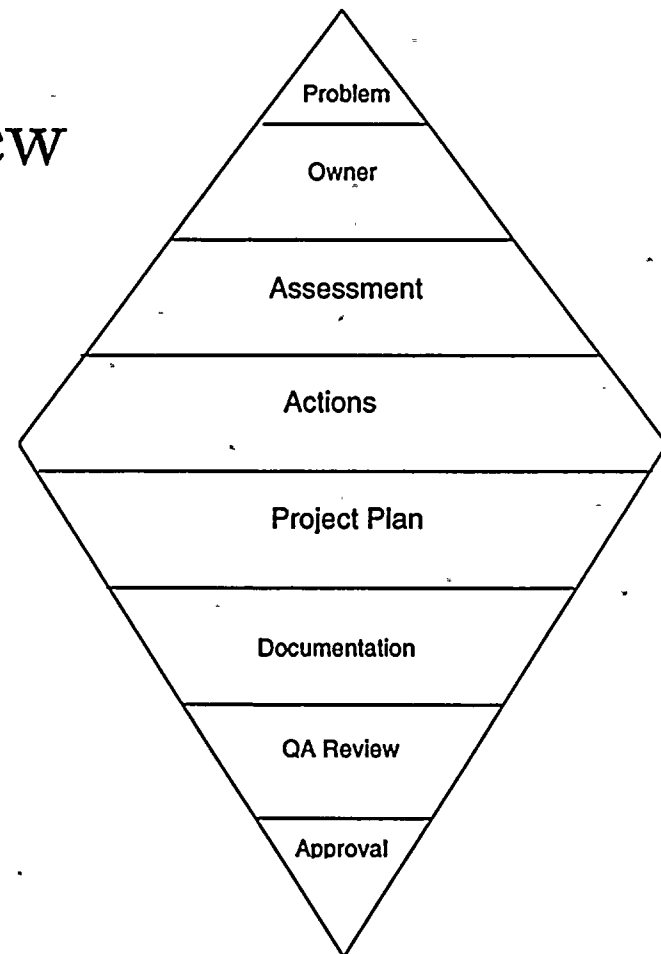
Restart Strategies

- Why now?
 - thorough / complete
 - check and adjust
 - integration



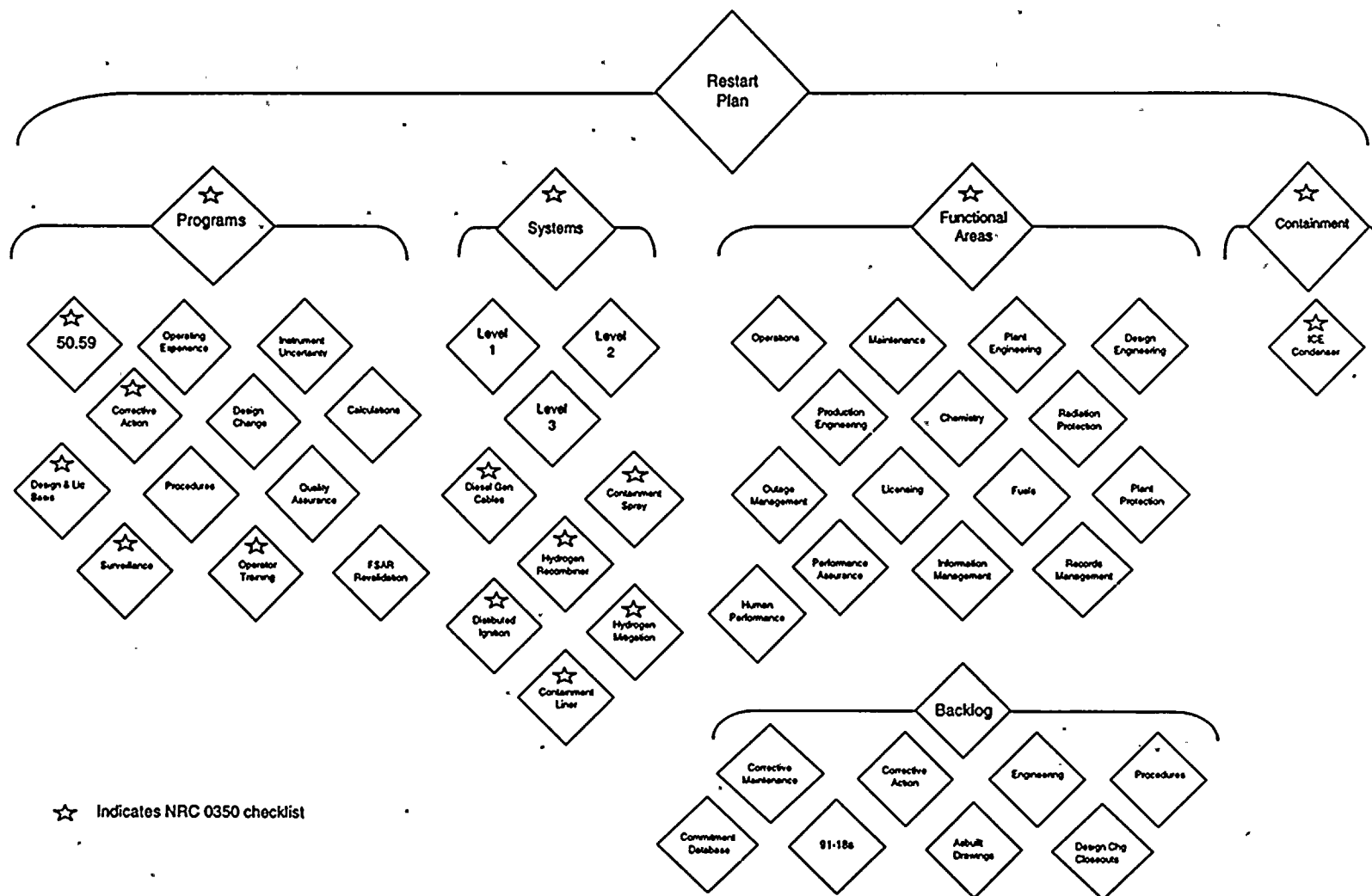
Restart Strategy Diamond

- Comprehensive overview
- Issue resolution
 - objectives
 - action plans
- Communication
 - internal
 - external

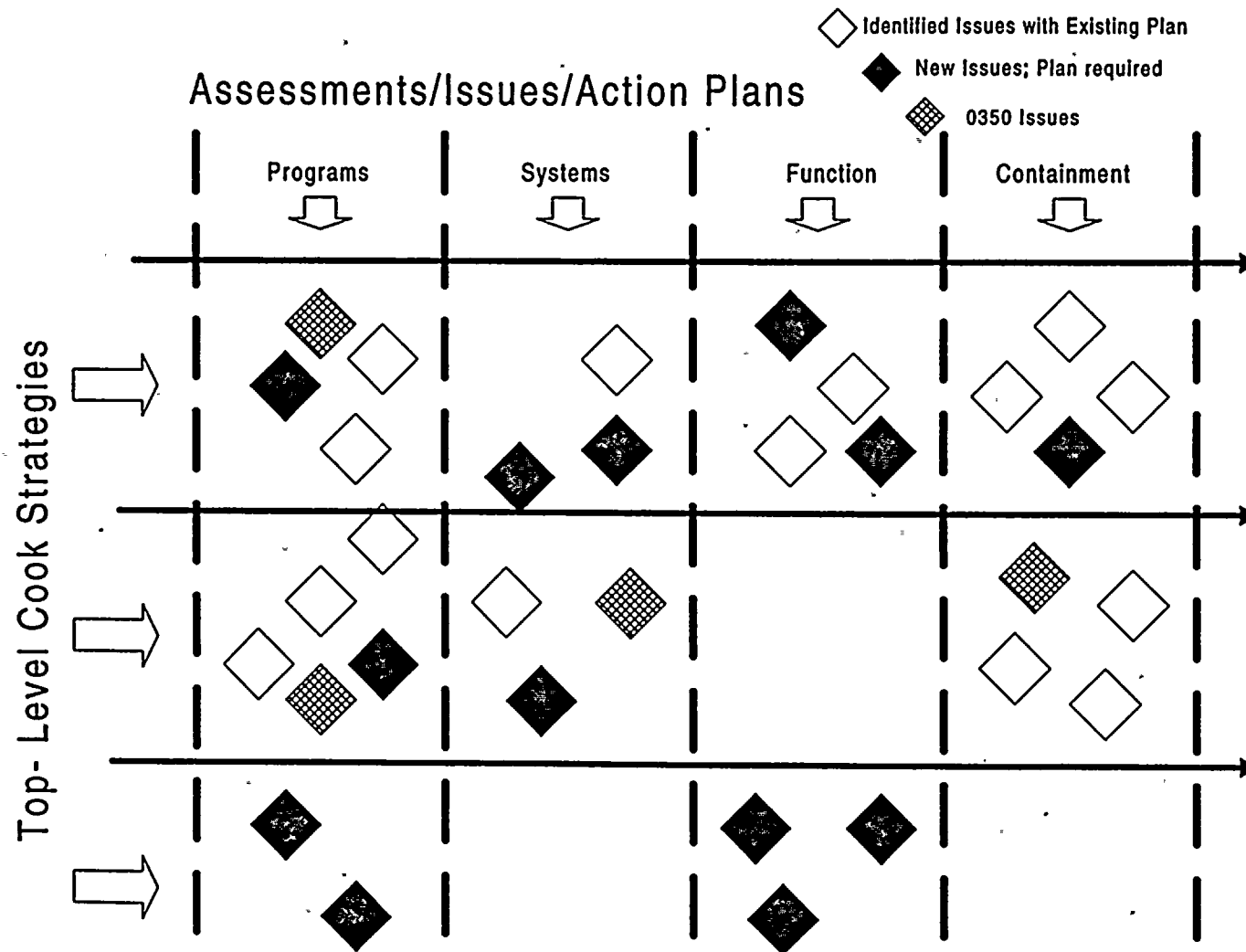




Restart Strategies



Common Causes

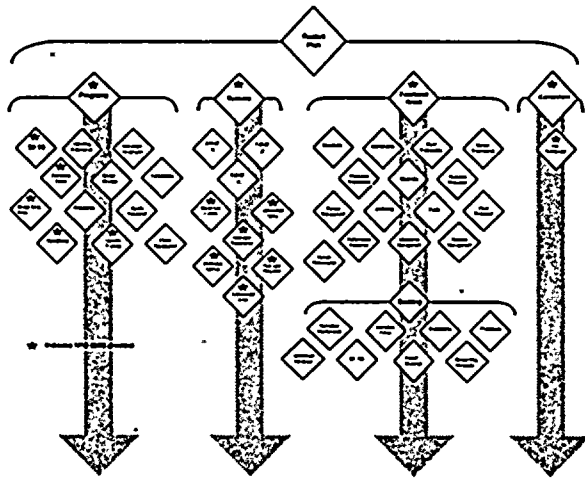


Development of Top-Level Strategies

- Manager's workshop
- Review assessment results
- Develop top level strategies

Performance Improvement

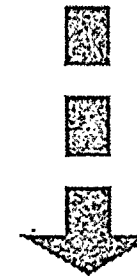
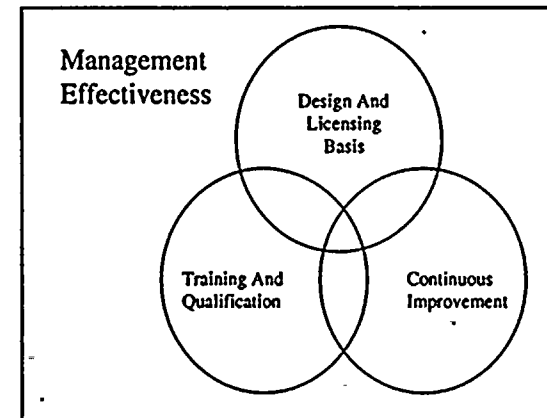
Restart Plan



- Identified Problems Corrected
- Performance Improved To Prevent Recurrence

Restart Authorization

Top Level Strategies



World Class Performance



Results of Workshop

- Top level strategies developed
 - management effectiveness
 - training and qualification
 - design and licensing basis
 - continuous improvement
- Implementing strategies
- Expectations and results for start-up

Proposed Inspection Schedule

Item	Description	Ready for Inspection
1	Surveillance Testing	1/4/99 (11/16/98)
2	Corrective Action	12/15/98
3	Design Basis Maintenance	TBD
4	Safety Evaluation	11/16/98
5	Operator Training	10/19/98

Proposed Inspection Schedule

Item	Description	Ready for Inspection
6	Ice Condenser	1/18/99 (11/16/98)
7	EDG Cables	11/2/98
8	Hydrogen Recombiner T/S Implementation	10/19/98
9	Distributed Ignition T/S Submittal	10/9/98
10	Containment Spray	12/7/98

Proposed Inspection Schedule

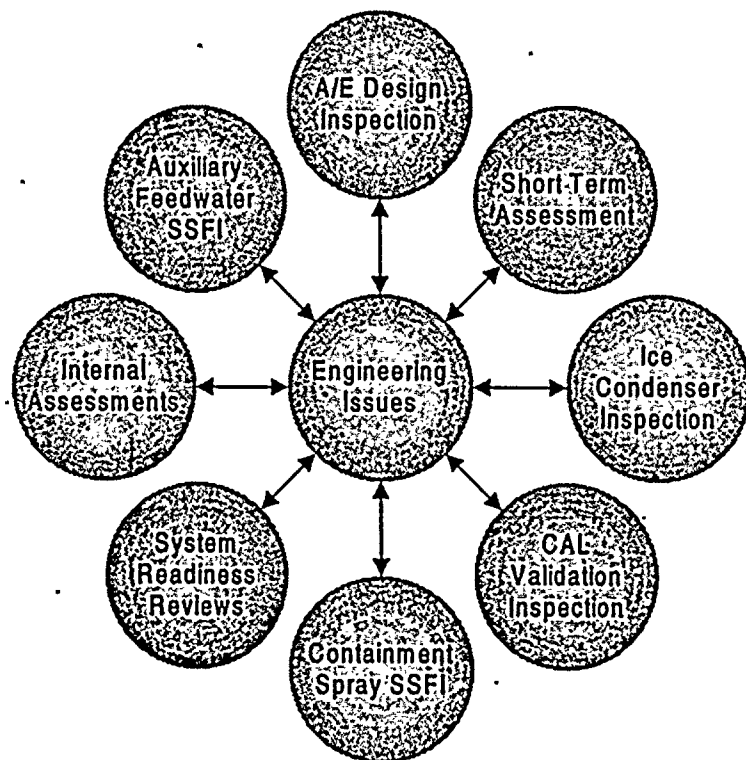
Item	Description	Ready for Inspection
11	Hydrogen Mitigation	11/30/98
12	Containment Liner Pitting	10/12/98
13	System Readiness Level 1 Level 2 and 3 Containment	11/9/98 12/7/98 1/18/99
14	Programmatic Readiness	TBD
15	Functional Area Readiness	12/15/98



Bounding the Engineering Issues

Rick Eckstein
Chief Nuclear Engineer

Key Engineering Issues



- Issues

- 50.59 program
- design change process
- calculations
- instrument uncertainty
- plant procedures
- surveillance program
- design / licensing basis
- materiel condition

Strategy

- Restart plan readiness reviews
 - systems
 - programs
 - functional areas
 - containment

Restart Plan

- System readiness reviews
 - design basis / materiel condition
 - led by system engineers
 - operations / maintenance support
 - 110 systems
 - graduated approach
 - approximately 100 personnel
 - approximately 23,000 manhours

System Readiness Reviews

- Major review elements (for 21 systems)
 - walkdowns by multi-functional team
 - 2,500+ condition reports
 - hundreds of work orders
 - functional design requirements
 - maintenance rule performance



System Readiness Reviews (cont'd)

- Major review elements (for 21 systems)
 - outstanding operability determinations
 - surveillance test procedures and results
 - pre-op test reports
 - 40 temp mods
 - 300 technical memos
 - 400 operating experience reports



Programmatic Readiness Reviews

- Major programs
 - 50.59 program
 - instrument uncertainty
 - design change program
 - calculations
 - design and licensing basis
 - procedures
 - surveillance program
 - UFSAR revalidation/update process
 - 21 systems prior to restart

Functional Area Readiness Reviews

- Addresses
 - training / qualification
 - organizational and managerial issues
 - backlog reviews
 - procedural adequacy for restart
 - program adequacy

Other Assessment Initiatives

- Self assessments
 - 50.59 evaluations and bypass review
 - surveillance program
 - 600 procedures
 - 10,000 manhours
 - review of 52 EOP's against ERGs
 - design change package quality
 - additional calculation reviews
 - ongoing design change process reviews
 - condition report triage review

Other Assessment Initiatives (Cont'd)

- Independent assessments
 - 50.59 evaluations (industry expert)
 - calculations
 - containment vertical review
 - system readiness review effectiveness

SSFIs

- Containment spray
- Auxiliary feedwater (in progress)
 - complex system
 - many modifications / upgrades
 - AEP design with vendor interface
 - routinely tested



Outreach Initiatives

- Benchmarking visits and interactions
 - Crystal River
 - LaSalle
 - Salem
 - Point Beach
- Management consultants
 - Crystal River
 - ComEd
 - Salem
 - Brunswick
 - Cooper



Results

- System reviews identified significant issues
 - valve failure modes and stroke times in UFSAR
 - calculations
 - NRC commitment database
 - testing / test procedures
 - temporary modifications
- Ice condenser
 - ice thaw and restoration
 - design criteria and assumptions
 - quality reviews of design change products

Results (cont'd)

- 1,130 condition reports written by engineering
- Self assessments identified significant issues
 - 50.59 screens / evaluations
 - grading system implemented
 - design changes
- Containment spray SSFI
 - calculation review expanded
 - EOP reviews strengthened



Results (cont'd)

- UFSAR revalidation resolving discrepancies
- Procedures and plant documents revised
- Training courses
- Vendor relationship strengthened
- Major analyses reperformed

Summary

ISSUE AREAS	ACTIONS TO BOUND ISSUES AND PROTECT THE DESIGN & LICENSING BASIS										
	SYSTEM READINESS REVIEW	CONTAINMENT REVIEW	PROGRESS REVIEW	FUNCTIONAL AREA REVIEWS	UFSAR VALIDATION	CALCULATION REVIEWS	BACKLOG SCREENING	CR TRIAGE EFFORT	PERFORMANCE ASSURANCE - BYPASS REVIEW	SSF'S	PROCEDURE UPGRADE & TRAINING
CALCULATIONS	X		X	X	X	X				X	X
DESIGN & LICENSING BASIS	X	X	X	X	X	X	X			X	X
DESIGN CHANGE PROCESS	X		X	X	X		X		X	X	X
SAFETY EVALUATIONS	X		X	X			X		X	X	X
PROCEDURE DEFICIENCIES	X			X	X	X	X			X	
MATERIEL CONDITION	X	X								X	
INSTRUMENT UNCERTAINTY	X		X	X		X					
SURVEILLANCE PROGRAM	X	X	X	X	X					X	

Conclusion

Reasonable assurance exists that the engineering issues will be bounded by restart.

Restart Readiness Metrics

Doug Cooper
Plant Manager



Readiness Categories

- Organizational readiness
- Operations readiness
- System and containment readiness
- Programmatic readiness
- Regulatory readiness
- Communications readiness



Cook Nuclear Plant Unit 1 Restart Metrics

METRICS	Goal at Startup	Current Status
I ORGANIZATIONAL READINESS		
• Management/Leadership	Top level strategies implemented	On Track
• Self-Identified Condition Reports	50% or greater	Achieved
• Root Cause Quality	Increasing	Metric by 10/15
• Corrective Actions Effectiveness	Metric in place	Data Compilation
• Restart Item Work Completion	Zero to complete	966 Items
II OPERATIONS READINESS		
• Operator Training	Training Complete	Training Scheduled
• Operations Procedures for Startup and Power Ascension	Zero to change	107 to change
• Operator Distractions	100 or less	282
• Surveillance Procedure Re-Validation	Zero to change	Metric by 10/15
III SYSTEM AND CONTAINMENT READINESS		
• Restart Modification Completion	Zero to Complete	25
• Systems Accepted by Operations	All systems accepted	None Accepted
• Temporary Modifications	< 10	25



Cook Nuclear Plant Unit 1 Restart Metrics

METRICS	Goal at Startup	Current Status
III SYSTEM AND CONTAINMENT READINESS (Continued)		
• Corrective Maintenance Backlog	< 100 Backlog (based on 10% of current items identified)	980 Items identified
IV PROGRAMMATIC READINESS		
• 50.59 Quality	B Avg. and Improving	B Average
• FSAR Re-Validation 50.59s	Zero to complete	70
• Calculation Quality	TBD by 10/15	Metric by 10/15
• As-Built Drawing Backlog	TBD by 10/15	Metric by 10/15
V REGULATORY READINESS		
• Licensing Submittals	Zero to Submit	Metric by 10/15
• License Amendments Implemented	Zero to Implement	Metric by 10/15
• 0350 Closeout packages	Zero to close	None closed
VI COMMUNICATIONS READINESS		
• Internal Communications	Metric in place	Initial Assessment Complete
• External Communications	Restart sessions conducted	Session planning in progress



Summary

- Restart Plan
 - strategies will be implemented
 - restart metrics will be on track
 - 0350 issues will be closed
- Long term improvement plan
 - comprehensive performance indicators
 - intrusive self assessment
 - routine check and adjust

Regulatory Activities

Jeb Kingseed
Regulatory Affairs Director



Presentation Scope

- ✓ NRC submittals
- UFSAR restart program

NRC Submittals

Submittal Topic	Submittal Date	Restart Requirement (Yes/No)	Required Action	Need Date	Comment
Boric Acid Concentration Reduction	6/10/98	Yes	T/S Amendment	8/31/98	Approved 8/31/98
Hydrogen Recombiner	3/3/98	Yes	T/S Amendment	N/A	Approved 9/17/98
Containment Spray Pump Code Relief	9/4/98	Yes	Code Relief Approval	ASAP	Long Lead Contingency
Ice Condenser Flow Passages (area blockage)	10/30/98 (est)	Yes	T/S Amendment	1/15/99	---
Sump pH	10/25/98 (est)	Yes	T/S Amendment	1/15/99	Mode 4 Constraint

NRC Submittals

Steam Generator Eddy Current Testing Surveillance Change (unit 1)	8/28/98	No	T/S Amendment	11/15/98	Compliance Ends 4/8/99
Safety Injection Pump Runout Flow	9/14/98	No	T/S Amendment	N/A	Admin. Controls in Place
Load Shed Cables	8/31/98	No	None	N/A	LER Retraction
Hydrogen Subcompartment Analysis USQ (Unit 2, Cycle 12)	10/23/98 (est)	No	License Amendment	N/A	GL 91-18 Rev. 1 to be performed
Generic Letter 96-06, Response to RAI	10/9/98 (est)	No	Review/Approve Response	N/A	No Mods Required
RCS Recirculation Flow (Mode 4/5)	10/2/98	No	T/S Amendment	11/15/98	Outage Work Related

NRC Submittals

Distributed Ignition System	10/9/98 (est)	No	T/S Amendment	N/A	Admin. Control in place
Ice Condenser Sublimation Rate	10/25/98 (est)	No	T/S Amendment	N/A	GL 91-18 Rev. 1 to be performed
Main Steam Line Wall Thickness	10/9/98 (est)	No	Status Letter	N/A	Weld Repairs
Post-LOCA Offsite Dose USQ	11/1/98 (est)	No	License Amendment	N/A	GL 91-18 Rev. 1 to be performed
Control Room Habitability	11/1/98 (est)	No	Review	N/A	Revised Analysis
Containment Overpressure Post-LOCA	10/23/98 (est)	No	T/S Bases Change	N/A	---



Presentation Scope

- NRC Submittals
- ✓ UFSAR Restart Program

UFSAR Restart Program Purpose

- Stewardship
- Accuracy and consistency
- Licensing and design basis understanding



UFSAR Actions Prior to Restart

- UFSAR update process procedure
- UFSAR update by 12/11/98
 - 11/11/98 cutoff date
 - 21 risk significant systems (looking for USQs)
 - inventoried items

UFSAR Actions Prior to Restart

- Electronic “living” UFSAR development
- Quality effectiveness review
 - revalidation process
 - resolution process



UFSAR Program Continued Actions

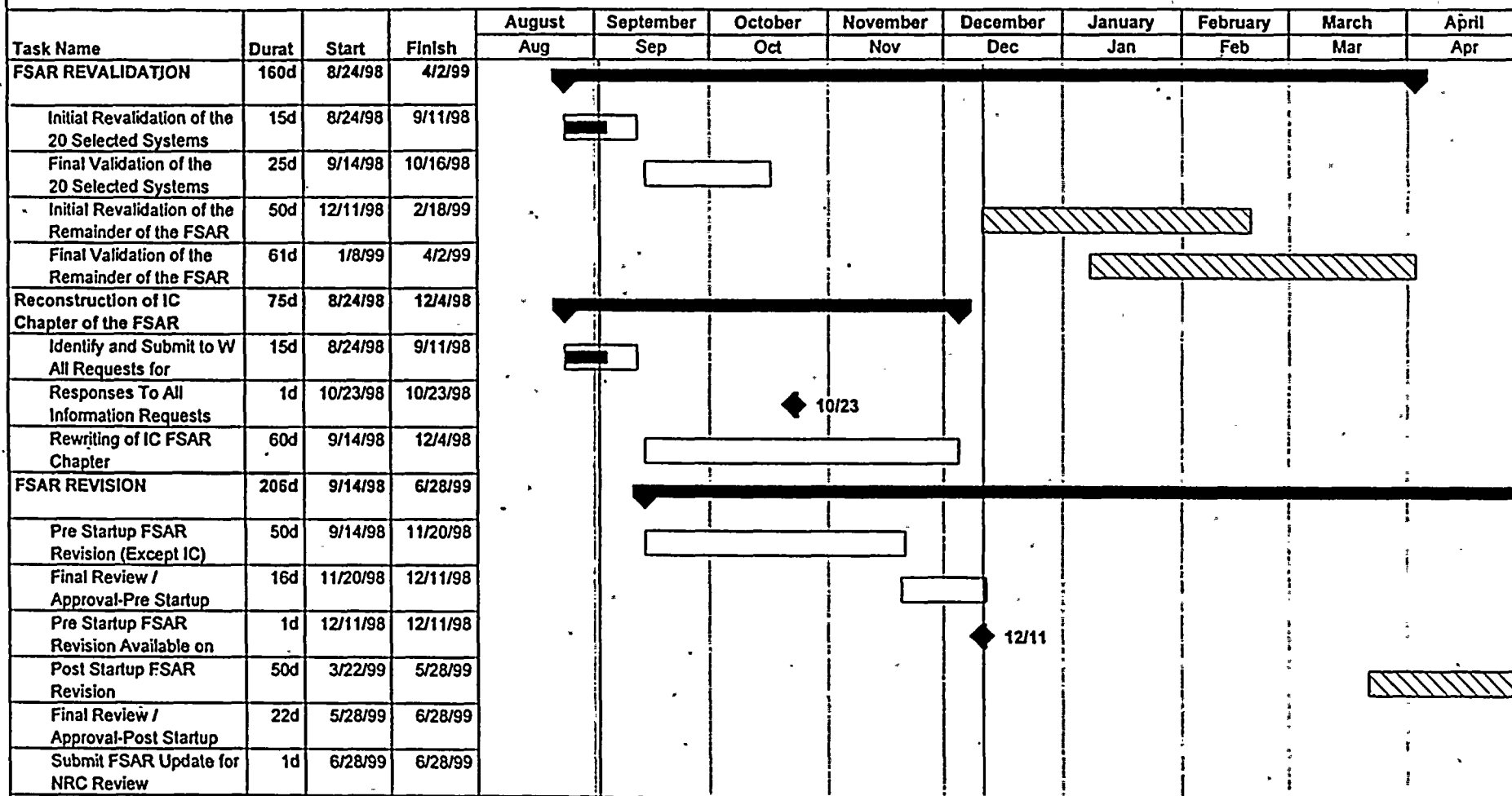
- Revalidation of remainder of UFSAR
- “Living” UFSAR implementation



UFSAR Program Result

- Improved accuracy and consistency
- Design and licensing basis maintenance
- Proper stewardship
- Facilitation of 50.59s via “living” UFSAR

FSAR PROJECT SCHEDULE



Project:
Date: 9/2/98

Task-Pre Startup



Progress



Summary



Task-Post Startup



Milestone



Closing Remarks

Robert Powers
Senior Vice President



Goals for Restart

- Operate within design and licensing basis
- Address root causes for shutdown
- Establish a foundation for world class performance
- Complete efforts in an efficient and timely manner

Challenges To Restart Plan Goals

- Delay in issuance of Restart Plan
 - Restart Plan Rev. 0 issued March 1998
- Implementation
 - self-critical evaluation
 - ownership and accountability
 - experience base

Actions - Cook is Changing

- Management expectations communicated
 - reality
 - ownership and accountability
- Restart Plan implementation
 - increased detail in revision 3
 - workdown curves
 - schedule
- New personnel
 - performance gaps
 - experience base expansion

Cook Staffing Changes Since Shutdown

- R. P. Powers* Senior Vice President
- J. R. Sampson Site Vice President
- R. Eckstein* Acting Chief Nuclear Engineer
- D. Cooper* Plant Manager
- J. Kingseed Acting Regulatory Affairs Director
- L. Weber* Operations Superintendent
- B. Wallace* Training Manager
- W. Walschot* Corrective Action Manager
- R. Gillespie Work Control Manager

* New to D. C. Cook



Staff Augmentation

- R. Cudlin Management
- J. Mason Management
- J. Durham Engineering
- B. Hickie Plant and Restart Management
- D. Kunsemiller Regulatory Affairs
- W. Kropp Quality Assurance
- C. Vanderneit Quality Assurance
- Others Training, Operations

Summary

- Progress is being made
 - physical plant
 - processes
 - culture
- More changes may be needed
- We will accomplish our goals