

# **ANNUAL ASSESSMENT MEETING**



**Nuclear Regulatory Commission**

# Agenda

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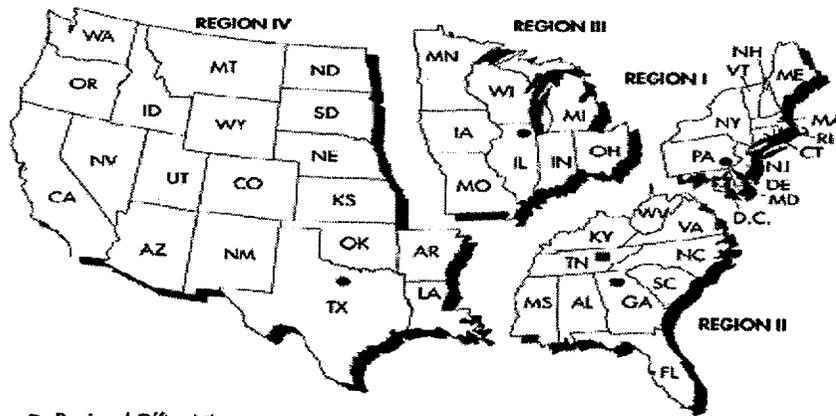
- Introduction
- Review of Reactor Oversight Process
- Discussion of Plant Performance Results
- Licensee Remarks
- NRC Closing Remarks

# NRC Activities

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- Ensure nuclear plants are designed, constructed, and operated safely
- Issue licenses for the peaceful use of nuclear materials in the U.S.
- Ensure licensees use nuclear materials and operate plants safely, and are prepared to respond to emergencies

# NRC REGIONAL OFFICES



- Regional Office (4)
- Technical Training Center (1)
- Headquarters (1)

Note: Alaska and Hawaii are included in Region IV.  
Source: Nuclear Regulatory Commission

## NRC Performance Goals

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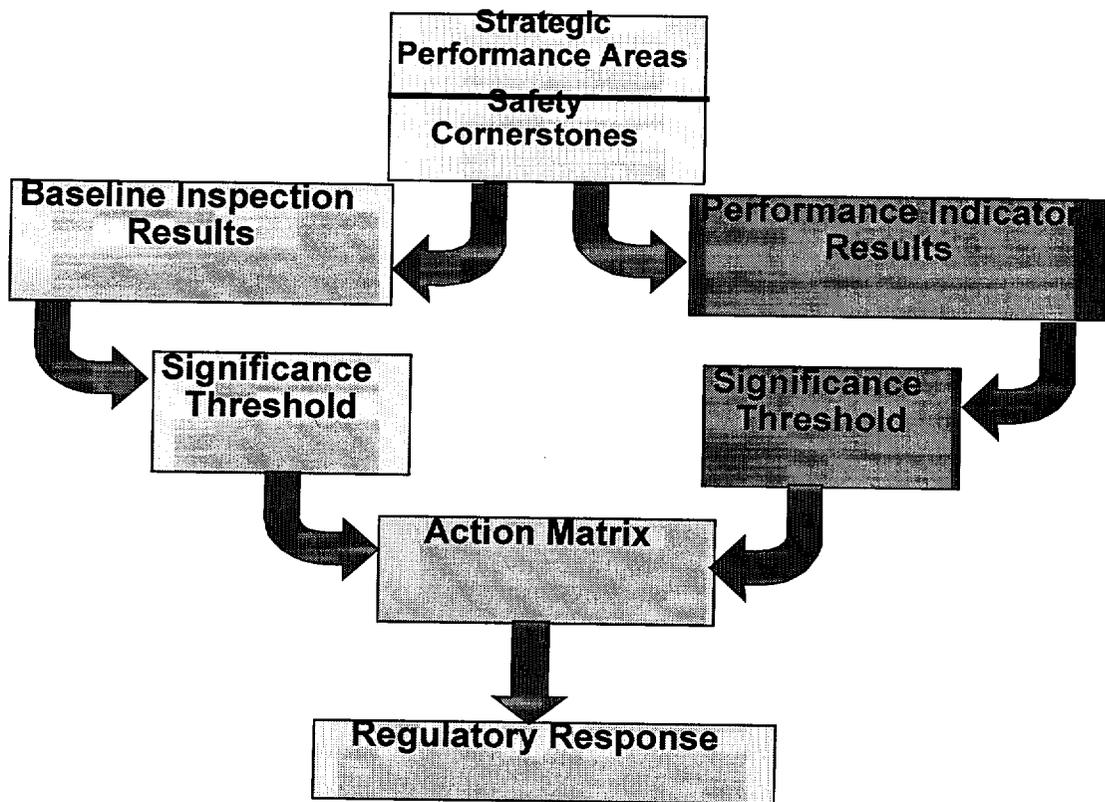
- Maintain safety and protect the environment
- Enhance public confidence
- Improve effectiveness, efficiency, and realism of processes and decision making
- Reduce unnecessary regulatory burden

# NRC Oversight Activities

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- Provides assurance plants are operating safely and in accordance with the regulations
- Risk informed process
- Objective indicators of performance
- Inspections focused on key safety areas
- Defines expected NRC and licensee actions

# Reactor Oversight Process



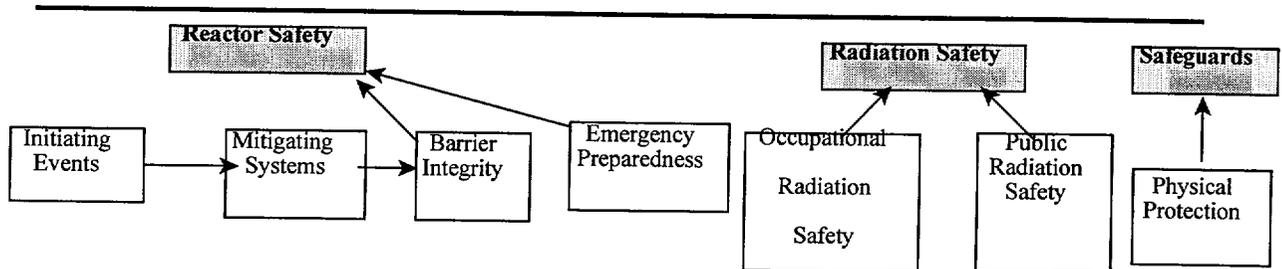
# Strategic Performance Areas

## Safety Cornerstones

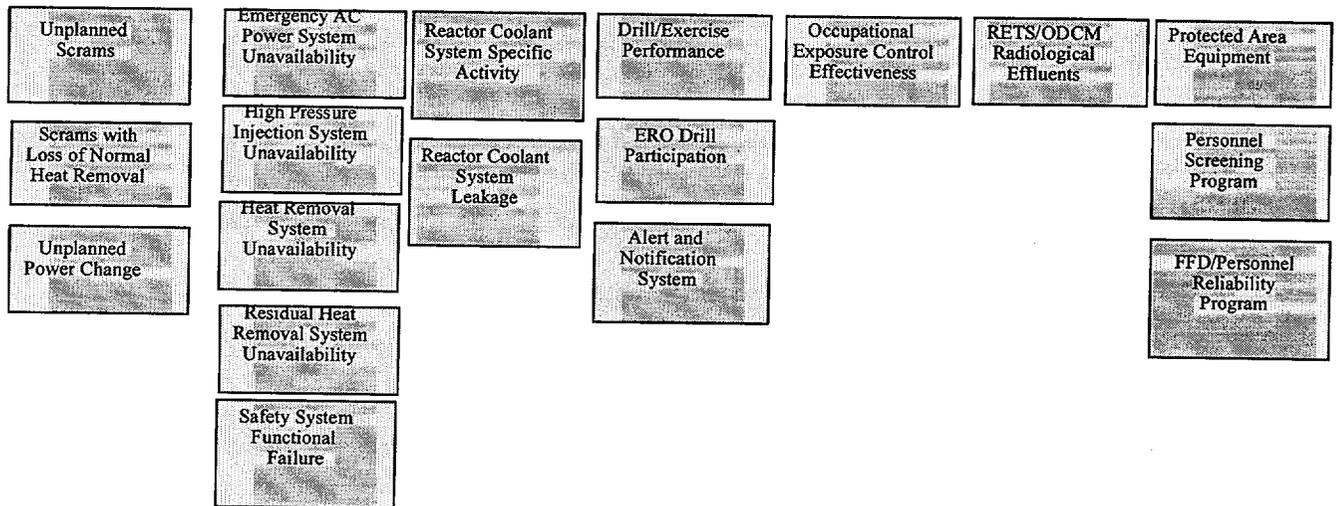
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- Reactor Safety
  - Initiating Events
  - Mitigating Systems
  - Barrier Integrity
  - Emergency Preparedness
- Radiation Safety
  - Occupational Radiation Safety
  - Public Radiation Safety
- Safeguards
  - Physical protection

# Relationship of Strategic Performance Areas, Safety Cornerstones and Performance Indicators



## Performance Indicators

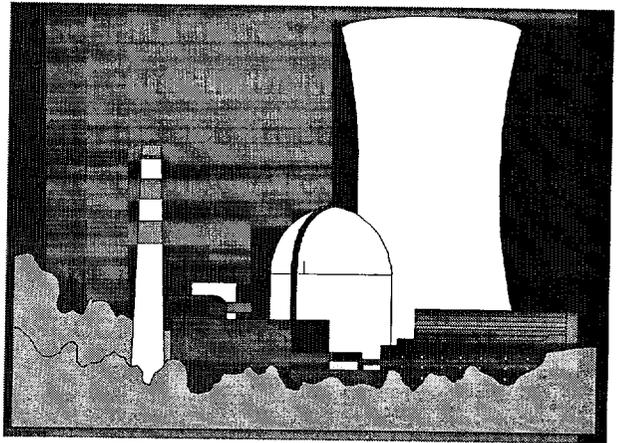


# NRC Resident and Regional Inspectors Conduct Safety Inspections

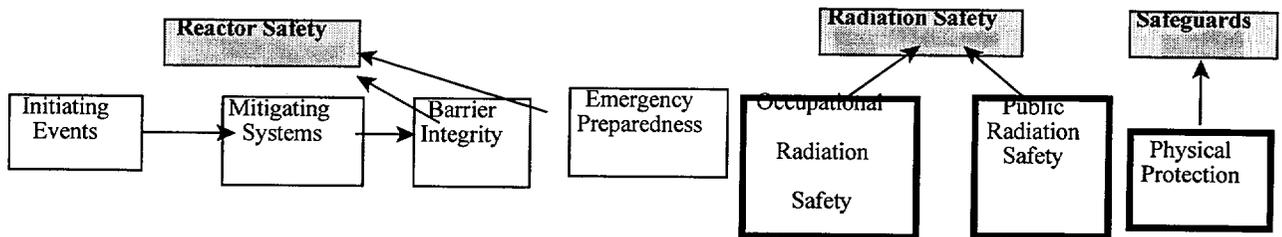
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Baseline Inspections at all reactor sites to monitor plant safety performance in each of the Strategic Performance Areas

Event Follow-up and Supplemental Inspections when required



# Inspection Areas



## Inspection Procedures

- |   |   |  |   |
|---|---|--|---|
| <ul style="list-style-type: none"> <li>● Adverse Weather</li> <li>● Evaluation of Changes</li> <li>● Equipment Alignment</li> <li>● Fire Protection</li> <li>● Flood Protection</li> <li>● Heat Sink</li> <li>● In Service Inspection</li> <li>● Operator Requalification</li> <li>● Maintenance Rule Imp</li> <li>● Maintenance Risk Assessment</li> <li>● Non-Routine Events</li> </ul> | <ul style="list-style-type: none"> <li>● Operability Evaluation</li> <li>● Operator Workarounds</li> <li>● Permanent Mods-Online</li> <li>● Permanent Mods</li> <li>● Post Maintenance Test</li> <li>● Refueling Outage</li> <li>● SSDI</li> <li>● Surveillance Testing</li> <li>● Temporary Modifications</li> <li>● PI&amp;R</li> <li>● Event Follow-up</li> <li>● PI Verification</li> </ul> | <ul style="list-style-type: none"> <li>● Exercise Evaluation</li> <li>● Alert and Notice</li> <li>● ERO Augment</li> <li>● EAL</li> <li>● EP Preparation</li> <li>● Drill Evaluation</li> <li>● RAD Access</li> <li>● ALARA Plan</li> <li>● RAD monitoring</li> <li>● RAD Effluents</li> <li>● RAD Transport</li> <li>● RAD Environmental</li> </ul> | <ul style="list-style-type: none"> <li>● Sec Authorization Access</li> <li>● Sec Search</li> <li>● Sec Response</li> <li>● Sec Plan change</li> </ul> |
|---|---|--|---|

## Key Aspects of Baseline Inspection Program

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- Objective evidence of plant safety
- Conducted at all plants
- Emphasizes safety significant systems, components, activities, and events
- Monitors licensee effectiveness in finding and fixing safety issues
- Inspection reports describe significant findings and non-compliance
- Inspection reports are publically accessible

# Examples of Baseline Inspections

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- Plant safety tours
- Plant control room tours
- Maintenance and alignment of equipment
- Operator response during simulated emergency conditions
- Worker radiation protection
- Controls for radiation releases
- Plant security

## Event Follow-up and Supplemental Inspection

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- Review events for significance
- Follow-up significant inspection findings
- Determine causes of performance declines
- Provides for graduated response

# Significance Threshold

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## Performance Indicators

- Green:** Performance requiring no NRC oversight beyond baseline Inspection.
- White:** Performance may result in increased NRC oversight.
- Yellow:** Performance that minimally reduces safety margin and requires more NRC oversight.
- Red:** Performance that represents significant reduction in safety, requires more NRC oversight, but provides adequate protection to public health and safety.

## Inspection Findings

- Green:** Very Low safety issue.
- White:** Low to moderate safety issue.
- Yellow:** Substantial safety issue.
- Red:** High safety issue.

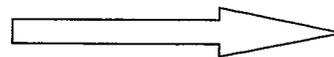
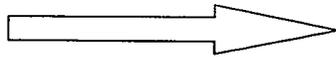
# Key Aspects of Assessment Program

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- Objective assessment of performance
- “Action Matrix” to determine agency response to performance
  - Inspection level increases
  - Management involvement increases
  - Regulatory actions increase
- Plant specific assessment letters
- Information on NRC public web site

# Action Matrix Concept

<b>Licensee Response</b>	<b>Regulatory Response</b>	<b>Degraded Cornerstone</b>	<b>Multiple/Degraded Cornerstone</b>	<b>Unacceptable Performance</b>
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Increasing Safety Significance

Increasing NRC Inspection Efforts

Increasing NRC / Licensee Management Involvement

Increasing Regulatory Actions

# National Summary

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## First Quarter Calendar Year 2001 Performance Indicator Results

**Green:** 1818  
**White:** 14  
**Yellow:** 0  
**Red:** 0

## Total Inspection Findings (April 2000 - March 2001)

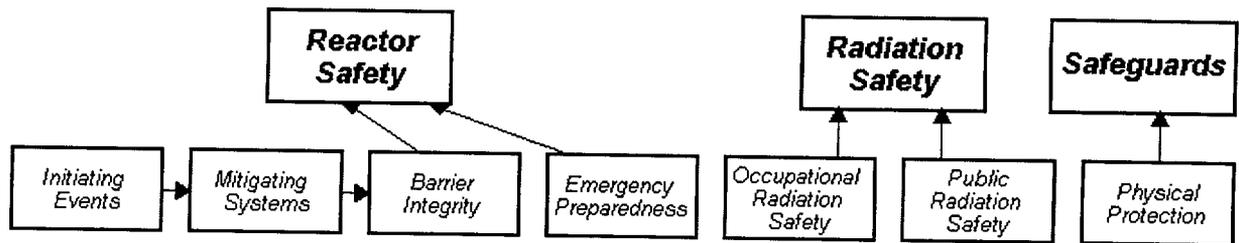
**Green:** 1031  
**White:** 20  
**Yellow:** 1  
**Red:** 1

# National Summary Of Plant Performance - 102 Plants End of First Quarter Calendar Year 2001

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Licensee Response	83
Regulatory Response	15
Degraded Cornerstone	3
Multiple/Repetitive Degraded Cornerstone	1
Unacceptable	0

## Beaver Valley 1 1Q/2001 Performance Summary



### Performance Indicators

Unplanned Scrams (0)	Emergency AC Power System Unavailability (0)	Reactor Coolant System Activity (0)	Drill/Exercise Performance (0)	Occupational Exposure Control Effectiveness (0)	RETS/ODCM Radiological Incident (0)	Protected Area Equipment (0)
Scrams With Loss of Normal Heat Removal (0)	High Pressure Injection System Unavailability (0)	Reactor Coolant System Leakage (0)	ERD Drill Participation (0)			Personnel Screening Program (0)
Unplanned Power Changes (0)	Heat Removal System Unavailability (0)		Alert and Notification System (0)			Personnel Reliability Program (0)
	Residual Heat Removal System Unavailability (0)					
	Safety System Functional Failures (0)					

Initiating Events → Mitigating Systems → Barrier Integrity Emergency Preparedness Occupational Radiation Safety Public Radiation Safety Physical Protection

**Most Significant Inspection Findings**

	Initiating Events	Mitigating Systems	Barrier Integrity	Emergency Preparedness	Occupational Radiation Safety	Public Radiation Safety	Physical Protection
1Q/2001	No findings this quarter	G	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter
4Q/2000	No findings this quarter	G	No findings this quarter	No findings this quarter	Findings without color designation	No findings this quarter	No findings this quarter
3Q/2000	No findings this quarter	G	G	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter
2Q/2000	G	Findings without color designation	No findings this quarter	G	No findings this quarter	No findings this quarter	No findings this quarter

Miscellaneous findings

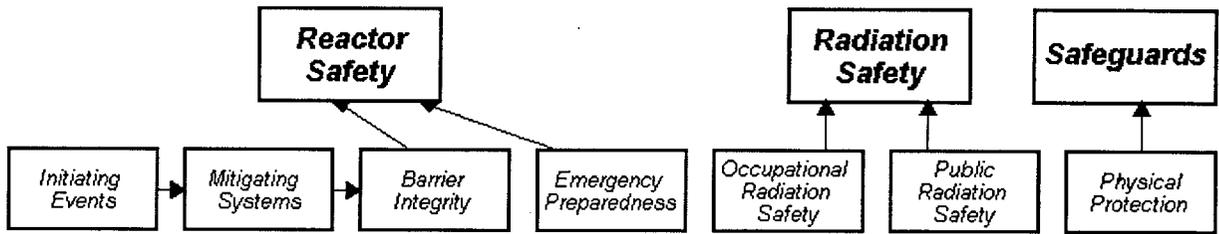
**Additional Inspection & Assessment Information**

**Assessment Reports/Inspection Plans:**

- 1Q/2001
- 4Q/2000
- 3Q/2000
- 2Q/2000

**List of Inspection Reports**

## Beaver Valley 2 1Q/2001 Performance Summary



### Performance Indicators

Unplanned Scrams (0)	Emergency AC Power System Unavailability (0)	Reactor Coolant System Activity (0)	Drill/Exercise Performance (0)	Occupational Exposure Control Effectiveness (0)	TS/OPCM Biological Agent (0)	Isolated Area Equipment (0)
Scrams With Loss of Normal Heat Removal (0)	High Pressure Injection System Unavailability (0)	Reactor Coolant System Leaks (0)	ERD Drill Interruption (0)			Establishment Licensing Program (0)
Unplanned Power Changes (0)	Heat Removal System Unavailability (0)		Leak and Lubrication System (0)			OP Personnel Reliability Program (0)
	Residual Heat Removal System Unavailability (0)					
	Safety System Functional Failures (0)					

Initiating Events → Mitigating Systems → Barrier Integrity    Emergency Preparedness    Occupational Radiation Safety    Public Radiation Safety    Physical Protection

**Most Significant Inspection Findings**

	Initiating Events	Mitigating Systems	Barrier Integrity	Emergency Preparedness	Occupational Radiation Safety	Public Radiation Safety	Physical Protection
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Miscellaneous findings

**Additional Inspection & Assessment Information**

☒ Assessment Reports/Inspection Plans:

- 1Q/2001
- 4Q/2000
- 3Q/2000
- 2Q/2000

☒ List of Inspection Reports

# Beaver Valley Power Station Annual Assessment

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- Operated safely.
- Fully met all cornerstone objectives.
- Current performance within Licensee Response column of Action Matrix.
  - All Inspection Findings of very low safety significance (Green).
  - All Performance Indicators require no additional NRC oversight (Green).
- NRC Plans to conduct Baseline Inspections.

# Beaver Valley Power Station Annual Assessment

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- Three Safety Significant inspection findings associated with the Unit 1 River Water and Unit 2 Service water systems identified before the cycle began.
  - Issues reflected legacy of longstanding degraded material conditions and latent design deficiencies.
  - NRC supplemental inspections confirm that issues have been evaluated and corrected.

# NRC Representatives

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- **Richard V. Crlenjak, Deputy Director, Reactor Projects**
  - (rvc@nrc.gov (610) 337-5080)
- **John Rogge, Chief Reactor Projects Branch 7**
  - (jfr@nrc.gov (610) 337-5146)
- **David Kern, Senior Resident Inspector**
  - (dmk@nrc.gov (724) 643-2000)
- **Geoffrey Wertz, Resident Inspector**
  - (gaw@nrc.gov (724) 643-2000)
- **Jeffrey Herrera, Project Engineer Branch 7**
  - (jxh4@nrc.gov (610) 337-5399)

# Reference Sources

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## **Reactor Oversight Process**

<http://www.nrc.gov/NRR/OVERSIGHT/index.html>

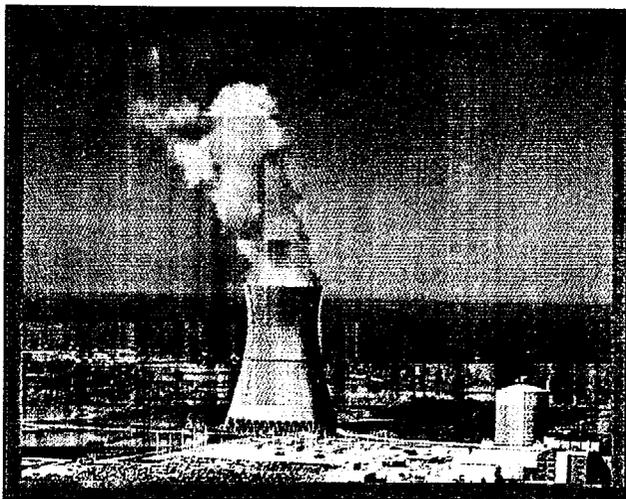
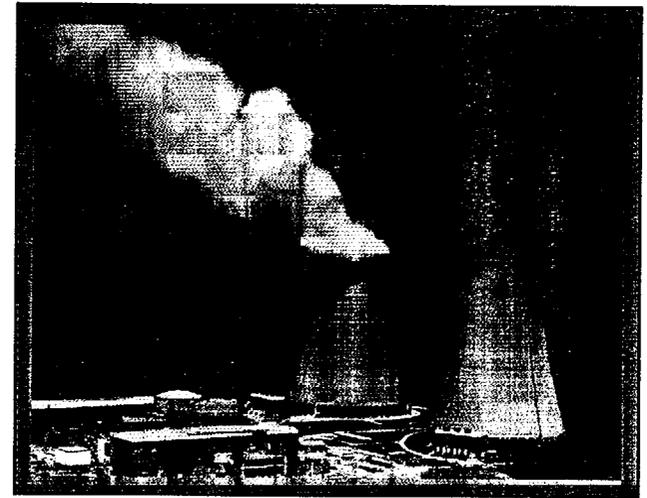
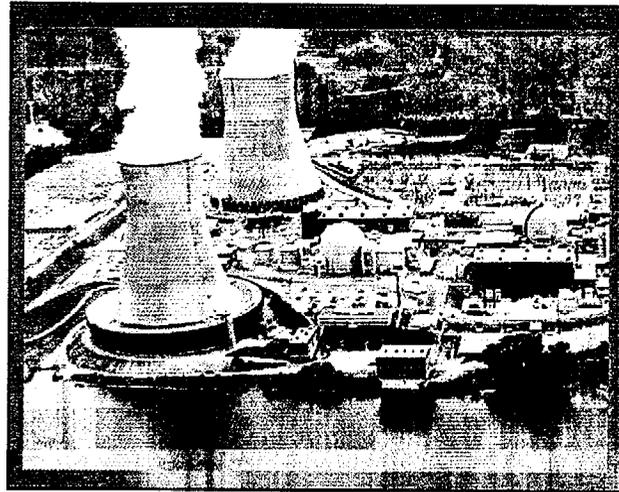
## **Public Electronic Reading Room**

<http://www.nrc.gov/NRC/ADAMS/index.html>

## **Public Document Room**

1-800-397-4209 (Toll Free)

# *BEAVER VALLEY PLANT PERFORMANCE ASSESSMENT MEETING - July 11, 2001*



**FENOC**  
FirstEnergy Nuclear Operating Company

## ***BVPS Senior Management Team***

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- Lew Myers, Senior Vice President
- Bill Pearce, Plant General Manager
- Randy Fast, Director of Plant Maintenance
- Fred vonAhn, Director of Engineering
- Bob Donnellon, Director of Projects and Scheduling
- Marc Pearson, Director of Nuclear Services

# ***BVPS HIGHLIGHTS***

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- Asset Transfer on 12/3/99
- Refueling Outage Performance
- Institute of Nuclear Power Operations (INPO) Evaluations
  - Material Condition Improvement
  - Maintenance Training Accreditation Renewal
- Common Processes

# ***BVPS KEY INITIATIVES***

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- Human Performance
- Accreditation Renewal
- Effective Probabilistic Analysis
- Latent Issues Program
- Facilities Improvement
- Top Ten Equipment Issues
- Full Potential Program

# *OPERATIONS STAFFING*

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- Operations Improvement Initiative
- Recent Class Completion
- Ongoing Classes and Future Operations Organization

# ***MATERIAL CONDITIONS***

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- Top Ten Equipment Issues
- Major Equipment Reliability
- Craft Training

# ***ENGINEERING INITIATIVES***

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- Latent Issues Review
- Improved Engineering Change Process

# ***FULL POTENTIAL PROGRAM KEY ELEMENTS***

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- Increase Capacity Factor
- Uprate of 1.4%
- Uprate of 5 to 10%
- Improved Standard Technical Specification (ISTS) Conversion
- License Renewal
- Unit 1 Steam Generator Replacement



**Beaver Valley Annual Assessment Meeting Sign in Sheet**  
 July 11<sup>th</sup>, 2001

<u>Name</u>	<u>Organization</u>
BILL PEARCE	PLANT GEN MGR
LARRY RYAN	PA - BRP
Chuck Hawley	FENOC
ARMAN MANCRO	FENOC
Don RITCHARD	FENOC
Bill MAHAN	FENOC
<del>W. J. ...</del>	<del>FENOC</del>
Ken GRADA	FENOC
GRANT J. FARR	FENOC
M. J. MITCHELL	PEO - ETS.
Guadalupe ...	QUALITY SERVICES
TOM SASKA	MAINTENANCE
ED BARTH	FENOC - EMER. PREP.
Jeff Davis	IBEW-29
Al Hartner	FENOC - BVPS
Ray Waker	IBEW 29

**Beaver Valley Annual Assessment Meeting Sign in Sheet**  
 July 11<sup>th</sup>, 2001

<u>Name</u>	<u>Organization</u>
John Maracek	FENOC - BVPS
Thomas S Cosgrove	FENOC - BVPS
FRED VON HAN	" - BVPS
JAY CARTER	COLUMBIANA Co EMA/DIR
CAL McFERN	FENOC - BVPS
Walt Chamberliff	FENOC - BVPS
Mary R. Smith	Columbiana Cty EMA
Marc Pearson	FENOC - BVPS
JAMES R. Kasunick	FENOC - BVPS
RUDY SACHBT	OHIO EMD
Michael Keene	FENOC BVPS
John Paul Jones Jr	HANCOCK OES
JOHN STANKIEWICZ	HANCOCK Co. OES
BILL PATTERSON	IBEW LOCAL 29
Kelly Campbell	FENOC - BVPS
Ken Johnson	FENOC - BVPS
Angeke Fenwick	FENOC - BVPS
MARK HOFFMAN	FENOC - BVPS
FRANK J. LIPCHICK	FENOC - BVPS

**Beaver Valley Annual Assessment Meeting Sign in Sheet**  
 July 11<sup>th</sup>, 2001

<u>Name</u>	<u>Organization</u>
Randy Fast	Maintenance - FENOC
Robert Saunders	FENOC
William K. Kline	FENOC - Life Cycle Mgt.
Lew W. Myers	FENOC
Mike Johnston	FENOC
Charles Bibbee	FENOC
Steve Lieberman	FENOC
Ken Frederick	FENOC
JOHN MARTIN	FENOC
Nicholas YANDSICH	INDUSTRY BOARD MAYOR
Brian Sepelak	FENOC
SUSAN VICINIE	FENOC
Michael S. Ressler	FENOC
MICHAEL CLANCY	MAYOR SHIPPAINGPORT
DAVID R. KLINE	FENOC
RAUTH L. HANSEN	FENOC
MARK MONOCENAS	FENOC
STEVE LOEHLEIN	FENOC - MAINT.
LEN LALLIDAY	FENOC - ENGINEERING
Paul M. Thumm	IBEW - E-BOARD

