

DES

FEB 15 1994

Docket Nos. 50-213, 50-245, 50-336 & 50-423

Mr. John F. Opeka  
Executive Vice President - Nuclear  
Northeast Utilities  
P.O. Box 270  
Hartford, CT 06141-0270

Dear Mr. Opeka:

Subject: **NOVEMBER 9, 1993, MEETING CONCERNING NU ENGINEERING INTEGRATION EFFORT AND ORGANIZATIONAL CHANGES**

This refers to the management meeting held with you and Mr. Richard Kacich of your staff on November 9, 1993, at the NRC Region I Office in King of Prussia, Pennsylvania. A list of attendees at the meeting is enclosed. In addition, during that meeting, you provided a handout to the NRC describing your presentation; a copy of that handout is also enclosed.

During this meeting, you and Mr. Kacich discussed NU issues and upcoming challenges, NU's status on current industry technical issues, the engineering integration effort you are planning and NU's response to the whistleblower allegations. Most importantly, you discussed your planning for the extensive number of management changes which you initiated in early December 1993 in an effort to improve organizational performance. We note that the changes you subsequently implemented were broad in scope with considerable potential impact on your organization. We will be closely monitoring your performance, particularly at Millstone, to ensure that this degree of change is managed effectively such that there are not detrimental impacts on NRC licensed activities. We also concur with your continued emphasis on performance improvement and cultural change at NU, particularly at Millstone Station.

We appreciate your efforts to keep us informed of your ongoing actions to improve performance at NU and look forward to a continuing dialogue on this subject.

Sincerely,

Lawrence T. Doerflein, Chief  
Division of Reactor Projects Branch 4

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FEB 15 1994

Mr. John F. Opeka

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Enclosures:

1. Attendees at the November 9, 1993, Meeting
2. NU Meeting Handout

cc w/encls:

S. E. Scace, Vice President, Nuclear Operations Services  
D. B. Miller, Senior Vice President, Millstone Station  
J. P. Stetz, Vice President, Haddam Neck Plant  
H. F. Haynes, Nuclear Unit Director  
R. M. Kacich, Director, Nuclear Planning, Licensing, and Budgeting  
J. Solymossy, Director, Nuclear Quality and Assessment Services  
Gerald Garfield, Esquire  
Nicholas Reynolds, Esquire  
Public Document Room (PDR)  
Local Public Document Room (LPDR)  
Nuclear Safety Information Center (NSIC)  
NRC Resident Inspector  
State of Connecticut SLO

bcc w/encl:

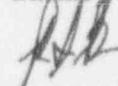
Region I Docket Room (with concurrences)  
J. Rogge, DRP  
R. Barkley, DRP

bcc w/encl (VIA E-MAIL):

J. Stolz, NRR/PD I-4  
V. McCree, OEDO  
D. Jaffe, PM, NRR  
J. Andersen, NRR  
M. Shannon, NRR/ILPB

RI:DRP

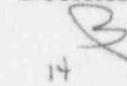
Barkley



1/31/94

RI:DRP

Deerlein *DLW 6/17*



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2/1/94

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## ENCLOSURE 1

### Attendees at the November 9, 1993, Meeting

#### NRC Attendees:

T. Martin, Regional Administrator, Region I  
W. Kane, Deputy Regional Administrator, Region I  
R. Cooper, Director, Division of Reactor Projects (DRP)  
C. Miller, Deputy Director, Division of Reactor Safety (DRS)  
J. Durr, Chief, Engineering Branch, DRS  
R. Blough, Chief, DRP Branch 4  
L. Doerflein, Chief, DRP Section 4A  
R. Barkley, Project Engineer, DRP Section 4A  
N. Blumberg, Project Engineer, DRP Section 4A  
N. Della Greca, Senior Engineer, DRS

#### NU Attendees:

J. Opeka, Executive Vice President - Nuclear  
R. Kacich, Manager - Nuclear Licensing

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**NORTHEAST UTILITIES  
MEETINGS WITH NRC  
COMMISSIONERS AND SENIOR STAFF**

**November 9 and 10, 1993.**

## **DISCUSSION TOPICS**

- **NU ISSUES AND UPCOMING CHALLENGES**
- **NU STATUS ON CURRENT INDUSTRY ISSUES**
- **ENGINEERING AND MAINTENANCE INTEGRATION**
- **ORGANIZATIONAL CHANGES**
- **NU AND NRC RESPONSE TO RETALIATION ALLEGATIONS**
- **COST BENEFICIAL LICENSING ACTIONS**

# NU ISSUES AND UPCOMING CHALLENGES

## Millstone 2 leftdown valve 2-CH-442 UPDATE

- Conservative safe operation is "Number One" priority message
- Lessons learned shared with industry CEOs on November 4, 1993
- Numerous Work Control procedure enhancements
- Quality and Assessment enhancements to improve "defense in depth"
- Responding openly to industry inquiries

## **Management Reaction and Responses to 2-CH-412 Event (Cont)**

- **Morning Nuclear Group Senior Management Meeting**
  - **Increased safety status reporting**
  - **Operability determination emphasis**
  - **Equipment restoration beyond minimum requirements**
  - **PIRs discussed in detail**
  - **Accountability emphasis and clarity**
  - **Continued information sharing between units**

**Excerpted from 10-1-93  
Enforcement Conference  
Presentation**

# • NU ISSUES AND UPCOMING CHALLENGES (cont)

## Millstone 1

- Improvements made to the License Operator Requalification Program have been effective
  - Recent NRC examination results were excellent: 100% pass rate; no program weaknesses identified
  - Working with the NRC towards return to satisfactory program status
- Major projects for Cycle 14 Refuel Outage
  - Main Condenser Replacement
  - Hardened Wetwell Vent
  - Station Blackout
  - Turbine Rotor Replacement (LP-A)
  - Motor Operated Valve Program Testing
  - Service Water pump discharge piping replacement

# NU ISSUES AND UPCOMING CHALLENGES (cont)

## Millstone 2

- Progress toward implementing Independent Review Team recommendations is on schedule
- Newly appointed Unit Director communicating expectations
- Unit management diversity
  - Unit Director from QAS and Haddam Neck
  - I&C Manager from Haddam Neck
  - Outage Manager from Technical Training
- Lower reporting threshold for Plant Information Reports

## Millstone 3

- Recently completed outage
  - Completed GL 89-13, Service Water
  - Significant progress on GL 89-10, MOVs
  - RCP replacements
  - FW nozzle cracking repaired
  - Improved Containment Leakage Testing Results
- Supplementary Leak Collection and Release System
- Unit returned to service

# NU ISSUES AND UPCOMING CHALLENGES (cont)

## Haddam Neck

- Vigorous pursuit of open SEP items (88 of 90 applicable topics closed; NRC reviewing remaining two)
- Avoid complacency

## Seabrook

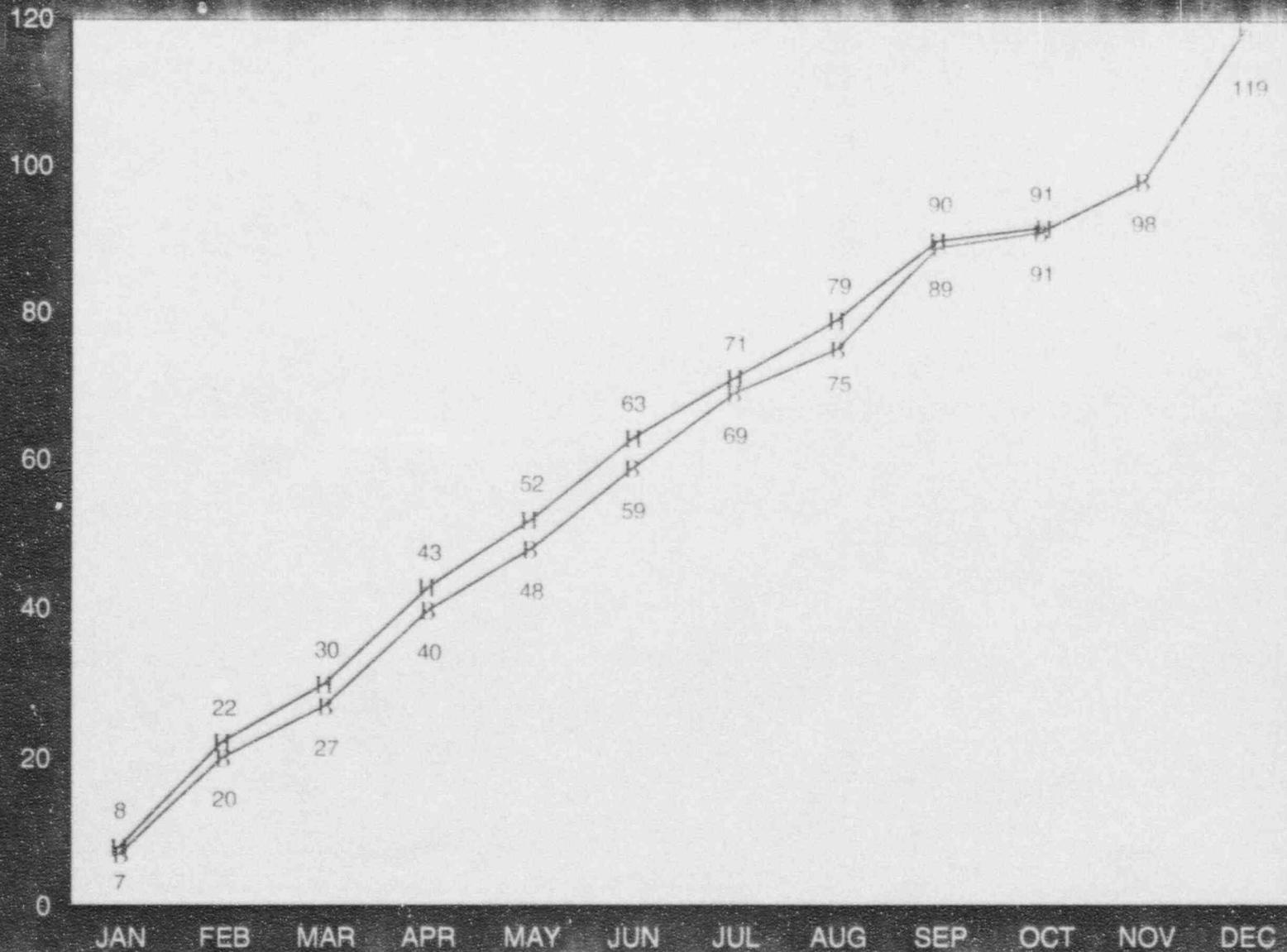
- Reactor Trip Reduction Plan
- Personnel Error Response Team

## NU ISSUES AND UPCOMING CHALLENGES (cont)

### Performance Enhancement Program (for Long Lasting Improvement)

- Milestone and deliverable schedules continue to be met
- Ongoing PEP activities - necessary for our pursuit of operational excellence
  - Engineering Backlog
    - Millstone 2: Complete
    - Millstone 1: Due 12/93
    - Haddam Neck: Due 12/94
    - Millstone 3: Due 1996
- Procedure Upgrade
  - 1137 of 4176 (27%) Procedures Upgraded
- New Program Manuals completed
  - MOV, Erosion/Corrosion, EEG, (HELB in December)
- Process Mapping of Design changes complete
- Design Basis Reconstruction complete 12/94
- Shutdown Risk Management procedures in place
- Root Cause Determination training enhancements

# PEP 1993 DELIVERABLES / MILESTONES PERFORMANCE CHART



—■— PLANNED

—●— ACTUAL

# Action Plan Status

Action Plan will be completed by January 1994

Action Plan will be completed after January 1994

Action Plan has been completed

Action Plan has been completed and validated

# ROOT CAUSE

# Management Practices

Contributor Level

Management Style

Leadership

Policy

Cultural/ Professional

Action Plans

1.1 Management Style  
1.2 Governance  
1.3 Organization

1.2.1 Vision (Completed)

1.2.2 Empowerment (Completed)

1.2.3 Management Development (Completed)

1.3.2 Standardization (Completed)

1.4.1 Cultural Analysis (12/97)

Status: 5 Action Plans Completed  
4 Action Plans Scheduled for Completion by 1/94  
1 Action Plan Scheduled for Completion After 1/94

93 Expenditures \$ .5 M  
93 Budget \$ 1.3 M

ROOT CAUSE

Programs & Processes

Contributor Level

Strategic Planning

Operational Planning & Budgeting

Work Programs & Processes

Action Plans

2.3.1 Configuration Management (2/95)	2.3.2 Design Control Processes (1/94)
2.3.3 Engineering Programs (6/95)	2.3.4 Plant System Engineering (12/95)
2.3.5 Procedures (6/96)	2.3.6 Maintenance Rule & Reliability Centered Maintenance (3/97)
2.3.7 Licensing Basis (12/95)	2.3.8 IRG / HRG (Completed)

Status: 4 Action Plans Completed & Validated  
 1 Action Plan Completed  
 1 Action Plan Scheduled for Completion by 1/94  
 7 Action Plans Scheduled for Completion After 1/94

93 Expenditures \$ 14.5 M  
 93 Budget \$ 19.3 M

# ROOT CAUSE

# Performance Assessment

Contributor Level

People/  
Organizational

Assessment  
Implementation

Management  
Policies

Data  
Analysis

Action Plans

3.1.2 Assessment Personnel Enhancement (4/94)

3.2.2 Finding Significance (Completed)

3.3.2 Corrective Action Execution (Completed)

3.4.1 Nuclear Tracking & Trending System (11/94)

3.4.2 Root Cause Evaluation & Assessment (Completed)

3.4.3 Integration of Assessment Results (Completed)

Status:

- 2 Action Plans Completed & Validated
- 4 Action Plans Complete
- 1 Action Plan Scheduled for Completion by 1/94
- 2 Action Plans Scheduled for Completion After 1/94

93 Expenditures \$ .4 M  
 93 Budget \$ .7 M

These Action Plans have developed to address other issues not identified by Root Cause Analysis

11/8/93

# Functional Programs

**Contributor Level**

**Nuclear Operation Services**

**Millstone Point**

**Connecticut Yankee**

**Corporate**

**Action Plans**

4.1.1 MEPL / BOM (12/95)

4.2.1 Station Organization (4/94)

4.2.2 Chemical / Hazardous Material Control (1/95)

4.4.2 Measures of Performance (Completed)

4.1.3 Nuclear Training Enhancement (1/95)

4.1.4 Emergency Preparedness Organization (1/95)

**Status:**  
 1 Action Plan Complete & Validated  
 1 Action Plan Complete  
 3 Action Plans Completed by 1/94  
 5 Action Plans Scheduled for Completion after 1/94

93 Expenditures \$ 3.4 M  
 93 Budget \$ 5.2 M

## NU ISSUES AND UPCOMING CHALLENGES

- Key Measures of Performance
  - Continue to be tracked; published on a monthly basis
  - PRA based measures of integrated safety performance planned to be added
  - Those selected for inclusion in performance Incentive programs may also include:
    - Plant Information Reports - personnel error related
    - License Event Reports - personnel error related
    - NRC NOVs and/or Civil Penalties
- Incentive Program redistribution being considered for 1994 to increase degree of emphasis on safety
- Incentive Program may be extended to Supervisors

## Measures of Performance - Nuclear

			Goal Ref.	CY	Seabrook	MP1	MP2	MP3	Northeast Nuclear
<b>Safety</b>	1. - 5.	Safety System Performance - HPSI or HPI/HR	(INPO)						
		Safety System Performance - AFW or RHR	(INPO)						
		Safety System Performance - Emerg. AC Power	(INPO)						
	6.	Unplanned Auto. Scrams Per 7000 Hrs. Critical	(INPO)						
	7.	Fuel Reliability Index	(INPO)						
	8.	Collective Radiation Exposure	(INPO)						
	9.	Personnel Contamination Events	(NU)						
	10.	Contaminated Areas	(NU)						
	11.	Solid Radioactive Waste	(INPO)						
	12.	Injury Statistics - Recordable	(NU)						
		Injury Statistics - Lost Work Day	(NU)						

**Legend:**

Previous Status  
 Current Status

Achieving Goal by 5% or more    
  Not Achieving Goal    
  Marginally Achieving Goal (achieving goal by < 5%)

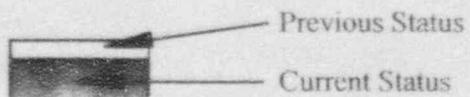
No Goal    
  Indicator N/A

			<i>Goal Ref.</i>	<i>CY</i>	<i>Seabrook</i>	<i>MP1</i>	<i>MP2</i>	<i>MP3</i>	<i>Northeast Nuclear</i>
<b>Reliable Generation</b>	13.	Actual vs. Planned Outage Schedule	(NU)						
	14.	NU Composite Capacity Factor	(NU)						
	15.	Capacity Factor	(NU)						
	16.	Forced Outage Rate	(NU)						
	17.	Actual vs. Planned Net Generation - Composite	(NU)						
	18.	Actual vs. Planned Net Generation - Unit	(NU)						
	19.	Thermal Performance	(INPO)						
	20.	Chemistry Index	(INPO)						
	21.	Temporary Modifications Status	(NU)						
	22.	Engineering Backlog Reduction	(NU)						
	23.	Maintenance Backlog	(NU)						
	24.	Rework	(NU)						

<b>Public Confidence</b>	25.	SALP Ratings	(NU)						
	26.	Trends in Nature and Number of NOV's	(NU)						
	27.	Trends in Plant Incident Reports - 1992	(NU)						
	28.	Trends in Plant Incident Reports - 1993	(NU)						
	29.	Non-Radiological Environmental Events	(NU)						
	30.	Trends in Employee Retention Rates	(NU)						

		Goal Ref.	CY	Seabrook	MP1	MP2	MP3	Northeast Nuclear
<b>Financial Performance</b>	31. GUAC Capacity Factor	(NU)						
	32. Total O&M Expense	(NU)						
	33. O&M Expense - Northeast Nuclear	(NU)						
	34. Capital Expenditures	(NU)						
	35. Connecticut Yankee Total Busbar Cost	(NU)						
	36. Seabrook Total Busbar Cost	(NU)						
	37. Millstone Unit One Total Busbar Cost	(NU)						
	38. Millstone Unit Two Total Busbar Cost	(NU)						
	39. Millstone Unit Three Total Busbar Cost	(NU)						
	40. NU Employee Overtime Hours - % of Total Hours	(NU)						
	41. NU Employee Staffing Levels	(NU)						
	42. Contractor Levels	(NU)						
	43. Productivity	(NU)						
	44. Stock Inventory	(NU)						
	45. Warehouse Stockouts	(NU)						

**Legend:**



Achieving Goal by 5% or more    
  Not Achieving Goal    
  Marginally Achieving Goal (achieving goal by < 5%)

No Goal    
  Indicator N/A

# Nuclear Safety Goal Achievement Through September 30, 1993

CY    MP1    MP2    MP3    SB

Safety System Perf. - HPSI (HPI/HR)    YES    YES    YES    YES    YES

Safety System Perf. - AFW (RHR)    YES    YES    YES    YES    YES

Safety System Perf. - Emerg. AC Power    YES    YES    YES    YES    YES

Unpl. Auto Scrams / 7000 Hrs. Critical    YES    NO    NO    NO    NO

Fuel Reliability    YES    YES    YES    YES    YES

Collective Radiation Exposure    YES    YES    YES    NO    YES

Solid Radioactive Waste    YES    YES    YES    YES    YES

Recordable Case Incident Rate    YES    YES    YES    YES    YES

Lost Workday Case Incident Rate    YES    YES    YES    YES    YES

## **NU STATUS ON CURRENT INDUSTRY ISSUES**

- **BWR Core Shroud Cracking (IN 93-79)**
  - 100% visual inspection of accessible outside diameter during last refueling outage (mid 1991); no indications found
  - Inspection video tape reviewed after receipt of GE information
  - 100% inspection of accessible ID and OD (consistent with GE recommendations) planned for January 1994 outage
- **BWR Reactor Vessel Level Monitoring (GL 92-04) - Resolved for Millstone 1**
- **Control Element Drive Mechanism Penetration Cracking**
  - Millstone 2 considering inspection (Summer 1994) - Contingency based on Point Beach results
  - Millstone 3 sample visual inspection completed; no observed indications

## NU STATUS ON CURRENT INDUSTRY ISSUES (cont)

- Boraflex (IN 93-70)
  - Boraflex surveillance programs are in place: have been in cooperation with EPAI for 7 years
  - Extensive "blackness" testing and laboratory testing of coupons confirms performance (neutron absorbtivity)
  - We have proactively and openly communicated with interested members of the public - NRC Staff and State of Connecticut involved
  - We are evaluating IN 93-70 to increase our understanding of Boraflex behavior
  - Millstone Boraflex material 2 to 3 times thicker than Palisades
  - Safety of spent fuel pool configurations assured

## **NU STATUS ON CURRENT INDUSTRY (cont)**

- **Self Assessment**
  - **NU Considers self assessment to be the cornerstone of our assessment program**
  - **Self assessment is being Institutionalized via Nuclear Group procedure**
  - **We support the NRC's efforts to encourage self assessment in lieu of NRC Team Inspections**
  - **Recent examples of self assessment initiatives**
    - **MOV Program: extremely rigorous and successful; NRC involved in plan review; findings presented**
    - **Millstone 3 EDSFI: resulted in scaled down NRC Team Inspection (October/November 1993)**
    - **Operability and reportability guidance and practices**
  - **Future self assessment efforts being considered:**
    - **Service Water System Operational Performance**
    - **Engineering Support**
    - **NSCP Effectiveness**
  - **Periodic use of YAEC when greater independence is desired**

## ENGINEERING INTEGRATION

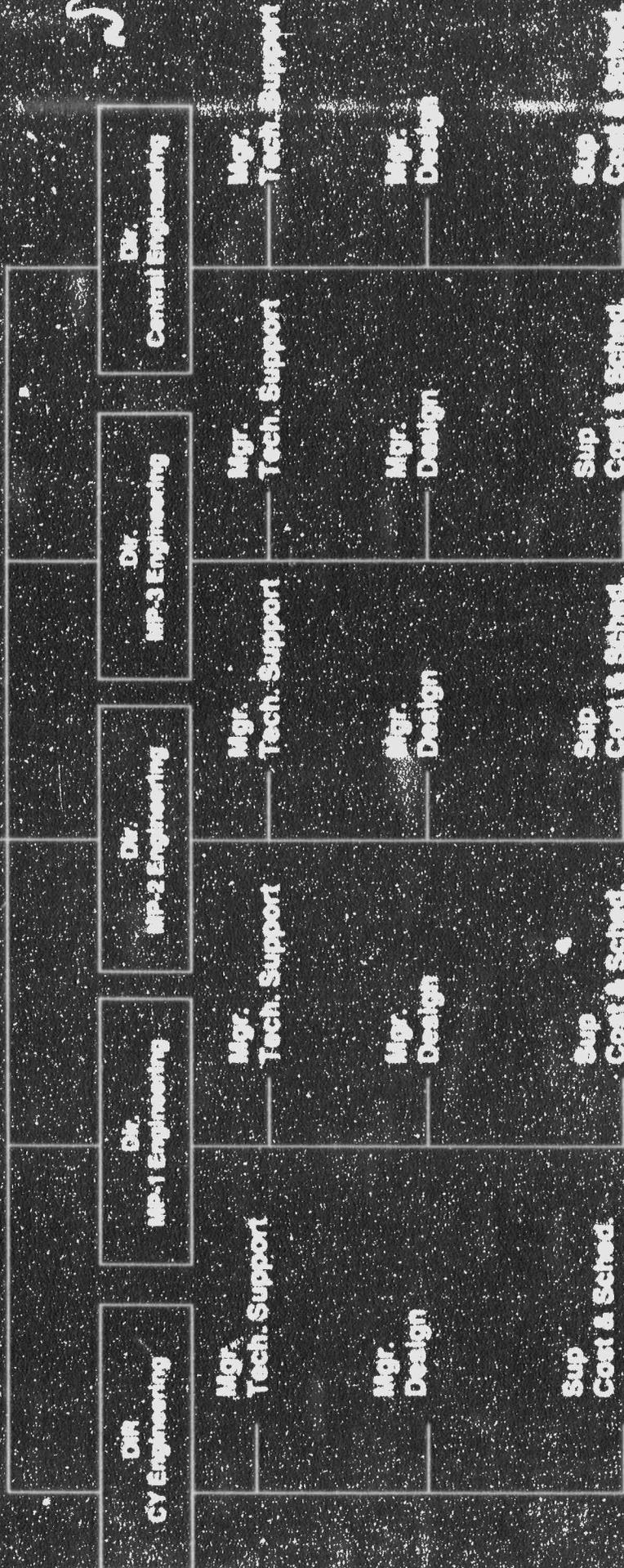
- Undertaken to improve the effectiveness, efficiency, and productivity of the engineering function
  - Current levels of safety and quality will be maintained or improved
- Four unit specific and one centralized engineering department under one Vice President
- Unit Engineering Departments:
  - Improved accountability and decision-making
  - System engineering being accelerated
  - Unit Director focus directed toward operations and maintenance
  - More clearly defined roles and responsibilities
  - Reduced handoffs in accomplishing work

## ENGINEERING INTEGRATION (cont)

- Corporate Engineering
  - Strategic issues (program development)
  - Specialized expertise (PRA, Nuclear Fuels, Radiological Assessment, etc.)
  - Reduced size
- Net effect is a reduction of approximately 100 positions - half contractors and other half unfilled, previously authorized positions

# NEW ENGINEERING ORGANIZATION

V.P. Engineering



# PREVIOUS ENGINEERING ORGANIZATION

R. T. MEYERS  
DIRECTOR  
ENGINEERING  
DEPARTMENT

A. S. ROBY  
MANAGER  
ELECTRICAL  
AND I.C. ENG.

P. M. AUSTIN  
MANAGER  
SYSTEM  
ENGINEERING

M. KUPINSKI  
MANAGER  
MECH & CIVIL  
ENGINEERING

L. MEYERS  
MANAGER  
ENGINEERING AND  
SERVICES

J. A. CRUMB  
PROJECT MANAGER  
CONFIGURATION MANAGEMENT  
PROGRAM

# PREVIOUS PROJECT SERVICES DEPARTMENT



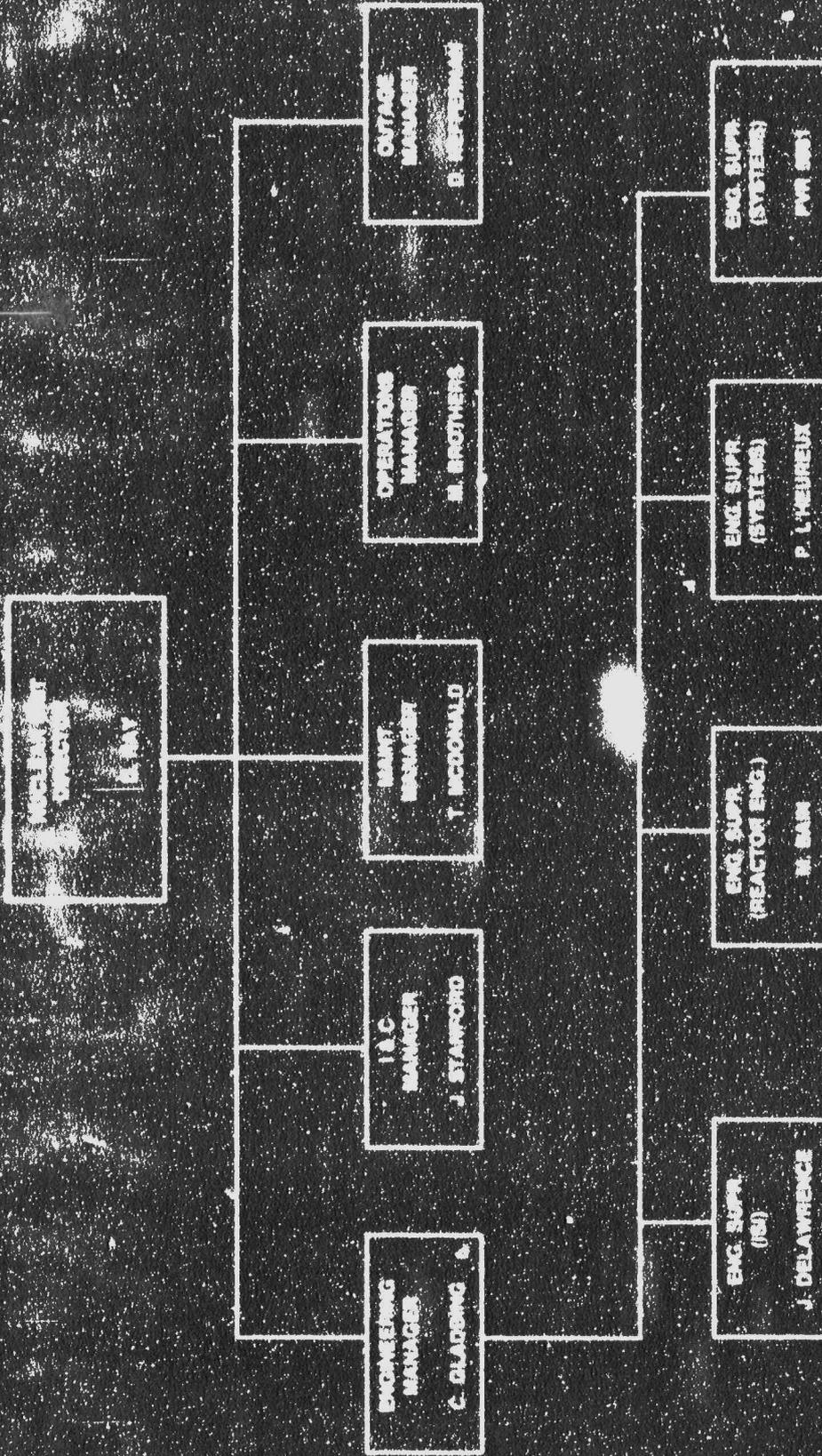
C. R. PITMAN  
MANAGER NUCLEAR PROJECT  
SERVICES CONNECTICUT  
YANKEE & SITE

L. D. DAVISON  
MANAGER NUCLEAR PROJECT  
SERVICES MILLSTONE  
UNIT NO. 1 & SITE

J. F. BIBBY  
MANAGER NUCLEAR PROJECT  
SERVICES MILLSTONE  
UNIT NO. 2

J. M. FERGUSON  
MANAGER NUCLEAR PROJECT  
SERVICES MILLSTONE  
UNIT NO. 3

# PREVIOUS CONNECTICUT YANKEE



# MAINTENANCE INTEGRATION

- Undertaken to improve the effectiveness and efficiency of the maintenance activities
- Proposed organizational concept has been approved and meets specified organizational criteria:
  - Increased plant focus
  - Simplified organization
  - Reduced duplication of programs, personnel, and physical resources
- Organizational Features
  - Maintenance production - specialized by unit
  - Maintenance specialty, facilities and modification installation - centralized by station
  - Maintenance programs - Implemented across all Connecticut units
- Implementation of the revised organization targeted for early 1994

## ORGANIZATIONAL CHANGES

- Major In Scope
- Philosophy - Put the best people in the job, without undue emphasis on prior positions or work experience
- Utilized competency model data (PEP/Action Plan)
- New Senior Vice President at Millstone Station
- All Berlin based Nuclear Officers Being Relocated to Millstone
- New NSCP Director (viewed at Two-Year Rotation Assignment)
- Elimination of "Acting" Management Position concept
- All four incumbent Unit Directors unchanged (continuity)

# ORGANIZATIONAL CHANGES

## Extent of Change

- 94 management positions unchanged
  - 59 positions, same individuals
  - 23 positions, promotions
  - 12 positions, rotational assignments
- 41 Management positions changed
  - 26 positions, lateral assignments
  - 13 positions, promotions
  - 2 positions, demotions

## ORGANIZATIONAL CHANGES (cont)

- Decisive management action
- Encourage diversity, new thinking, and fresh perspectives
- Continuation of ongoing culture changes

The Bottom Line:

A Motivated, Results - Oriented Nuclear Organization

# NU AND NRC RESPONSE TO RETALIATION ALLEGATIONS

• NU Communications with the Staff have resulted in the Staff providing 10CFR2.206 petitions directly to the licensees

– Allows for timely resolution of possible safety issues

• Recent 10CFR2.206 petitions have alleged violations of 10CFR50.5 (Deliberate Misconduct) and 10CFR50.7 (Employee Protection)

– The public nature of allegations of wrongdoing calls for timely petition resolution

– We will respond proactively to such petitions to provide the Staff with information needed to act on the petitions

• We encourage prompt Staff action, and would be pleased to further contribute to timely resolution

• Judicial review of NRC denial of 10CFR2.206 petitions unnecessary

# NU AND NRC RESPONSE TO RETALIATION ALLEGATIONS (cont)

## Suggestions for the NRC Review Team

- Share with licensees information regarding allegations brought directly to the NRC, including:
  - Characterization of allegations
  - Number of individuals making allegations
  - Number of concerns per site or unit
- This recommendation is safety driven:
  - Effective issue investigation
  - More timely issue resolution
  - Valuable feedback regarding health of work environment and Nuclear Safety Concerns Program
- Reemphasize to the Department of Labor the importance the Commission places on the prompt resolution of discrimination allegations

## NU AND NRC RESPONSE ON RETALIATION ALLEGATIONS (cont)

- Issue clearer and more explicit guidance regarding the preferred method of raising safety concerns: bring them to the licensees' attention for resolution
- Provide licensees with the NRC's view of the desirable aspects of employee concerns programs. However,
  - Do not prescribe program attributes
  - Do not measure licensee programs against these criteria
- NRC investigations should be limited to instances where a pervasive pattern of discrimination may have developed
  - Involve licensees early on in any such investigation to improve efficiency and effectiveness

## **COST BENEFICIAL LICENSING ACTIONS**

- We have been actively involved with CBLAs for some time with moderate success
  - We continue to pursue safety beneficial/neutral, cost saving opportunities
- We are actively interested and involved in industry and NRC efforts to formalize the process for CBLA identification and disposition
- We have solicited input from the Nuclear Group population (i.e., bottom up)
- ISAP is our preferred prioritization process for effective resource allocation of both NRC and industry issues
- Millstone Unit 1 H<sub>2</sub> monitoring resolution is a major accomplishment for both NRC and NU
- Continued Senior NRC Staff support and resource allocation are necessary