

October 10, 1995

Tennessee Valley Authority
ATTN: Mr. Oliver D. Kingsley, Jr.
President, TVA Nuclear and
Chief Nuclear Officer
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: MEETING SUMMARY - BROWNS FERRY NUCLEAR PLANT
ENGINEERING ACTIVITIES

Gentlemen:

This refers to the meeting conducted at your request at our Region II Office on October 3, 1995. The purpose of the meeting was to discuss the status of corrective actions for your service water self-assessment, planned engineering activities for the restart of Unit 3, and engineering activities to support two-unit operation.

It is our opinion that this meeting was beneficial to us in aiding our understanding of your ongoing engineering programs.

In accordance with section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

Should you have any questions concerning this matter, please contact us.

Sincerely,

ORIGINAL SIGNED BY A. F. GIBSON

Albert F. Gibson, Director
Division of Reactor Safety

Docket Nos. 50-259, 50-260, 50-296
License Nos. DPR-33, DPR-52, DPR-68

Enclosures: 1. Meeting Attendees
2. Licensee Handout

cc w/encls: (See page 2)

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9510180166 951010
PDR ADOCK 05000259
P PDR

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JEYS

cc w/encls:

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New Plant Completion
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OFFICE	RII:DRS	RII:DRS	RII:DRP			
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DATE	10 / 5 / 95	10 / 5 / 95	10 / 5 / 95	10 / / 95	10 / / 95	10 / / 95
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

LIST OF ATTENDEES
October 3, 1995

Tennessee Valley Authority

H. Crisler, Engineer, Engineering and Materials
P. Salas, Manager, Licensing
H. Williams, Manager, Engineering and Materials

Nuclear Regulatory Commission

A. Gibson, Director, Division of Reactor Safety
J. Hannon, Acting Deputy Director, Division of Reactor Projects
P. Kellogg, Project Manager, Division of Reactor Safety
M. Lesser, Acting Branch Chief, Division of Reactor Projects

BROWNS FERRY NUCLEAR PLANT

STATUS OF ACTION ITEMS RESULTING FROM SERVICE WATER SYSTEM OPERATIONAL PERFORMANCE SELF ASSESSMENT

Enclosure 2

October 3, 1995

SWSOPI ACTION ITEM STATUS

<u>OBSERVATION</u>	<u>ACTION</u>	<u>RESPONSIBILITY</u>	<u>STATUS</u>
1. MECH-01	- Revise calculation MD-Q0067-940058	Site Engineering	COMPLETE 8-28-95
2. MECH-02	- Close DCN T35994A	Site Engineering	COMPLETE 8-16-95
	- RHRSW restart test	Technical Support	COMPLETE 8-30-95
	- Benchmark Unit 3 easy flow calculation	Site Engineering	COMPLETE 9-22-95
	- Reference valid design input for 1000 gpm flow rate in non-accident unit	Site Engineering	COMPLETE 9-8-95
	- Revise calculation MD-Q0023-920133 to address single unit operation	Site Engineering	COMPLETE 9-11-95
3. MECH-03	- No Action Required		
4. MECH-04	- Revise calculation ND-Q2999-890026 R3	Site Engineering	COMPLETE 8-31-95
	- Revise calculation ND-Q3000-920059 R1	Site Engineering	COMPLETE 7-16-95
5. MECH-05	- Issue DCN T37522 to support setpoint change For EECW low flow alarm	Site Engineering	COMPLETE 8-18-95
	- Implement DCN T37522 (C164968)	Maintenance	FCST 10-13-95
6. MECH-06	- Clean RHR room cooler '2B'	Maintenance	COMPLETE 8-31-95
	- Clean core spray room cooler '2A' & '2C'	Maintenance	COMPLETE 9-14-95
	- Perform test core spray and RHR room coolers to confirm appropriate fouling factors	Technical Support	FCST January, 1996

SWSOPI ACTION ITEM STATUS

<u>OBSERVATION</u>	<u>ACTION</u>	<u>RESPONSIBILITY</u>	<u>STATUS</u>
7. TEST-01	- Provide formal trending program for intake pumping station sump pumps	Technical Support	COMPLETE 4-26-95
8. TEST-02	- Reinforce requirement to prepare Form SSP-253 for raw water system inspections - Revise SSP-13.5	Technical Support	COMPLETE 4-26-95
9. TEST-03	- Revise calculation MD-Q2999-890026	Technical Support	COMPLETE 8-18-95
10. TEST-04	- Revise SSP-8.6	Site Engineering	COMPLETE 8-31-95
11. TEST-05	- Revise SSP-8.6	Technical Support	COMPLETE 7-26-95
12. TEST-06	- Clean RHR room cooler '2B' & '2C' (see response to MECH-06) Expand scope of existing PMs to include requirements for cleaning air side of coolers	Technical Support	COMPLETE 7-26-95
13. OPS-01	- Revise O-OI-55	Maintenance	COMPLETE 5-16-95
14. OPS-02	- Revise 1-ARP-9-20A	Operations	COMPLETE 6-26-95
		Operations	COMPLETE 6-16-95

SWSOPI ACTION ITEM STATUS

<u>OBSERVATION</u>	<u>ACTION</u>	<u>RESPONSIBILITY</u>	<u>STATUS</u>
15. OPS-03	- Revise OI-23	Operations	COMPLETE 6-12-95
16. OPS-04	- Revise O-AOI-100-3 - Revise 1-ARP-9-20A - Revise O-GOI-300-1 - Install Hinges and Locks on Unit 3 Diesel Generator Drain Valve Pit (WRs 95-11150-00, 95-11243-00)	Operations Operations Operations Maintenance	COMPLETE 6-12-95 COMPLETE 6-19-95 COMPLETE 6-8-95 COMPLETE 8-20-95
17. QA/CA-01	- Revise BFPER940337	Site Engineering	COMPLETE 5-3-95
18. QA/CA-02	- See response to Observation MAINT-03		
19. QA/CA-03	- Revise BFPER941156	Site Engineering	COMPLETE 5-10-95
20. MAINT-01	- Revise SSP-12.7	Maintenance	COMPLETE 7-31-95
21. MAINT-02	- Conduct formal training for individuals involved in raw water system inspections	Chemistry	COMPLETE 9-28-95
22. MAINT-03	- Develop and formalize corrosion monitoring plan - Implement corrosion monitoring plan	Chemistry Chemistry	COMPLETE 8-10-95 COMPLETE 8-31-95
23. MAINT-04	- Recalibrate O-PS-67-24 (WR C186952)	Maintenance	COMPLETE 6-6-95

NRC REGION II

UPDATE ON BFN

ENGINEERING & MATERIALS

OCTOBER 3, 1995

KEY ITEMS SINCE LAST UPDATE

- DUAL UNIT READINESS

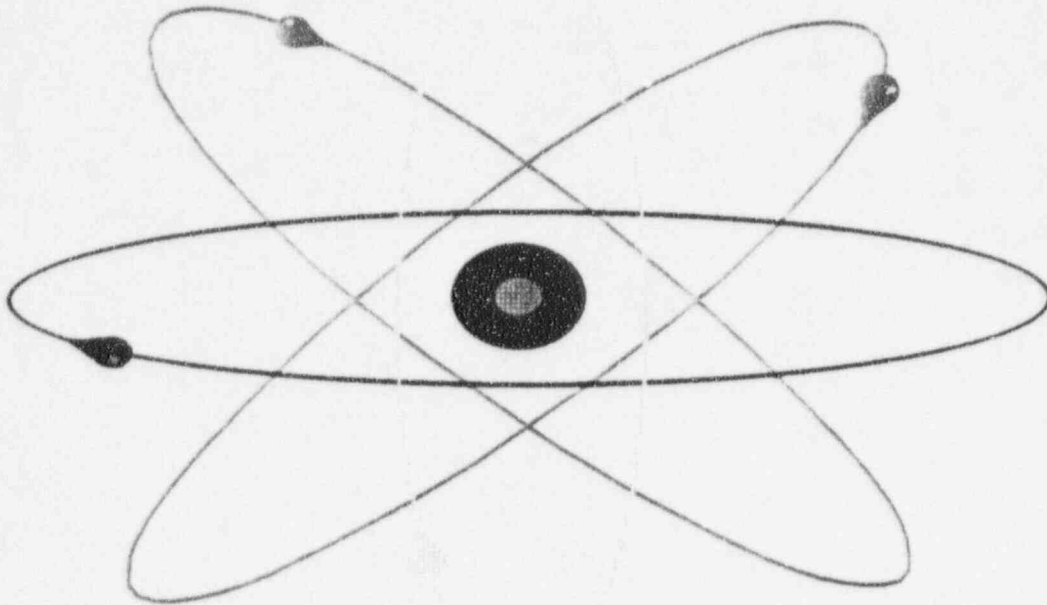
- DUAL UNIT ORGANIZATIONAL STRUCTURE

- MAJOR U3 PROGRAM REVIEWS/CLOSURES

- ISSUES BEING ADDRESSED
 - TRAINING, SELF-ASSESSMENT

- CONDUCT OF ENGINEERING “ATTRIBUTES”

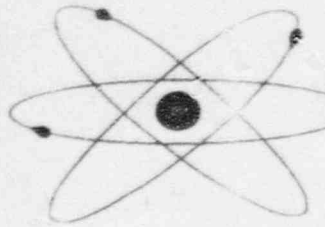
ENGINEERING & MATERIALS



DUAL UNIT OPERATIONAL READINESS TRANSITION PLAN

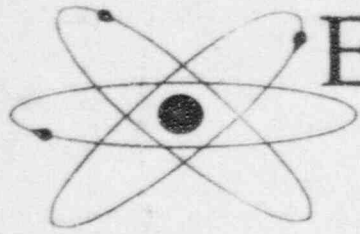
PURPOSE AND SUMMARY OF PLAN

- THE FOLLOWING DOCUMENT OUTLINES THE OVERALL PLAN AND KEY ACTIONS REQUIRED TO OUTLINE THE TRANSITION OF E&M FOR DUAL UNIT OPERATION
- KEY COMPONENTS INCLUDE:
 - UPPER TIER OBJECTIVES
 - ORGANIZATION TRANSITION
 - PERSONNEL/STAFFING REVIEW
 - OUTAGE SUPPORT STRUCTURE
 - KEY REMAINING ACTIVITIES
 - E&M DEPARTMENT BACKGROUND DATA



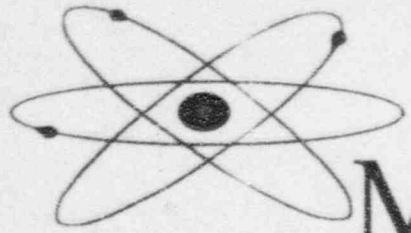
E&M MANAGER EXPECTATIONS FOR DUAL UNIT OPERATION

- THINK TWO UNITS!
- UNDERSTAND CLEARLY HOW YOUR ACTIONS ON ONE UNIT WILL AFFECT THE OTHER
- ENSURE ALL KEY DATABASES REFLECT PROPER UNIT DESIGNATION
- SAFETY OF OPERATING UNITS IS PARAMOUNT (IF ONE UNIT IS IN AN OUTAGE, THE PRIORITY IS SAFETY OF OPERATING UNIT)



E&M MANAGER EXPECTATIONS FOR DUAL UNIT OPERATION

- KEEP UNIT FIDELITY! (UNIT DIFFERENCES CREATE OPERATING/MAINTENANCE CHALLENGES)
- ALL DESIGN BASIS DOCUMENTS MUST REFLECT PLANT CONFIGURATION
- KEY MATERIAL SPARES AVAILABILITY IS CRUCIAL TO SAFE, EFFECTIVE OPERATION
- PERSONAL ACCOUNTABILITY IS TO BE REINFORCED AT ALL TIMES



ENGINEERING & MATERIALS CHALLENGES

- TRANSITION TO FULL OPERATIONS MENTALITY FROM RECOVERY/OPERATING MODE
- DEMONSTRATE SALP 1 AND INPO 1 PERFORMANCE - WORLD CLASS DECISIONS
- NO CONSEQUENTIAL PERSONNEL ERRORS
- ENSURE PLANT HAS "RIGHT PART AT RIGHT TIME"

KEY ACTIONS TO ENSURE SUCCESS

In order to ensure E&M readiness for Dual Unit Operation, the following actions have been taken:

- (1) Personnel - Additional multi-unit training on PSA. Turnover of information from the Unit 3 Recovery effort has been in effect in technology transfer.
- (2) Budget - The past year saw budgets in U2 O&M, U2 Capital, and U3 Recovery (Capital) developed and managed. For 1996, Budgeting was developed in five areas:
 - a. U2 Capital
 - b. U2 O&M (Based on operating expenses)
 - c. U3 Recovery Capital - Capital funds to complete U3 Recovery to 100 hours at 100 per cent.
 - d. U3 O&M - Estimated as a function of U2 for the number of months U3 to operate in FY96.
 - e. U3 Capital - Worked with U2 Capital
- (3) Staffing - Overall staffing was decreased with primary emphasis in operating support area. No significant increases have been made in OSE until the true increased effect of two unit design support is seen. There is sufficient manpower in the discipline departments to handle any O&M overflow seen by OSE. During the year, the staffing will be continually reviewed to assure adequate support for long term. Capital work will be decreasing significantly, therefore, any available discipline manpower will be made always available to OSE. Long term staffing is forecast to continue to decrease as budget pressure increases; thus, significantly reducing the manhours the site can afford to fund.
- (4) Procedures/Processes - The E&M procedures have been scrubbed to remove any unit differences. Program differences are documented and well understood.
- (5) Outage Support - As outlined in the attached--the E&M outage coverage will consist of a temporary assigned Outage Manager supported by four (4) multi-discipline teams. OPS Support Group will retain primary responsibility for the operating unit, while the E&M Outage Manager will coordinate all outage related activities.

**BFN ENGINEERING & MATERIALS
UPPER TIER ORGANIZATIONAL GOALS/OBJECTIVES MATRIX
DUAL UNIT OPERATIONS**

GOALS & OBJECTIVES

SALP I/INPO I

**IMPROVE CUSTOMER
SATISFACTION IN MATERIALS**

**UNIT 3 STARTUP
& RECOVERY**

**COMPLETE AND
ACCURATE INFO**

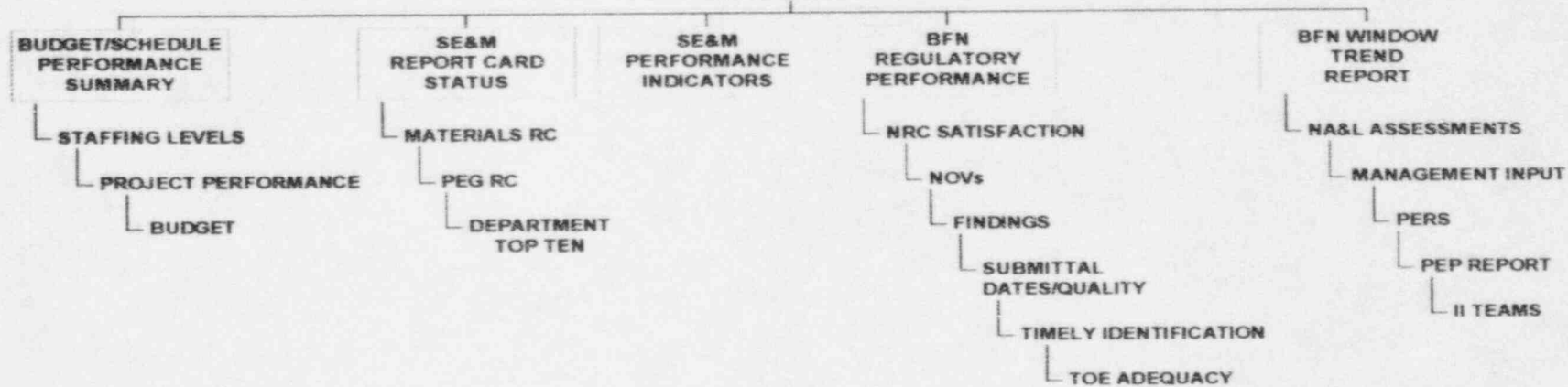
TIMELY/QUALITY PLANT SUPPORT

**UNIT 2 CONTINUOUS
OPERATION**

**SELF-CRITICAL/INLINE
ASSESSMENT**

**IMPROVE PLANT
COMPETITIVENESS**

MEASURED BY



DON'T SATISFY THE CUSTOMER - SURPRISE THEM

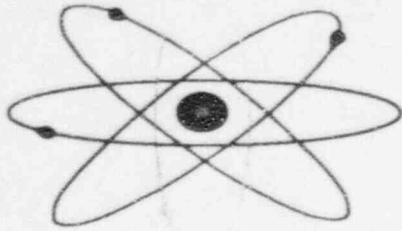
ORGANIZATIONAL TRANSITION

The E&M organization for support of U2 operation and U3 recovery is as shown on Attachment 1. A separate multi-discipline U3 Recovery Organization has been in effect for the past two years. During this time, the U3 Recovery Organization reported directly to the U3 Recovery Manager with matrix responsibility to the Site E&M Manager.

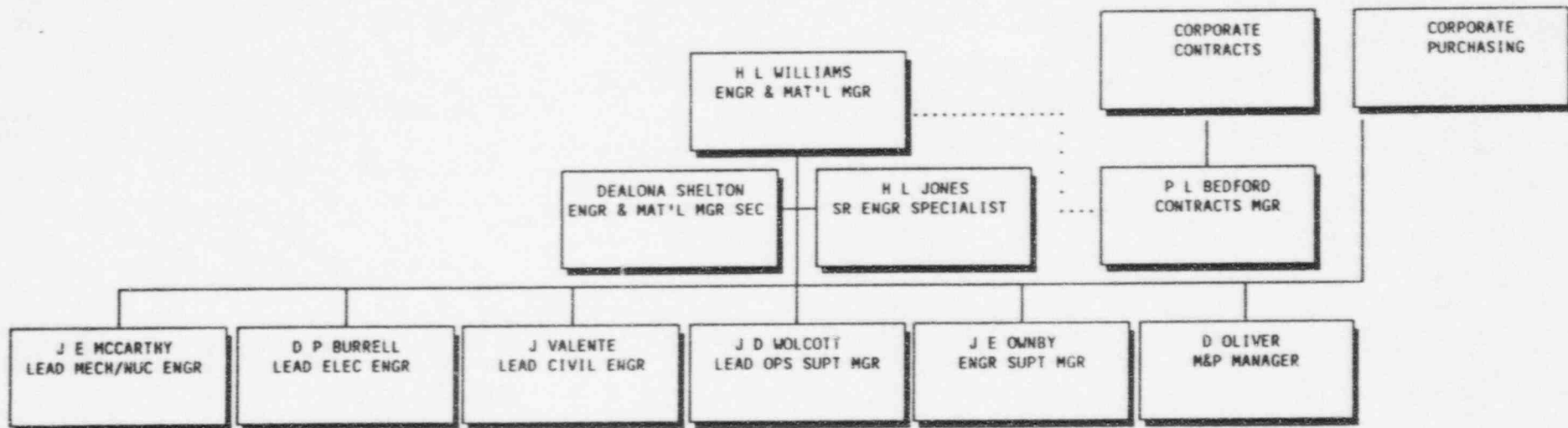
As we move closer to U3 fuel load and power ascension, the organization will recombine with the U3 Recovery personnel being absorbed into the current discipline organization structure. Key dates for organization actions are:

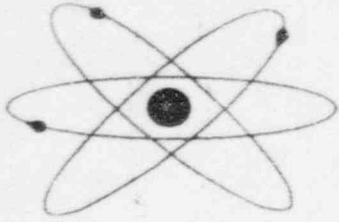
<u>Action</u>	<u>Date</u>
• Current reporting relationship to hard line to E&M Manager	June 15 (A)
• Hard line discipline support to LDE	Sept. 15 (A)
• Desolve U3 Recovery Organization into standard E&M Organization	Nov. 1, 1995

Personnel actions to support these activities are already underway.



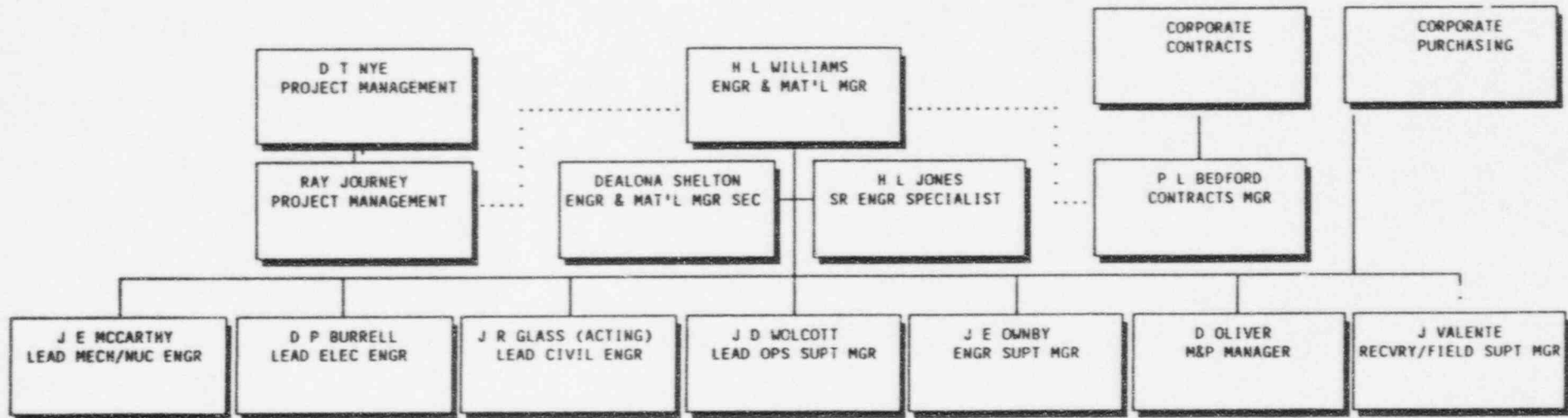
ORGANIZATION STRUCTURE DUAL UNIT OPERATION

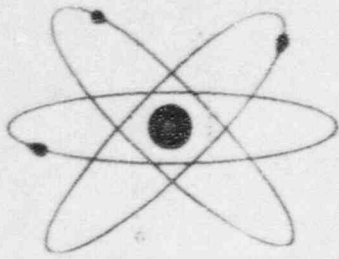




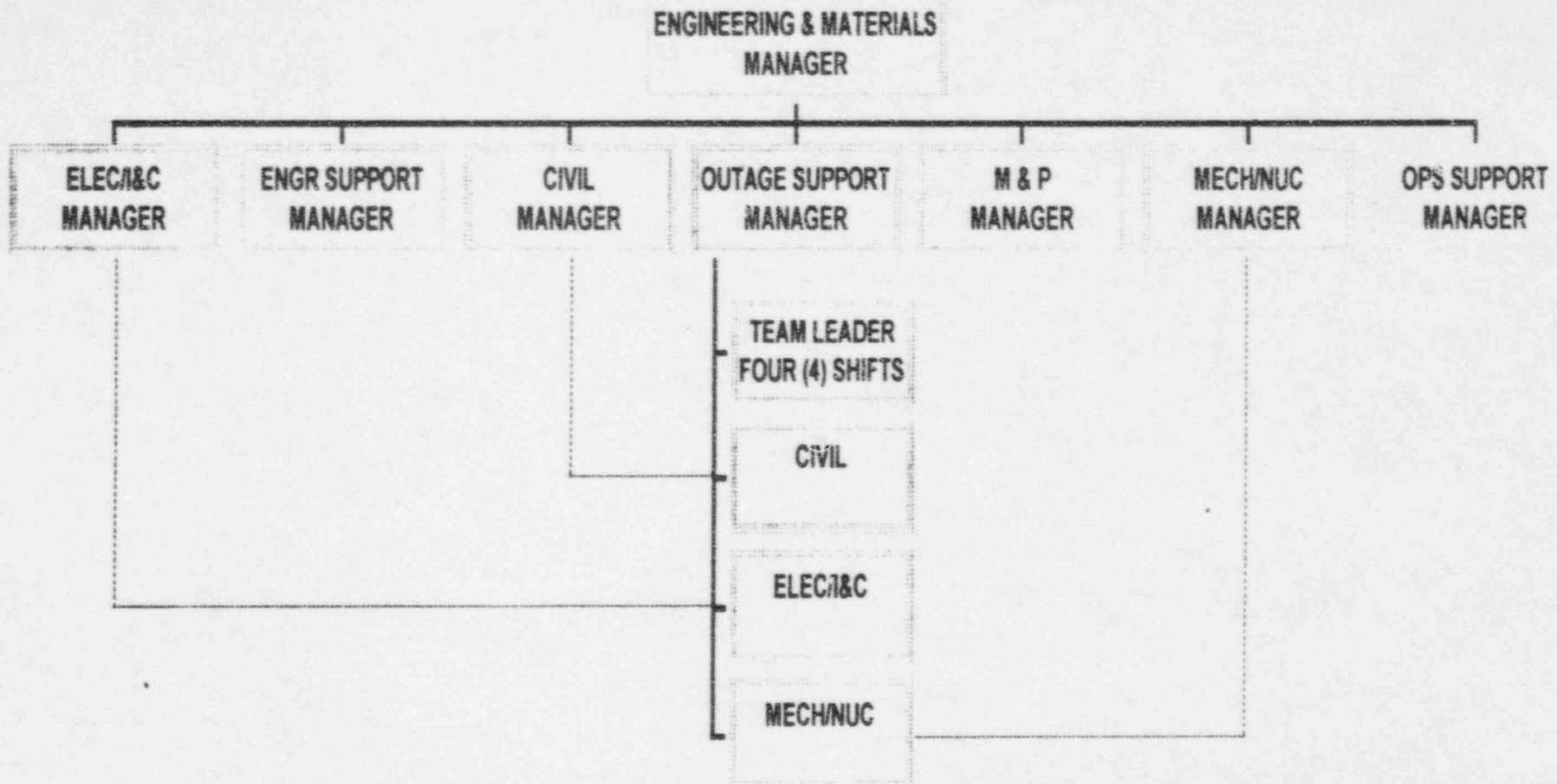
ORGANIZATION STRUCTURE

U2 OPERATING/ U3 RECOVERY





E&M OUTAGE SUPPORT MATRIX ORGANIZATION



UNIT 3 RESTART MAJOR PROGRAM SUMMARY

- APPENDIX R
 - HIGH IMPEDANCE FAULT ISSUE W/STAFF
 - SUBMITTAL 10/2

- GL 89-10
 - U2 REVIEWED/CLOSED

- U3 PHASE I REVIEW

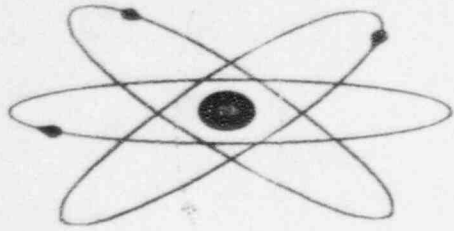
- 79-14, 02
 - REVIEWS COMPLETE, IN CLOSURE

- EQ
 - CURRENTLY BEING REVIEWED BY REGION II

- PSA
 - MULTI-UNIT COMPLETED
 - NO SIGNIFICANT VARIATIONS IDENTIFIED
 - ONLINE MAINTENANCE MATRIX DEVELOPED

- E/C, ISI
 - BASELINED FOR U3

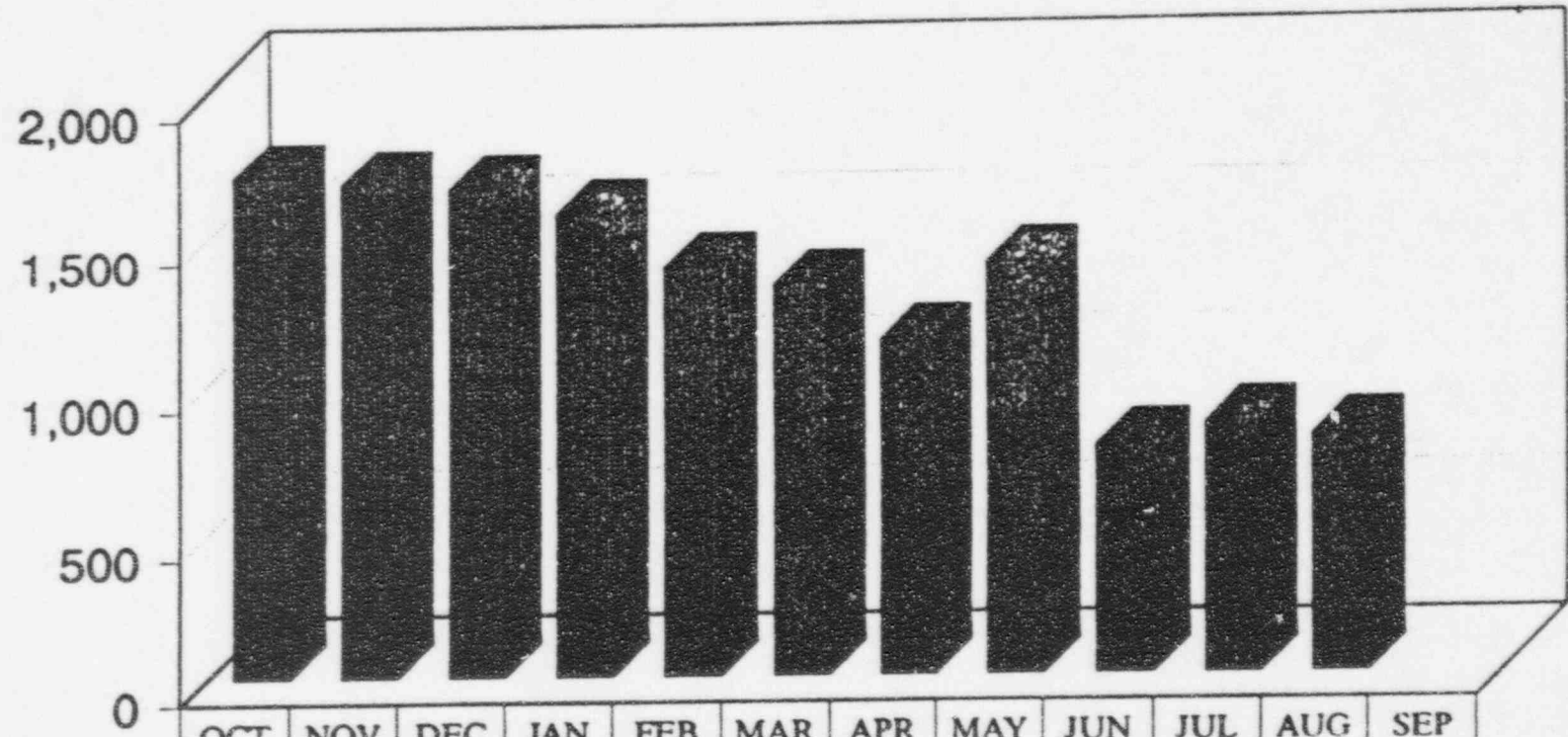
- SWSOPI
 - ACTION ITEMS NEARLY COMPLETE



MANAGEMENT

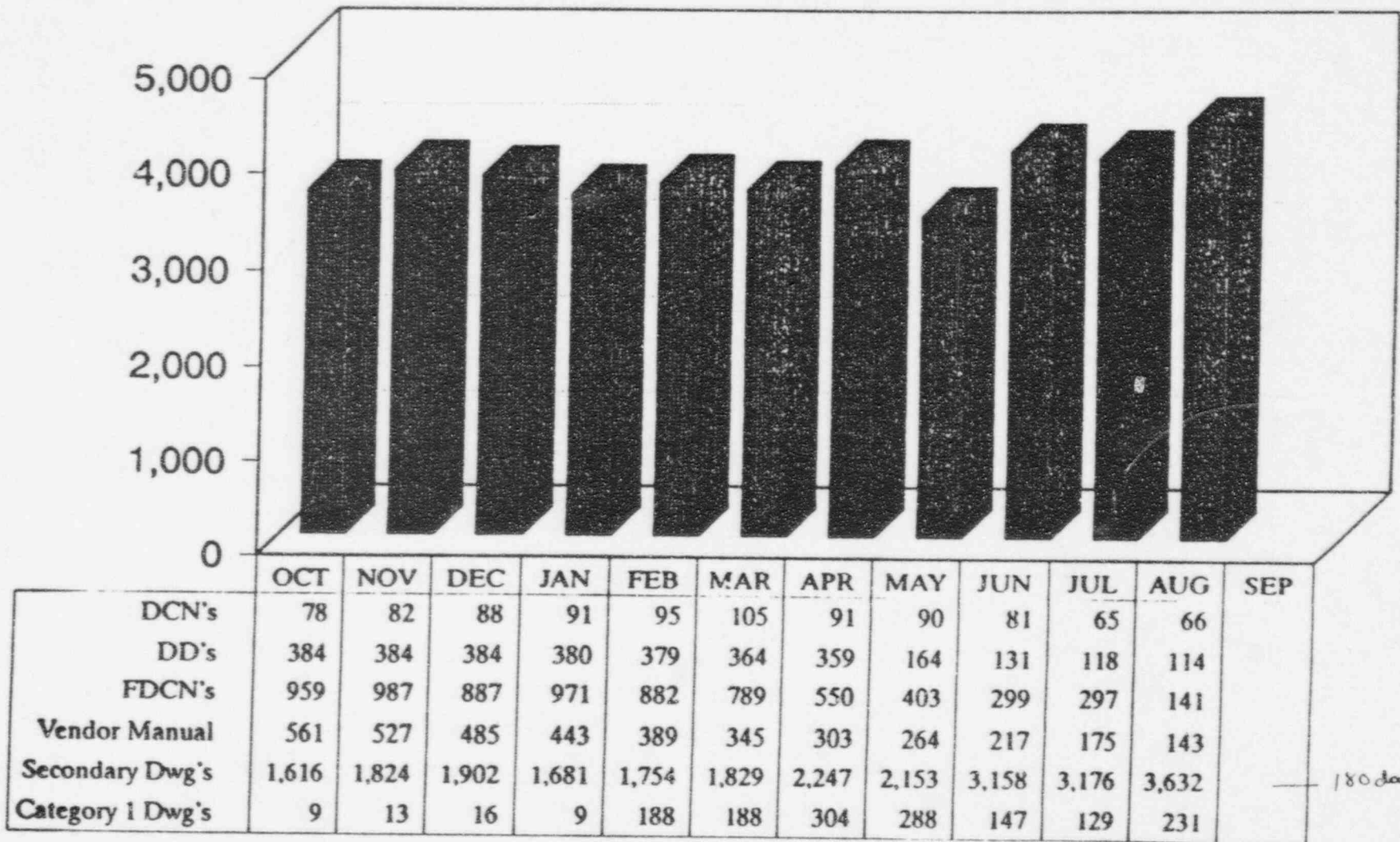
- AREAS FOR INCREASED MANAGEMENT FOCUS
 - BUSINESS PERFORMANCE
 - TOES
 - PROCUREMENT ENGINEERING
 - TWO UNIT OPERATION TRANSITION
 - ACCURATE/COMPLETE INFORMATION
 - "RIGHT PART AT RIGHT TIME" CONCEPT
 - FDCN REDUCTION

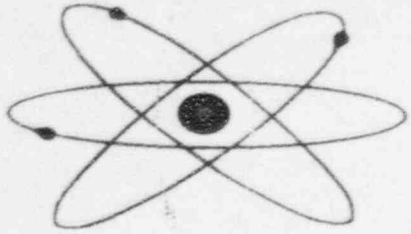
Site Engineering Unit 2 & Common Workload



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
DCN's	115	113	117	130	130	126	123	127	124	112	112	
DD's	1,239	1,239	1,239	989	833	750	617	563	113	66	34	
FDCN's	320	260	250	301	340	358	256	190	158	162	185	
Vendor Manual	19	23	20	21	20	22	27	28	26	23	20	
Secondary Dwg's	2	39	30	125	53	53	36	258	284	450	359	
Category 1 Dwg's	9	2	2	1	6	8	64	225	61	22	86	

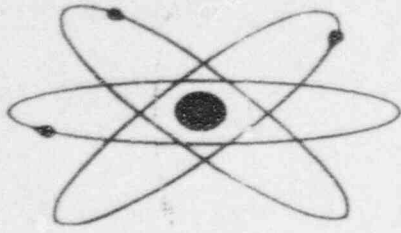
Site Engineering Unit 3 Workload





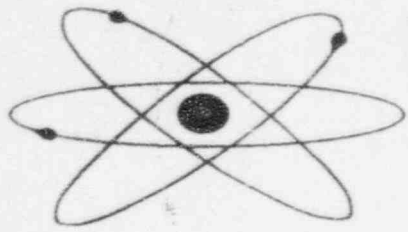
TRAINING

- DUAL UNIT OPERATION SUPPORT
 - PROBABILISTIC SAFETY ASSESSMENT
 - DUAL UNIT INDUSTRY EXPERIENCE
 - UNIT INTERFACES
 - UNIT 3 MODIFICATIONS
 - ORAM
 - DUAL UNIT SENSITIVITY
 - ENGINEERING SUPPORT PERSONNEL -
62 INDIVIDUALS



E&M SELF ASSESSMENTS

- PLANT WINDOWS
- PERFORMANCE EVALUATION PROGRAM
- CORPORATE OPERATIONAL READINESS
- PERFORMANCE INDICATORS
- INVENTORY ACCURACY
- CORPORATE INDUSTRIAL ENGINEER ASSESSMENT
- M&P INPO SELF-ASSESSMENT



QA ASSESSMENT/AUDIT FINDINGS

- 91 - QA AUDITS/ASSESSMENTS PERFORMED PAST 18 MONTHS
 - PROCEDURAL ADHERENCE
 - ATTENTION TO DETAIL
 - COMMUNICATION WEAKNESS