June 1, 1983

Docket Nos. 50-329/330

APPLICANT: Consumers Power Company

FACILITY: Midland Plant, Units 1 & 2

SUBJECT: SUMMARY OF APRIL 19-21, 1983 CASELOAD FORECAST PANEL MEETING

On April 19 and 21, 1983, members of the NRC Caseload Forecast Panel met with Consumers Power Company (CPCo) and Bechtel to review construction completion schedules which CPCo completed February 18, 1983 and announced April 12, 1983 for Midland Plant, Units 1 & 2. On April 20, 1983 the Panel toured the plant to observe construction progress. The purpose of the meeting and tour is to provide for an assessment by the Panel of construction completion. Meeting attendees are listed in Enclosure 1. Enclosure 2 is the meeting and tour agenda. Enclosure 3 shows some of the slides used during CPCO's presentations.

CPCO's previous and revised estimates are:

	7/80 Estimate	4/83 Estimate	Difference (Mos.)
Unit 2	7/83	10/84	14
Unit 1	12/83	2/85	13

Overall plant completion is estimated by CPCo to be about 83% complete; engineering is about 76% complete; design 94%; and underpinning 4%.

CPCo finds there are three separate critical paths for construction completion: (1) a so called "aboveground" pathway, (2) auxiliary building underpinning, and (3) the licensing/hearing pathway.

Aboveground Pathway

This pathway is primarily based upon rework of large and small bore pipe supports. However, installation of three HVAC systems, penetration sealing, and installation of mirror type pipe insulation also presently have zero or negative schedule float.

8306070425 830601
PDR ADOCK 05000329
A PDR

OFFICE ▶							
SURNAME ▶							
DATE ▶							

A letter of March 29, 1983, notes CPCO's intent to reinspect all installed safety related pipe supports without regard to the time of their installation or turnover. CPCo estimated the new support reinspection procedure, training and certification of inspection personnel, QA program revisions, and other support activities would be in place in tima to commence reinspections during the week of April 11, 1983. CPCo plans to use three inspection teams (about 50 inspectors) and expects to complete hanger reinspections in June 1983. Only two inspectors had been certified as of April 15, 1983 and had started hanger inspections. The hanger reinspection pathway is the critical path for the "Construction Completion Plan" (CCP) described in CPCo's letters of January 10 and April 6, 1983 (and subsequently on April 22, 1983).

CPCo noted that 544 of 850 total subsystems (64%) have been turned over and accepted. Some systems were accepted with multiple "exceptions" (punchlist open items such as design changes, and corrective actions). CPCo's schedule for preoperational testing, acceptance testing, flushing and specific tests for both units provides a total duration of 14 months. Forty-five percent of the systems have been initially checked out. About 4% of the total of 683 tests have been completed as of March 31, 1983. Of these 683 tests, CPCo plans to complete 95% of the 268 preoperational tests and 128 acceptance tests prior to the Unit 2 fuel load. Currently, no preoperational tests have been completed (two are in progress); one acceptance test has been completed and none are in progress. The testing program for about 134 systems were noted to be constrained by the CCP. The present schedule assumes little rework of hanger (about 850 out of 7000) will be needed for both units.

At least seven 50.55(e) reports are considered by CPCo to have some potential for schedule impact in that reviews and tests are not complete and cannot be fully assessed at this time. These seven are:

	50.55(e) Report No.	Management Corrective Action Report (MCAR) No.	Subject
1.	80-04	40	High-energy line break analysis (HELBA) pipe whip restraints
2.	80-09	45B	Low alloy quenched and tempered bolting
3.	82-12	63	Design of steel embedments that use tension bars and shear lugs
4.	81-01	46	Deficiencies of Limitorque valve operators
5.	82-01	55	Deficiencies in electrical components associated with main steam isolation valve actuators, and non-safety related equipment wired as Class 1E

6.	82-07	59	Safety related equipment cooled by non-safety related HVAC system
7.	83-02	67	Clearances between electrical control cabinets and panels

Auxiliary Building Underpinning Pathway

Six of the 57 underpinning piers have been installed since December 13, 1983, and a pier load test (pier W-11) was in progress. The construction sequence will utilize an existing Utility Access Tunnel (UAT) to gain early access beneath the southern corners of the Control Tower. The revised construction scheme utilizing the UAT is reflected in CPCO's current completion forecasts.

CPCO's schedule assumes NRC will approve loading of fuel immediately after transfer of the EPA load to the permanent wall (i.e. in advance of EPA and FIVP soil consolidation beneath the wall; pier lockoff and grouting; replacing of backfill beneath EPA and FIVP; and structural stiffening at critical elevation 659 feet). CPCo estimates that these latter activities will be completed by late January 1985.

Licensing/Hearing Pathway

CPCo considers that completion of the present soils "OM" hearing and "OL" hearing is also critical to the new Unit 2 fuel load estimate. CPCo's estimated need dates for the hearing are:

Complete "OM" hearing session	August 1, 1983
Initial Decision on "OM" matters	Mid October 1983
Completion of "OL" hearing session	Mid May 1984
Initial Decision on "OL" matters	Early July 1984

Staff Conclusions

The Caseload Panel noted that the information provided during the meeting and observations made during the site tour would be further reviewed before the Panel's completion estimates are reached.

/s/

Darl Hood, Project Manager
Licensing Branch No. 4
Division of Licensing

Enclosures:
As stated

cc: See next page

OFFICE	LB#4	LB#4					
SURNAME	DHood:ms	EAdensam					
DATE	5/27/83	5/31/83					

MIDLAND

Mr. J. W. Cook
Vice President
Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

cc: Michael I. Miller, Esq.
Ronald G. Zamarin, Esq.
Alan S. Farnell, Esq.
Isham, Lincoln & Beale
Three First National Plaza,
51st floor
Chicago, Illinois 60602

James E. Brunner, Esq.
Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

Ms. Mary Sinclair
5711 Summerset Drive
Midland, Michigan 48640

Stewart H. Freeman
Assistant Attorney General
State of Michigan Environmental
Protection Division
720 Law Building
Lansing, Michigan 48913

Mr. Wendell Marshall
Route 10
Midland, Michigan 48640

Mr. Roger W. Huston
Suite 220
7910 Woodmont Avenue
Bethesda, Maryland 20814

Mr. R. B. Borsum
Nuclear Power Generation Division
Babcock & Wilcox
7910 Woodmont Avenue, Suite 220
Bethesda, Maryland 20814

Cherry & Flynn
Suite 3700
Three First National Plaza
Chicago, Illinois 60602

Mr. Don van Farrowe, Chief
Division of Radiological Health
Department of Public Health
P.O. Box 33035
Lansing, Michigan 48909

Mr. Steve Gadler
2120 Carter Avenue
St. Paul, Minnesota 55108

U.S. Nuclear Regulatory Commission
Resident Inspectors Office
Route 7
Midland, Michigan 48640

Ms. Barbara Stamiris
5795 N. River
Freeland, Michigan 48623

Mr. Paul A. Perry, Secretary
Consumers Power Company
212 W. Michigan Avenue
Jackson, Michigan 49201

Mr. Walt Apley
c/o Mr. Max Clausen
Battelle Pacific North West Labs (PNWL)
Battelle Blvd.
SIGMA IV Building
Richland, Washington 99352

Mr. I. Charak, Manager
NRC Assistance Project
Argonne National Laboratory
9700 South Cass Avenue
Argonne, Illinois 60439

James G. Keppler, Regional Administrator
U.S. Nuclear Regulatory Commission,
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

cc: Mr. Ron Callen
Michigan Public Service Commission
6545 Mercantile Way
P.O. Box 30221
Lansing, Michigan 48909

Mr. Paul Rau
Midland Daily News
124 McDonald Street
Midland, Michigan 48640

Billie Pirner Garde
Director, Citizens Clinic
for Accountable Government
Government Accountability Project
Institute for Policy Studies
1901 Que Street, N.W.
Washington, D. C. 20009

Mr. Howard Levin, Project Manager
TERA Corporation
7101 Wisconsin Avenue
Bethesda, Maryland 20814

Ms. Lynne Bernabei
Government Accountability Project
1901 Q Street, N.W.
Washington, D. C. 20009

cc: Commander, Naval Surface Weapons Center
ATTN: P. C. Huang
White Oak
Silver Spring, Maryland 20910

Mr. L. J. Auge, Manager
Facility Design Engineering
Energy Technology Engineering Center
P.O. Box 1449
Canoga Park, California 91304

Mr. Neil Gehring
U.S. Corps of Engineers
NCEED - T
7th Floor
477 Michigan Avenue
Detroit, Michigan 48226

Charles Bechhoefer, Esq.
Atomic Safety & Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Frederick P. Gowan
Apt. B-125
6125 N. Verde Trail
Boca Raton, Florida 33433

Jerry Harbour, Esq.
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Geotechnical Engineers, Inc.
ATTN: Dr. Steve J. Poulos
1017 Main Street
Winchester, Massachusetts 01890

ENCLOSURE 1

CASELOAD FORECAST PANEL VISIT

April 19, 1983

NAME	ORGANIZATION
D. Hood	LB4/DL/NRR
R. Gardner	Region III, NRC, IE
B. Harshe	CPCo - Safety & Licensing
J. Mooney	Exec. Mgr. - CPCo
R. McCue	CPCo - Technical Supt.
D. Miller, Jr.	CPCo - SHE Manager
J. DeMeest	Public
N. Saari	CPCo - Pub. Affairs
L. Shane	Midland Daily News
J. Leech	CPCo - Safety & Licensing
W. Bird	CPCo - Mgr. Quality Assurance
J. Schaub	Asst. Proj. Mgr. - Midland CPCo
J. Post	CPCo - Purchasing Dept.
D. Fredlund	BPC - Project Planning
D. Perry	CPCo - Design Production
G. Keeley	CPCo Project Manager
J. Cook	CPCo, V.P. Proj. Eng. & Const.
D. Ronk	CPCo, Section Head, Midland Project Mgr.
F. Buckman	CPCo - Exec. Mgr.
W. Lovelace	NRC/Ron
D. Sedgwick	Saginaw News
G. Slade	CPCo - SMO
A. Mollenkopf	Mgr. - Sch. & Cost - CPCo
R. Wells	Exec. Mgr. - QA

ENCLOSURE 1 (continued)

ATTENDEES

April 21, 1983

NAME	ORGANIZATION
D. Hood	LB4/DL/NRR
J. Harrison	USNRC/RIII/OSC
R. Gardner	RIII/OSC/IE
B. McCue	CPCo - Technical Dept.
A. Mercado	CPCo - Technical Dept.
D. Miller, JR	CPCo - SMD
D. Fredlund	BPC - Project Plng.
A. Mollenkopf	CPCo - Sch. & Cost
R. Wells	CPCo - MPQADF
F. Buckman	CPCo - Project Office
N. Saari	CPCo - Public Affairs
L. Shane	Midland Daily News
M. Clayton	DOW

ENCLOSURE 1 (continued)

CASELOAD FORECAST VISIT

April 20, 1983

SITE SESSION

NAME	ORGANIZATION
D. Hood	LB4/DL/NRR
R. Rice	CPCo - Tech. Dept. - Primary Mech.
R. Orosz	CPCo -Tech.
R. McCue	CPCo - Tech. Dept. Supt.
D. Miller, JR.	CPCo
A. Mercado	CPCo Tech. Dept. - Scheduling
A. Mollenkopf	CPCo - Schedule & Cost
W. Lovelace	NRC/RM
J. Harrison	USNRC/RIII
R. Gardener	USNRC/RIII

ENCLOSURE 2

MIDLAND PLANT UNITS 1 & 2
NRC CASE LOAD FORECAST PANEL
APRIL 19 & 21, 1983

SUMMARY AGENDA

	Topic	Presenter
1.	Opening Remarks	Darl Hood
2.	Introduction and Project Organization	Jim Cook
3.	Results of Replanning Effort	Jim Cook
4.	Schedule Replanning Effort	Alan Mollenkopf
5.	Schedule Critical Paths (other than soils and licensing)	Alan Mollenkopf
6.	Design & Engineering	Fred Buckman
7.	Procurement	Jim Post
8.	Construction Progress Overview	Don Miller
—	Lunch Break	
9.	Construction Completion Program (CCP)	
	A. Status & Plan	Don Miller
	B. Verification Program	Roy Wells
	C. IDV & Third Party Overview Programs	Gil Keeley
10.	Test Program Status and Plan	Don Miller
11.	Soils Remedial Work Status & Plan	Jim Mooney & John Schaub
12.	Post TMI (NUREG 0737) Changes	Bruce Harshe
13.	Plant Licensing Plan	Nate Leech
14.	10 CFR 50.55(e) Impacts	Walt Bird
—	Dinner Break (Approximate)	
15.	Plant Operational Readiness	Gerry Slade

NOTE: If necessary some presentations may be deferred until Thursday 4/21/83, 8:30 am.

ENCLOSURE 2 (continued

TOUR - CASE LOAD FORECAST PANEL - APRIL 20, 1983

AREA	ENGINEER(S)	DURATION
		0800
T/Bs, D/G's, SW & CW, Evaporator	JSKreple	1½ - 2 Hrs
Auxiliary Building	TASpelman/ GWRowe	1½ - 2 hrs
BREAK		
Confined Space Entry Training		½ hr
Electrical and I&C	RDOrosz	1 hr
Containments	JTWalton	1½ - 2 Hrs
Remedial Soils	RHWieland	1 Hr

ENCLOSURE 3

SELECTED VIEWGRAPH SLIDES AND HANDOUTS

April 19 & 21, 1983

) GAR
4/19/83

MIDLAND PROJECT REPLANNING

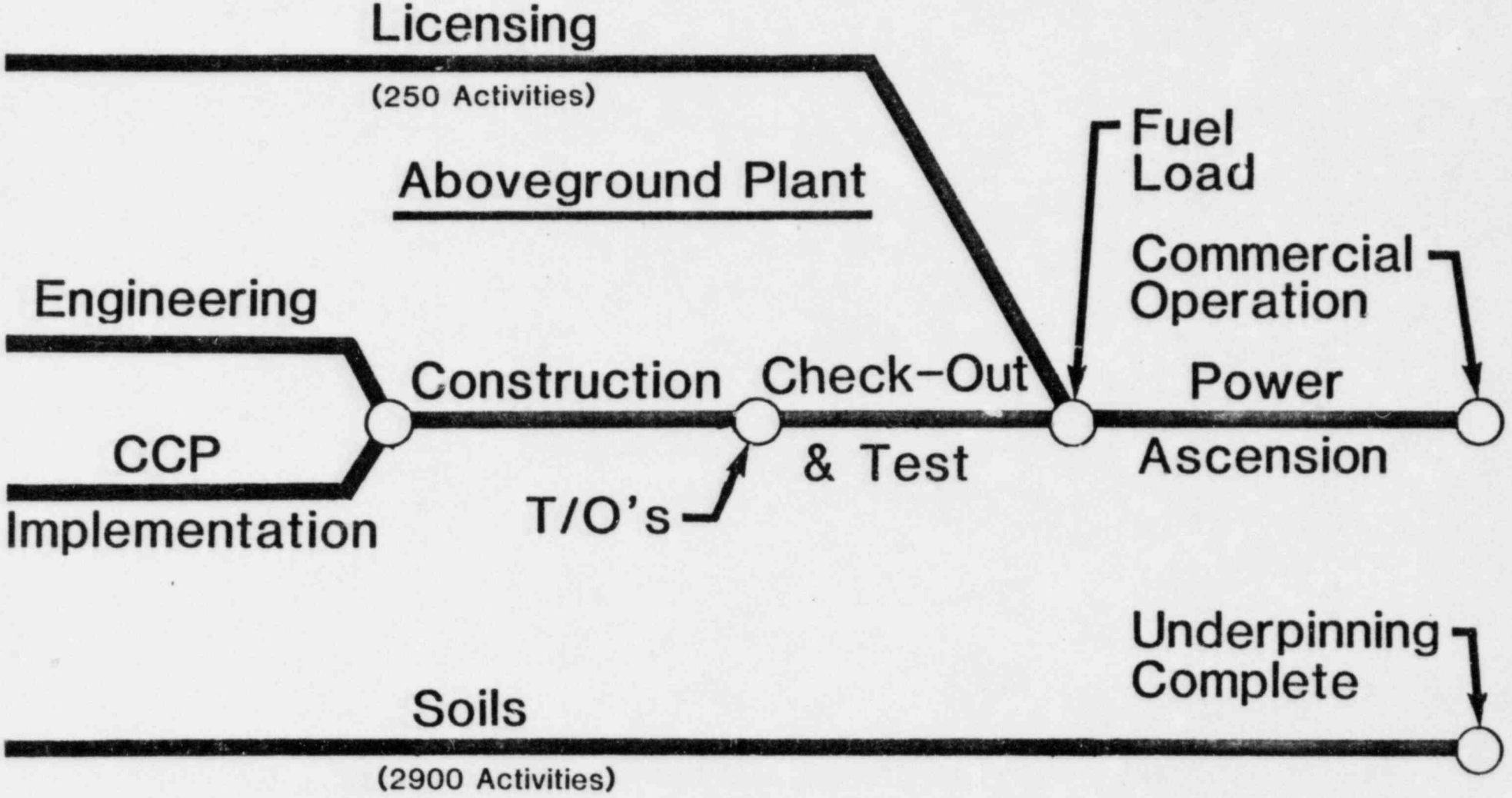
SCHEDULE CONCLUSIONS

MILESTONE	PREVIOUS (1)	CURRENT (2)	ΔMONTHS (3)
● Unit 2 Fuel Load	July 83	Oct 84	14
● Unit 2 Operation	Dec 83	Feb 85	14
● Unit 1 Fuel Load	Dec 83	Feb 85	13
● Unit 1 Operation	July 84	Aug 85	12

(1) Established July 1980
(2) Recommended April 1983
(3) Rounded To Nearest Month

NRC CASELOAD FORECAST PANEL

SIMPLIFIED MODEL - OVERALL PROJECT SCHEDULE



NRC Caseload Forecast Panel

RESULTS OF WORKING LINE SCHEDULE DEVELOPMENT
(ABOVEGROUND PLANT)

- COMPLETED INITIAL SCHEDULE - FEBRUARY 18, 1983

- WORKING LINE CRITICAL PATHS

  (0 OR NEGATIVE FLOAT TO AUGUST 1, 1984 UNIT 2 F.L.)

  - LB PIPE SUPPORTS (BASE)
  - SB PIPE SUPPORTS (BASE)
  - HVAC DUCT & HANGERS INSTALLATION
  - SB PIPING
  - MECHANICAL/INSTRUMENTATION - CONSTRUCTION PUNCHLIST ITEMS
  - PENETRATION SEALS

NRC Caseload Forecast Panel

Aboveground critical path = Q Work completion

ESTABLISHING THE BASELINE PROJECT SCHEDULE
(ABOVEGROUND PLANT)

- REEVALUATE WORKING LINE ASSUMPTIONS
  - Q WORK RESTART DELAYED — .1 MONTH
- ALLOWANCE FOR UNCERTAINTIES — 1 MONTH
  - RESULTS OF VERIFICATION EFFORT
  - UNFORESEEN TESTING/ENGINEERING PROBLEMS
- CHANGE TO WORKING LINE SCHEDULE — 2 MONTHS

NRC Caseload Forecast Panel

PROJECT REPLANNING SCHEDULE SUMMARY

	MAJOR TESTING MILESTONES	SCHEDULE REQUIREMENTS	
		UNIT 2	UNIT 1
C	HYDRO REFUELING CANAL	12/10/83	2/2/84
D	RCS COLD HYDRO	1/10/84	3/14/84
J	HOT FUNCTIONAL TEST	5/5/84	7/19/84
M	FUEL LOAD	10/1/84	2/9/85
R	COMMERCIAL OPERATION	2/28/85	8/9/85

NRC Caseload Forecast Panel

BASELINE SCHEDULE CRITICAL PATHS
(MAJOR WORK)

	PATH DESCRIPTION	FLOAT (MONTHS)
1.	SOILS - AUX BLDG UNDERPINNING	0
2.	INSTALLATION OF LB & SB PIPE SUPPORTS (BASE) (22 SYSTEMS - 59 LB & 163 SB SUPPORTS)	0
3.	INSTALLATION OF LB & SB PIPE SUPPORTS (SEISMIC) (6 SYSTEMS - 6 LB & 129 SB SUPPORTS)	0
4.	INSTALLATION OF HVAC SYSTEMS (3 SYSTEMS)	0
5.	PENETRATION SEALING (FUEL LOAD)	0
6.	PIPE INSULATION (SECONDARY PATH)	0
7.	RELOCATION OF CLASS 1E PANELS (MCAR 67) (RCS HYDRO)	+2
8.	Q-LISTED DEVICES IN NON-Q ENVIRONMENT (MCAR - 59) (1/2 GJA-1-FUEL LOAD)	+3
9.	MOTOR OPERATED VALVES (MCAR - 46) (FUEL LOAD)	+4
10.	HELBA PIPE WHIP RESTRAINTS (UNIT 2)	+6

NRC Caseload Forecast Panel

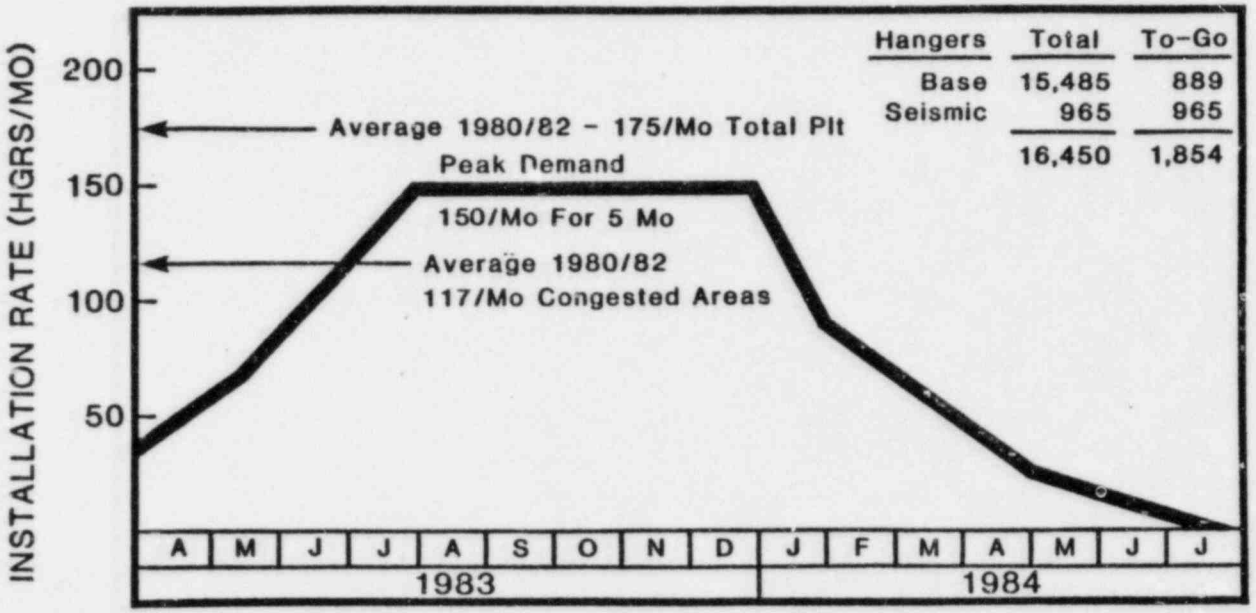
BASELINE SCHEDULE CONFIDENCE

- CONSERVATIVE ESTIMATE OF NEW & MODIFIED SEISMIC LB & SB PIPE SUPPORTS
- CONSERVATIVE PIPE SUPPORT COMPLETION DEMAND
  - SEISMIC 45 DAYS PRIOR TO HFT
  - BASE PRIOR TO SYSTEM T/O
- HANGER TEAMS - EFFICIENT WORK PROSECUTION
- ACHIEVABLE INSTALLATION RATES

MIDLAND PROJECT REPLANNING

LARGE PIPE HANGER INSTALLATION

(BECHTEL)



W. Bird

50.55(E) REPORT STATUS

14	CLOSED BY NRC
18	AWAIT NRC REVIEW
39	ARE WORKING
71	TOTAL REPORTED

SEVEN ITEMS BEING PRESENTED, ARE ONES WHICH HAVE SOME POTENTIAL FOR SCHEDULE IMPACT IN THAT ALL REVIEWS, TESTS FOR ENGINEERING ARE NOT COMPLETE, WHICH IN TURN RESULTS IN SOME SCHEDULE RISK.

WRB
4/18/83

HIGH-ENERGY LINE BREAK ANALYSIS
(HELBA) PIPE WHIP RESTRAINTS MCAR 40 (80-04)

DESCRIPTION OF PROBLEM

CONTRARY TO INTENT OF BN-TOP-2, THE STEADY-STATE THRUST FORCES WERE USED IN THE ENERGY BALANCE TECHNIQUES FOR THE DESIGN OF HELBA PIPE WHIP RESTRAINTS RATHER THAN THE TRANSIENT PEAK THRUST FORCES.

STATUS

83 RESTRAINTS REQUIRE MODIFICATION.

CALCULATION FINALIZATION IN PROGRESS - INTEGRATED INTO NORMAL HELBA PRODUCTION WORK. DESIGN DRAWINGS ARE BEING REVISED.

TASKS TO RESOLVE	EXPECTED COMPLETION DATE
. COMPLETE DESIGN EFFORT	JUNE, 1983
. COMPLETE PLANT MODIFICATIONS	PRIOR TO HFT

SCHEDULE IMPACT

NO KNOWN IMPACT ON SYSTEMS TURNOVER OR FUEL LOAD.

WRB
4/18/83

LOW ALLOY QUENCHED AND TEMPERED BOLTING
MCAR 45B (80-09)

DESCRIPTION OF PROBLEM

IDENTIFICATION SPECIFIC BOLTING FAILURES TO MEET REQUIRED SPECIFICATIONS RESULTED IN A COMMITMENT TO REVIEW ALL LAQTS BOLTING AND COMPONENT SUPPORTS 7/8 INCH IN DIAMETER OR GREATER.

STATUS

RECEIPT INSPECTION UTILIZING HARDNESS SAMPLING WAS IMPLEMENTED IN MAY, 1982.

COMMONWEALTH AND APETCH REVIEWS IDENTIFIED APPROXIMATELY 65,000 LAQTS ITEMS TO BE EVALUATED BY A SAMPLING PLAN DEVELOPED BY SAI.

THE 6000 ITEMS REQUIRING PHYSICAL TESTING IS WELL UNDERWAY WITH THREE NCRS WRITTEN TO DATE ON MATERIAL LOTS EITHER TOO HARD OR TOO SOFT.

5 of 7 complete

TASKS TO RESOLVE	EXPECTED COMPLETION DATE
. COMPLETE TESTING OF REMAINING LAQTS ITEMS AND REVIEW BY SAI	AUGUST, 1983
. FINALIZE IDENTIFICATION OF ITEMS REQUIRING ENGINEERING DSPOSITION VIA NONCONFORMANCE REPORTS AND OBTAIN SAME	DECEMBER, 1983

SCHEDULE IMPACT

INDETERMINATE UNTIL TEST PROGRAM IS COMPLETED. TO DATE RESULTS, OF THE APPROXIMATELY 50% BOLTS TESTED, BOLT REPLACEMENT FOR THE THREE NCRS HAS NO SCHEDULER IMPACT.

DESIGN OF STEEL EMBEDMENTS THAT USE TENSION BARS AND SHEAR LUGS MCAR 63 (82-12)

DESCRIPTION OF PROBLEM

THE ACI 349 CODE, APPENDIX B, ISSUED AUGUST 1979, SPECIFIES THAT SHEAR LUGS IN EMBEDMENT DESIGNS SHALL BE CONSIDERED EFFECTIVE ONLY IN COMPRESSION ZONES. MIDLAND EMBEDMENT DESIGNS WERE COMPLETED AND INSTALLED BEFORE THIS DATE AND CONSIDERED THAT SHEAR LUGS ACCOMODATE ALL SHEAR LOADS AND THAT TENSION BARS ACCOMMODATE ALL TENSION LOADS.

STATUS

ENGINEERING HAS IDENTIFIED APPROXIMATELY 2,500 EMBEDMENTS HAVING SHEAR LUGS.

EVALUATION IN PROGRESS TO DETERMINE WHICH OF THESE EMBEDMENTS IDENTIFIED HAVE SHEAR LUGS IN TENSION ZONES.

TASKS TO RESOLVE	EXPECTED COMPLETION DATE
. TESTING PROGRAM IS BEING DEVELOPED TO DETERMINE THE EFFECTIVITY OF SHEAR LUGS LOCATED IN TENSION ZONES FOR MIDLAND DESIGN	TBD

WRB
4/18/83

. REVISE THE DESIGN CRITERIA ESTABLISHED FOR NEW DESIGNS AND MODIFICATIONS TO EXISTING EMBEDMENTS TO ENCOMPASS ALL EMBEDMENT DESIGN, MODIFICATION AND EVALUATION. MAY, 1983

SCHEDULE IMPACT

IT IS EXPECTED THAT THE TEST PROGRAM WILL SUBSTANTIATE EXISTING MIDLAND DESIGN.

WRB
4/18/83

DEFICIENCIES IN LIMITORQUE VALVE OPERATORS
MCAR 46 (81-01)

DESCRIPTION OF PROBLEM

A) THE USE OF UNDERRATED TERMINAL BLOCKS IN LIMITORQUE OPERATORS.

B) THE USE OF TERMINAL BLOCKS WITHOUT PROPER ENVIRONMENTAL QUALIFICATION IN LIMITORQUE OPERATORS.

C) ADDITIONAL CONCERNS REGARDING QUALIFICATION OF VARIOUS LIMITORQUE OPERATOR COMPONENTS.

STATUS

EVALUATION TO DETERMINE THE EXACT NUMBER OF VALVES OPERATORS TO BE REPLACED IS IN PROGRESS.

TASKS TO RESOLVE	EXPECTED COMPLETION DATE
. IDENTIFY AND ISSUE P.O. FOR REPLACEMENT PARTS	SEPTEMBER 9, 1983
. COMPLETE INSTALLATION	JUNE 8, 1984

SCHEDULE IMPACT

NO KNOWN IMPACT ON SYSTEM TURNOVER OF FUEL LOAD.

WRB
4/18/83

DEFICIENCIES IN ELECTRICAL COMPONENTS ASSOCIATED MSIV ACTUATORS, AND NON-Q EQUIPMENT WIRED AS CLASS 1E MCAR 55 (82-01)

DESCRIPTION OF PROBLEM

MAJOR SAFETY-RELATED ELECTRICAL COMPONENTS OF THE MSIV SYSTEM WERE FOUND TO BE NONCONFORMING TO THE SEPARATION CRITERIA OF REGULATORY GUIDE 1.75, QUALITY ASSURANCE PROGRAM, AS REQUIRED BY 10 CFR 50, APPENDIX B, OR ANSI 45., 2 AND THE PROJECT SEISMIC REQUIREMENTS.

A REVIEW OF FOUR ADDITIONAL EQUIPMENT PACKAGES (M125C (Q) NUCLEAR STAINLESS STEEL VALVES 150 THROUGH 400 POUND RATINGS 2 1/2" AND LARGER, (M-149 (Q) AIR HANDLING UNITS, (M-150 (Q) AIR FILTERING UNITS, AND (M-154 (Q) HVAC ISOLATION VALVES, HAS REVEALED THAT SOME NON CLASS 1E DEVICES HAVE BEEN WIRED INTO CLASS 1E CIRCUITS (MCAR 55, REVISION 1)

STATUS

REPLACEMENT COMPONENTS WERE ORDERED AND ARE EXPECTED TO BE SHIPPED OVER THE NEXT THREE MONTHS.

A REVIEW OF ALL SAFETY-RELATED MATERIAL REQUISITIONS THAT INCLUDE PROCUREMENT OF ELECTRICAL COMPONENTS AND ACCESSORIES FOR SIMILAR POTENTIAL NONCONFORMANCES AND DEFICIENCIES IS IN PROGRESS.

AN ACTION PLAN IS BEING DEVELOPED TO RESOLVE THE EXPANDED SCOPE OF MCAR 55.

82-01 (CONT'D)

TASKS TO RESOLVE	EXPECTED COMPLETION DATE
. RECEIVE MSIV REPLACEMENT COMPONENTS AND INSTALL	DECEMBER, 1983
. IDENTIFY AND ACCOMPLISH MODIFICATIONS FROM ONGOING REVIEW	TBD

SCHEDULE IMPACT

INDETERMINATE UNTIL REVIEW IS COMPLETE. PROBLEMS IDENTIFIED TO DATE HAVE NO IMPACT ON FUEL LOAD.

Q-RELATED EQUIPMENT COOLED BY NON-Q HAVAC SYSTEM
MCAR 59 (82-07)

104 o Jenn

DESCRIPION OF PROBLEM

SAFETY-RELATED DEVICES LOCATED IN PORTIONS OF THE AUXILIARY BUILDING ARE COOLED BY NON-Q HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC) SYSTEMS. LOSS OF THESE NON-Q HVAC SYSTEMS FOLLOWING VARIOUS DESIGN BASIS ACCIDENTS COULD RESULT IN ROOM ENVIRONMENTAL TEMPERATURES THAT COULD EXCEED THE SPECIFIED DESIGN TEMPERATURE OF 104F. UNDER THESE CONDITIONS, THE SAFETY-RELATED EQUIPMENT IN THESE ROOMS MAY NOT OPERATE RELIABLY, AND BOTH TRAINS OF REDUNDANT Q-LISTED EQUIPMENT ARE AFFECTED BY LOSS OF THE NON-Q HVAC SYSTEM IN MANY INSTANCES.

STATUS

REVIEW OF THE PROJECT DESIGN DRAWINGS TO DATE HAS IDENTIFIED 57 AREAS CONTAINING APPROXIMATELY 1100 ITEMS OF CLASS 1E ELECTRICAL EQUIPMENT, DEVICES, AND INSTRUMENTS IN THE AUXILIARY BUILDING THAT ARE COOLED BY NON-Q HVAC SYSTEMS.

TASKS TO RESOLVE	EXPECTED COMPLETION DATE
. ACTIONS TO FINALIZE RESOLUTIONS ARE IN PROGRESS	UNIT II JULY, 1984 UNIT I DECEMBER, 1984
A. UPGRADE SELECTED AUXILIARY BUILDING HVAC SYSTEMS TO Q STATUS TO LIMIT THE EFFECT OF THE PEAK ROOM TEMPERATURE WITHIN THE CURRENT ENVIRONMENTAL QUALIFICATION ENVELOPE OF THE EQUIPMENT	

B. RELOCATE THE CLASS 1E DEVICE TO ANOTHER AREA WHERE THE PREDICTED PEAK ENVIRONMENTAL TEMPERATURE IS WITHIN THE ENVIRONMENTAL QUALIFICATION ENVELOPE OF THE EQUIPMENT

C. REPLACE THE CLASS 1E DEVICE, WHICH DOES NOT QUALIFY FOR THE PREDICTED PEAK ROOM TEMPERATURE, WITH ONE THAT QUALIFIES

D. QUALIFY THE EXISTING CLASS 1E DEVICE FOR TEMPERATURES GREATER THAN OR EQUAL TO THE CALCULATED PEAK ROOM ENVIRONMENTAL TEMPERATURE

SCHEDULE IMPACT

NO KNOWN IMPACT ON FUEL LOAD.

WRB
4/18/83

ELECTRICAL CONTROL CABINETS/PANELS CLEARANCES
MCAR 67 (80-02)
3

DESCRIPTION OF PROBLEM

CLASS 1E ELECTRICAL CONTROL CABINETS/PANELS THAT ARE NOT MEANT TO BE PHYSICALLY ATTACHED TO EACH OTHER AND ARE SEISMICALLY QUALIFIED INDEPENDANTLY MUST NOT INTERACT WITH EACH OTHER OR ADJACENT STRUCTURES DURING A SEISMIC EVENT. THE REQUIRED CLEARANCES HAVE BEEN CALCULATED FOR THE CLASS 1E CABINETS/PANELS BASED ON THE RECOMMENDATIONS OF BC-TOP-4A (TOPICAL REPORT, SEISMIC ANALYSIS OF STRUCTURES AND EQUIPMENT FOR NUCLEAR POWER PLANTS, REVISION 3, NOVEMBER 1974) AND COMPARED TO THE EXISTING CLEARANCES. THOSE CABINETS/PANELS WHOSE EXISTING CLEARANCES IS LESS THAN THAT CALCULATED ARE CONSIDERED TO POSE POSSIBLE SAFETY/QUALIFICATION PROBLEMS SUBJECT TO ADDITIONAL EVALUATION.

STATUS

NUTECH AND/OR SUPPLIERS ARE REVIEWING EXISTING INSTALLATIONS WITH PROXIMITY PROBLEMS TO DETERMINE ACCEPTABILITY.

B&W IS ANALYZING THEIR CLASS 1E CRD TRIP BREAKER CABINETS
- TO FINALIZE THE DEFLECTIONS
- DETERMINE WHETHER PROXIMITY PROBLEM EXISTS

WRB
4/18/83

3

80-02 (CONT'D)

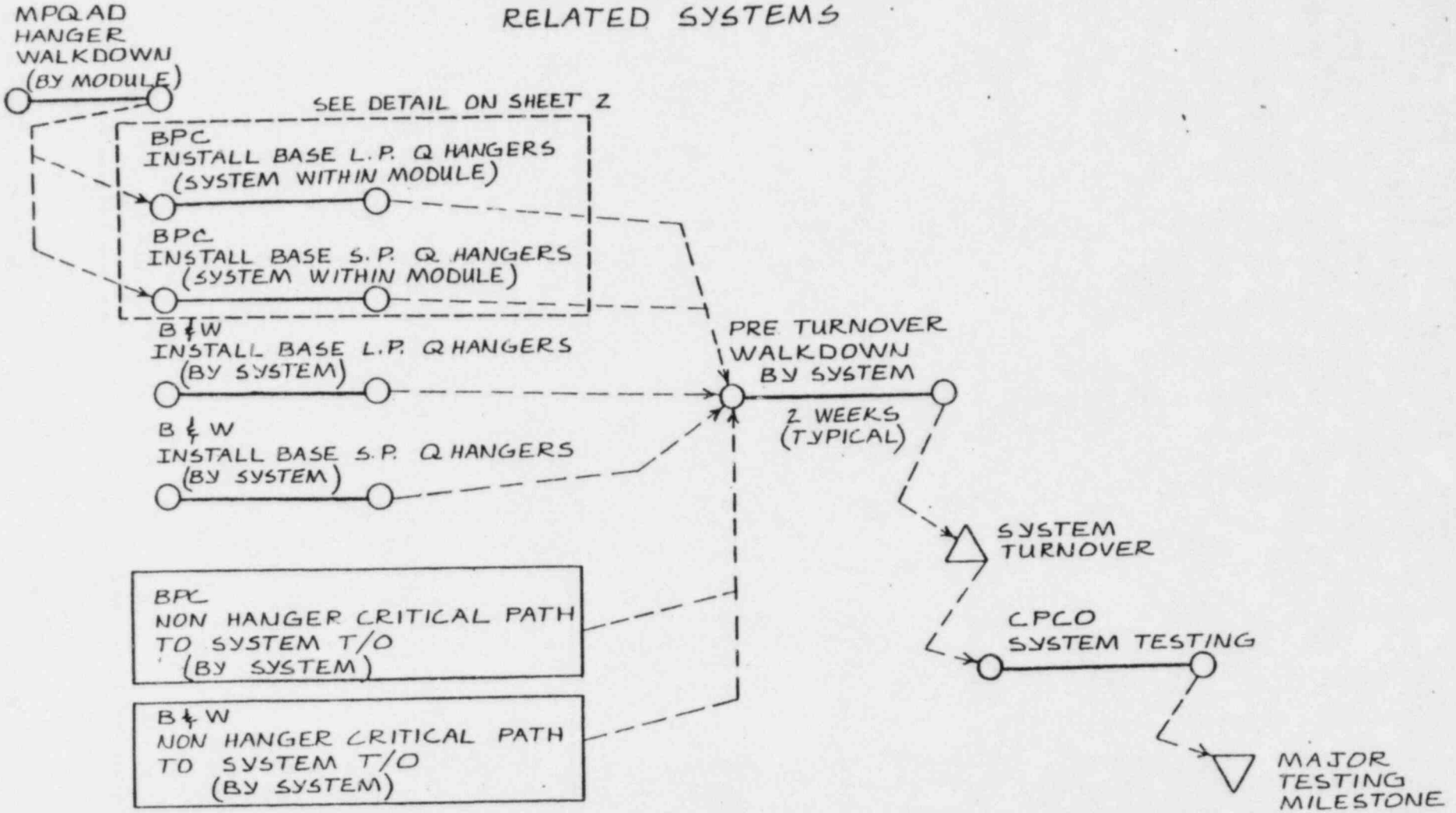
TASKS TO RESOLVE	EXPECTED COMPLETION DATE
. ACTUAL MOVING OF PANELS TO PROVIDE REQUIRED CLEARANCES ON HOLD PENDING 'NUTECH' REVIEW OF ALTERNATIVE SOLUTION AND ANALYSIS OF EXISTING INSTALLATION	APRIL 25, 1983
. UNINSTALLED CLASS 1E PANELS - ADD NOTES TO APPROPRIATE LOCATION DRAWINGS SHOWING MINIMUM CLEARANCES	JUNE, 1983
. B&W SEISMIC QUALIFICATION ANALYSIS	MAY 31, 1983

SCHEDULE IMPACT

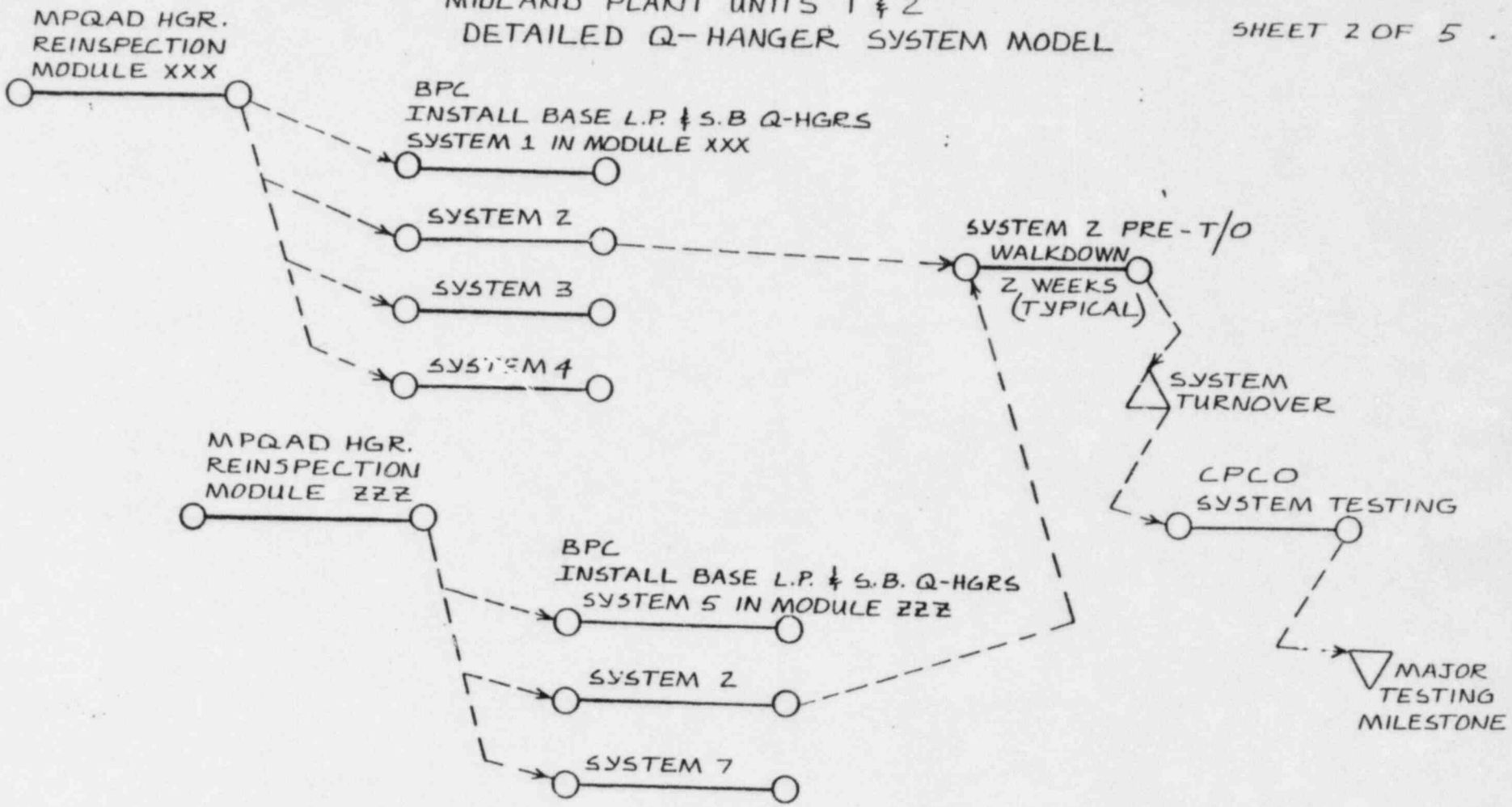
NO SCHEDULE IMPACT EXPECTED.

WRB
4/18/83

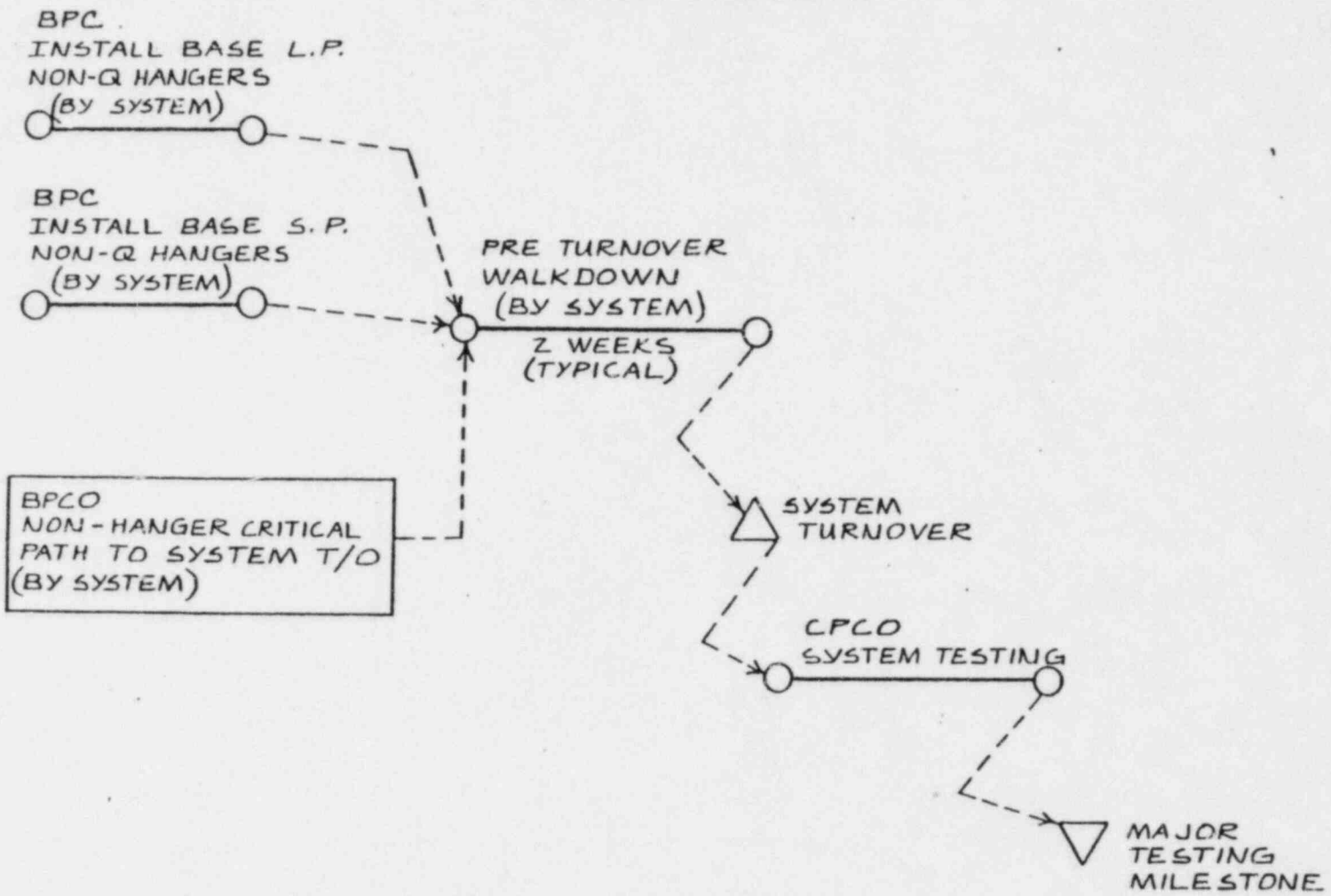
MIDLAND PLANT UNITS 1 & 2
MODEL FOR Q HANGER RELATED SYSTEMS



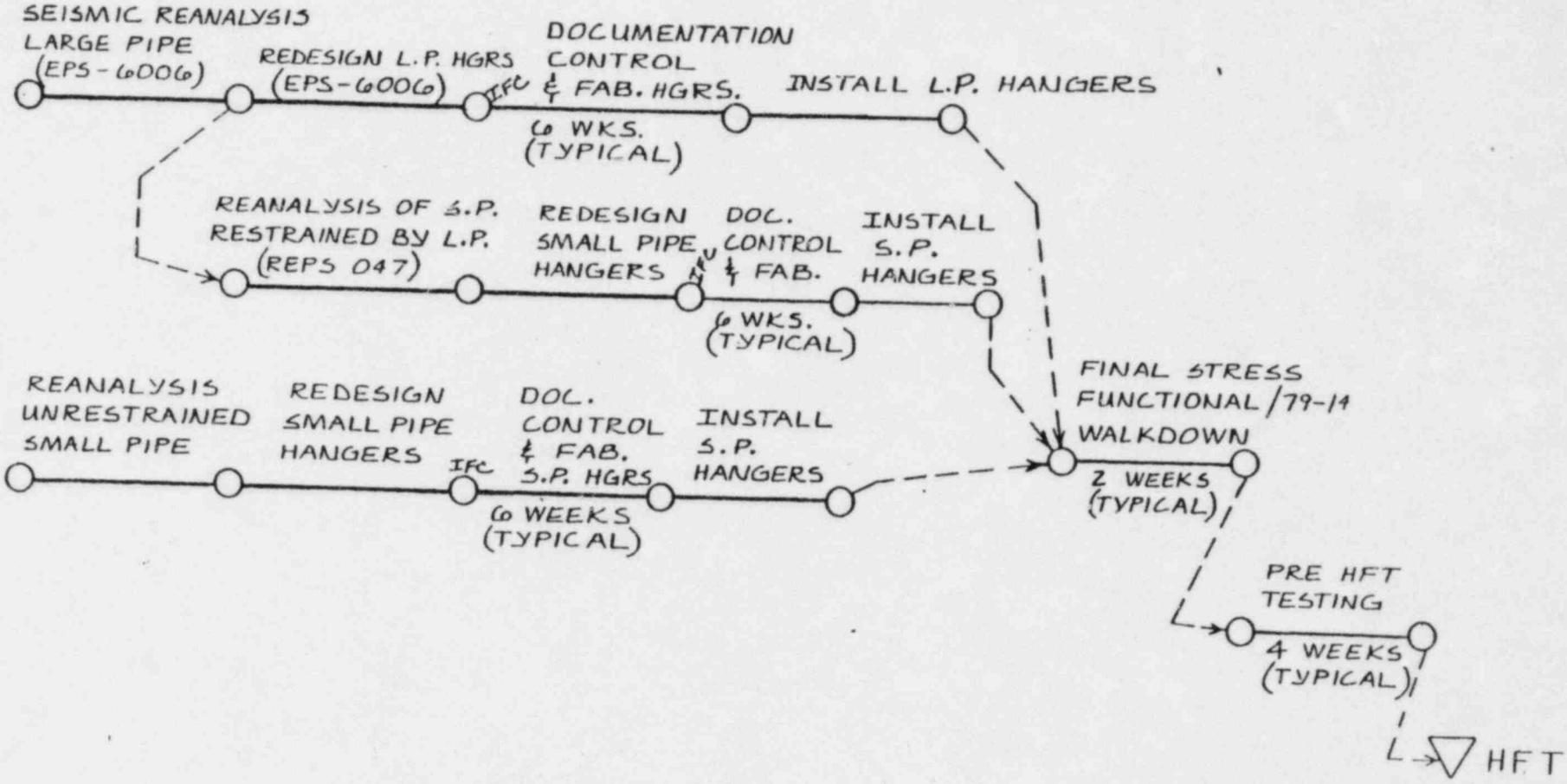
MIDLAND PLANT UNITS 1 & 2
DETAILED Q-HANGER SYSTEM MODEL



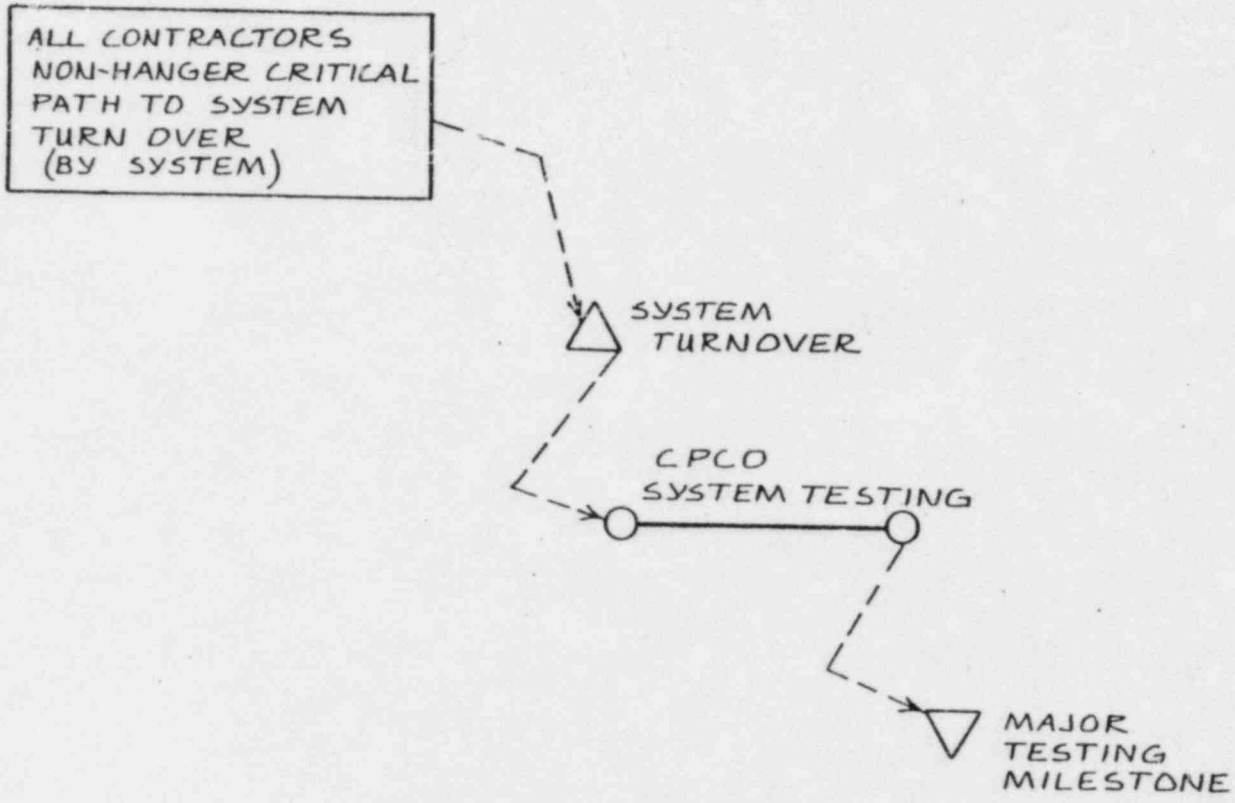
MIDLAND PLANT UNITS 1 & 2
MODEL FOR NON-Q HANGER RELATED SYSTEMS

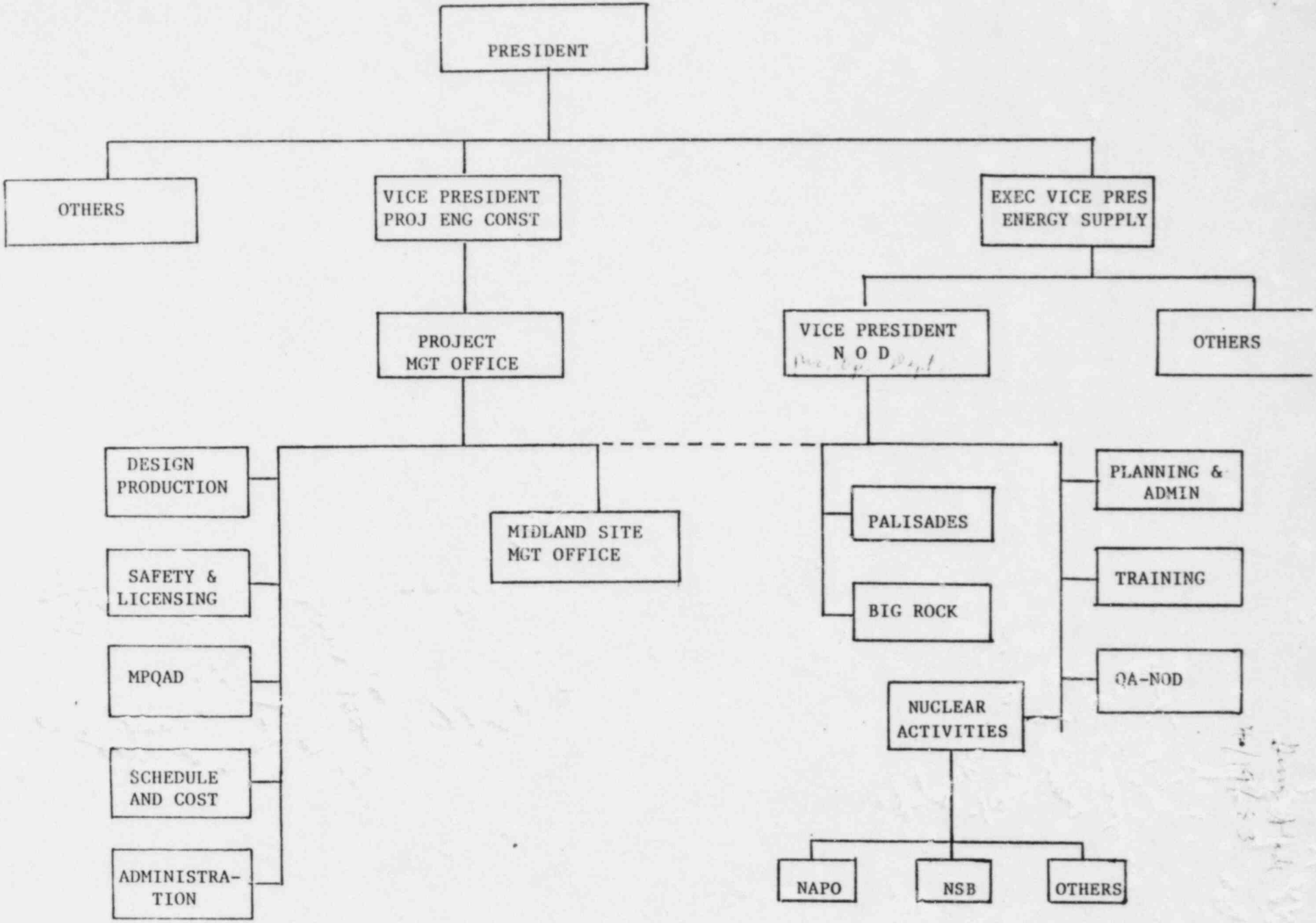


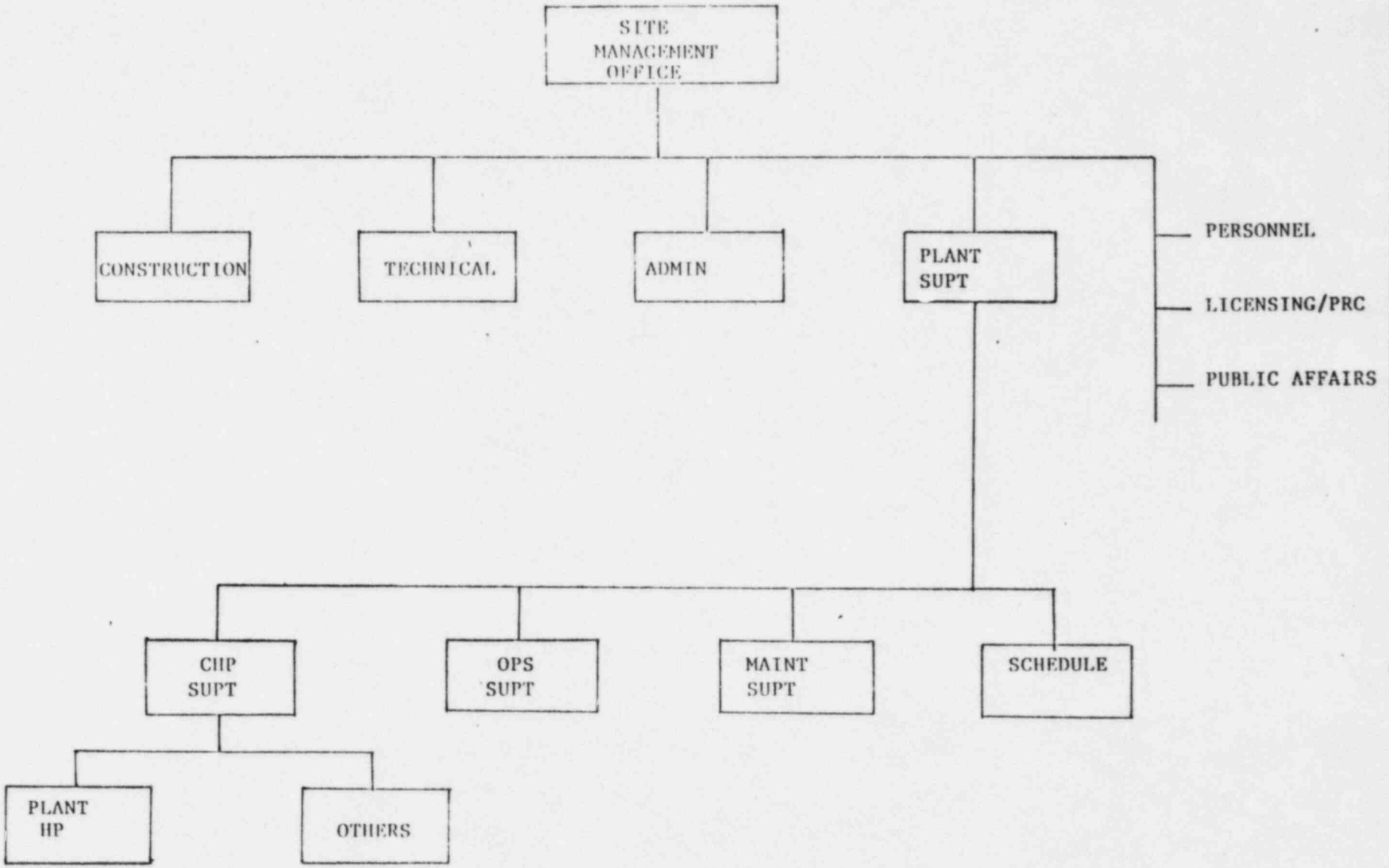
MIDLAND PLANT UNITS 1 & 2
SEISMIC HANGER MODEL
(ALL ACTIVITIES BY SYSTEM)



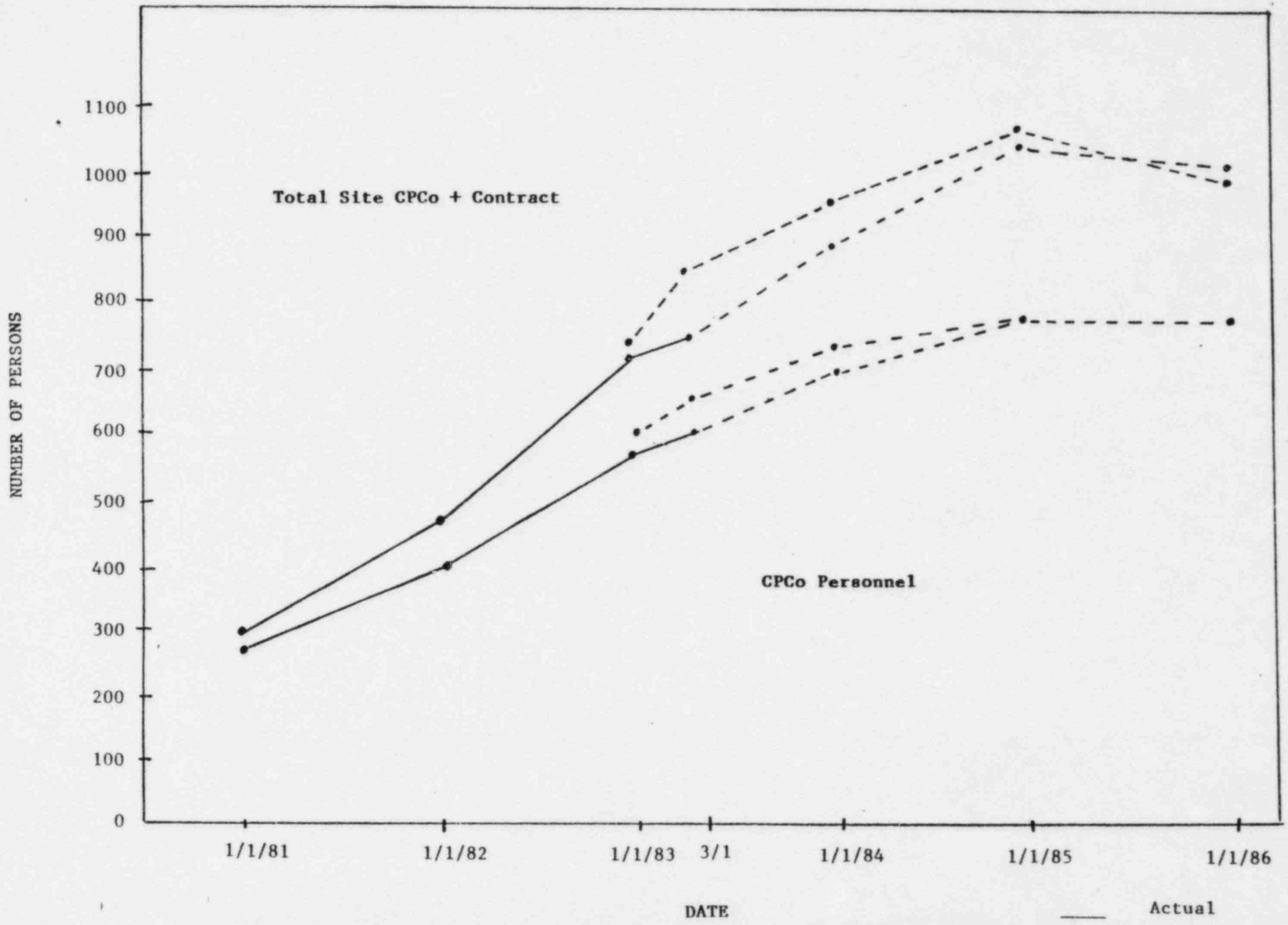
MIDLAND PLANT UNITS 1 & 2
MODEL FOR NON-HANGER
RELATED SYSTEM




PRESIDENT
OTHERS
VICE PRESIDENT PROJ ENG CONST
EXEC VICE PRES ENERGY SUPPLY
PROJECT MGT OFFICE
VICE PRESIDENT N O D
OTHERS
DESIGN PRODUCTION
SAFETY & LICENSING
MPQAD
SCHEDULE AND COST
ADMINISTRA-TION
MIDLAND SITE MGT OFFICE
PALISADES
BIG ROCK
PLANNING & ADMIN
TRAINING
QA-NOD
NUCLEAR ACTIVITIES
NAPO
NSB
OTHERS


SITE
MANAGEMENT
OFFICE
CONSTRUCTION
TECHNICAL
ADMIN
PLANT
SUPT
PERSONNEL
LICENSING/PRC
PUBLIC AFFAIRS
CHP
SUPT
OPS
SUPT
MAINT
SUPT
SCHEDULE
PLANT
HP
OTHERS

ACTUAL AND ANTICIPATED CPCO AND CONTRACT EMPLOYEES THROUGH 1985



OPERATIONS DEPARTMENT TRAINING STATUS

As of March 31, 1983

	TOTAL	COLD LICENSE		U of M Rx TRAINING	SIMULATOR B&W	REQUIRED SRO MGMT	OBSERVATION TRAINING
		FUND.	SYSTEM				
SS	27	24 * 3	24 ** 3	24 ** 3	20 * 4 ** 3	27	24 *** 3
SE	6	6	6	6	5 ** 1	6	4 *** 2
B/U SE	5	4 * 1	4 ** 1	4 ** 1	4 * 1	4 *** 1	4 *** 1
CO 1	12	12	12	12	12		10 *** 2
CO 2	11	11	11	11	11		***11
AO	26	14 *12	14 **12	15 **11	11 * 2 **13		1 ***25

* In training
** Scheduled
*** Pending

MIDLAND PLANT

PROCEDURE STATUS
(MARCH 1983)

	Number Identified	Draft Complete	Approved
Administrative Program Procedures	305	250 (82%)	213 (70%)
Tech Spec Surv *	396	3 (1%)	0 (0%)
Working Level Procedures			
OPS +	322	320 (99%)	195 (60%)
MAINT	336	312 (93%)	290 (86%)
CHEM	111	109 (98%)	97 (87%)
HP	130	111 (85%)	84 (65%)
Test Program	729	610 (84%)	322 (44%)

* Withdrew all approved procedures 4th quarter 1982, due to NOD Standards requirements changes.

\+ Many system procedures require substantial revision due to changes since originally approved.

EMERGENCY PREPAREDNESS STATUS

PLANS AND PROCEDURES

EMERGENCY PLAN

- SUBMITTED — FEB 1982
- SER ISSUED — JUNE 1982
- REVISION PLANNED (Plan Emergency) — MAY 1983

IMPLEMENTING PROCEDURES

- 100% DRAFTED
- 65% FINAL

MIDLAND, BAY AND SAGINAW COUNTY EMERGENCY PLANS

- SUBMITTED TO FEMA — SEPT 1982
- INITIAL FEMA FINDINGS ISSUED — DEC 1982
- RESUBMITTED TO FEMA — APRIL 1983

ASLB PREPARATION

- DIRECT TESTIMONY PREPARATION HAS BEGUN

EMERGENCY PREPAREDNESS STATUS

SEP TRAINING

CPCo PERSONNEL

- o 60% — 1982
- o REMAINDER — 1983

NON-CPCo PERSONNEL

- c HOSPITAL — NOV 1982
  - c EMERGENCY ROOM
  - c AMBULANCE ATTENDANTS

REQUALIFICATION

- o SCHEDULED — 1983

DRILLS

- c ACTUAL — DEC 1982, FEB 1983
- c PLANNED — QUARTERLY

EXERCISES

- c TWO TRAINING TEAMS
- c ACTUAL — DEC 1982
  - o INCLUDED GOCC — MAR 1983
- c PLANNED — QUARTERLY

EMERGENCY PREPAREDNESS STATUS

SEP SYSTEMS/FACILITIES

SYSTEM FACILITY	TESTING COMPLETE	TURNOVER COMPLETE	TURNOVER FORE-CAST DATE
POLICE RADIO LINK	✓		
BULK POWER BASE STATION	✓		
HEALTH PHYSICS BASE STATION	✓		
OPERATIONS REPEATER		✓	
CONSTRUCTION REPEATER		✓	
SECURITY SYSTEM REPEATER		✓	
EMERGENCY YARD LIGHTING		✓	
UNINTERRUPTABLE POWER SUPPLY		✓	
COMMON COMPUTER		✓	
TSC DOMESTIC WATER		✓	
TSC SEWAGE		✓	
TSC UPS		✓	
SECURITY SYSTEM CONSOLES/COMPUTERS		✓	
PLANT ACCESS/SECURITY MONITORING			NOV 1983
PUBLIC ADDRESS GROUPS 1 & 2			DEC 1983
AUX BUILDING RADIATION MONITORS			JAN 1984
PLANT DRMS COMPUTERS			JAN 1984

Digital Radiation monitoring System

EMERGENCY PREPAREDNESS STATUS

SEP SYSTEMS/FACILITIES

PUBLIC WARNING SYSTEM

- INSTALLATION COMPLETE
- PARTIAL TEST — MAR 1983
- IN SERVICE — MAY 1983

GENERAL OFFICE CONTROL CENTER

- PROCEDURES COMPLETE
- TRAINING COMPLETE
- EXERCISED FOR PALISADES AND BIG ROCK PLANT

EMERGENCY OPERATIONS FACILITY

- PROCEDURES COMPLETE
- COMMUNICATION SYSTEMS INSTALLED
- TRAINING BEGUN

MIDLAND ENERGY CENTER - CONSUMERS POWER COMPANY

PREOPERATIONAL AND ACCEPTANCE TESTS

EARLY STARTS / MONTH =	22	20	17	17	34	25	36	18	26	38	25	27	15	21	10	6	17	7	2
LATE STARTS / MONTH =						1				6	14	6	17	11	12	10	19	29	33	42	69	65	8

UNIT 2 RCS HYDRO

UNIT 1 RCS HYDRO

UNIT 2 HPT (STEAM)

UNIT 1 HPT (STEAM)

UNIT 2 FUEL LOAD

TOTAL REMAINING PREOP AND ACCEPTANCE TEST - 396

19 83

19 84

ALM 4-21-83

B Kelly
4/17/85

INDEPENDENT THIRD PARTY REVIEWS

Independent Design Verification (IDV)

Construction Implementation Overview (CIO)

Soils Remedial Activities

IDV

(a) System Selection

-Aux FW

-Electric Power System (Diesel Gen)

-HVAC (Control Room Habitability)

(b) Scope (Design)

-Review of Design Criteria & Commitments

-Review of Implementation Documents

-Review of Calculations & Evaluations

-Evaluation of Drawings & Specifications

(c) Scope (Construction)

-Review of Supplier Documents

-Review of Storage & Maintenance Documents

-Review of Construction Installation Documents

-Review of Selected Verification Activities

-Verification of Physical Configuration

(d) Expansion of Scope Possible if Generic Findings

(e) Status

Started 11/82

Meetings 10/25/82, 2/8/83, 4/13/83 With NRC

PQAM issued 11/11/82

Findings & Protocol (Region III letter 3/28/83)

CIO

(a) Purpose Overview CCP

(b) Scope

-Development of An Assessment Program and Preparation of a Project Quality Plan

-Assessment of Adequacy & Compliance with CCP Procedures and Inspection Plans

-Monitoring of the Implementation of the CCP by Evaluating:

--Conformance of Installed Hardware to Design Info in Specs & Drawings

--Completeness of CP Co & Bechtel's Procedures Regarding Construction Activities Personnel Qualifications, Training Programs, and Organizational Practices

--Compliance of CCP Teams With Prescribed Procedures

--Compliance of QA Personnel With Applicable Procedures

--Compliance of Construction Activities with Applicable Procedures.

--Audits of Management Reviews of CCP & Hold Points

(c) Protocol

(d) Status

-Selection of S&W

-April 6, 1983 Letter to Keppler

-Drafting PQAM

-On Site 4/20/83

R Wells
4/21/83

CCP QUALITY ACTIVITIES

ACTIVITY	STATUS
. QC INTEGRATION WITH MPQAD	COMPLETED 1-17-83
. VERIFICATION OF QUALITY	
- PQCI REVISIONS	ONGOING
- INSPECTOR TRAINING/RECERTIFICATION	ONGOING
- DEVELOPMENT OF QUALITY VERIFICATION PLAN	MGMT REVIEW 4-29-83
- PROCEDURE REVIEW AND DEVELOPMENT	ONGOING
. SUPPORT OF Q SYSTEM TEAMS	
- ORGANIZATIONAL ALIGNMENTS	IN PROGRESS
- PROCEDURE REVIEW/APPROVAL	ONGOING
- MPQAD INTERFACE PROCEDURES	IN PROGRESS
- IN PROCESS INSPECTION PLAN	IN PROGRESS
. PROGRAMMATIC REVIEWS	REPORT TO MGMT 5-18-83
. HANGER REINSPECTION	
- 100% REINSPECTION OF 7000 HANGERS	IN PROGRESS
- OVER 50 INSPECTORS DEDICATED	STAFFING IN PROGRESS

REINSPECTION SCOPE AND ASSUMPTIONS

SCOPE

- 139,000 CLOSED IR'S REPRESENT POPULATION
  - COMBINED PQCI'S
  - RECEIPT INSPECTION
  - DOCUMENT REVIEW
  - OVERINSPECTIONS PREVIOUSLY DONE
- 101,500 CLOSED IR'S SUBJECT TO VERIFICATION (EST)
  - 79,500 HARDWARE REINSPECTION
  - 22,000 PRIMARILY DOCUMENTATION REVIEW

ASSUMPTIONS

- PLANNING BASED UPON 45,000 UNITS OF REINSPECTION
- 4 INSPECTION HOURS PER UNIT (AVG) REQUIRED FOR REINSPECTION
- WORK FORCE OF 250 TO 350 INSPECTORS
- SCHEDULE BASED UPON 7 DAY WEEK AND 5 INSP-HOURS PER DAY
- NRC APPROVAL OF CCP IN MAY

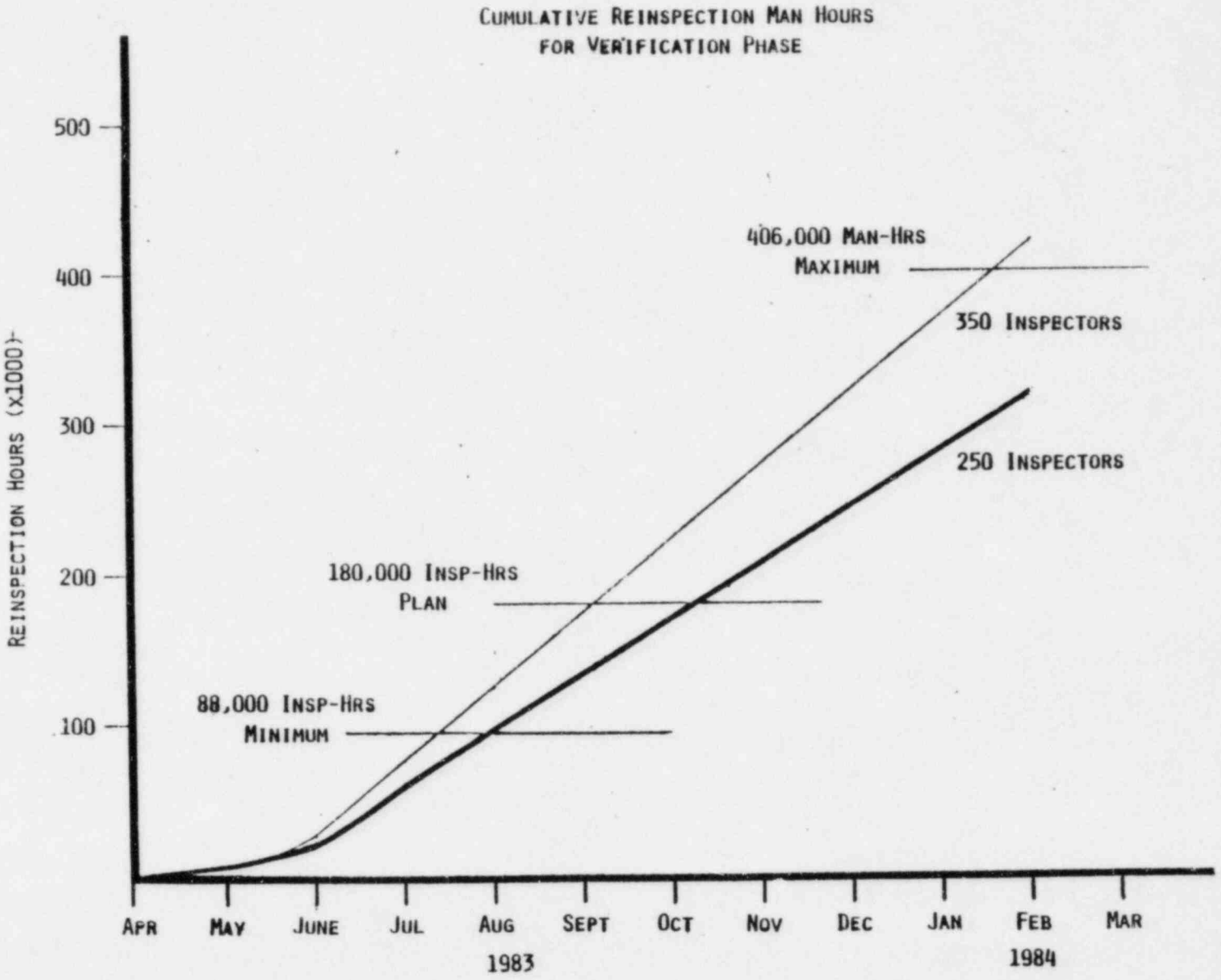
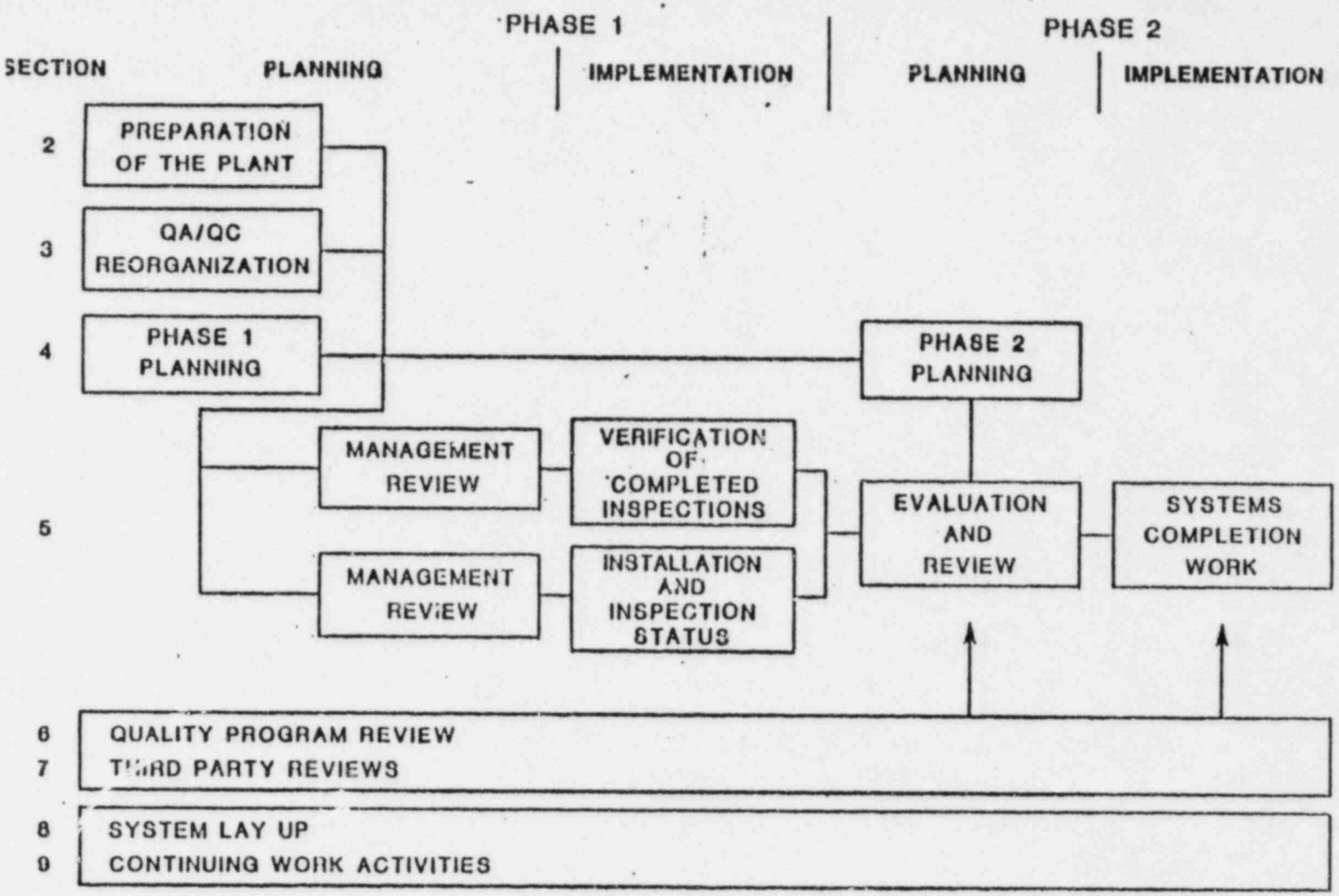

CUMULATIVE REINSPECTION MAN HOURS
FOR VERIFICATION PHASE
REINSPECTION HOURS (X1000)
500
400
300
200
100
406,000 MAN-HRS
MAXIMUM
350 INSPECTORS
250 INSPECTORS
180,000 INSP-HRS
PLAN
88,000 INSP-HRS
MINIMUM
APR
MAY
JUNE
JUL
AUG
SEPT
OCT
NOV
DEC
JAN
FEB
MAR
1983
1984

FIGURE 1-1

CONSTRUCTION COMPLETION PROGRAM SCHEMATIC



BASIC CCP ELEMENTS

Subject
No.

Scotch
Commercial Tape Division 3M
no.

SYSTEM TURNOVERS

1. TOTAL TO-GO. 310

Q-SYSTEMS TO-GO. 187

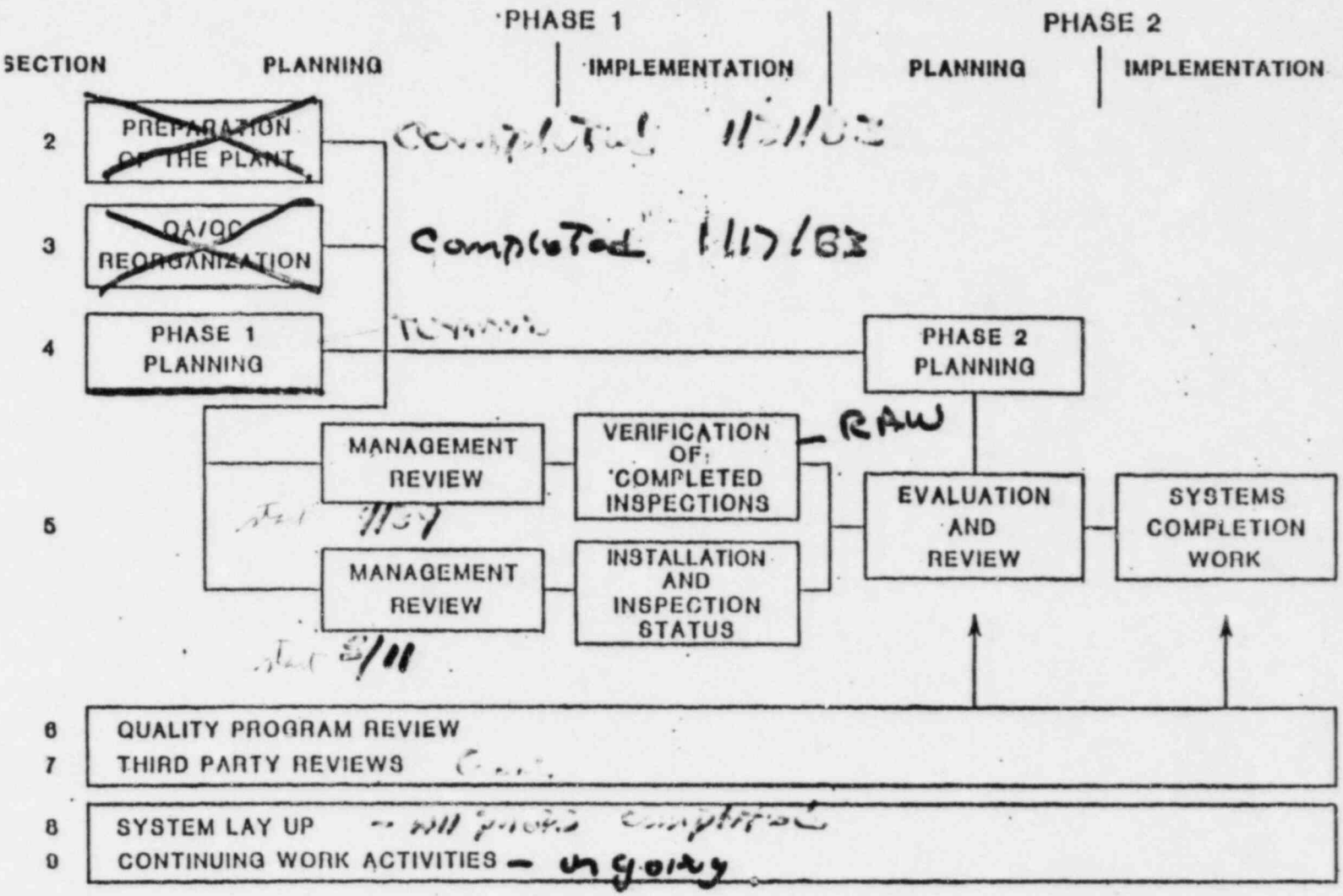
Rechtel	134
B&W Construction	8
Zack	45
	187

NON-Q SYSTEMS TO-GO 123

DBMiller/4-15-83

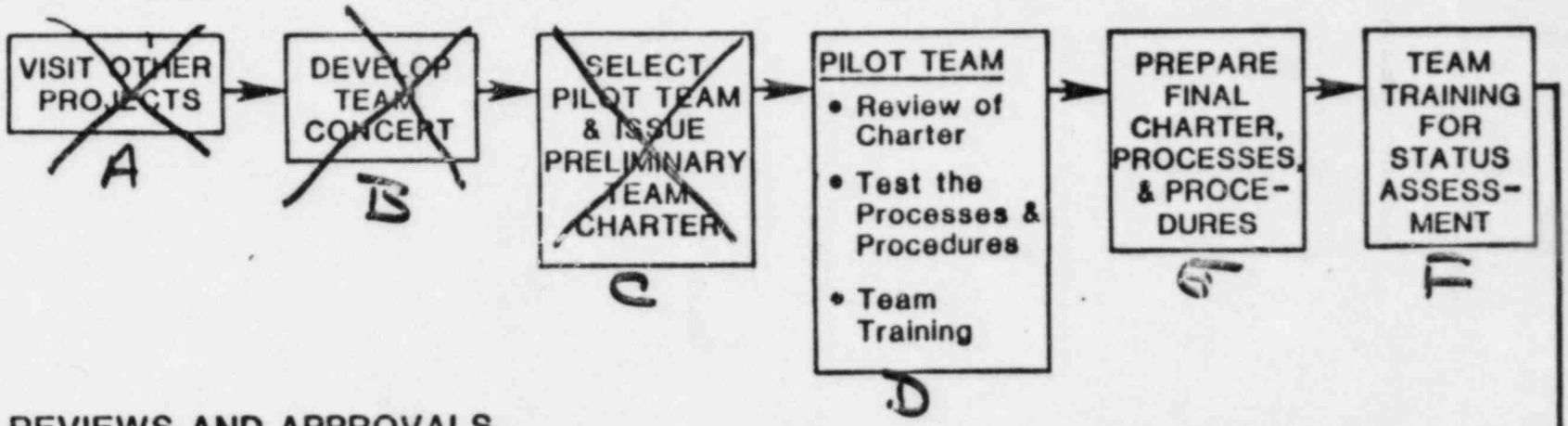
FIGURE 1-1

CONSTRUCTION COMPLETION PROGRAM SCHEMATIC

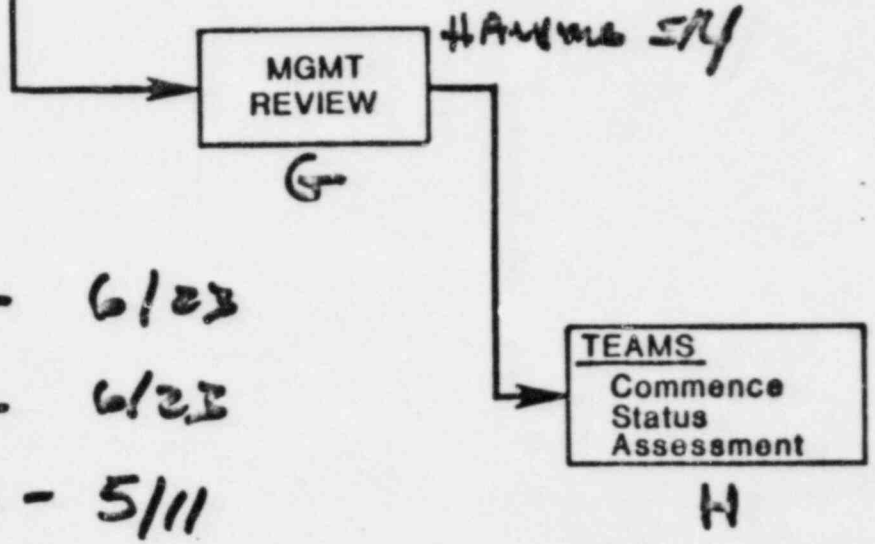


SYSTEM TEAM DEVELOPMENT

ORGANIZATIONAL PROCESS & PROCEDURE DEVELOPMENT



REVIEWS AND APPROVALS



COMMENCE WORK

Systems - 6/23

Arems - 6/23

Hangars - 5/11

G/M-0467-3

subject

no.

Scotch
584 Transparency Mounting Frame
Commercial Tape Division 3M

SECTION 9.0

CONTINUING WORK ACTIVITIES

DESCRIPTION: THOSE ACTIVITIES THAT HAVE DEMONSTRATED EFFECTIVENESS IN THE QUALITY PROGRAM IMPLEMENTATION WILL CONTINUE DURING IMPLEMENTATION OF THE CONSTRUCTION COMPLETION PROGRAM.

THESE ARE:

1. NSSS INSTALLATION OF SYSTEMS AND COMPONENTS BEING CARRIED OUT BY B&W CONSTRUCTION COMPANY

2. HVAC INSTALLATION WORK BEING PERFORMED BY ZACK COMPANY. WELDING ACTIVITIES CURRENTLY ON HOLD WILL BE RESUMED AS THE IDENTIFIED PROBLEMS ARE RESOLVED

3. POST SYSTEM TURNOVER WORK, WHICH IS UNDER THE DIRECT CONTROL OF CONSUMERS POWER COMPANY, WILL BE RELEASED AS APPROPRIATE USING ESTABLISHED WORK AUTHORIZATION PROCEDURES

4. HANGER AND CABLE RE-INSPECTIONS, WHICH WILL PROCEED ACCORDING TO SEPARATELY ESTABLISHED COMMITMENTS TO NRC

5. REMEDIAL SOILS WORK WHICH IS PROCEEDING AS AUTHORIZED BY THE NRC

6. DESIGN ENGINEERING WILL CONTINUE AS WILL ENGINEERING SUPPORT OF OTHER PROJECT ACTIVITIES

D Mills
4/1982

MAJOR EVENTS SINCE AUGUST, 1981

- CCP Initiated - December, 1982

- Remedial Soils Work Start - August, 1982

- Turnover First System for Cold Hydro - May 1982

- Completed 500 Turnovers - October, 1982

- Placed HP Boilers in Service - August, 1982

Turbine - Generators on Turning Gear - Unit 2 June, 1982
Unit 1 November, 1982

- Commenced Area Turnovers for CPCo Control

Completed Support Cents
Starting Energy Planning

CONSUMERS POWER COMPANY
MIDLAND UNITS 1 & 2

BULK COMMODITY COMPARISON

COMMODITY	CURRENT ESTIMATE	% COMPLETE 3/27/83	PREVIOUS ESTIMATE	% COMPLETE 7/26/81	ESTIMATE INCREASE/DECREASE
Large Pipe	280,000	99	282,000	94	(2,000)
Small Pipe	325,350	95	307,550	78	17,800
Large Pipe Hangers	15,834	92	15,350	82	484
Small Pipe Hangers	18,260	80	17,740	43	520
Cable Tray	93,300	99	85,000	96	8,300
Exposed Metallic Conduit	610,000	90	554,000	76	56,000
Wire and Cable	10,750,000	93	10,300,000	58	450,000
Connections	356,000	81	385,000	32	(29,000)
Instrument Tubing	175,000	65	205,000	22	(30,000)

CONSUMERS POWER COMPANY

MIDLAND UNITS 1 & 2

BULK COMMODITY STATUS

(AS OF 3/27/83)

COMMODITY	UNIT	TOTAL QUANTITY			INSTALLED TO-DATE		
		1	2	TOTAL	1	2	TOTAL
PIPING							
Large Pipe	LF	85,525	194,475	280,000	84,855	192,470	277,325
Small Pipe	LF	110,277	215,073	325,350	105,306	204,960	310,266
Large Pipe Hangers	EA	5,064	10,770	15,834	4,623	9,965	14,588
Small Pipe Hangers	EA	5,930	12,330	18,260	5,042	9,648	14,690
ELECTRICAL							
Cable Tray	LF	N/A	N/A	93,300	N/A	N/A	92,574
Exp. Metallic Conduit	LF	141,463	468,537	610,000	131,918	419,378	551,296
Wire and Cable	LF	N/A	N/A	10,750,000	N/A	N/A	9,946,929
Connections	EA	N/A	N/A	356,000	N/A	N/A	288,690
INSTRUMENTATION							
Tubing	LF	N/A	N/A	175,000	N/A	N/A	113,890

CONSUMERS POWER COMPANY
MIDLAND PLANT UNITS 1 & 2

PEAK INSTALLATION RATES
OVER FIVE MONTH PERIOD

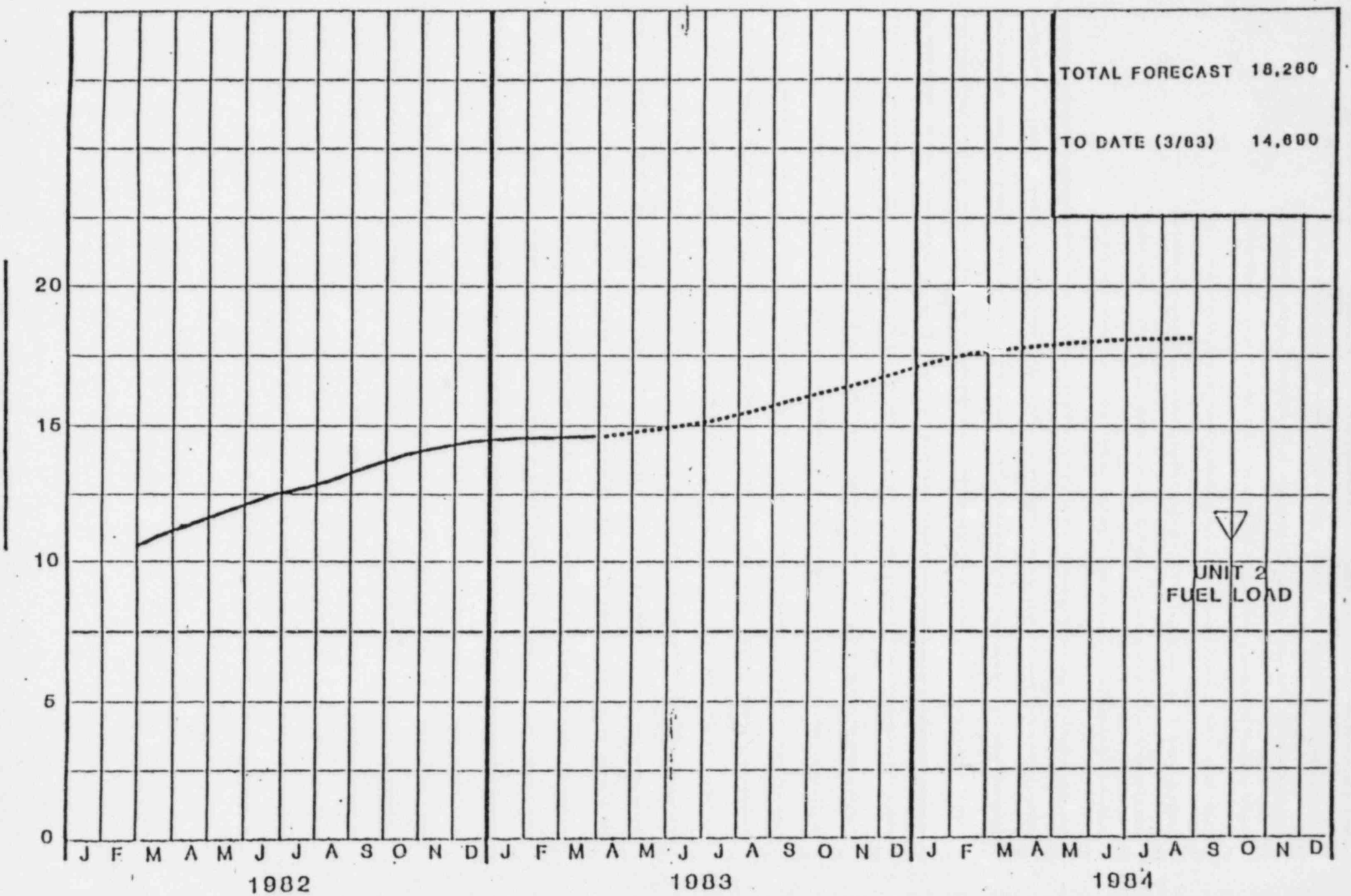
	SMALL PIPE HANGERS	CONNECTIONS	INSTRUMENT TUBING
ACTUAL AVERAGE PEAK RATE (SEPT. 81 THROUGH JAN. 82)	515/MO	13,737	9175
ACTUAL VS. FORECAST (OLD)	54%	72%	57%
ACTUAL VS. FORECAST (NEW)	186%	181%	115%

7220 MIDLAND UNITS 1& 2

CONSUMERS POWER COMPANY

SMALL PIPE HANGER INSTALLATION

THE TO GO INSTALLATION IS BASED ON REQUIREMENTS TO SUPPORT THE PROJECT REPLANNING SCHEDULE

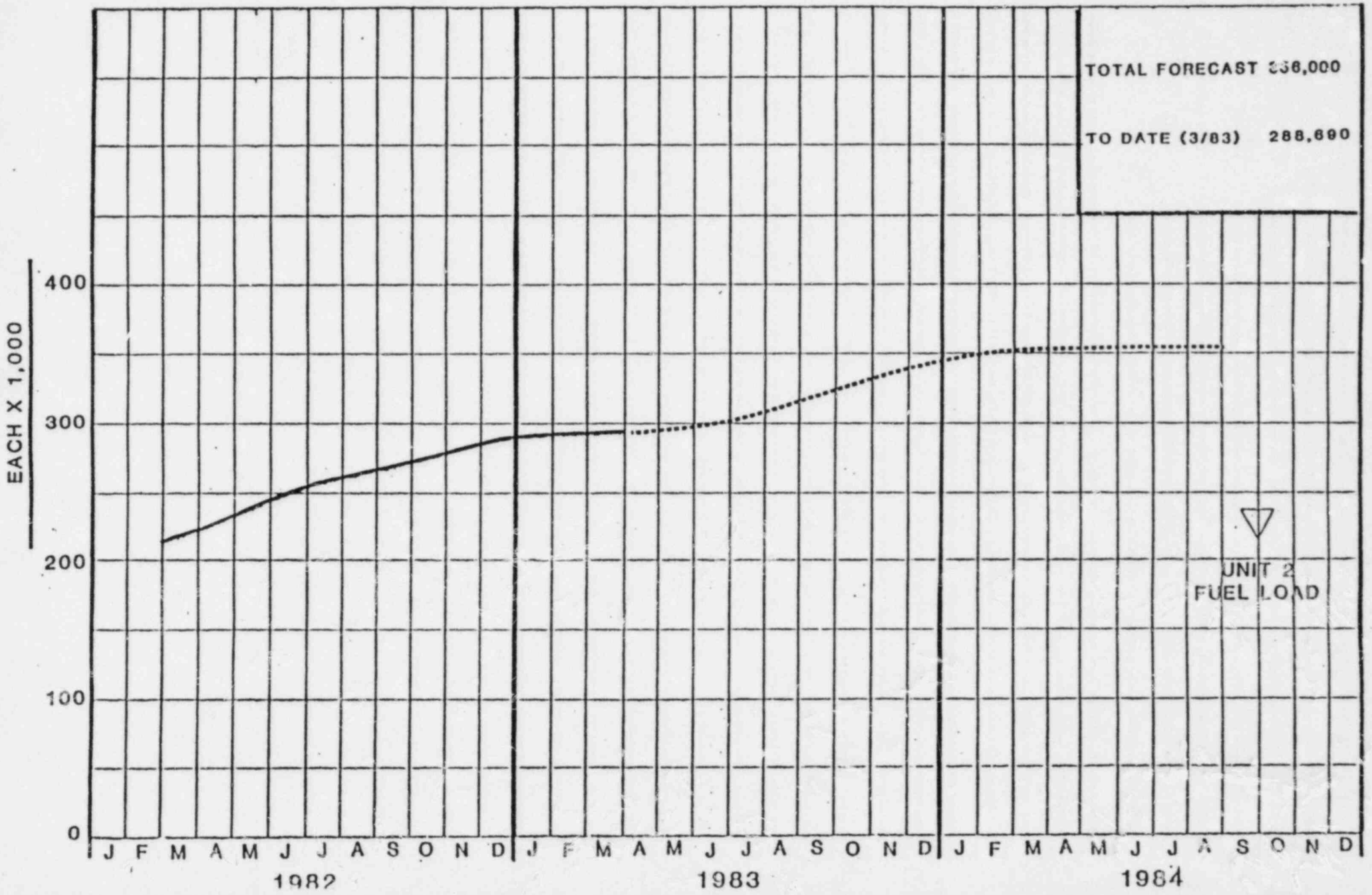


7220 MIDLAND UNITS 1& 2

CONSUMERS POWER COMPANY

TERMINATION INSTALLATION

THE TO GO INSTALLATION IS BASED ON REQUIREMENTS TO SUPPORT THE PROJECT REPLANNING SCHEDULE



7220 MIDLAND UNITS 1& 2

CONSUMERS POWER COMPANY

TUBING INSTALLATION

THE TOGO INSTALLATION IS BASED ON REQUIREMENTS TO SUPPORT THE PROJECT REPLANNING SCHEDULE

TOTAL FORECAST 176,000

TO DATE (3/83) 113,890

200

160

120

80

40

0

J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D

1982 1983 1984

UNIT 2 FUEL LOAD

CONSUMERS POWER COMPANY

MIDLAND UNITS 1 & 2

PRODUCTIVITY

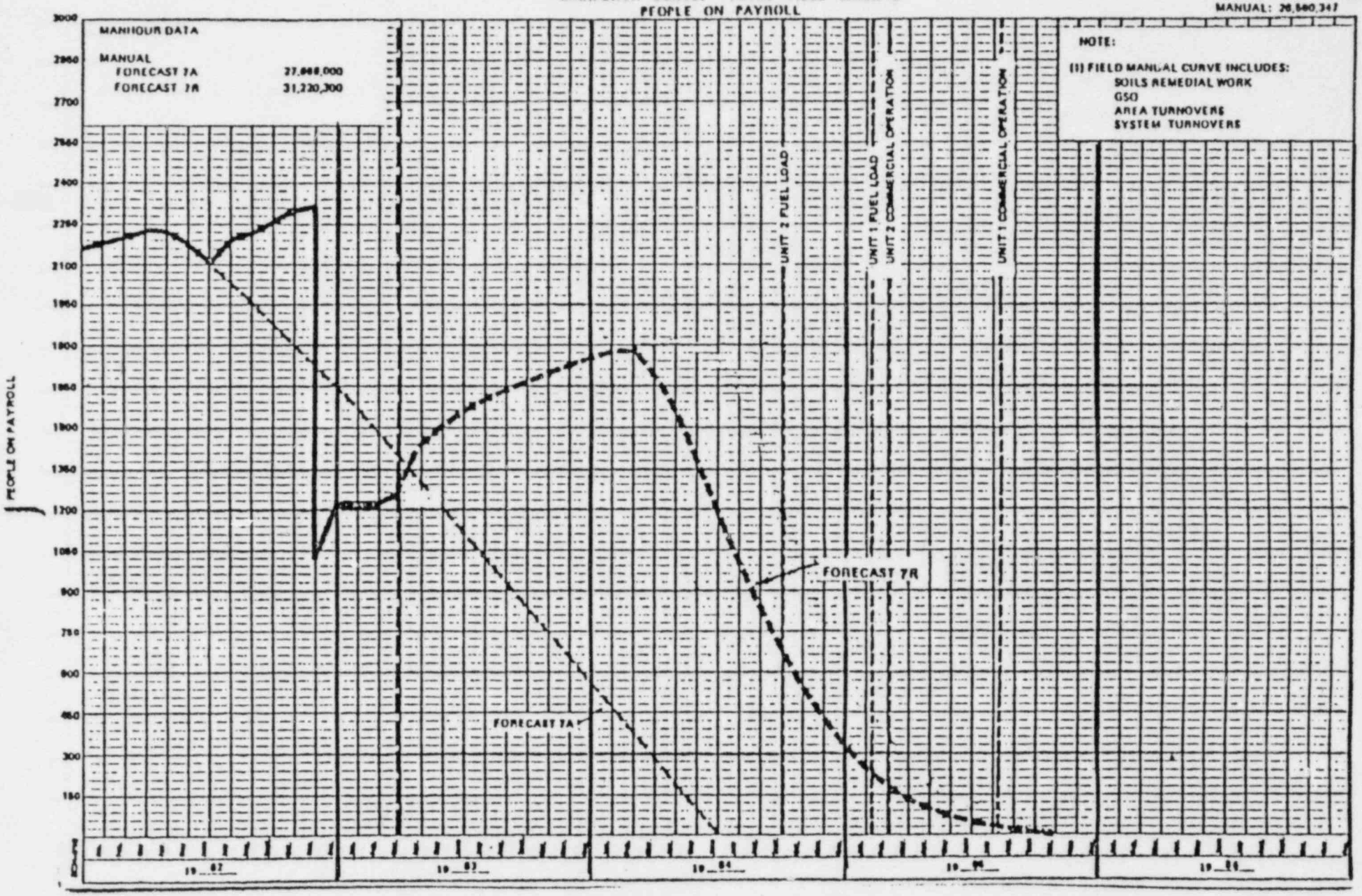
(AS OF MARCH 27, 1983)

COMMODITY	PERFORMANCE FACTOR TO-DATE	UNIT RATES TO-DATE
Large Pipe	1.00	5.48 MH/LF
Small Pipe	0.99	4.56 MH/LF
Large Pipe Hangers	1.05	120.84 MH/EA
Small Pipe Hangers	1.04	45.23 MH/EA
Conduit	0.97	1.83 MH/LF
Wire and Cable	0.92	0.08 MH/LF
Connections	0.93	0.91 MH/EA

$$\text{PERFORMANCE FACTOR} = \frac{\text{Actual Manhours}}{\text{Calculated Manhours}}$$

MIDLAND UNITS 1&2 JOB 7220
MANPOWER CURVE: TOTAL FIELD MANUAL
PEOPLE ON PAYROLL

ACTUAL AS OF 3/27/83
MANUAL: 26,860,347



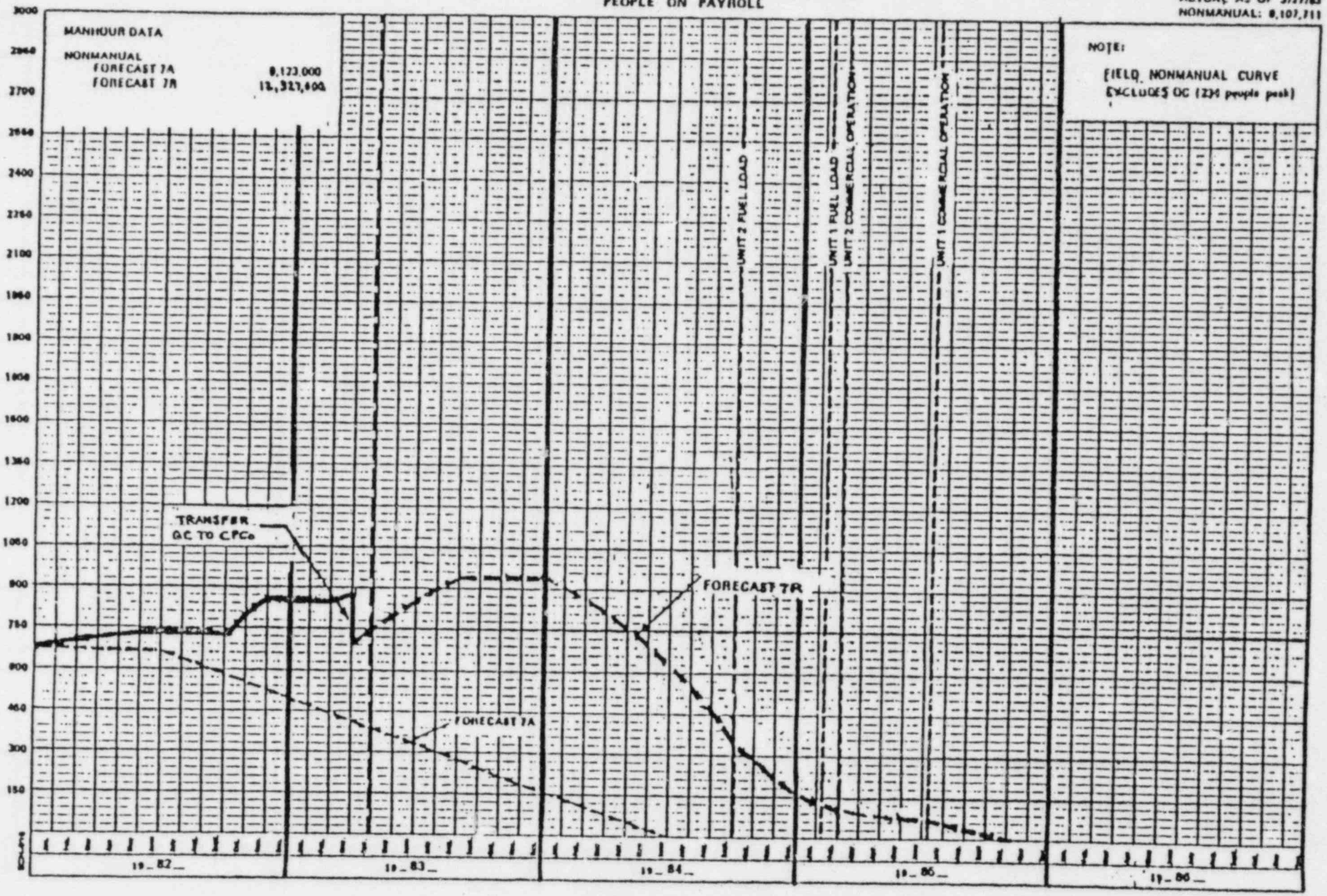
SIGNIFICANT CRAFT

MANPOWER STATUS

	PIPEFITTERS	ELECTRICIANS
CURRENT	357	275
PEAK FORECAST	670	500
AVAILABILITY	416	650
CONTRACT EXPIRATION	April 30, 1984	May 31, 1983

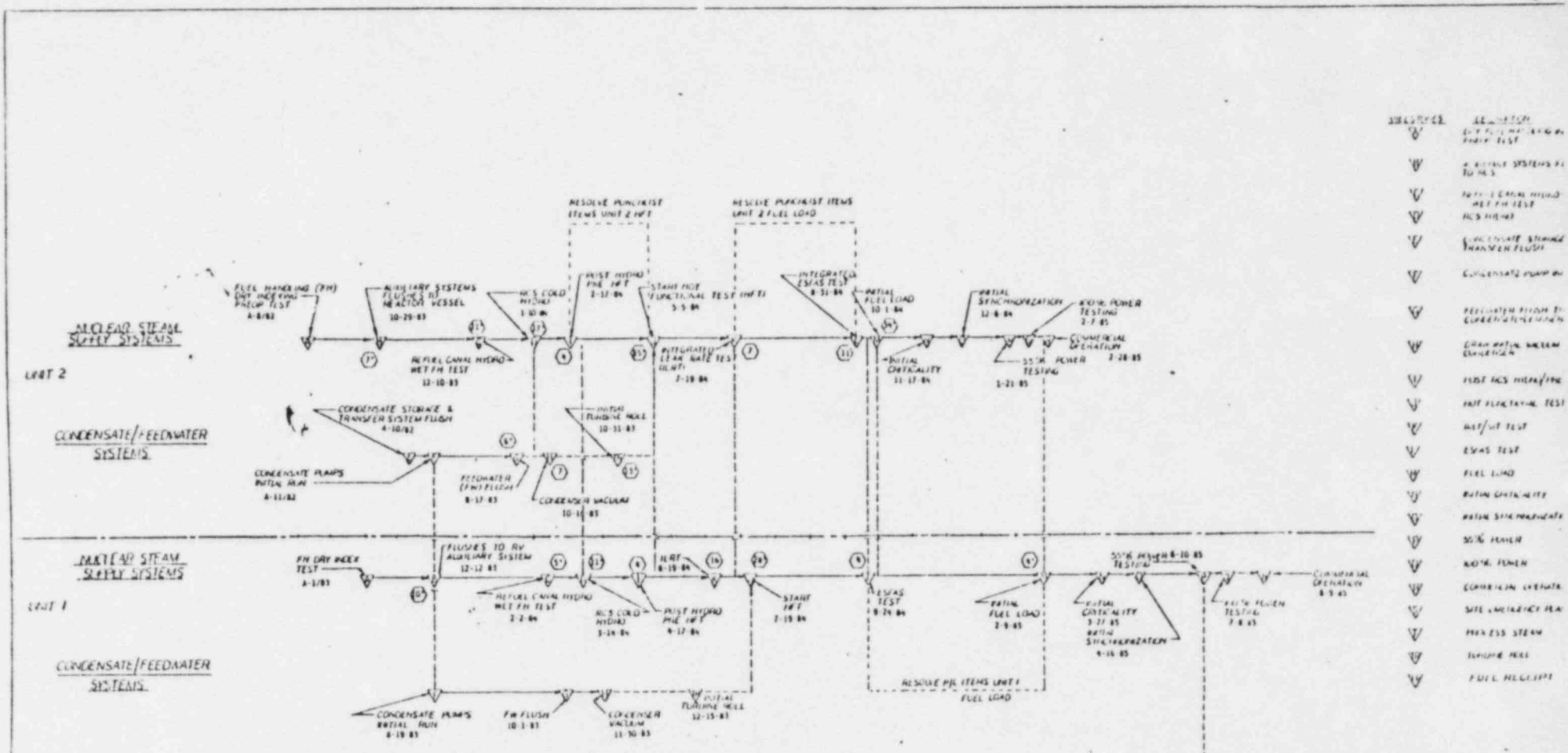
MIDLAND UNITS 1&2 JOB 7220
MANPOWER CURVE: TOTAL FIELD NONMANUAL
PEOPLE ON PAYROLL

ACTUAL AS OF 3/27/83
NONMANUAL: 8,107,711



CURRENT PROBLEMS

1. CCP - RESTART OF WORK
2. REMEDIAL SOILS WORK
3. HVAC
4. HANGER INSTALLATION
5. PENETRATION SEALING



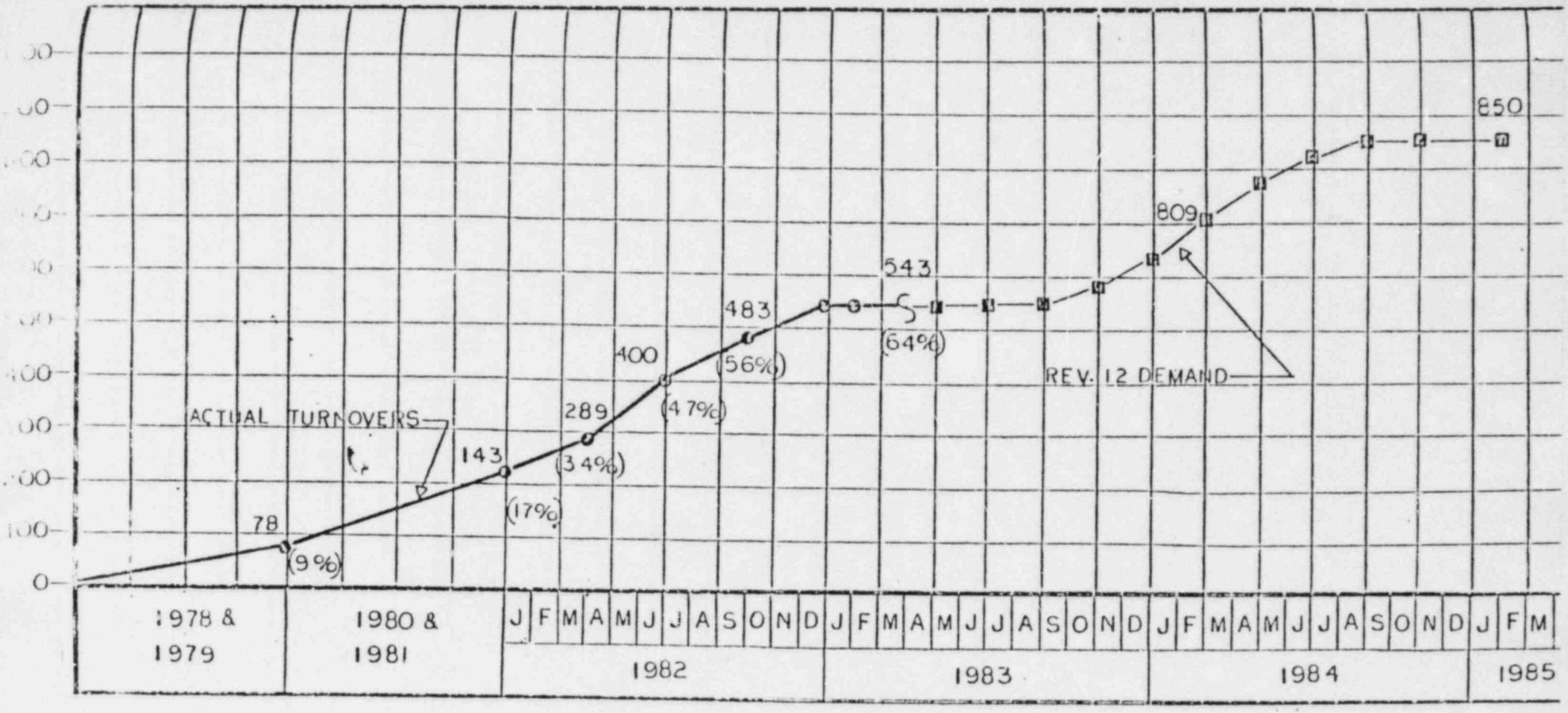
REV	DATE	REVISIONS	BY	CHK'D	APP'D
3	10-83	REV 12			
4					
5					
6					

SCALE: | DESIGNED: | DRAWN:

MIDLAND PLAN

PLAN FOR TWO UNIT STARTUP
MIDLAND UNITS 1 & 2

DRAWING NO.
CP -145-7



ACTUAL TURNOVERS AND REV. 12 DEMAND TURNOVER CURVE

FIGURE 1

MANPOWER | Fig. 1 PLAN Rev. 12 | Fig. 2 PROC. Act. vs Goal | TEST COMPL | PROC. STATUS

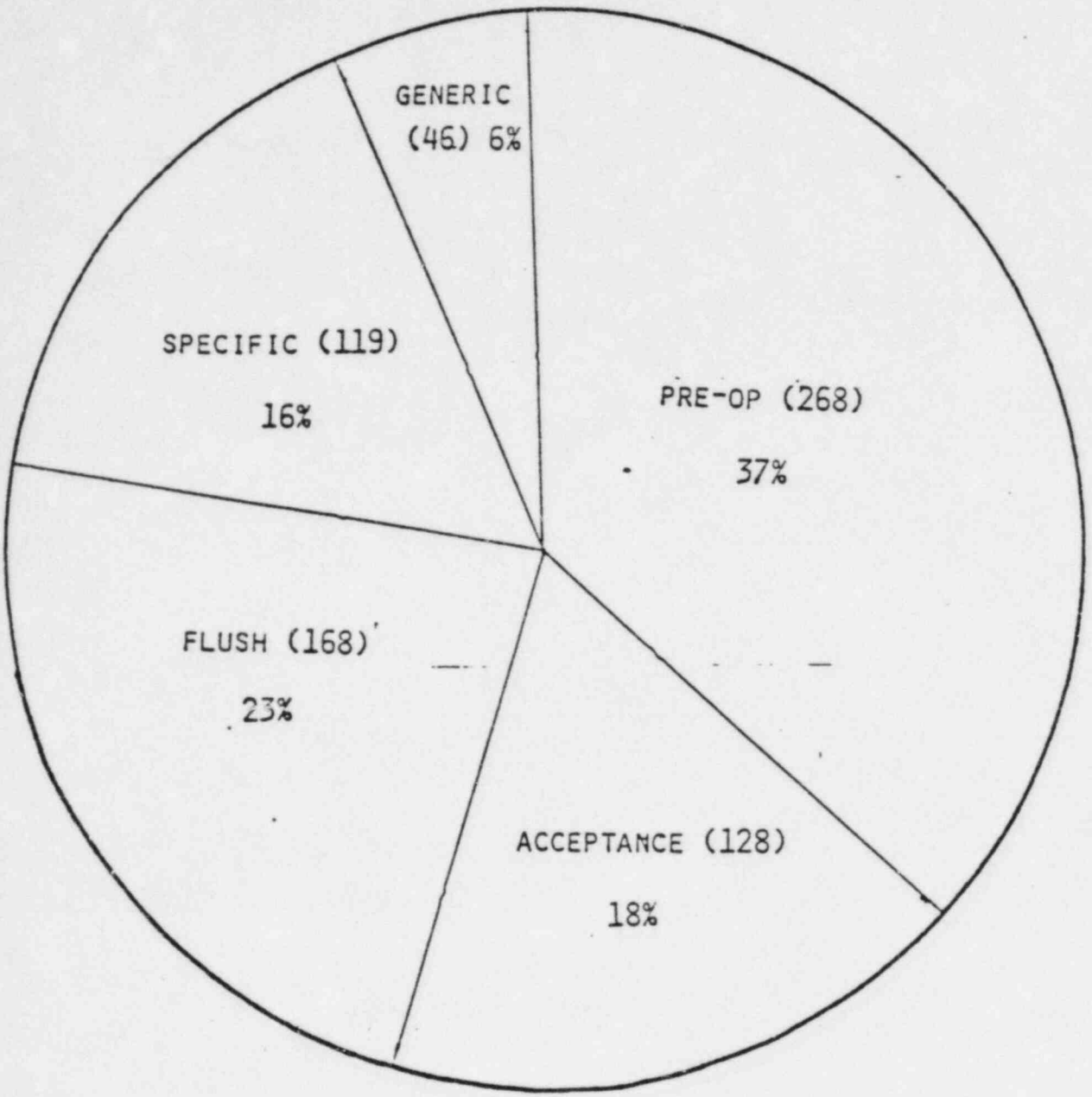
DISCIPLINE	GENERIC CHECKOUT PERCENT COMPLETE
ELECTRICAL	83
I & C	37
TURBINE/HVAC	24
FEEDWATER/CONDENSATE	25
NSSS	4
AUXILIARY SYSTEM	8
PROCESS STEAM	15
TOTAL SYSTEM CHECKOUT COMPLETE	45%

SYSTEM CHECKOUT STATUS - (3-31-83)

ET #
0329
0330

--

00329
00330



TEST PROCEDURES - PROCEDURE TYPES

(729) (5)

	COMPLETED	STARTED/NOT COMPLETE
RE-OPERATIONAL TESTS (2nd 268)	0	2
CCEPTANCE TESTS (128)	1	0
YSTEM FLUSHES	16	17
PECIFIC TESTS	9	23
OTAL	26	42

OTAL TESTS REQUIRED

EXCLUDING GENERIC TESTS) 683

% TEST COMPLETE = 4

TESTS COMPLETED - (3-31-83)

Jim Post
4/13/83

OVERALL PROCUREMENT STATUS

- DELIVERED TO JOBSITE
  - Approximately 97% of Valves; Balance Due by 9/83
  - Approximately 98% of Instrumentation; Balance Due by 8/83
  - Approximately 92% of Hangers; Balance to Be Released During Remainder of 1983
  - Approximately 99% of Power and Control Cable; Balance Due by 6/83

INCOMPLETE MAJOR PURCHASES

P.O. NO.	DESCRIPTION (Vendor)	STATUS
J-244/ J-289	Radiation Monitoring (Victoreen)	Complete Delivery by 8/83 with Exception of New Q Modules. New Q Modules to be Delivered First Quarter of 1984
M-56	Chilled Water Pumps and Motors (Goulds/Reliance Electric)	Complete Delivery by 9/83
M-146	Chiller Upgrade (Carrier Corporation)	Complete Delivery by 8/83
M-154/ M-387	Halon and Tornado Dampers (Pacific Air Products)	Complete Delivery by 7/83
M-224	Unit Coolers (American Air Filter)	Complete Delivery by 9/83
M-238	MSIV Electrical Modifications (Bonney Forge Engineered Valve Division	Complete Delivery by 7/83
M-106	Hanger Components (ITT Grinnell)	Deliveries to Continue Through Balance of 1983 as Released by Engineering

Fred Buckman

PERCENT COMPLETE

	March 1983 Current Forecast
• ALL ENGINEERING	76%
• DESIGN	94%
• Cable Routed Complete	99%
• Exposed Metallic Conduit Issued	98%
• Small Pipe Issued	99%
• Small Pipe Supports Issued	95%
• Large Pipe Supports Issued	97%

12-G-3017

MIDLAND PLANT UNITS 1 AND 2 - JOB 7220

ENGINEERING MANHOUR CHANGES

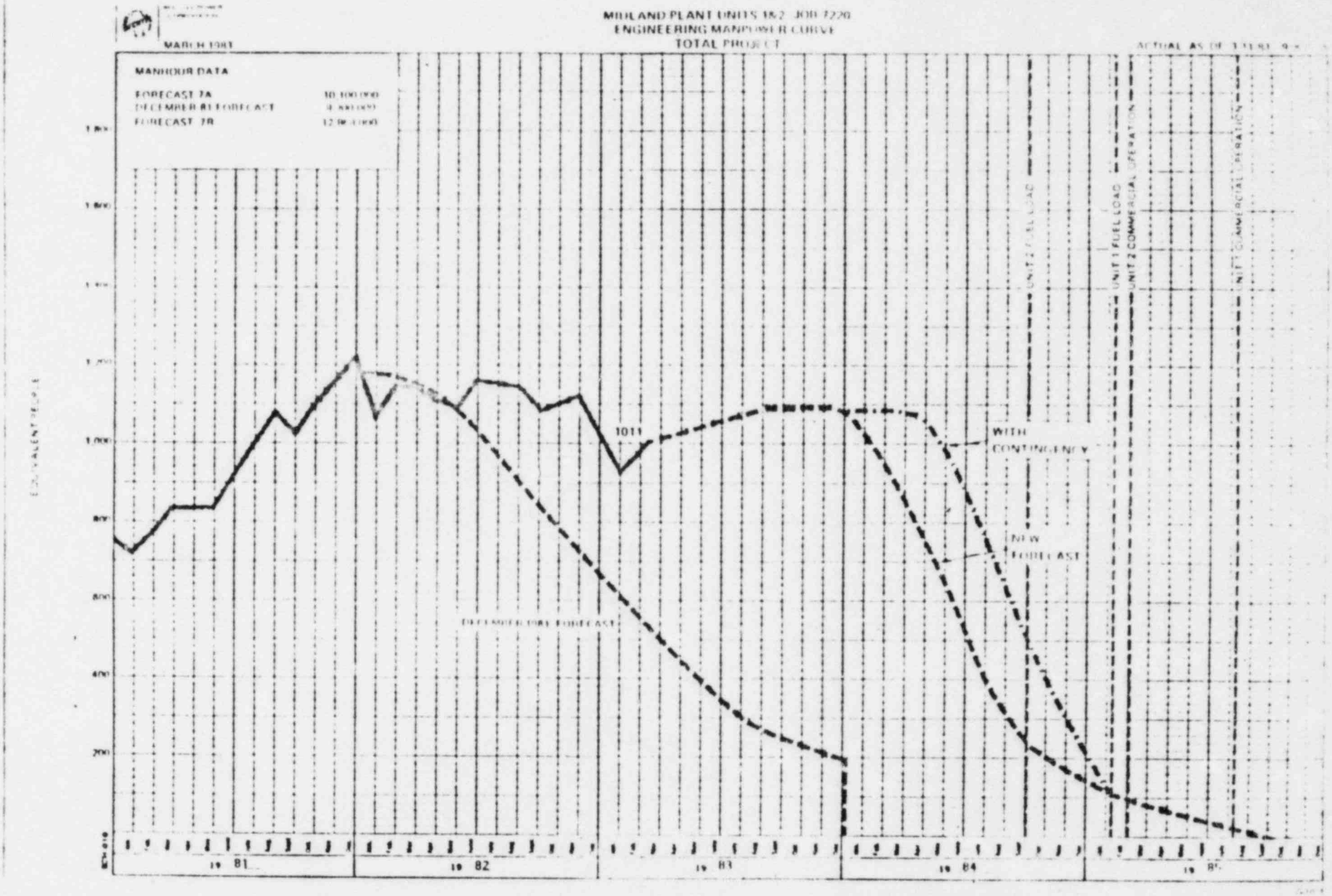
THROUGH DECEMBER 1982

(Reconciliation from December 1981 Forecast)

	Item Description	Manhours (1,000s) Total	
DECEMBER 1981 FORECAST			9,900
1	SCHEDULE CHANGE	1,100	
2	HVAC	338	
3	SOILS	267	
4	LARGE PIPE	212	
5	SMALL PIPE	133	
6	SPACE CONTROL GROUP	109	
7	HELBA	100	
8	CONSTRUCTION COMPLETION PROGRAM	77	
9	SPATIAL SYSTEM INTERACTION	77	
10	STRUCTURAL VERIFICATION	60	
11	Q DEVICES IN NON-Q-COOLED AREAS	52	
12	EQUIPMENT ENVIRONMENTAL QUALIFICATION	49	
13	NRC BULLETIN 79-14	49	
14	INCORPORATION OF CHANGE DOCUMENTS	48	
15	SQRT	41	
16	SEISMIC ANALYSIS OF CABLE TRAY SUPPORTS	36	
17	GENERAL FCR/FCN CONSTRUCTION SUPPORT	35	
18	FILE CLOSEOUT AND JOB CLEANUP	35	
19	RELOCATION OF RESIDENTS	34	
20	EMBED ANALYSIS	25	
21	CONTROL ROOM MODIFICATIONS	25	
22	CAR DISPOSITIONS	22	
23	RESOLUTION OF MIOSHA INTERFERENCES	21	
24	INDEPENDENT DESIGN REVIEWS	18	
25	QE ACTIVITIES	15	
26	NRC HEARINGS/QUESTIONS SUPPORT	10	
27	MISCELLANEOUS NON-SCOPE CHANGES	92	
28	MISCELLANEOUS SCOPE CHANGES	226	
	ROUNDING	(6)	
		3,300	3,300
CURRENT ESTIMATED ENGINEERING MANHOUR FORECAST		**100%**	**13,200**
	AFTER FUEL LOAD CONTINUING SERVICE AGREEMENT		250
			13,450

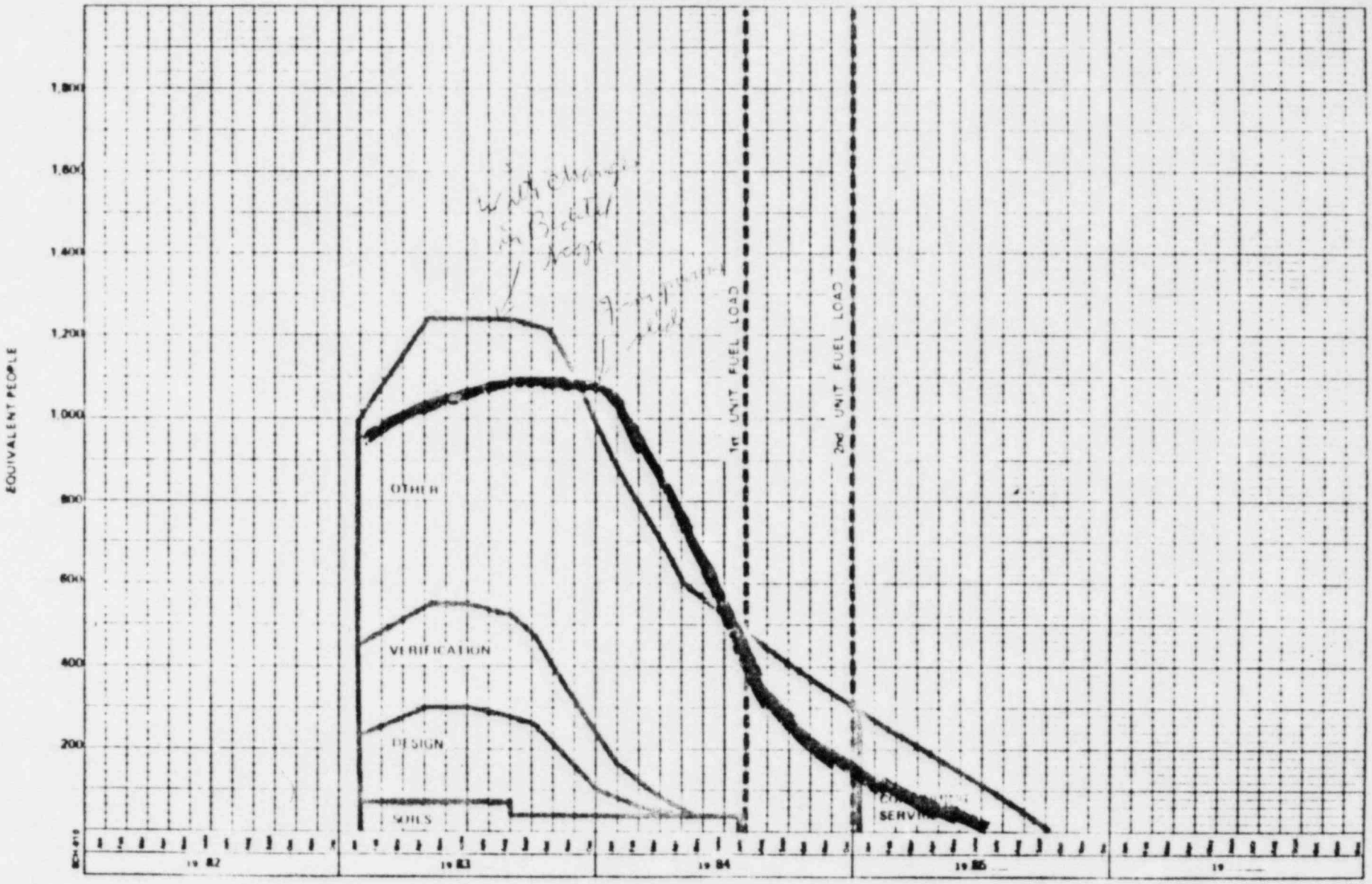
MID AND UNITS 1 AND 2
FEBRUARY 1983

93 G 2679 44


MIDLAND PLANT UNITS 1&2 JOB 7220
ENGINEERING MANPOWER CURVE
TOTAL PROJECT
MARCH 1981
ACTUAL AS OF 3/31/81
MANHOUR DATA
FORECAST 7A
DECEMBER 81 FORECAST
FORECAST 7B
EQUIVALENT PEOPLE
1011
WITH CONTINGENCY
NEW FORECAST
DECEMBER 81 FORECAST
UNIT 2 FUEL LOAD
UNIT 1 FUEL LOAD
UNIT 2 COMMERCIAL OPERATION
UNIT 1 COMMERCIAL OPERATION
1600
1400
1200
1000
800
600
400
200
0
19 81
19 82
19 83
19 84
19 85

DECEMBER 1982 FORECAST

TOTAL PROJECT
TO GO ENGINEERING MANPOWER CURVE
MIDLAND UNITS 1 AND 2 7220



0-1811

NOTE ACTUAL QUANTITY ISSUED IS BASED ON QTS FIGURES THERE IS AN APPROXIMATE 3 WEEK LAG IN THE REPORTING OF OFFICIALLY ISSUED HANGER DESIGNS FROM ENGINEERING TO THE TIME IT APPEARS IN THE QTS REPORT

MIDLAND UNITS 1 & 2 JOB 7220

ENGINEERING PRODUCTION SCHEDULE

TOTAL LARGE PIPE SUPPORT DESIGN RELEASE

CUTOFF DATE
AS OF 6/11/84

LEGEND
ACTUAL
ENGINEERING SCHEDULE

16,200
16,000
15,800
15,600
15,400
15,200
15,000
14,800
14,600

NOTE

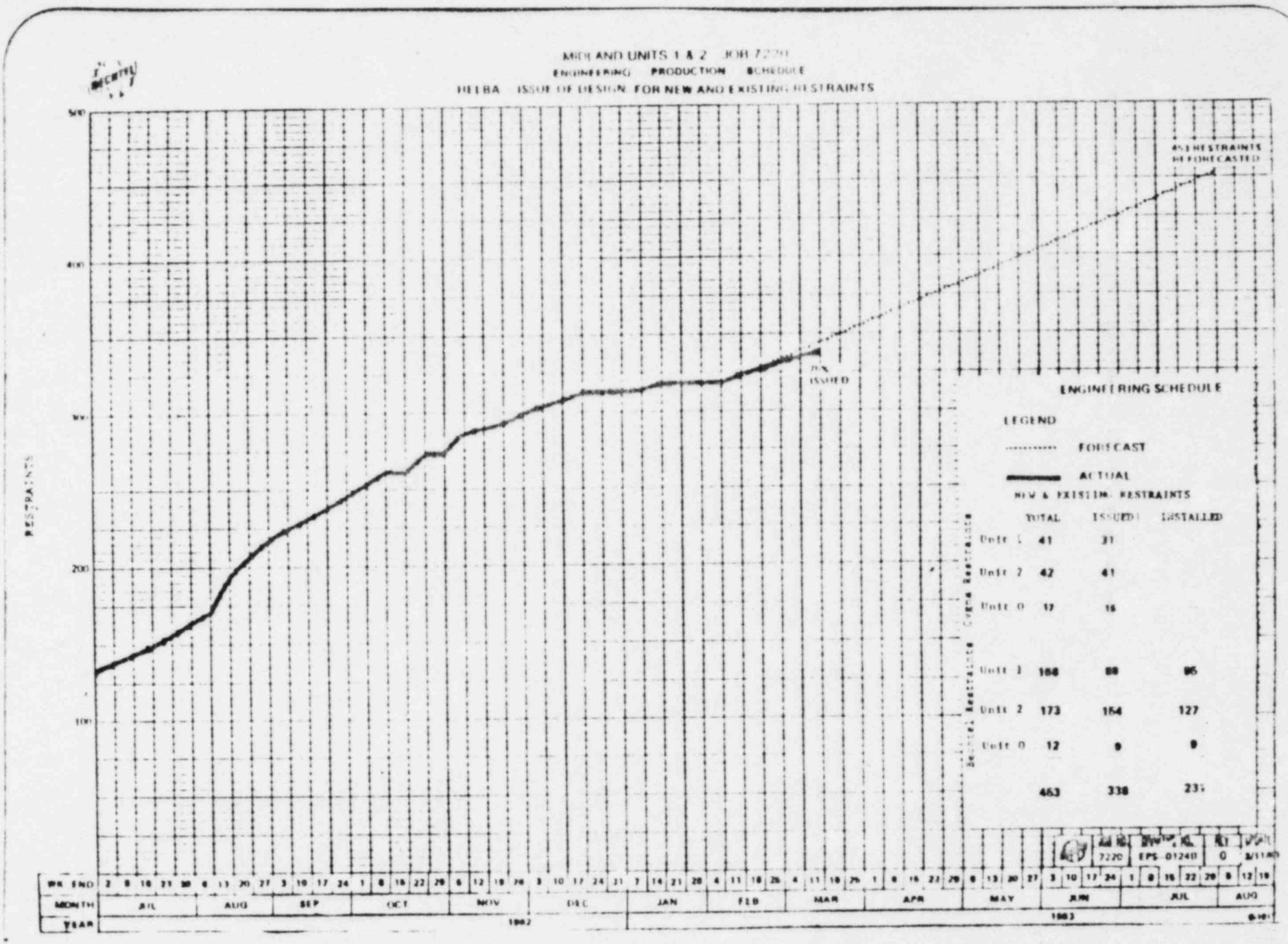
LARGE PIPE SUPPORT ESTIMATE

QTS TO DATE QUANTITY PER RUN 02/07/84	15,325
ALLOWANCE FOR SUPPORTS RESULTING FROM WALKDOWNS	50
ALLOWANCE FOR SUPPORTS DUE TO SEISMIC REANALYSIS	342
ESTIMATED SUPPORTS TO GO EXCLUDING THOSE DUE TO WALKDOWN & SEISMIC REANALYSIS	53
TOTAL	15,770

BECHTEL	JOB NO	DRAWING NUMBER	REV
	7220	EPS 6000 SHT 1	6

MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT
1981 1982 1983

G-1011


MIDLAND UNITS 1 & 2 JOB 7220
ENGINEERING PRODUCTION SCHEDULE
HEBA ISSUE OF DESIGN FOR NEW AND EXISTING RESTRAINTS
RESTRAINTS
453 RESTRAINTS RE-FORECASTED
ISSUED
ENGINEERING SCHEDULE
LEGEND
FORECAST
ACTUAL
NEW & EXISTING RESTRAINTS
TOTAL ISSUED INSTALLED
Unit 1 41 31
Unit 2 42 41
Unit 0 17 16
Unit 1 188 88 86
Unit 2 173 164 127
Unit 0 12 9 9
453 338 23
7220
EPS-01240
0
WK END
MONTH
YEAR
JUL
AUG
SEP
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
1982
1983

MIDLAND

CASE LOAD FORECAST

SCHEDULE REVIEW

4/19/83

SOILS SCHEDULE

1982												1983												1984											
J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D

Diesel Generator Building - Crack Repair Prior To First Refueling

Borated Water Storage Tank

Underground Piping 36" Pipe Replacement

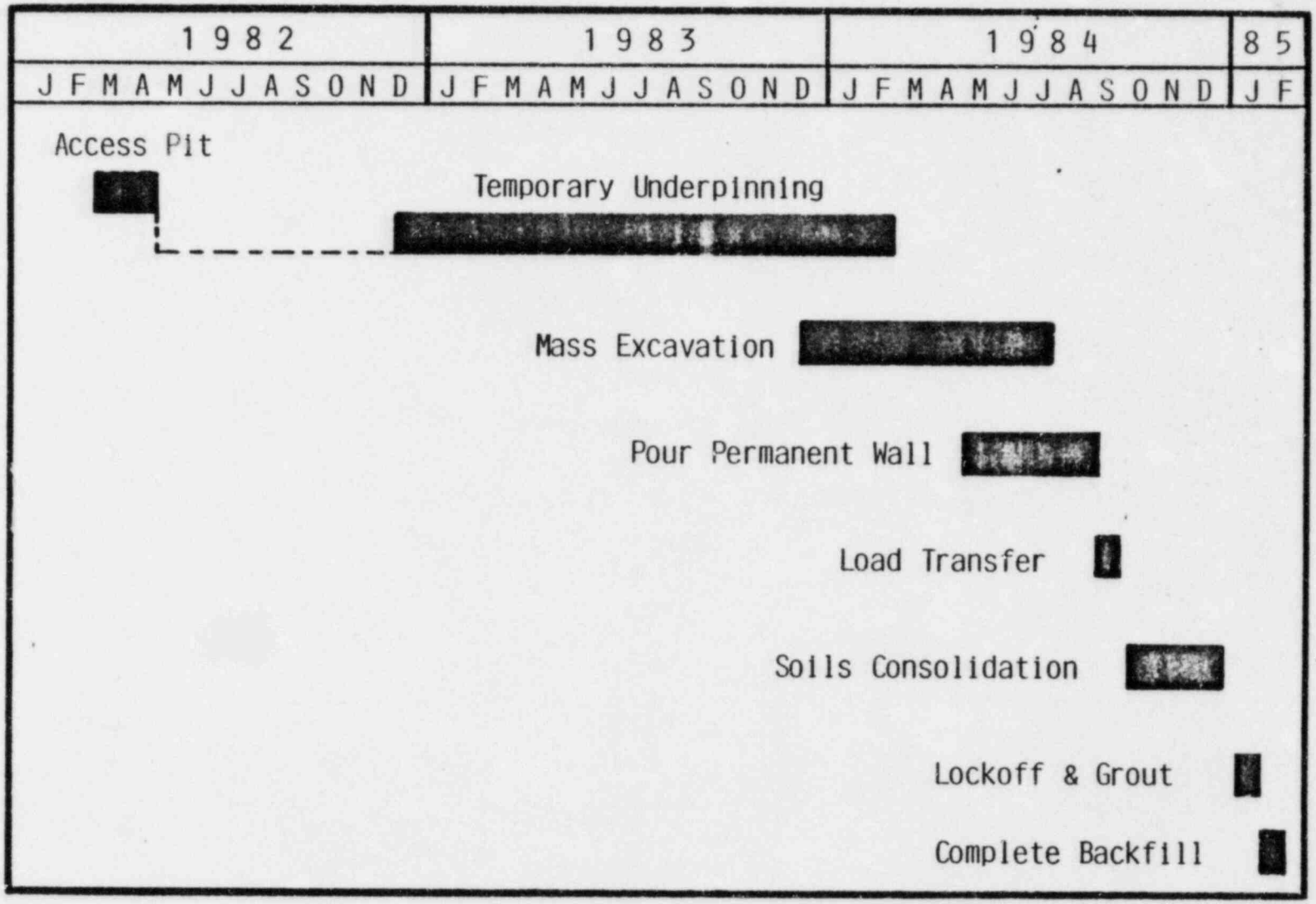
Monitoring

Dewatering

Service Water Pump Structure

SOILS SCHEDULE

AUXILIARY BUILDING



MIDLAND PROJECT REPLANNING

SOILS (UNDERPINNING)

LINKAGE TO FUEL LOAD

EVENT:

- Start of Soils Consolidation

BASIS:

- Load Transferred To Permanent Wall
- Demonstrate Building Has Structural Capability To Fulfill Safety Function Required For Fuel Load & Low Power Physics Test
- Present Evaluation For NRC Approval

AUXILIARY BUILDING
UNDERPINNING

FACT SHEET

A. Dewatering

Vertical Freeze Holes	248
Angled Freeze Holes	79
Thermal Monitor Holes	39
Ejectors	78
Piezometers	13
Total Holes Drilled	457
Linear Feet Freeze Header	3,036
Linear Feet Dewatering Header	3,410

B. Access Shafts (East and West)

Depth Each Shaft	76 Feet
Excavated Material - Shafts	8,889 Cubic Yards

C. Temporary Underpinning

Length of Access Drifts	1,106 Horizontal Feet
Excavated Material - Drifts	1,474 Cubic Yards
Number Temporary Piers	57
Excavated Material - Piers	3,550 Cubic Yards
Reinforcing Steel - Piers	295 Tons
Structural Steel - Piers	803 Tons
Concrete - Piers	3,550 Cubic Yards

D. Permanent Underpinning

Mass Excavation	7,957 Cubic Yards
Permanent Wall:	
Length:	600 Feet
Width:	6 Feet
Height:	35 Feet
Wall Concrete	4,287 Cubic Yards
Wall Reinforcing Steel	326 Tons
Slab Concrete	257 Cubic Yards
Slab Reinforcing Steel	30 Tons

E. Summary

Total Material Excavated	21,870 Cubic Yards
Total Reinforcing Steel	651 Tons
Total Concrete	8,095 Cubic Yards

FS/LET2

C-195

Scope:

The scope of the C-195 contract is to underpin the Control Tower and Electrical Penetration Areas (EPA) of the Auxiliary Building and a portion of the Turbine Building.

The project has been broken down into four phases of work which includes the installation of the East and West Access Shafts, 54 underpinning piers and six grillage beam support assemblies. The piers and grillage beam assemblies will temporarily support the Control Tower, EPA and Turbine Buildings until the permanent underpinning wall can be constructed and the building loads transferred to the wall.

General:

Mergentime, the prime contractor for the Auxiliary Building, will accomplish this work by excavating drifts (tunnels) from both the East and West Access Shafts. The drifts will only advance as far as the next scheduled pier location. At this point, the pier will be excavated, lagged, rebar installed, instrumentation and embedded items installed and concreted.

Once the concrete has achieved the specified strength, the pier will be jacked against the building and the load transferred to the pier. The drift will then procede to the next pier and the same process followed. This method will continue from both sides until all the piers and grillage systems have been installed and the load temporarily transferred.

Once the Control Tower, EPA and Turbine Building have been supported temporarily, Mergentime will begin mass excavating the area in stages to the final elevation of 571'±. During the mass excavation, the Contractor will install a strut system to brace the piers as the excavation procedes, since excavation is on only one side of most piers. Mass excavation of the Access Shafts will coincide with the mass excavation under the building.

After mass excavation is complete, the Contractor will construct a six foot wide, 35 feet high wall approximately 600 L.F. long, (4,287 cubic yards of concrete). This will serve as the new foundation for the building once the load has been transferred from the piers to the wall.

When the load has been transferred to the permanent wall, the "ballroom" will be backfilled on the way out, as well as the Access Shafts.

Pertinent Data:

Pier Concrete	3550 C.Y.
Wall Concrete	4287 C.Y.
Miscellaneous Concrete	600 C.Y.
Rebar (Total)	1,274,784 lbs.
Material Removed	21,870 C.Y.

By Kelleher 12/14

SERVICE WATER PUMP STRUCTURE
UNDERPINNING
Phase I

Agreed Quantities
as of 11/19/82

FACT SHEET

A. Dewatering

Ejectors (Inside)	33
Piezometers (Inside)	3
Ejectors (Outside)	47
Piezometers (Outside)	9
Total Holes	92
Linear Feet 8" Dewatering Header	1,375
Linear Feet 10" Dewatering Header	345

B. Access Shaft

1.	Soldier Piles	27 each
2.	Sheeted Pits for S.P.	3377 Sq. Ft.
3.	Excavation Sheeted Pits for S.P.	109 CYS.
4.	Concrete for S.P.	16.5 CYS.
5.	Lean Flyash Concrete for S.P.	65.3 CYS.
6.	Lagging	2700 Sq. Ft.
7.	Excavation	981 CYS.
8.	Structural Steel (Struts, wales, bracing)	95 Ton

C. Approach Pits, Underpinning Piers, & Tunnel

1.	Excavation	680 CYS.
2.	Pier Reinforcing	52 Ton
3.	Lagging	10,585 Sq. Ft.
4.	Concrete	670 CYS.
5.	Backfill and Tunnel Concrete	46 CYS.
6.	Anchor Bolts & Plates, Etc.	47 Ea.
7.	Hydraulic Jacks (Estimated)	50 Ea.

FS/LET2

Summary of Underpinning of Service Water Pump Structure

The scope of the work involves two Phases, I and II. Phase I entails work related to the actual underpinning of the Service Water Pump Structure. Phase II involves excavation and rebedding of piping.

Phase I work begins with the location of utilities within the work area, both for excavation and installation of dewatering wells. After all utilities are located, approximately 47 dewatering wells will be installed outside of the building. Concurrently with this operation, 33 dewatering wells will be placed in the Service Water Pump Structure and the Circulating Water Intake Structure. Also, a total of 12 piezometers are to be installed.

The installation of soldier piles will be the next activity. This will consist of 27 total soldier piles being installed; 20 will be placed in drilled holes, and the remaining seven will be placed in sheeted pits. Once the soldier piles have been installed, the Access Shaft excavation can begin. Lagging and bracing will be installed as the shaft is dug. An estimated 785 cubic yards of excavated material will be removed from ground elevation down to elevation 618.

From the Access Shaft, access pits will be dug to enable the pier excavations to proceed. A total of 20 piers are to be installed in a predetermined sequence. After Pits 1, 1A, 2 and 2A are installed, a tunnel will begin being excavated under the Service Water Pump Structure, next to the Circulating Water Intake Structure. This tunnel will be approximately 6' x 6' x 30' in length upon completion. The above will entail, for all piers, 680 cubic yards of excavation, 670 cubic yards of pier concrete, and 102,425 pounds of rebar. The tunnel will have 50 cubic yards of excavation.

Once a pier is installed, jacking will take place to transfer the load to the pier. After the load is transferred, the pier will be wedged to maintain the applied load. Large anchor bolts, connecting the pier to the Service Water Pump Structure, will be tightened to maintain contact between the building and the pier. This process will be repeated for each individual pier.

After all piers have been loaded, the access tunnel will be backfilled with a lean concrete mix.

Additional work for the Phase II operation will include probing for utilities, installation of dewatering wells, installation of soldier piles, excavation, lagging and bracing. This work is being done to uncover certain utilities which must be rebedded. The actual embedment will be performed by Bechtel forces. Quantities for this work have not been calculated by the Field.

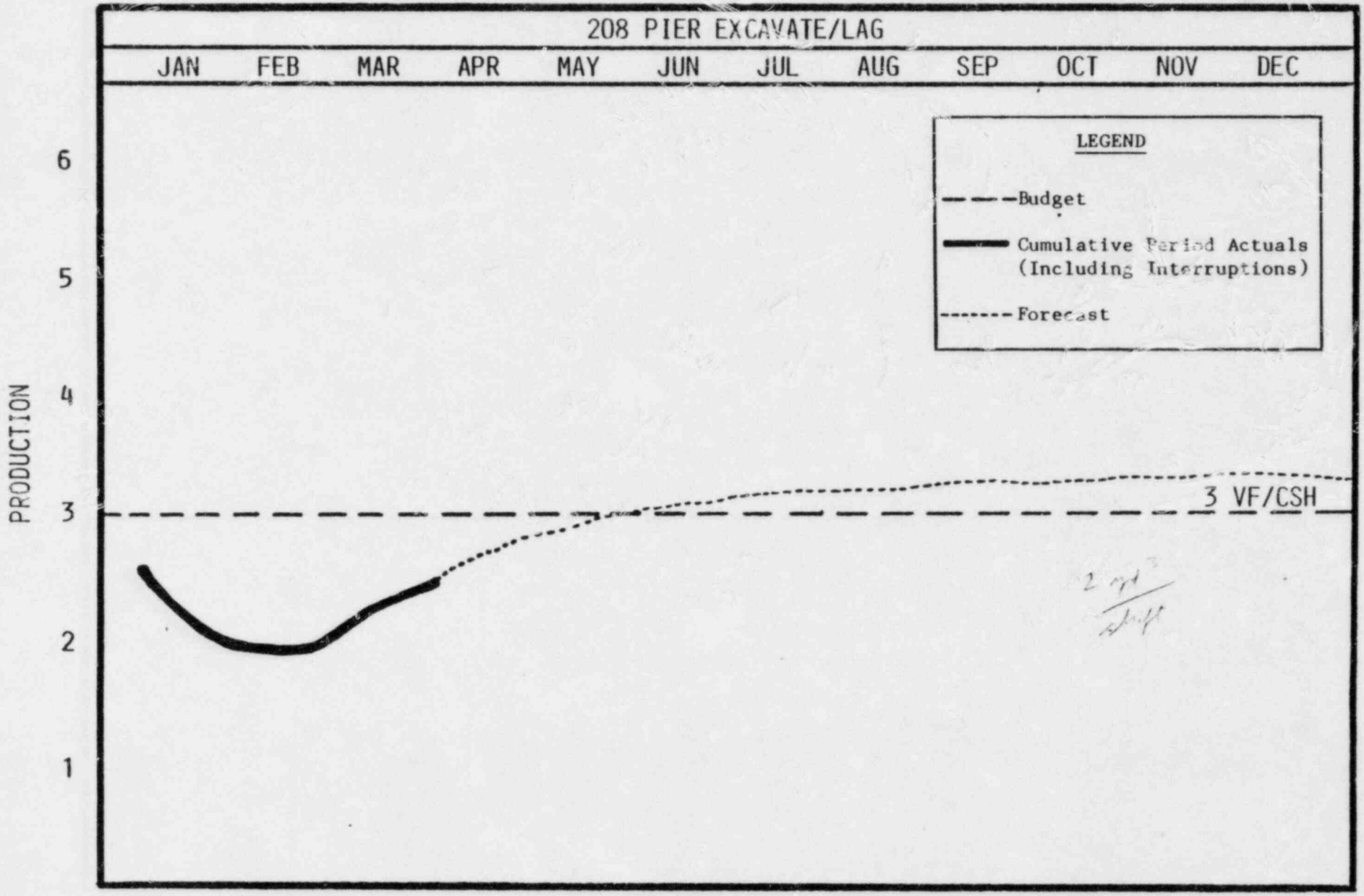
By Hemm 12/14

AUXILIARY BUILDING

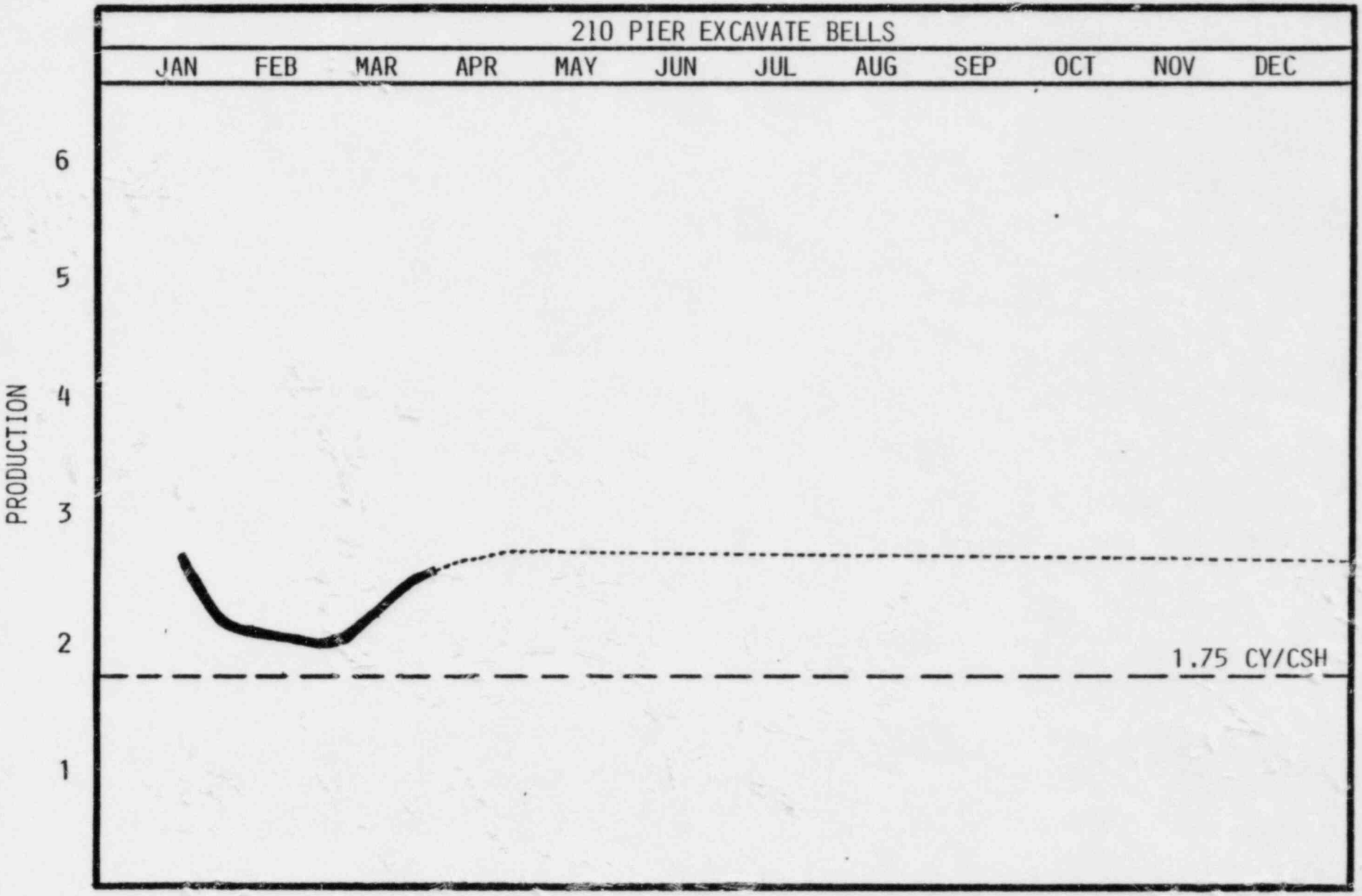
SCOPE

ITEM	QUANTITY	BUDGET RATE
Horizontal Drift	1,106 ft	3 lf/cs
Pier Excavating	3,550 cy	3 vf/cs
Pier Reinforcing Steel	295 T	500 lb/cs
Pier Concrete	3,550 cy	7 cy/cs
Mass Excavation	7,957 cy	10 cy/cs
Permanent Wall Concrete	4,287 cy	29 cy/cs

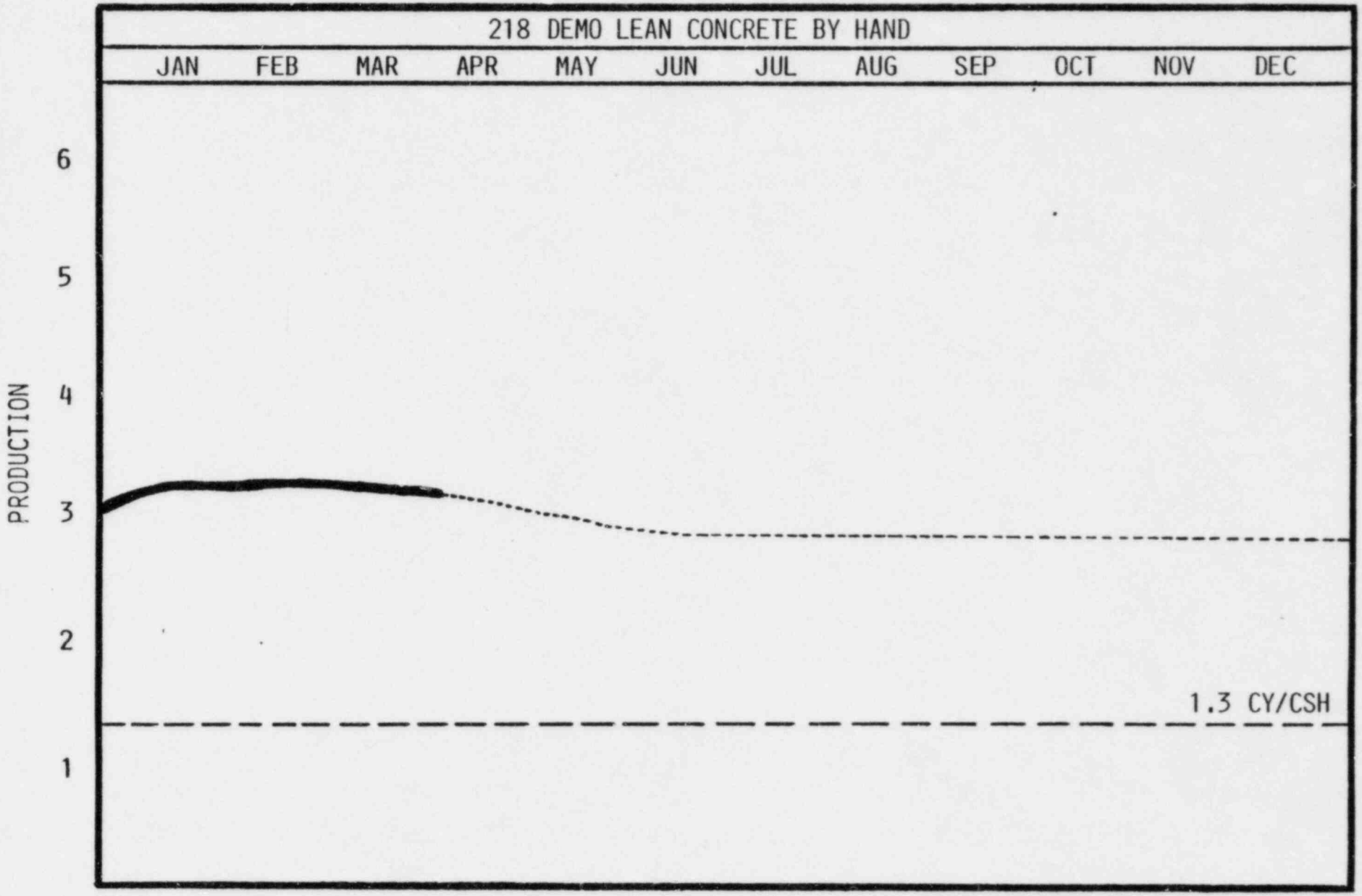
PRODUCTIVITY CHART
AUX BLDG UNDERPINNING



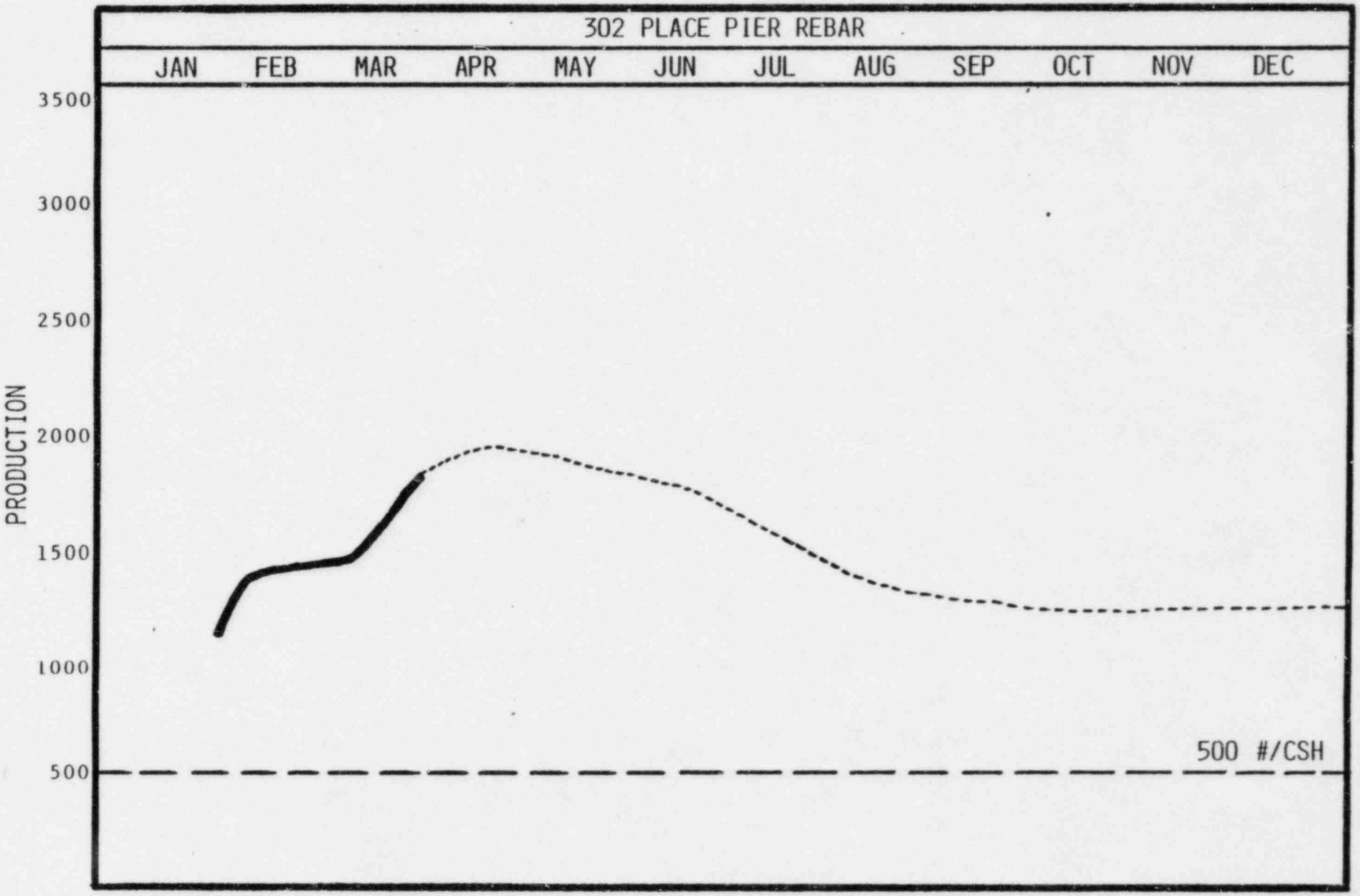
PRODUCTIVITY CHART
AUX BLDG UNDERPINNING



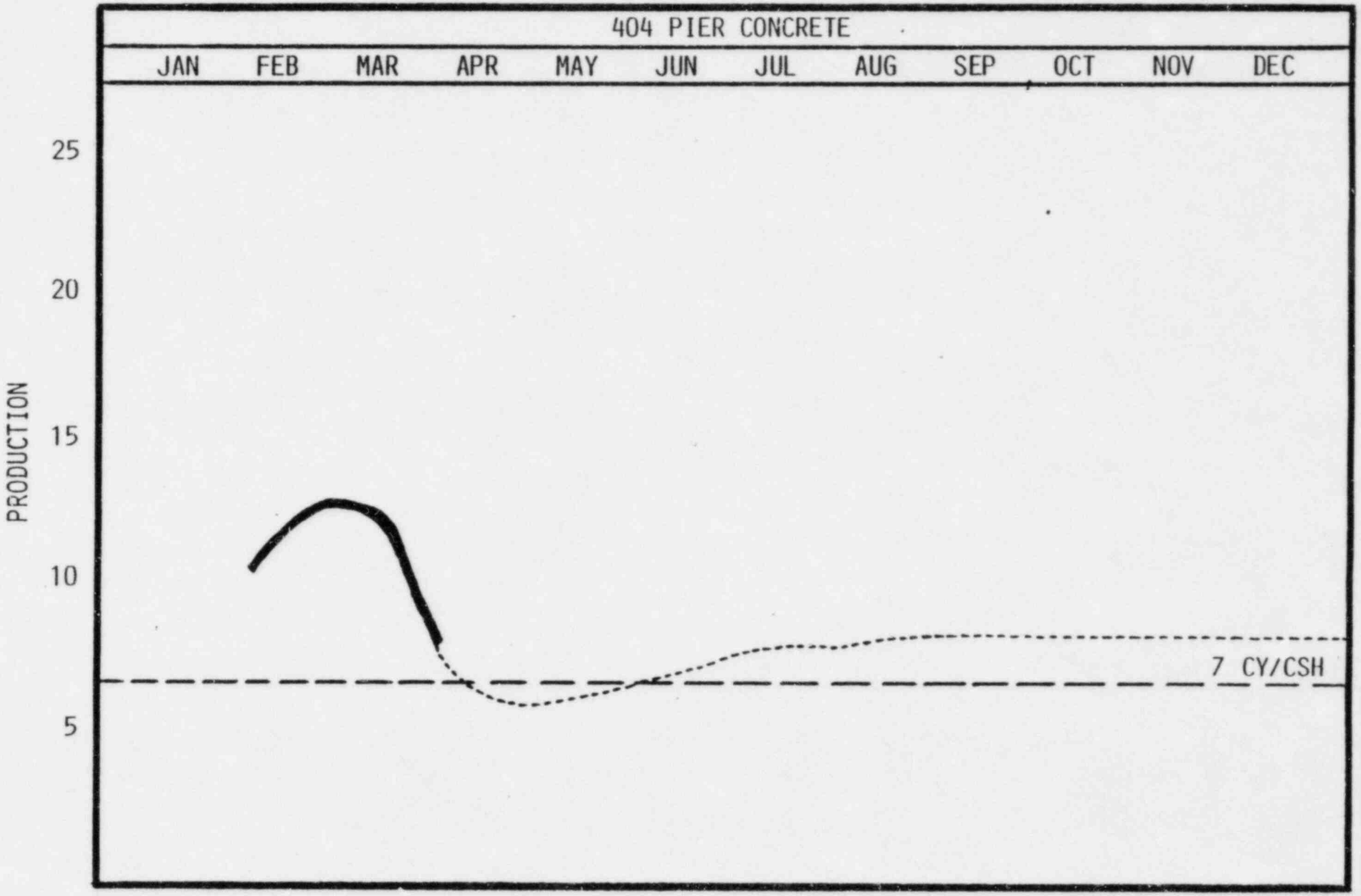
PRODUCTIVITY CHART
AUX BLDG UNDERPINNING



PRODUCTIVITY CHART
AUX BLDG UNDERPINNING

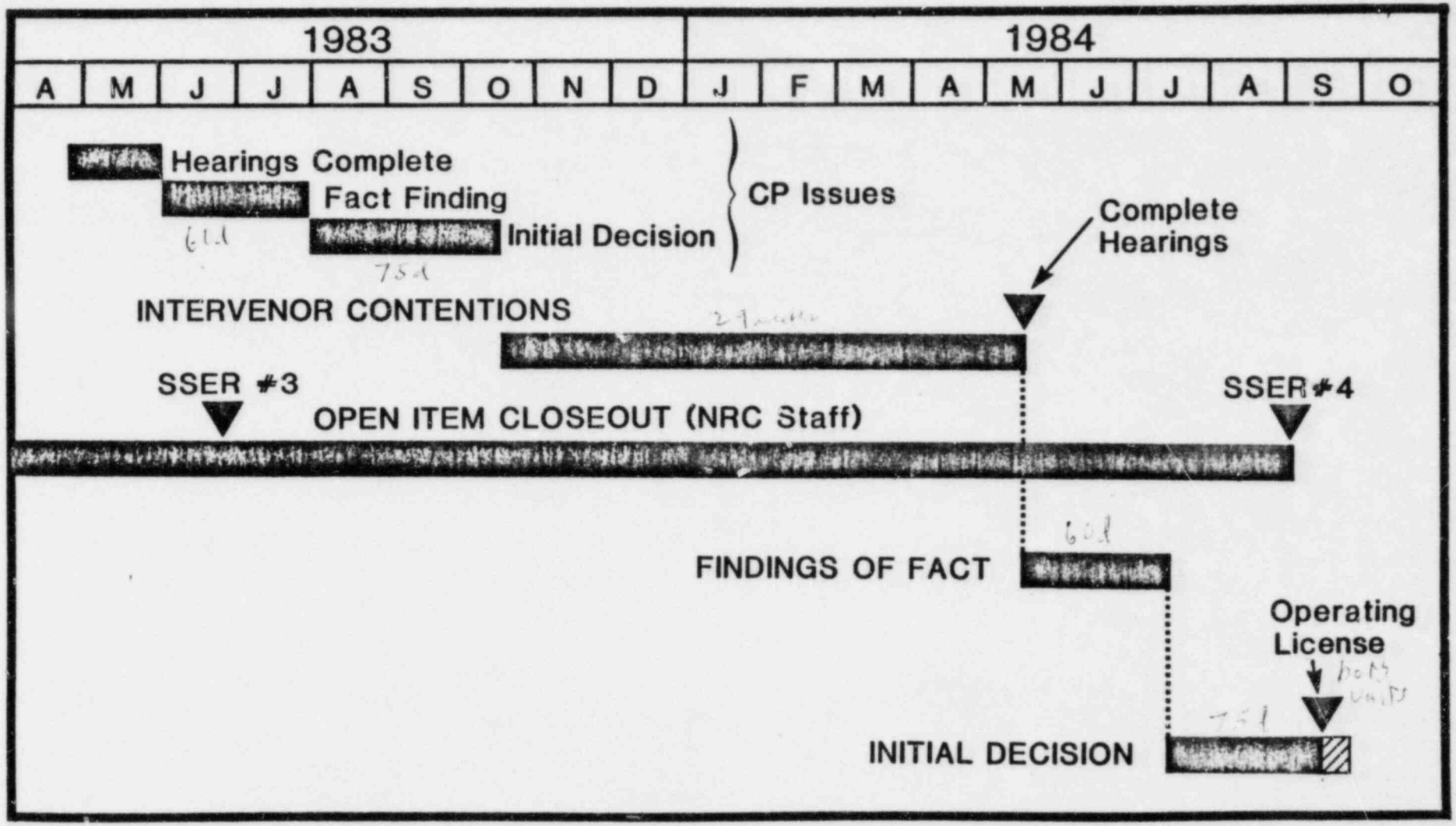


PRODUCTIVITY CHART
AUX BLDG UNDERPINNING



MIDLAND PROJECT REPLANNING

LICENSING SCHEDULE



JNL 4/19/83

SER OPEN ITEM STATUS

CLOSED BY SSER #1 AND #2

TYPE OF ITEM	COMPLETED/TOTAL NUMBER
OUTSTANDING ITEMS	0/17
CONFIRMATORY ISSUES	9/32
LICENSING CONDITIONS	1/11

PROJECTED COMPLETION FOLLOWING SSER #3

TYPE OF ITEM	COMPLETED/TOTAL NUMBER
OUTSTANDING ITEMS	10-1/2/17
CONFIRMATORY ISSUES	25/32
LICENSING CONDITIONS	2/11

JNL 4/19/83

SER OPEN ITEM STATUS (CONT'D)

PROJECTED COMPLETION BY END OF 1983

TYPE OF ITEM	COMPLETED/TOTAL NUMBER
OUTSTANDING ITEMS	16/17 (2 HALVES REMAINING-EMERGENCY PLANNING & SEISMIC QUALIFICATION)
CONFIRMATORY ISSUES	31/32
LICENSING CONDITIONS	4/11

PROJECTED COMPLETION BY FUEL LOAD

TYPE OF ITEM	COMPLETED/TOTAL NUMBER
OUTSTANDING ITEMS	17/17
CONFIRMATORY ISSUES	32/32
LICENSING CONDITIONS	8 7/11

JNL 4/19/83

SER ITEMS ALREADY CLOSED BY SSER'S

OUTSTANDING ITEMS	DESCRIPTION OF ITEM
01-5	PORTIONS OF SOILS SETTLEMENT ISSUES

CONFIRMATORY ISSUES	DESCRIPTION OF ITEMS
CI-3	PROGRAM FOR MASONRY WALL EVALUATION
CI-5	SUPPLEMENTAL ECCS CALCULATIONS
CI-8	EVALUATION OF ENVIRONMENT NEAR DHR SUCTION VALVES
CI-9	ADEQUACY OF BWST TO PROVIDE BORIC ACID TO RCS
CI-10	MFW OVERFILL PROTECTION
CI-13	LOWEST SERVICE METAL TEMPERATURE
CI-28	APPLICABILITY OF POWER TRAIN CODE
CI-29	S/G WATER INVENTORY AS A FUNCTION OF POWER LEVEL
CI-30	LOSS OF FLOW TRANSIENTS

LICENSE CONDITIONS	DESCRIPTION OF ITEM
LC-1	GROUNDWATER MONITORING

JNL 4/19/83

SER ITEMS TARGETED FOR CLOSURE IN SSER #3
(TENTATIVELY SCHEDULED FOR JUNE 1983)

OUTSTANDING ITEMS	DESCRIPTION OF ITEMS
OI-1	EXPLOSIVE HAZARDS (NATURAL GAS ISSUE)
OI-3	TORNADO MISSILE PROTECTION
OI-6	ENVIRONMENTAL QUALIFICATION REVIEW (ONLY-NOT SEISMIC PROTION)
OI-7	NATURAL CIRCULATION COOLDOWN ANALYSIS
OI-8	HPI LINE MAKEUP NOZZLE CRACKING
OI-9	REACTOR VESSEL HEAD VENTS
OI-10	CONTAINMENT VALVE TESTING-SECONDARY VALVES
OI-11	CONTAINMENT VALVE TESTING-DHR/RBCWS VALVES
OI-13	AFW RING HEADER MODIFICATION
OI-16	SHUTDOWN DECAY HEAT REMOVAL (3RD AFW PUMP)
OI-17	PUMP AND VALVE OPERABILITY

JNL 4/19/83

SER ITEMS TARGETED FOR CLOSURE IN SSER #3
(TENTATIVELY SCHEDULED FOR JUNE 1983)
CONT'D

CONFIRMATORY ISSUES	DESCRIPTION OF ITEMS
CI-1	PMF EFFECTS ON COOLING POND DIKE
CI-4	INDEPENDENT ANALYSIS OF PIPING SYSTEMS
CI-7	NATURAL CIRCULATION TESTING
CI-11	CHARPY DATA FOR WF-70
CI-12	S/G COMPARTMENT FAN OPENING DATA
CI-14	CONTAINMENT PENETRATION CATEGORIZATION
CI-15	SETPOINT METHODOLOGY DOCUMENTATION
CI-17	NON-CLASS 1E INPUTS TO CLASS 1E CONTROL CIRCUITS
CI-18	ECCAS AUXILIARY RELAY TESTING
CI-19	AFW PUMP SUCTION TRANSFER LOGIC TESTING
CI-20	AFW SYSTEM AUTOMATIC LEVEL CONTROL
CI-22	COMMON CAUSE CONTROL SYSTEM FAILURES
CI-23	EVALUATE LOAD SEQUENCER

JNL 4/19/83

SER ITEMS TARGETED FOR CLOSURE IN SSER #3 (TENTATIVELY SCHEDULED FOR JUNE 1983) CONT'D

CONFIRMATORY ISSUES	DESCRIPTION OF ITEMS
CI-26	INTEGRATE ISEG WITH OTHER SAFETY GROUPS
CI-27	PHYSICAL SECURITY AND SAFEGUARDS PLANS
CI-31	RCP LOCKED ROTOR/SHEARED SHAFT W/TT AND LOOP

LICENSE CONDITIONS	DESCRIPTION OF ITEMS
LC-2	INADEQUATE CORE COOLING INSTRUMENTATION

JNL 4/19/83

SER ITEMS TARGETED FOR CLOSURE AFTER SSER #3 BUT BEFORE 12/31/83

OUTSTANDING ITEMS	DESCRIPTION OF ITEMS
OI-2	TURBINE MISSILE HAZARD EVALUATION
OI-4	RCS/CORE COMPONENT ANALYSIS
OI-5	NSSS PIPING SEISMIC ANALYSIS
OI-12	APPENDIX R FIRE PROTECTION
OI-14	EMERGENCY PREPAREDNESS (DOWNGRADE TO CONFIRMATORY)
OI-15	CONTROL ROOM DESIGN - DCRDR REPORT

JNL 4/19/83

SER ITEMS TARGETED FOR CLOSURE AFTER SSER #3 BUT BEFORE 12/31/82 (CONT'D)

3

CONFIRMATORY ISSUES	DESCRIPTION OF ITEMS
CI-2	LOCA AND JET IMPINGEMENT AND STRESS INTENSITIES
CI-6	CODE RELIEF REQUEST
CI-16	S/G LEVEL REFERENCE LEG HEATING
CI-24	SYSTEM VOLTAGE TEST
CI-25	TURBINE INSPECTION PROGRAM
CI-32	SELECTED SOILS SETTLEMENT ISSUES (SIESMIC MARGIN REVIEW, FOUNDATIONS, CONCRETE CONTAINMENT EVALUATION, OTHER SEISMIC CAT. 1 STRUCTURES)

LICENSE CONDITIONS	DESCRIPTION OF ITEMS
LC-7	CONTROL OF HEAVY LOADS
LC-8	SECONDARY WATER CHEMISTRY MONITORING AND CONTROL PROGRAM

JNL 4/19/83

SER ITEMS TARGETED FOR CLOSURE IN 1984

OUTSTANDING ITEMS	DESCRIPTION OF ITEMS
OI-6	SEISMIC AND ENVIRONMENTAL QUALIFICATION OF EQUIPMENT (SEISMIC PORTION)
OI-14	EMERGENCY PREPAREDNESS

CONFIRMATORY ISSUES	DESCRIPTION OF ITEMS
CI-21	REMOTE SHUTDOWN OPERATION TESTING

JNL 4/19/83

SER ITEMS TARGETED FOR CLOSURE IN 1984 (CONT'D)

LICENSING CONDITIONS	DESCRIPTION OF ITEMS
LC-3	RELIEF/SAFETY/VALVE TESTING ~~(PFL)~~
LC-4	INSERVICE INSPECTION PROGRAM (PFL)
LC-~~6~~ 5	AFW LEVEL CONTROL TEST (PFL)
LC-6	POST ACCIDENT SAMPLING
LC-9	B&W ON-SHIFT - STARTUP EXPERIENCE
LC-10	EMERGENCY PROCEDURES - ATOG
LC-11	SMALL BREAK LOCA MODEL (PFL)

PFL - POST FUEL LOAD

JNL 4/19/83

MAJOR NRC SITE VISITS

EVENT	TENTATIVE TIMEFRAME
CONTROL ROOM REVIEW VISIT	MAY 1983
INSTRUMENTATION & CONTROL VISIT	4TH QUARTER 1983
ELECTRICAL VISIT	4TH QUARTER 1983
FIRE PROTECTION VISIT	4TH QUARTER 1983
SEISMIC QUALIFICATION REVIEW TEAM VISIT	4TH QUARTER 1983
EMERGENCY PLANNING APPRAISAL	2ND QUARTER 1984
SECURITY VISIT	3RD QUARTER 1984
EMERGENCY PLANNING EXERCISE	3RD QUARTER 1984

JNL 4/19/83

June 1, 1983

MEETING SUMMARY DISTRIBUTION

Docket No(s): 50-329, 50-330
NRC/PDR
Local PDR
NSIC
PRC System
LB #4 r/f
Attorney, OELD
E. Adensam
Project Manager D. Hood
Licensing Assistant M. Duncan

NRC Participants:

D. Hood
R. Gardner
W. Lovelace
J. Harrison
R. Gardner

bcc: Applicant & Service List