MIDLAND PLANT UNITS 1&2
NRC CASELOAD FORECAST PANEL

Tuesday, August 25, 1981
8:30 AM
Plant Site - Orientation Room

AGENDA

1.	Opening Remarks	G. S. Keeley
2.	Discussion of Tour	D. B. Miller
3.	Plant Tour No. 1	
	Containment Building No. 1	J. T. Walton
	Containment Building No. 2	J. T. Walton
	Turbine Buildings No. 1 & 2	J. S. Kreple
	Process Steam Evaporator Building	J. S. Kreple
	Diesel Generator Building	J. S. Kreple
4.	Lunch	
5.	Plant Tour No. 2	
	Yard Area - North	G. W. Rowe
	Auxiliary Building	T. A. Spelman/G. W. Rowe
	Service & Circulating Water Bldg.	T. A. Spelman
	Yard Area - South	G. W. Rowe

RMW/pp
8-24-81

MIDLAND PLANT UNITS 1 AND 2
NRC CASE LOAD FORECAST PANEL

Wednesday - August 26, 1981
8:30 AM
Midland Service Center

AGENDA

	Topic	Briefer	Time	Reference*
1.	Opening Remarks	D Hood	8:30 AM	-
2.	Introduction and Project Organization	G S Keeley	8:35 AM	13
3.	Construction Progress Overview	D B Miller	9:00 AM	1
4.	Engineering Status and Forecast Detailed Review	K D Bailey	9:15 AM	3
5.	Procurement Status Detailed Review	R M Collins	9:45 AM	4
6.	Construction Manpower Review and Construction Mgmt Org	D B Miller	10:00 AM	5, 11
7.	Piping and Pipe Hangers Design Status and Forecast Review	P Corcoran	10:30 AM	6
8.	Bulk Commodities Installation and Forecast Status Review	R M Wheeler	11:00 AM	7
9.	Lunch		12:00 Noon	
10.	Schedule Critical Path Review	A R Mollenkopf	1:00 PM	2, 10
11.	Test Program Status and Forecast Review	R E McCue	1:30 PM	8
12.	Plant Licensing Schedule Status and Forecast Review	T J Sullivan	2:00 PM	9
13.	Adjourn		2:30 PM	

*Reference to Detailed NRC Agenda Item (see D S Hood Memorandum dated 8/4/81)

8/25/81

SCHEDULED FUEL LOAD

UNIT 2 - 7/83

UNIT 1 - 12/83

ORGANIZATIONAL CHANGES

PROJECT MANAGEMENT

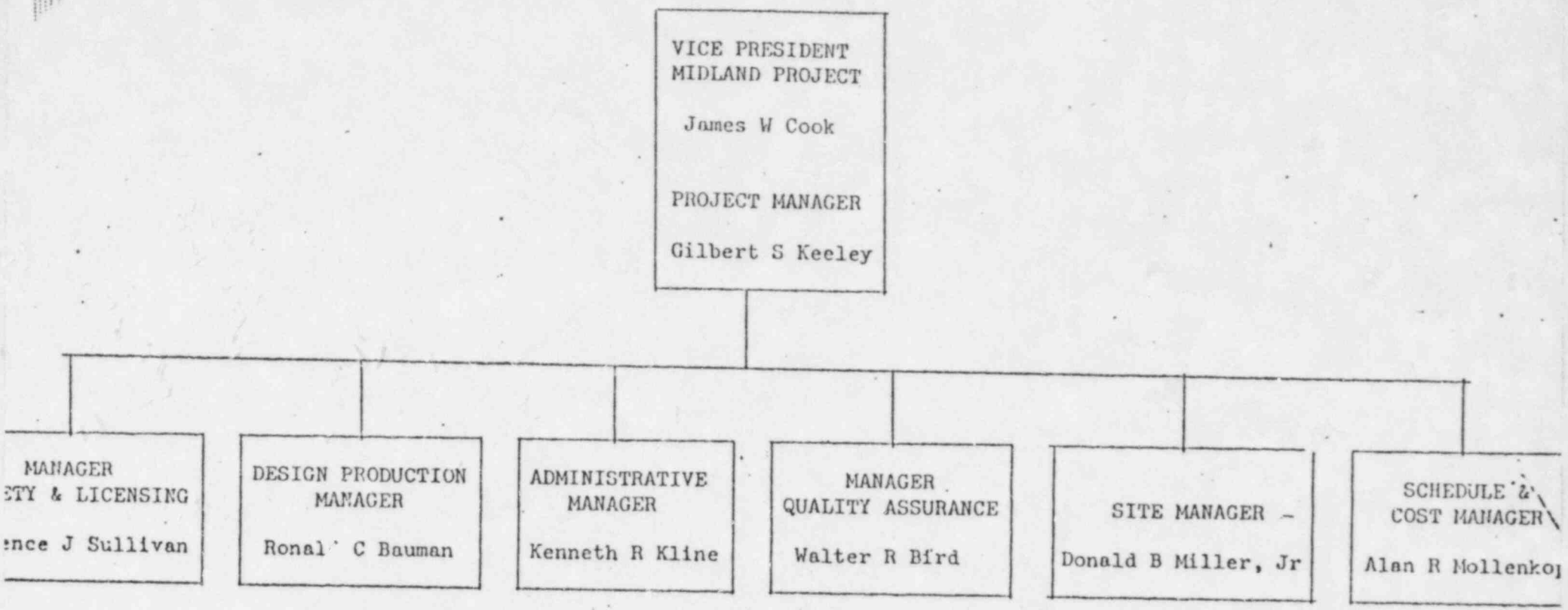
INTEGRATED QA

HVAC QC ON SITE

TMI 2 CHANGES

FORECAST 7

HEARINGS ON SOILS


VICE PRESIDENT
MIDLAND PROJECT
James W Cook
PROJECT MANAGER
Gilbert S Keeley
MANAGER
ETY & LICENSING
ence J Sullivan
DESIGN PRODUCTION
MANAGER
Ronal C Bauman
ADMINISTRATIVE
MANAGER
Kenneth R Kline
MANAGER
QUALITY ASSURANCE
Walter R Bird
SITE MANAGER
Donald B Miller, Jr
SCHEDULE &
COST MANAGER
Alan R Mollenko

CONSTRUCTION PROGRESS OVERVIEW

1. Current Status of Bulk Quantities

	July 1980 % Complete	August 1981 % Complete
Large Pipe	91	94
Large Pipe Hangers	74	82
Small Pipe	58	78
Small Pipe Hangers	11	43
Cable Tray	89	96
Conduit	51	76
Wire & Cable	28	58
Connections	20	32

2. Major milestones completed since Caseload Forecast Panel visit of July 1980.

- Completed post tensioning at Containment Building No. 1.
- Completed erection of the Service Water Cooling Towers.
- Completed erection of the Borated Water Storage Tanks.
- Completed construction of the Secondary Security Building.
- Unit No. 1 Main Transformer delivered to the site and installed.
- Installed reactor vessel internals in Unit #2.
- Complete the installation of over 6 million feet of wire and cable (58% of the total quantity)
- Completed the preservice inspection work on both reactor vessels, and the steam generators.
- Completed construction work on both Turbine - Generators.
- Started a second shift of construction work in the 4th Quarter, 1980. Manning levels have been 20-25% of first shift levels.
- Started construction work for the Technical Support Center.
- Started exterior construction work for the plant Security Building.
- Started modification work in the reactor vessel holddown and support area.

- Started installation of the fuel transfer and handling systems in the Auxiliary Building and both Containment Buildings.
- Started construction work for three high pressure, gas fired package boilers to be used for early testing of process steam equipment.
- Unit No. 2 NSSS is 96% complete.
- Unit No. 1 NSSS is 92% complete.
- Approximately 20% of the plant systems have been turned over to CPCo for testing. Key systems include: domestic water, demineralized water, fire protection, and turbine lube oil. Approximately 40% of the plant electrical systems are energized.

3. Current Problems

- Resolution and completion of remedial soils work.
- Resolution of coatings problems.
- Resolution of long lead time licensing issues (e.g. fire protection,
- Completion of small pipe and hanger design and installation.

BHP
8/20/81

ENGINEERING PERCENT COMPLETE
JULY, 1981

- DESIGN 79%
- ALL ENGINEERING 67% 64%

G-1577-19
(G-1512-21)

PERCENT COMPLETE BASIS

- ENGINEERING PERCENT COMPLETE
  - Calculation Based on ALL Engineering Dept Manhours (To Date/Total) Including Contingency

- DESIGN PERCENT COMPLETE
  - Calculation Based on DESIGN Manhours (To Date/Total) Excluding Contingency
  - Design Is Activity in Direct Support of Development of Drawings and Specs (excluding support activities, e.g., licensing, administration, QE, studies, etc)

DISCIPLINE DESIGN PERCENT COMPLETE

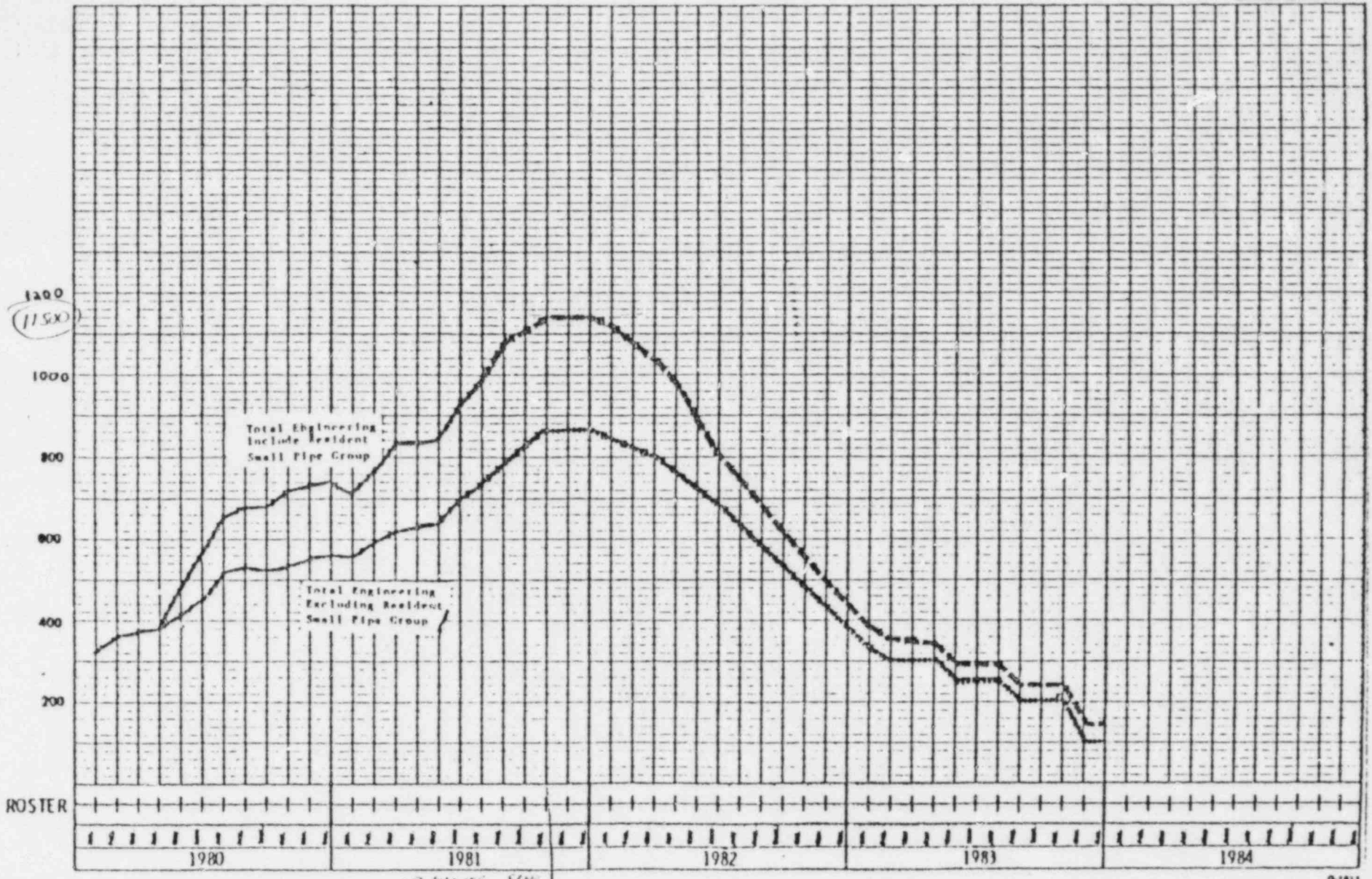
Discipline	Design Percent Complete
ARCHITECTURAL	98
CIVIL/STRUCTURAL	83
PLANT DESIGN	86
ELECTRICAL	80
CONTROL SYSTEMS	85
MECHANICAL	96
NUCLEAR SYSTEMS	54
SMALL PIPE	68
M&QS	89
GEOTECH	89
CHANGES IN PROCESS	
TOTAL AS OF 6/19/81	**77**
EST TOTAL AS OF 7/17/81	**79**

MIDLAND UNITS 1 AND 2
DSAR 7/6/81

G-1577-131

MIDLAND UNITS 1 & 2 - JOB 7220
ENGINEERING MANPOWER CURVE
TOTAL PROJECT

AS OF 7-3-81



MANHOUR CHANGES SINCE ADJ
F/C 6

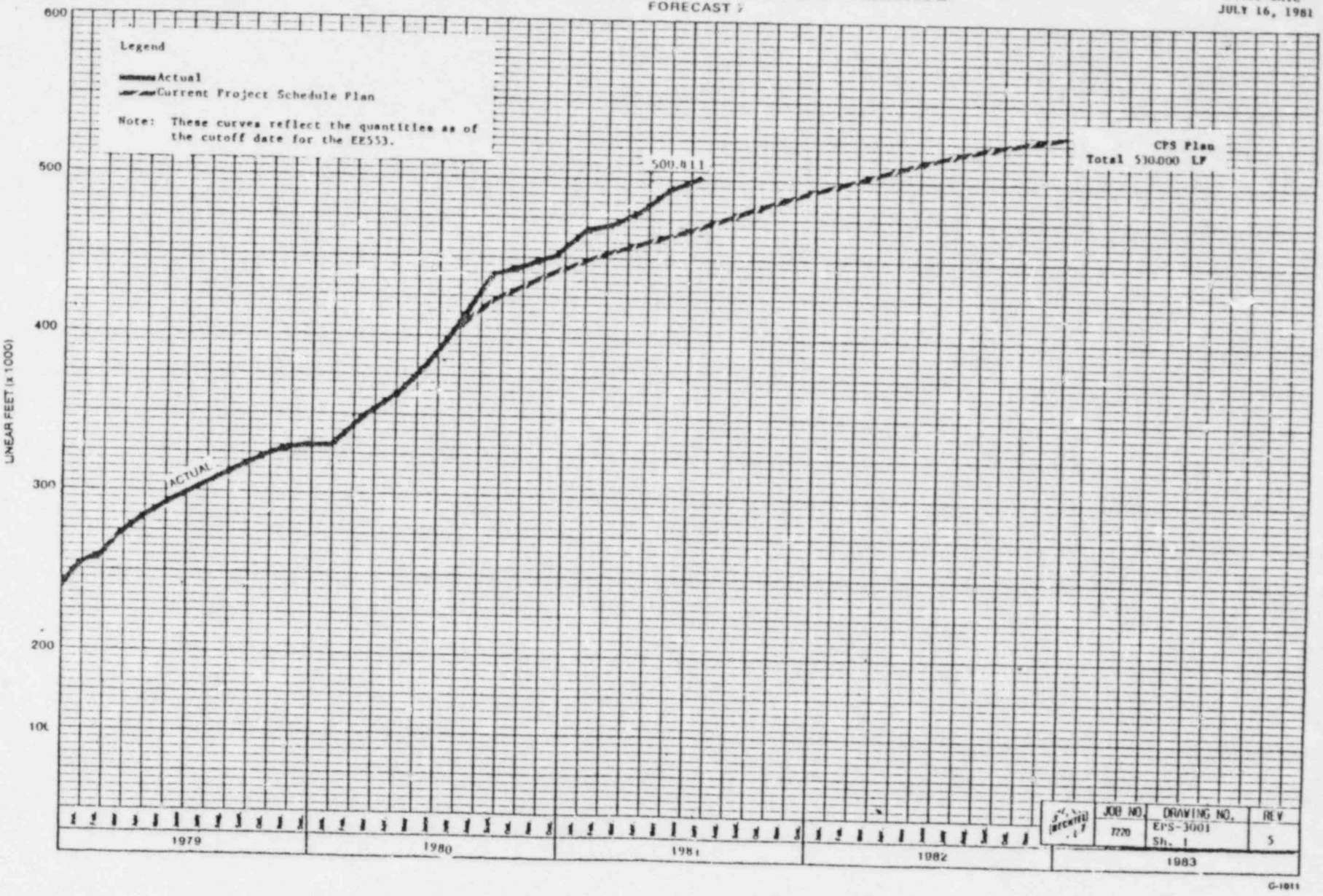
	1,000 Manhours
• SEISMIC STUDIES/REANALYSIS	275
• HELBA	200
• ELECTRICAL WORK PROGRAM	115
• RESIDENT ENGINEERING SUPPORT TO CONSTRUCTION	210
• HVAC TASK FORCE	25
• LARGE PIPE SUPPORT TSA	40
• CLASS I STRESS GROUP	90
• SOILS/GEOTECH GROUPS	100
• LICENSING SUPPORT	55
• STARTUP SUPPORT	40
• FIRE PROTECTION	25
• ENVIRONMENTAL QUALIFICATION	25
• INSTRUMENT SUPPORT DESIGN	25
• QUALITY ENGINEERING REQUIREMENTS	40
• OTHER MISC CHANGES (approx 400 changes)	135
• **TOTAL CHANGE**	**1,400**

MIDLAND UNITS 1 & 2 BECHTEL JOB NO. 7220
ENGINEERING PRODUCTION SCHEDULE

TOTAL EXPOSED METALLIC CONDUIT RELEASE

FORECAST

EE553 RUN 99
CUTOFF DATE
JULY 16, 1981



G-1011

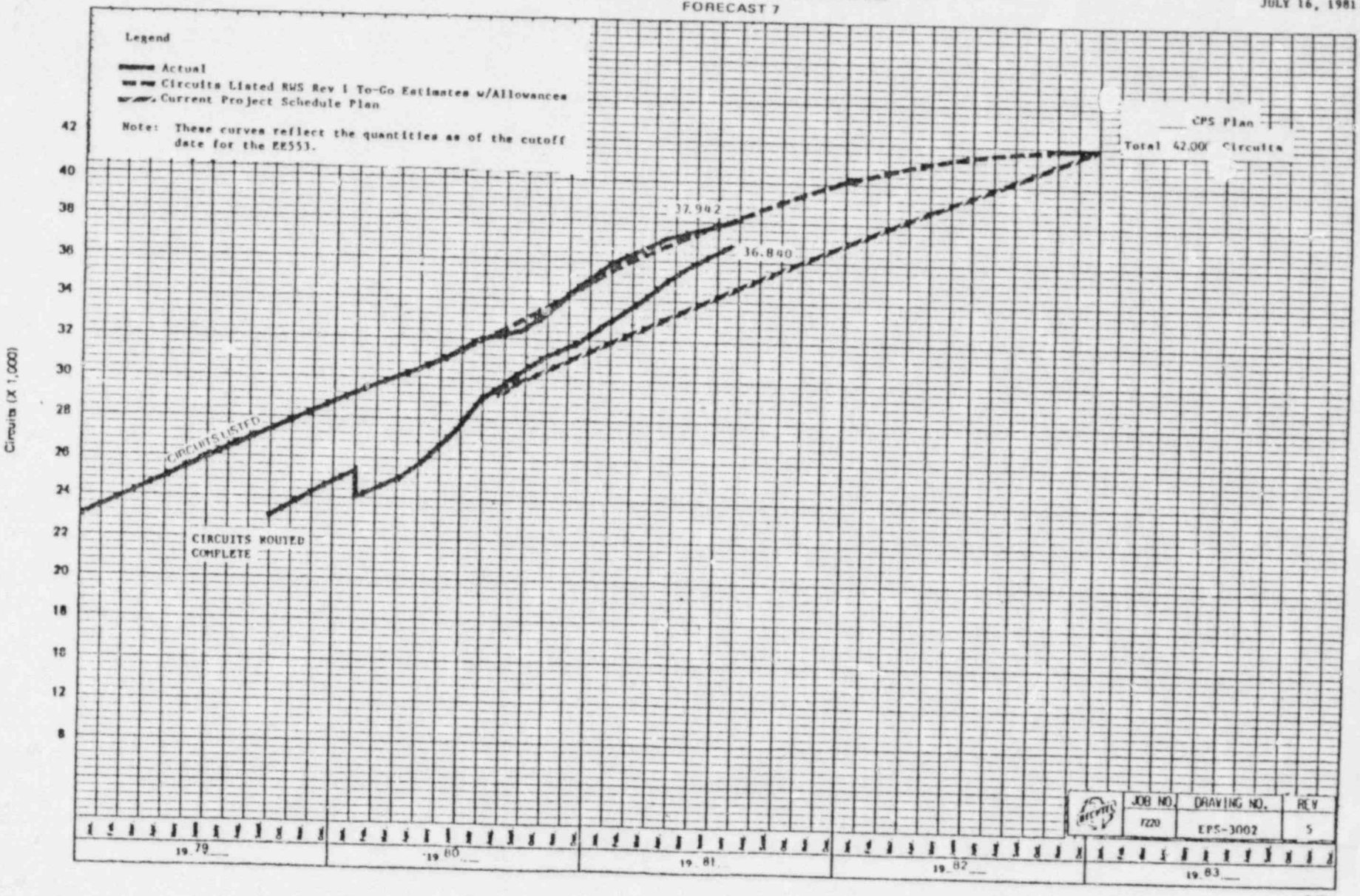
MIDLAND UNITS 1 & 2 JOB NO. 7220

ENGINEERING PRODUCTION SCHEDULE

CIRCUIT RELEASE SCHEDULE

FORECAST 7

EE553 RUN 99
CUTOFF DATE
JULY 16, 1981



G-1011

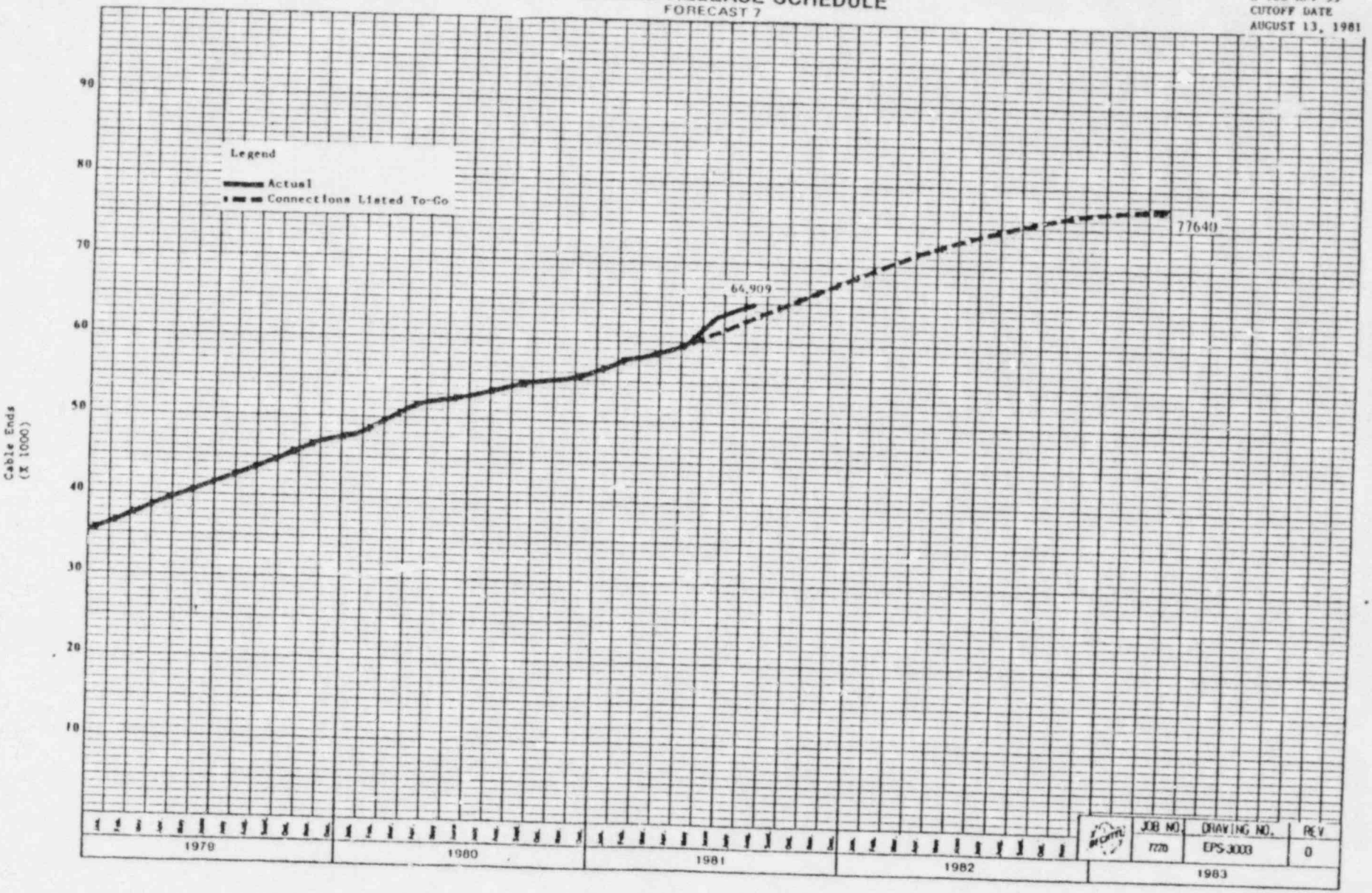
MIDLAND UNITS 1 AND 2 JOB 7220

ENGINEERING PRODUCTION SCHEUDULE

CABLE END RELEASE SCHEDULE

FORECAST 7

E-900 REV 53
CUTOFF DATE
AUGUST 13, 1981



JOB NO.	DRAWING NO.	REV
7220	EPS-3003	0

G-1011

OVERALL PROCUREMENT STATUS

- DELIVERY TO JOBSITE
  - All Major Pipe Spools
  - Approx 95% of Valves; Balance Due by 3/82
  - Approx 90% of Instrumentation; Balance Due by 12/81 ~ 8000 Total
  - Approx 90% of Hangers; Balance Either in Fabrication or Due by 12/81

G-1577-121

POWER AND CONTROL WIRE AND CABLE

P.O.	Description	Qty on Order (ft)	Qty Dlvrd to Date (ft)	% Compl
E-21	5,000 AND 8,000 POWER CABLE	178,355	125,355	70
E-22	600 V POWER CABLE	667,000	652,137	98
E-23	INSTRUMENT AND SPECIALTY CABLE	1,650,550	1,650,643	100
E-26	600 V CONTROL CABLE	5,920,000	5,666,946	96
E-56	COAXIAL, TRIAXIAL, AND TWINAXIAL CABLES	38,000	39,984	100
E-59	600 V HIGH-TEMPERATURE POWER CABLE	16,000	16,820	100
E-60	INSTRUMENT AND SPECIAL PURPOSE CABLE	3,565,000	3,503,409	98
	TOTAL	**12,034,905**	**11,655,294**	**97**

Balance of wire and cable to be delivered by 2/82

G-1577-122

PROCUREMENT TEAM IN SUPPORT OF SYSTEM TURNOVER

- BECHTEL PROJECT PROCUREMENT TEAM REORGANIZED TO SUPPORT SYSTEM TURNOVER
- IDENTIFY LONG LEAD ITEMS AND CRITICAL PURCHASES
- ATTEND WEEKLY CONSTRUCTION SYSTEM TURNOVER MEETINGS TO ASCERTAIN PRIORITY PROCUREMENTS
- ISSUE BI-WEEKLY REPORT TO MANAGEMENT ON CRITICAL PURCHASES
- INITIATE APPROPRIATE ACTIONS TO ATTAIN MATERIALS AND SERVICES TO SUPPORT SYSTEM TURNOVER

PROCUREMENT
INCOMPLETE CRITICAL PURCHASES

Number	Description	Status
E-34	LOCAL CONTROL STATIONS (Gould)	DELIVERY 12/81
J-202	TRANSFER SWITCH PANEL FIRE PROTECTION (Harlo)	DELIVERY 4/82
J-204	INDICATORS (Foxboro)	DELIVERY 11/81
J-207	ECCAS CABINETS (Vitro)	DELIVERY 11/81
J-232A	ORIFICE PLATES (Vickery Simms)	DELIVERY 9/81
J-245	TRANSMITTERS (Rosemont) (qualification program under way to IEEE Std 323-1974)	DELIVERY 1/82 (unqualified) DELIVERY 5/82 (qualified)

G-1577-119

PROCUREMENT
INCOMPLETE CRITICAL PURCHASES (cont'd)

Number	Description	Status
J-275B	ESIS ISOLATION CABINETS (Vitro)	UNIT 2 DELIVERY 4/82 (unqualified)
		UNIT 1 DELIVERY 7/82 (unqualified)
	(qualification program to be complete 11/82)	QUALIFICATION COMPLETE 11/82
J-275B	9 kV ISOLATORS (Vitro)	DELIVERY 3/1/82
J-280D	PLANT COMPUTER (MODCOMP) (replacement)	HARDWARE DELIVERY 11/81
		SOFTWARE COMPLETE 1/82
M-127B	TWO-INCH GLOBE VALVES (Henry Vogt)	DELIVERY 4/82
M-132	MOTOR OPERATORS (Henry Pratt Valves)	DELIVERY 12/81

G-1577-124

CRITICAL SUBCONTRACTS TO GO

Number	Description	Forecast Award
A-60	PENETRATION SEALING	11/81
C-118	WELLS FOR PERMANENT DEWATERING	10/81
C-194	UNDERPINNING FOR SERVICE WATER PUMPHOUSE	11/81
C-195	UNDERPINNING AUXILIARY BUILDING (talking with prospective bidders)	12/81

PROCUREMENT DIFFICULTIES IN TODAY'S MARKET

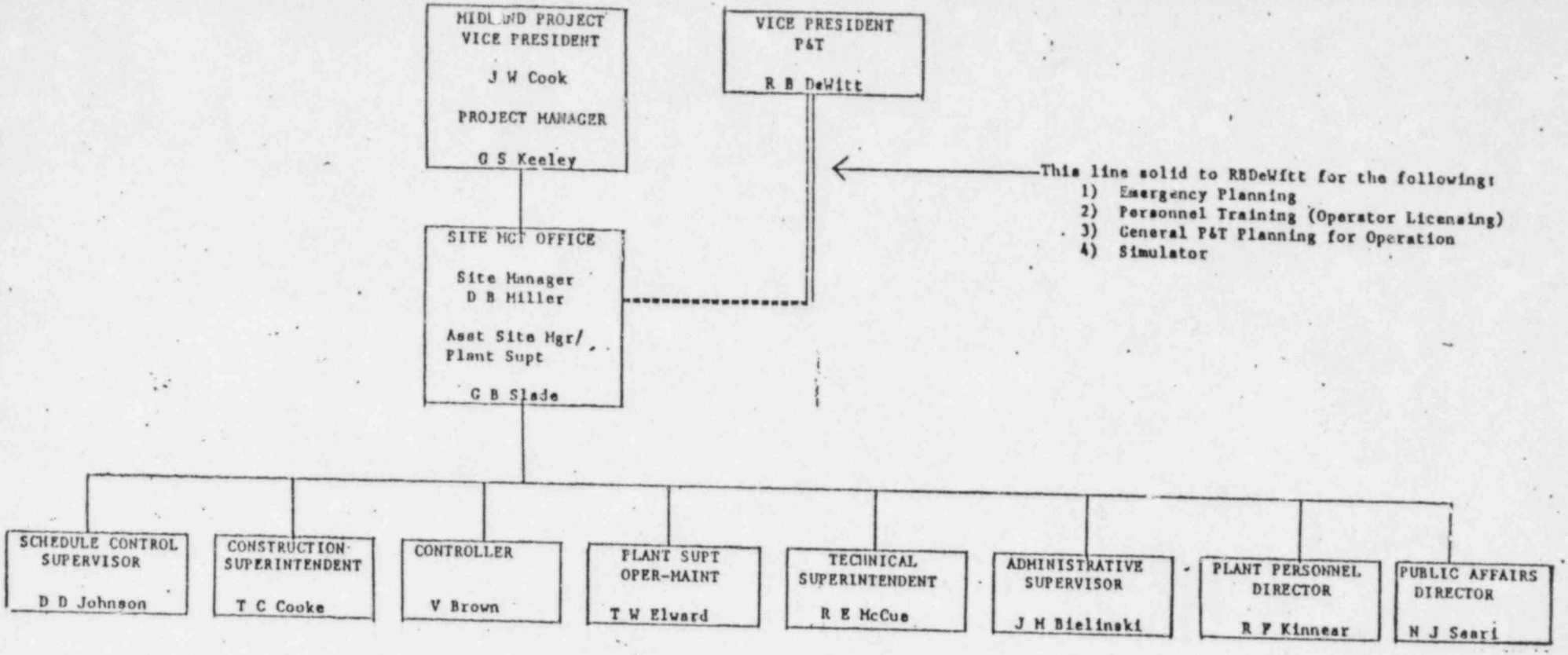
Difficulty	Actions Taken
• BUSY NUCLEAR INDUSTRY VENDORS	• GOOD RAPPORT MAINTAINED WITH MAJOR SUPPLIERS
• LONG LEAD TIMES (sales backlogs)	• PURCHASE ACCELERATED SCHEDULES • CLOSER COORDINATION WITH SUPPLIERS • ONBOARD DRAWING APPROVALS AT VENDOR'S SHOP • HEAVY EXPEDITING

PROCUREMENT DIFFICULTIES IN TODAY'S MARKET (cont'd)

Difficulty	Actions Taken

• CLASS IE QUALIFICATIONS TESTING (long lead time)
  • IEEE Std 323-1974
  • IEEE Std 344-1975
  • NUREG-0588
	• MEET WITH VENDORS AND TESTING FACILITIES DIRECTLY
	• ARRANGE FOR QUALIFICATION TESTING DIRECTLY OR COORDINATE WITH OTHER UTILITIES
	• INSTALL EQUIPMENT INTO PLANT PENDING COMPLETION OF QUALIFICATION TESTING

G-1577-123



Miller/pp
6-80

CONSTRUCTION MANPOWER REVIEW

1. Work Force

	June 1980	July, 1981	Expected 1981-1983 Peak
Pipefitters (Mechanics and Welders)	542	831	880
Electricians	292	594	700
Total Manual Work Force (All Crafts)	1,218	2,068	2,200

a. The expected 1981-83 peak for pipefitters is very near the current employment. Through the continued use of Canadian pipewelders, it is not expected that meeting the peak will be a problem.

b. The expected 1981-83 peak for electricians is below the earlier 1981 peak of 712, therefore, no problem is expected.

2. Labor contract negotiations for all crafts will occur in the spring of 1982.

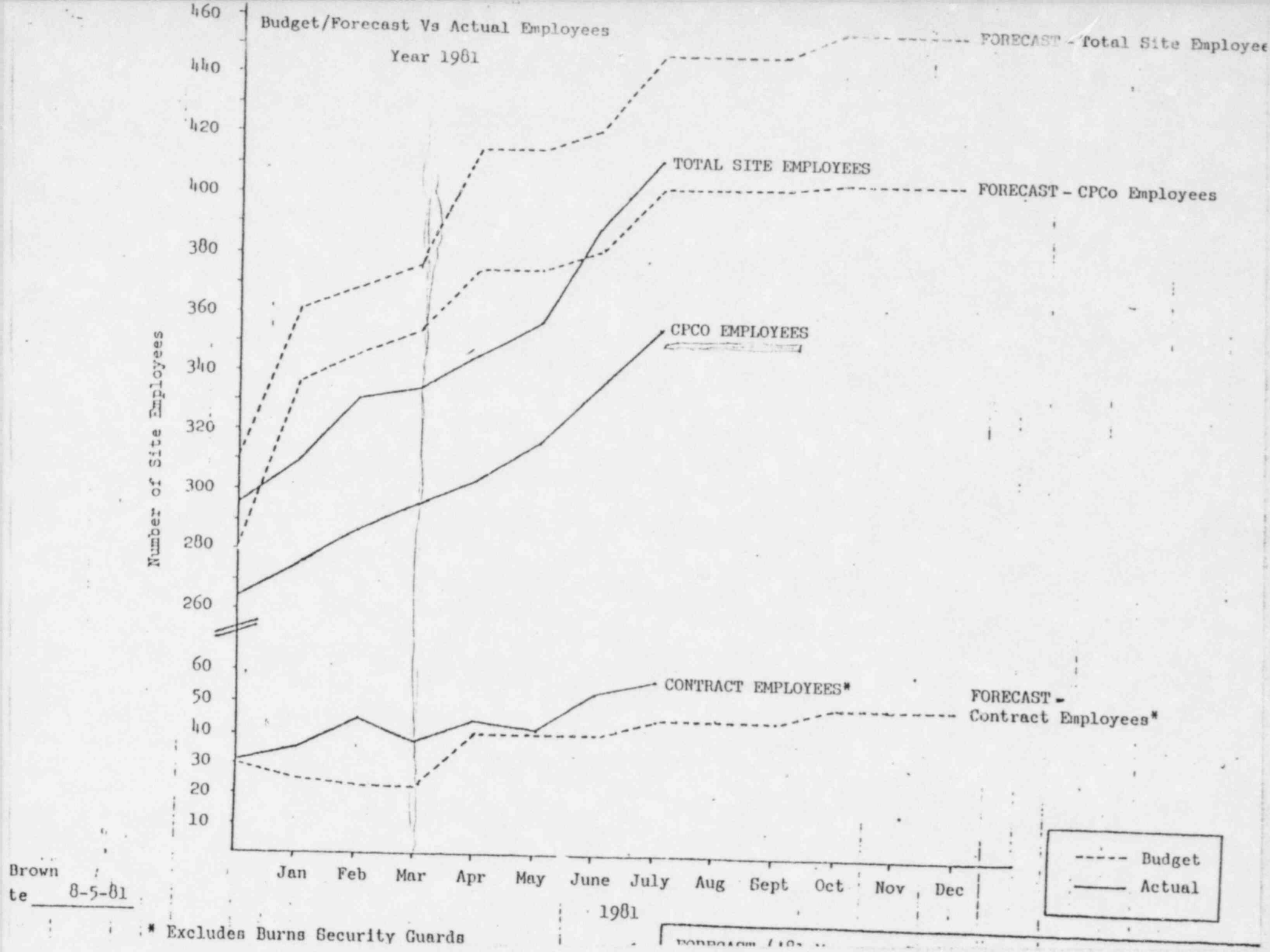
3. Productivity

Construction productivity is maintained by a joint Bechtel/CPCo production engineering team that was formed in late 1980. Reports and recommendations for improvement are made to management. Productivity is also maintained by the use of unit rate comparisons. Midland Project Construction productivity is comparable with the national average for nuclear construction.

B.P
8/20/81

MANPOWER STATUS

BECHTEL FIELD MANPOWER LABOR	2,068
BECHTEL FIELD NON-MANUAL	635
BECHTEL RESIDENT ENGINEERING AND DESIGN	371
SUBCONTRACTORS - MANUAL AND NON-MANUAL	609
CONSUMERS POWER COMPANY	434
TOTAL ON SITE	4,117



Brown

te 8-5-81

* Excludes Burns Security Guards

CONSUMERS POWER COMPANY
MIDLAND PLANT UNITS 1 & 2 JOB7220

DESIGN STATUS

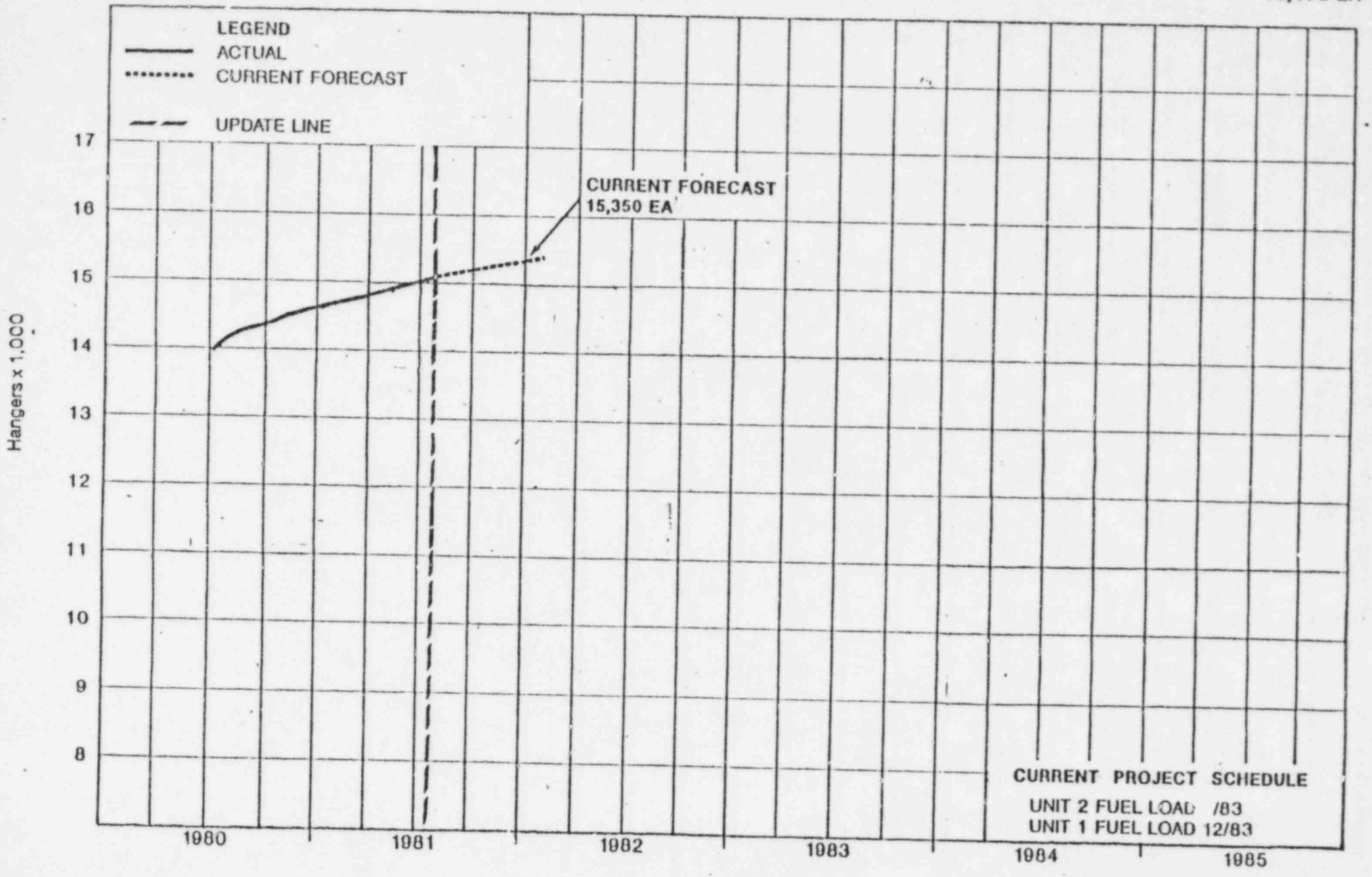
	CURRENT FORECAST	DESIGNED TO DATE	% COMPLETE
LARGE PIPE	282,000 FT.	279,000 FT.	'99
LARGE PIPE HANGERS	15,350	15,178	99
SMALL PIPE	307,550 FT.	284,144 FT.	92
SMALL PIPE HANGERS	17,740	13,658	77

LARGE PIPE HANGERS - TOTAL PLANT

DESIGN CURVE

JULY 1981

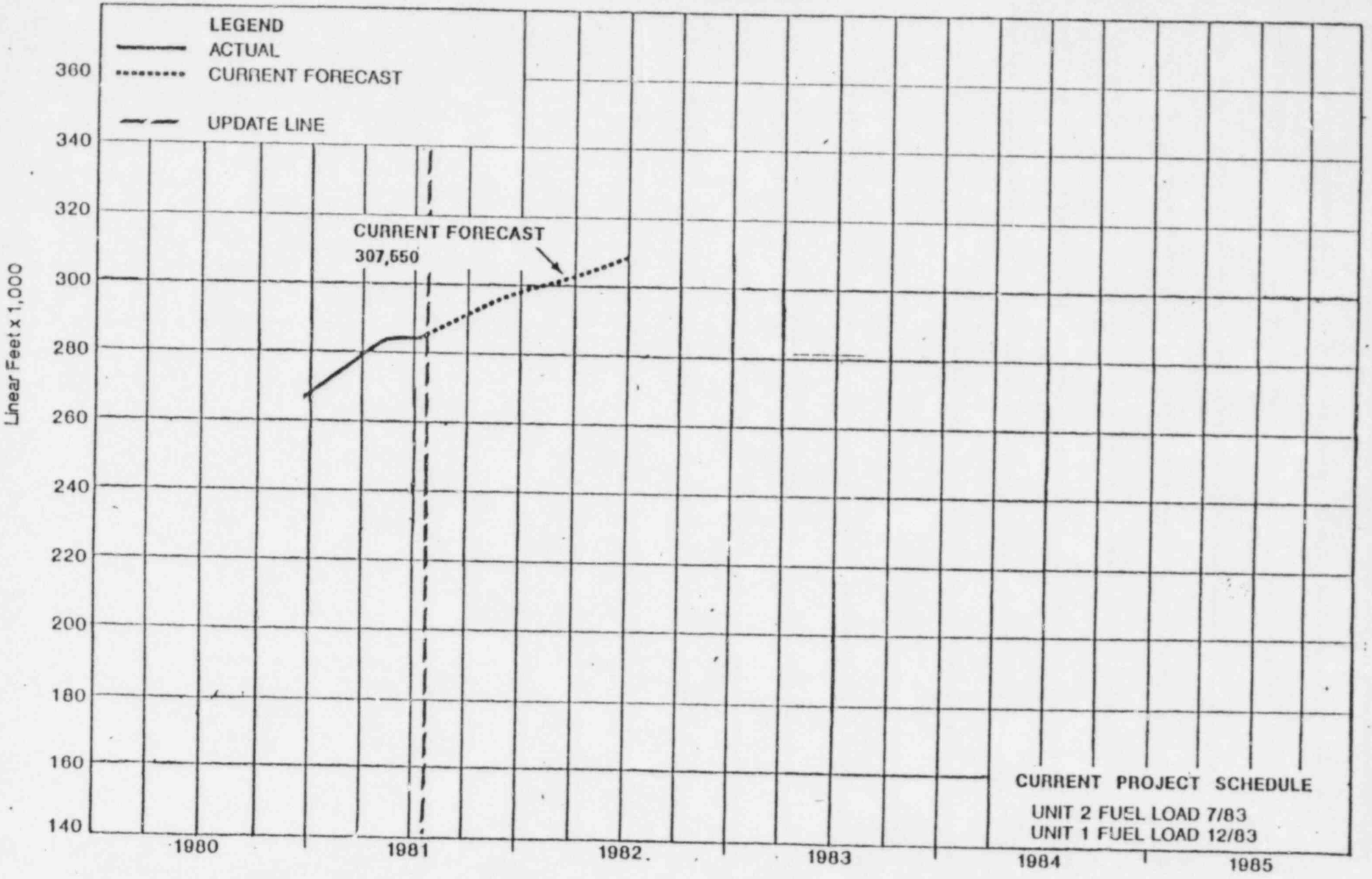
ACTUAL AS OF: 7/26/81
DESIGN 15,178 EA



PROCESS AND NONPROCESS
DESIGN CURVE

JULY 1981

ACTUAL AS OF: 7/26/81
DESIGN 284,144 LF



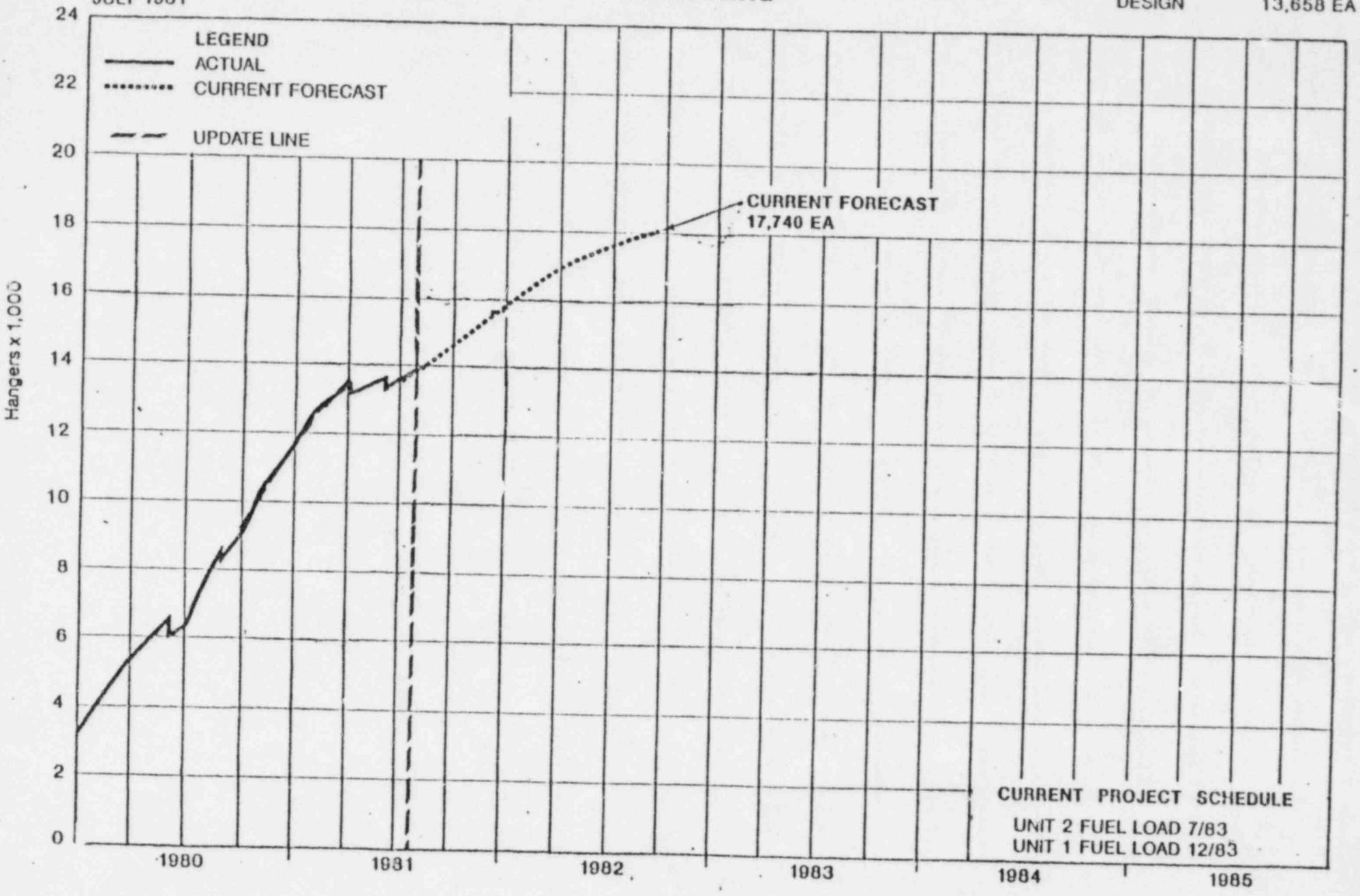
CONSUMERS POWER COMPANY
MIDLAND UNITS 1 AND 2 - JOB 7220

SMALL PIPE HANGERS (Resident Engineered) - TOTAL PLANT

JULY 1981

DESIGN CURVE

ACTUAL AS OF: 7/26/81
DESIGN 13,658 EA

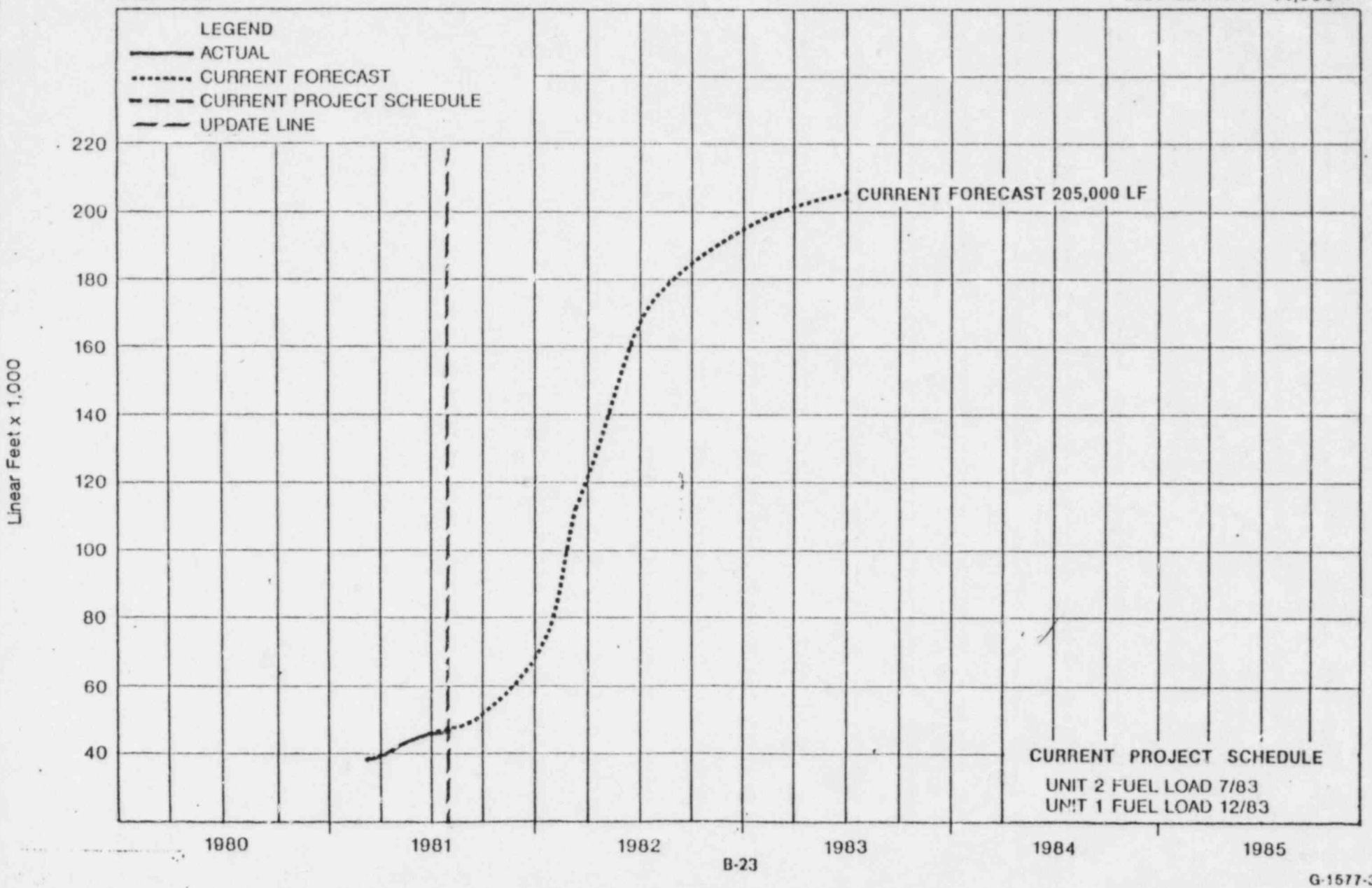


CONSUMERS POWER COMPANY
MIDLAND UNITS 1 AND 2 - JOB 7220
INSTALLATION CURVE

INSTRUMENT TUBING - TOTAL PLANT

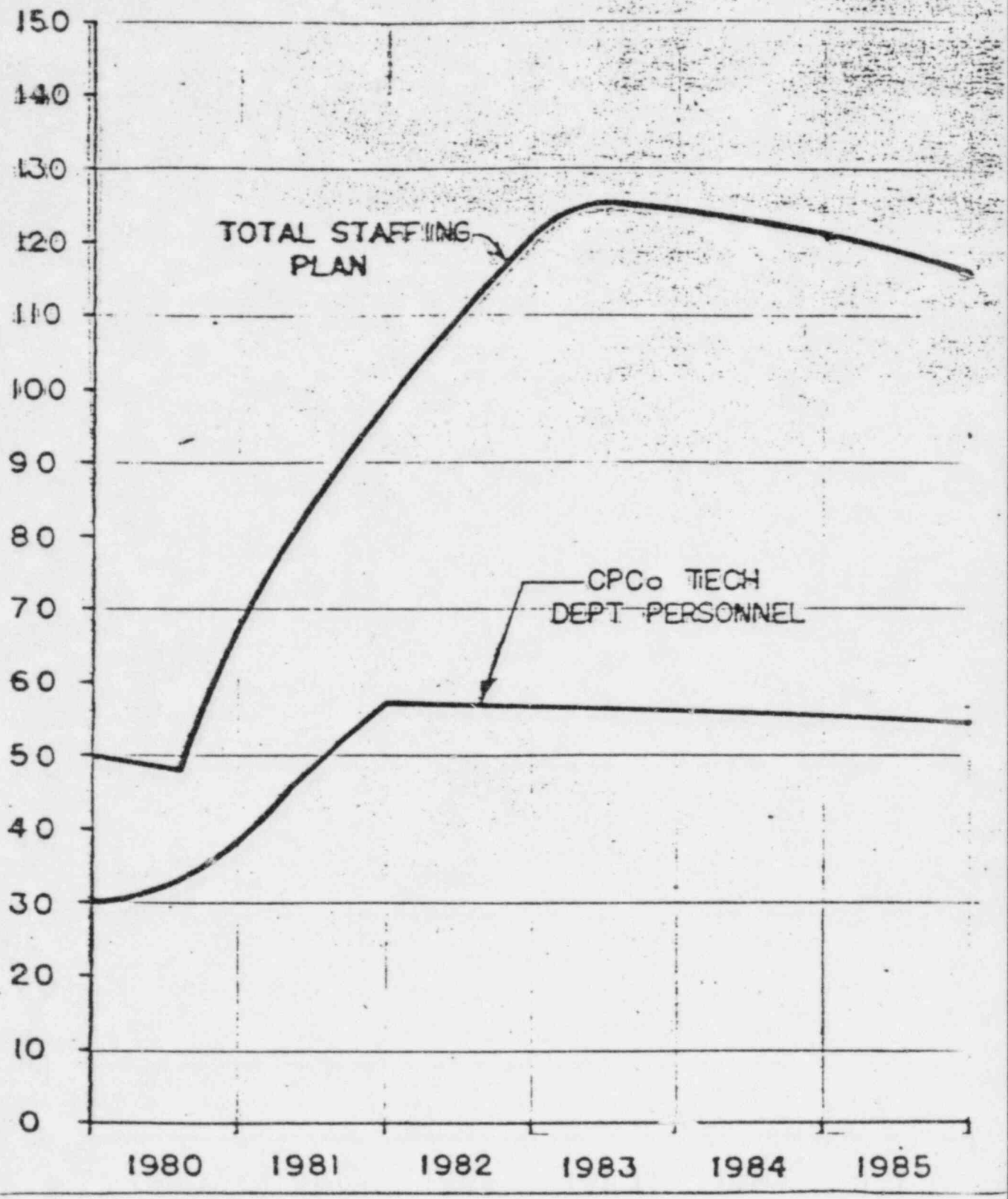
JULY 1981

ACTUAL AS OF: 7/26/81
INSTALLATION 44,690 LF



G-1577-33

TECH DEPT STAFFING PLAN
1980-1985



00-0015-1006-4

Visual Products Division
St. Paul, MN 55101 Made in

QUANTITY CHANGES

(INSTALLATION)

	6/22/80	(Forecast #7) 7/26/81	△
Concrete	199,000	203,000	4,000
Large Pipe	277,000	282,000	5,000
Large Pipe Hangers	15,670	15,350	(320)
Small Pipe	310,000	307,550	(2,450)
Small Pipe Hangers	16,500	17,740	1,240
Instrument Tubing	230,000	205,000	(25,000)
Exp. Metallic Conduit	569,000	554,000	(15,000)
Wire and Cable	9,600,000	10,300,000	700,000
Connections	385,000	385,000	--

CONSUMERS POWER COMPANY - MIDLAND UNITS 1 & 2
BULK QUANTITY STATUS
(AS OF 7-26-81)

	UNIT	TOTAL QUANTITY			INSTALLED TO-DATE			% COMPLETE		
		1	2	TOTAL	1	2	TOTAL	1	2	TO
CIVIL										
Concrete 39.6	CY	49,174	153,866	203,040	49,099	152,134	201,233	100	99	9
PIPING										
Large Pipe 16.9	LF	80,070	201,930	282,000	77,329	189,005	266,334	97	94	9
Small Pipe 9.4	LF	105,140	202,410	307,550	91,400	147,400	238,800	87	73	7
Large Pipe Hanger	EA	4,570	10,780	15,350	4,016	8,567	12,583	88	79	8
Small Pipe Hanger	EA	5,681	12,059	17,740	3,578	4,085	7,663	63	34	4
ELECTRICAL										
Cable Tray 4.8	LF	N/A	N/A	85,500	N/A	N/A	81,821	N/A	N/A	9
Exp Metallic Conduit	LF	128,300	425,700	554,000	113,384	309,919	423,303	88	73	? 7
Wire and Cable 5.8	LF	N/A	N/A	10,300,000	N/A	N/A	~ 350,000 6,022,764	N/A	N/A	? 5
Connections 1.6	EA	N/A	N/A	385,000	N/A	N/A	122,776	N/A	N/A	? 3
INSTRUMENTATION										
Tubing 7.0	LF	N/A	N/A	205,000	N/A	N/A	44,690	N/A	N/A	2
INSTRUMENTS				7996.			2,202			28

86%

UNIT 1 INCLUDES TURBINE 1, CONTAINMENT 1 AND EVAPORATOR BUILDING FOR IDENTIFICATION OF QUANTIT

CONSUMERS POWER COMPANY

MIDLAND PLANT UNITS 1 & 2 JOB 7220

COMPARISON: MIDLAND UNITS 1 & 2 WITH WATERFORD UNIT 3

COMMODITY	MIDLAND 1 & 2 AT 24 MONTHS % COMPLETE	WATERFORD 3 AT 21 MONTHS % COMPLETE
LARGE PIPE	94	95
SMALL PIPE	78	82
LARGE PIPE HANGERS	82	84
SMALL PIPE HANGERS	43	N/A WITH PIPE
CABLE TRAY	96	100
CONDUIT	76	90
POWER & CONTROL	58	57
TERMINATIONS	32	33
INSTRUMENT TUBING	22	53

CONSUMERS POWER COMPANY

Midland Plant Unit I and Unit II

1981 CONSTRUCTION PROGRESS

INSTALLATION	CURRENT ESTIMATE	% INSTALLED 6/22/80	% INSTALLE 7/26/81
LG. BORE PIPE	282,000	91	94
SM. BORE PIPE	307,550	58	78
LG. PIPE HGRS.	15,350	74	82
SM. PIPE HGRS.	17,740	11	43
CABLE TRAY	85,500	89	96
EXP. METALLIC CONDUIT	554,807	51	76
WIRE/CABLE	10,300,000	28	58
CONNECTIONS	385,000	20	32

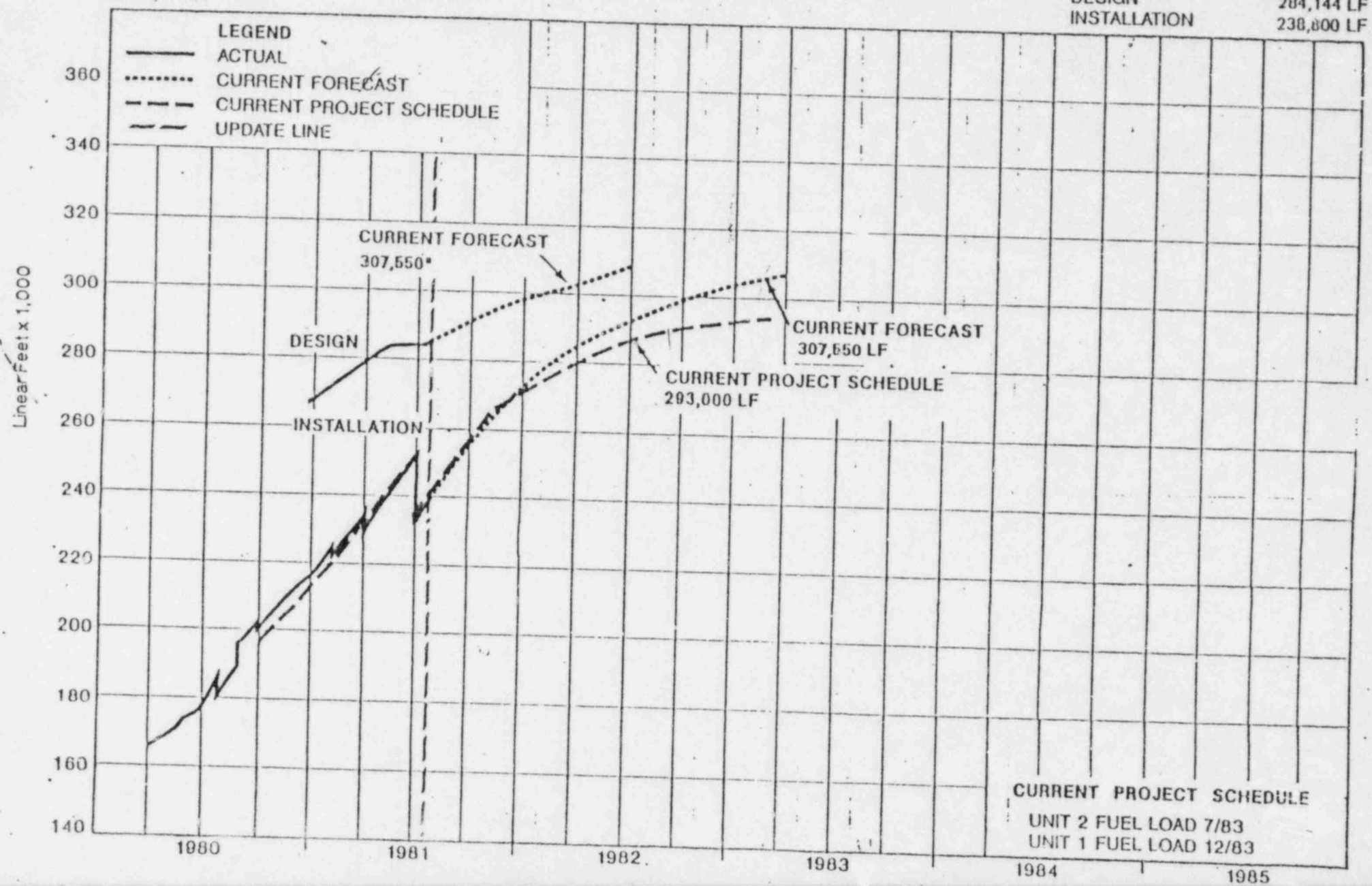
G/M-0266-04

CONSUMERS POWER COMPANY
MIDLAND UNITS 1 AND 2 - JOB 7220
DESIGN AND INSTALLATION CURVES

SMALL PIPE TOTAL PLANT
PROCESS AND NONPROCESS

JULY 1981

ACTUAL AS OF: 7/26/81
DESIGN 284,144 LF
INSTALLATION 238,800 LF



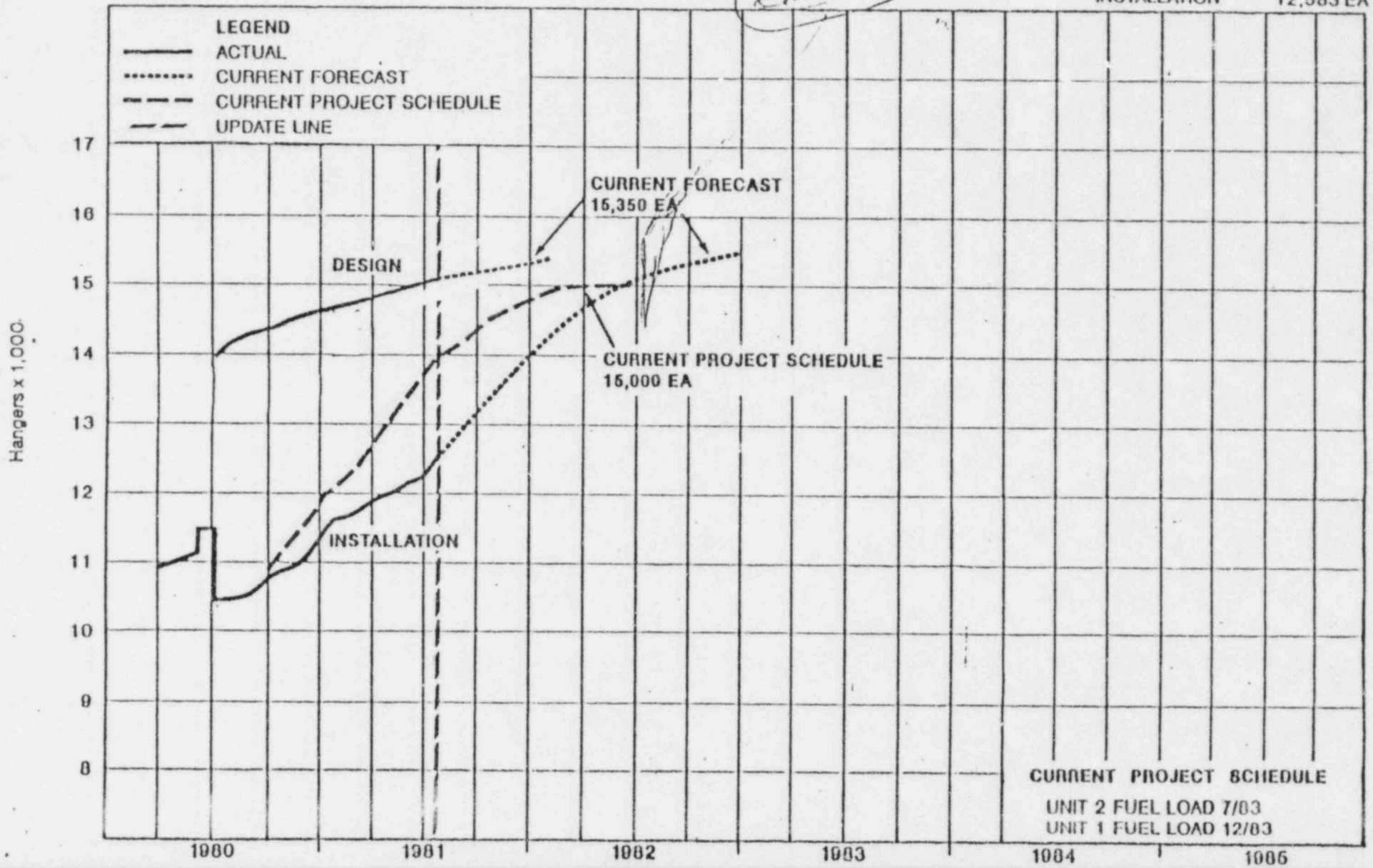
CONSUMERS POWER COMPANY
MIDLAND UNITS 1 AND 2 - JOB 7220
DESIGN AND INSTALLATION CURVES

LARGE PIPE HANGERS - TOTAL PLANT

HF 1-83
Critical Path Item
12,940

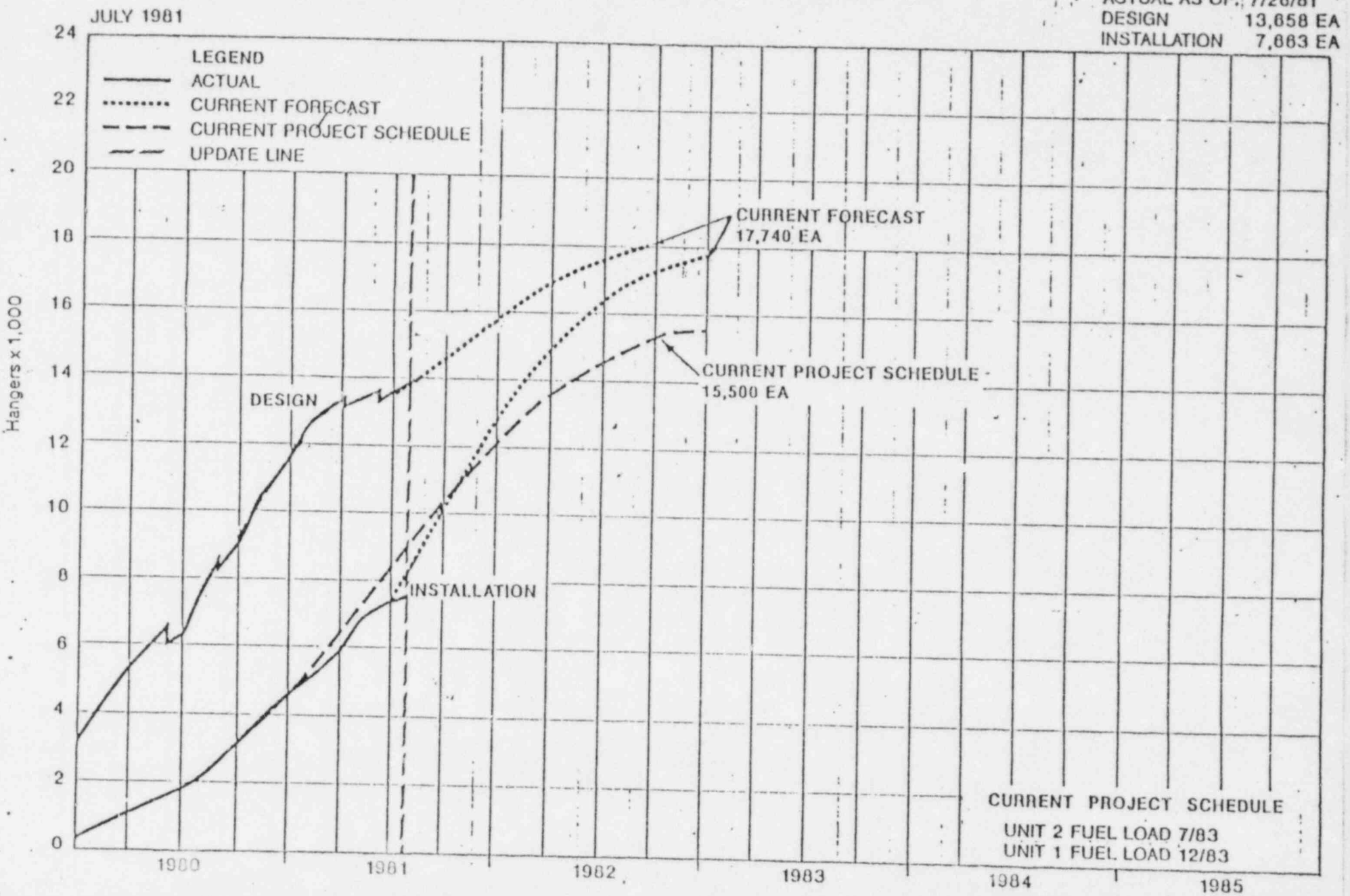
JULY 1981

ACTUAL AS OF: 7/26/81
DESIGN 15,178 EA
INSTALLATION 12,583 EA



CONSUMERS POWER COMPANY
MIDLAND UNITS 1 AND 2 - JOB 7220
DESIGN AND INSTALLATION CURVES

SMALL PIPE HANGERS (Resident Engineered) - TOTAL PLANT

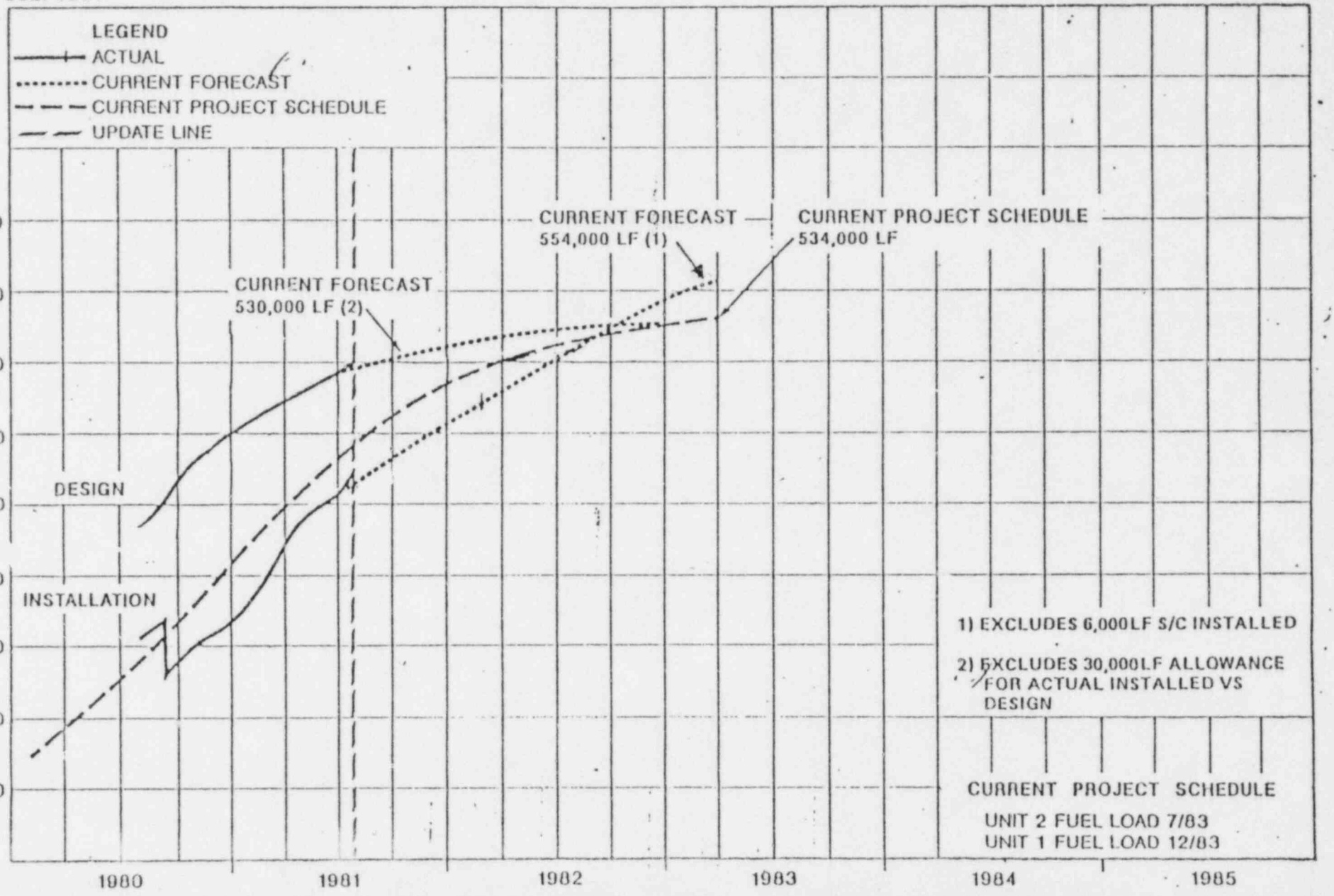


CONSUMERS POWER COMPANY
MIDLAND UNITS 1 AND 2 - JOB 7220
DESIGN AND INSTALLATION CURVES

EXPOSED METALLIC CONDUIT - TOTAL PLANT

JULY 1981

ACTUAL AS OF: 7/26/81
DESIGN 500,411 LF
INSTALLATION 423,303 LF

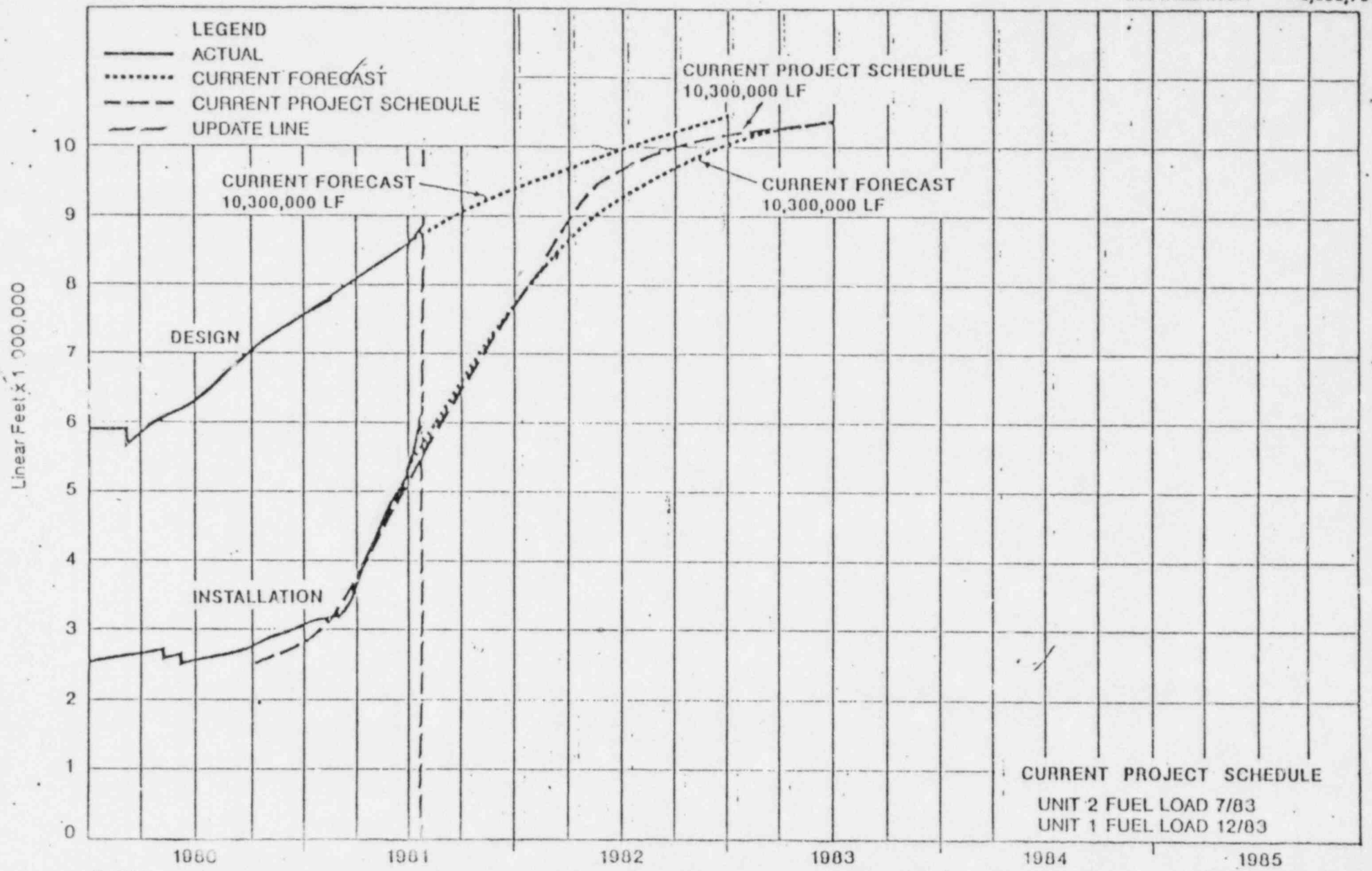


CONSUMERS POWER COMPANY
MIDLAND UNITS 1 AND 2 - JOB 7220
DESIGN AND INSTALLATION CURVES

POWER AND CONTROL WIRE AND CABLE - TOTAL PLANT

JULY 1981

ACTUAL AS OF: 7/26/81
DESIGN 8,917,094 LF
INSTALLATION 6,022,764 LF



G-1584

NRC CASE LOAD FORECAST PANEL
AGENDA ITEMS

- CONSTRUCTION PERCENT COMPLETE
- DESIGN & CONSTRUCTION CRITICAL PATHS (PATH A)
- LONG LEAD TIME ISSUES (PATH B)
- CONSTRUCTION COMPLETION SCHEDULING

NRC CASE LOAD FORECAST PANEL
CONSTRUCTION PERCENT COMPLETE

JUNE 1980

40,668,000 MH'S (FORECAST #6) 62%

JULY 1981

43,155,000 MH'S (FORECAST #7) 71%

8/24/81

NRC CASE LOAD FORECAST PANEL
CRITICAL PATHS

Design & Construction
(PATH A -BULKS)

1. AUX BUILDING SMALL PIPE DESIGN AND INSTALLATION - 2 MONTHS

2. INSTRUMENTATION AND TUBING INSTALLATION TO SUPPORT EARLY MECHANICAL TURNOVERS

3. CONDUIT INSTALLATION TO SUPPORT CABLE PULLING - 2 months

8/24/81

NRC CASE LOAD FORECAST PANEL
LONG LEAD TIME ISSUES

(Path B)

- **NUMBER OF ISSUES**
  - JULY 1980 — 44
  - JULY 1981 — 47
- **ISSUES WITH NEGATIVE FLOAT**
  - JULY 1980 — 15
  - JULY 1981 — 16

NRC CASE LOAD FORECAST PANEL
LONG LEAD TIME ISSUES

Tracking Program

Project/2

- USE OF CPM PLANNING & SCHEDULING METHODS (P/2)
- PURPOSE - ESTABLISH PROJECT PRIORITIES
  - EXTRA VISIBILITY FOR MANAGEMENT REVIEW & ACTION
- ISSUES COMPLETION TRACKED TO ASSOCIATED SYSTEM T/O DATE (NOT FUEL LOAD)
- T/O DATES ARE OPTIMUM - ALLOW FOR EFFICIENT TEST PROGRAM
- VIGOROUS PROGRAM TO RESOLVE SCHEDULE CRITICAL ISSUES PRIOR TO SYSTEM T/O

NRC CASE LOAD FORECAST PANEL
LONG LEAD TIME ISSUES

- **MULTI-SYSTEM ISSUES**
  - HELBA (effects 42 systems)
  - BLOCKWALLS (no effect on system turnover)
  - SEISMIC (0.12 g REANALYSIS) Complete structural analysis 4/82
  - SOILS REMEDIAL WORK

NRC CASE LOAD FORECAST PANEL
CRITICAL LONG LEAD TIME ISSUES
(AS OF JULY 1981)

			- FLOAT (MO)	SYSTEM	T/O DATE
MORE THAN 6 MONTHS NEGATIVE FLOAT* (2)					
(t)	● MLLA 6A	FIRE PROTECTION SAFE SHUTDOWN	9-1/2	BNA	NOV 1,1981
(t)	● MLLA 21	CORE FLOOD SYSTEM	9	SAA	DEC 1, 1981
4 TO 6 MONTHS NEGATIVE FLOAT* (5)					
(e)	● MLLA 68	PRESSURIZER HEATERS	5	SCA	OCT 1, 1981
(t)	● MLLA 2305	COMPONENT COOLING WATER (small surge tank instl)	4-1/2	EGA	DEC 15, 1981
	● MLLA 67	OVERPRESSURE PROTECTION AT LOW TEMPERATURE	4	SCA	OCT 1, 1981
	● MLLA 6	FIRE PROTECTION	4	RGC	MAY 1, 1982
(t)	● MLLA 65L	CORE FLOOD DEPRESSURIZATION	4	BHA	MAR 1, 1982

* Negative Float Relative to System Turnovers Dates
(t) Issue Requires Test Workaround (CWG Action)
(e) 50.55(e) Schedular Impacts Impacts

8/24/81

NRC CASE LOAD FORECAST PANEL
CRITICAL LONG LEAD TIME ISSUES (CONT'D)
(AS OF JULY 1981)

			- FLOAT (MO)	SYSTEM	T/O DATE
1 TO 3 MONTHS NEGATIVE FLOAT* (9)					
	● MLLA 59A	HVAC-ARTS AUX SHUTDOWN PANEL ROOM	3	GLC	MAR 1, 1983
	● MLLA 65D	COLD SHUTDOWN- DEPRESSURIZATION - RCS	3	BCA	DEC 1, 1981
(e)	● MLLA 65C	COLD SHUTDOWN - EMERGENCY BORATION	1-1/2	BGK	APR 1, 1982
(e)	● MLLA 446	REACTOR VESSEL ANCHOR BOLT	1	BBA	SEP 30, 1981
	● MLLA 65B	COLD SHUTDOWN - DHR DROPLINE VALVE	1	BCA	DEC 1, 1981
	● MLLA 220	POST ACCIDENT SAMPLING	1	SJA	JUN 1, 1982
	● MLLA 65G	COLD SHUTDOWN - DHR SYSTEM UPGRADE	1	BCA	DEC 1, 1981
	● MLLA 2300	PLANT COMPUTER REPLACEMENT	1		FEB 12, 1982
(e)	● MLLA 69	SMALL BREAK LOCA	1/2	SAA	JAN 1, 1982

* Negative Float Relative to System Turnover Dates

(e) 50.55(e) Schedular Impact Items

8/24/81

NRC CASE LOAD FORECAST PANEL
LONG LEAD TIME ISSUES
MANAGEMENT

TASK GROUP (ISSUES)

- LEAD ISSUE ENGINEER
- SUPPORT GROUP

RESPONSIBILITY

- PROVIDE CONSISTENT COMMUNICATION AMONG ALL PARTIES INVOLVED
- EXPEDITE AND COORDINATE CRITICAL ACTIVITIES
- DEVELOP PRE-T/O WORKAROUNDS

COMPLETION WORKING GROUP INTERFACE (SYSTEMS)

- DEVELOP POST-T/O WORKAROUNDS

8/24/81

NRC CASE LOAD FORECAST PANEL
LONG LEAD TIME ISSUES

Bottom Line

ALL LONG LEAD (CRITICAL SCHEDULE) ISSUES CAN BE ACCOMMODATED BY THE USE OF PRE OR POST T/O WORKAROUNDS AND MAJOR MILESTONES ACCOMPLISHED ON TIME

NRC CASE LOAD FORECAST PANEL
CONSTRUCTION COMPLETION SCHEDULING

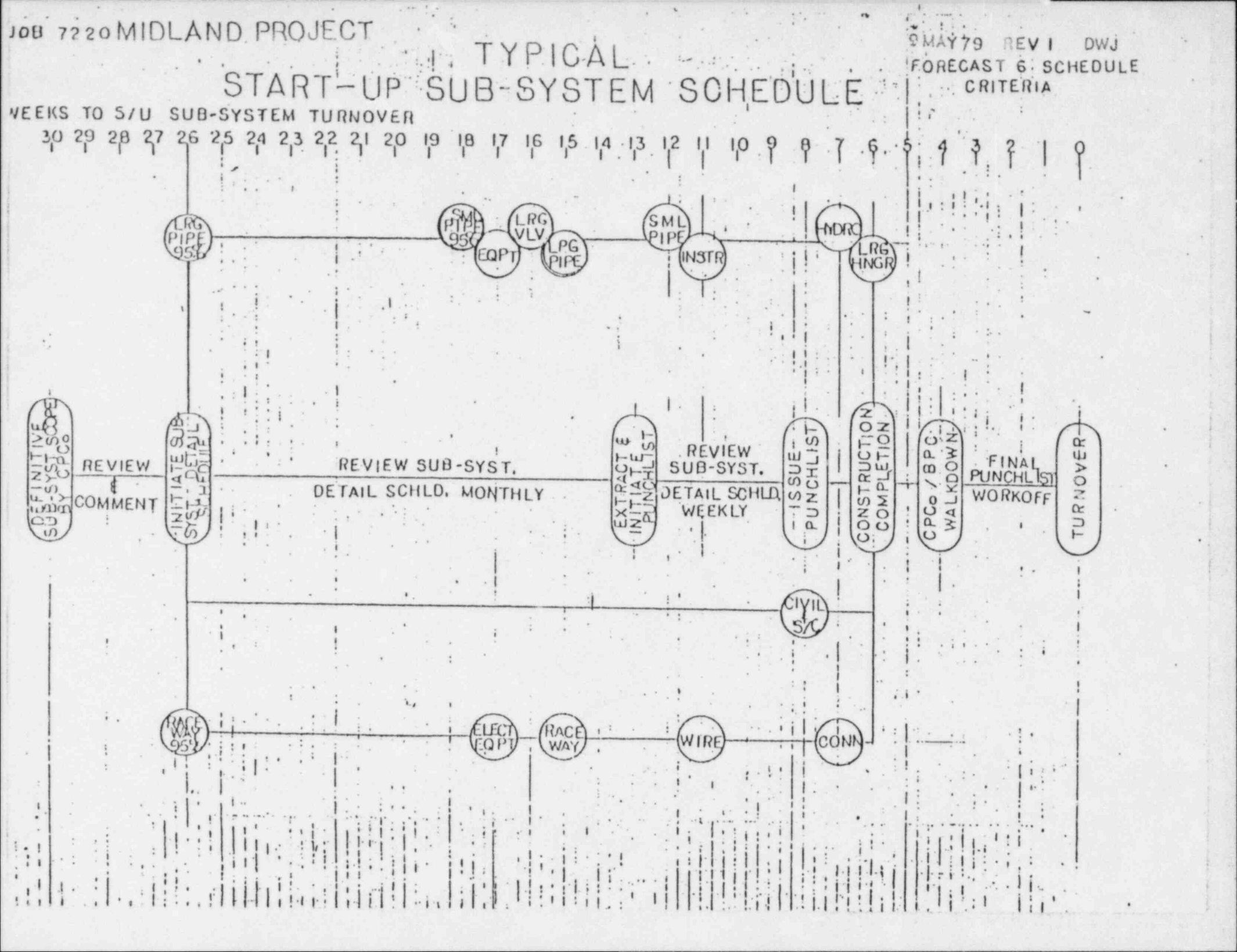
- CONSTRUCTION COMPLETION MODEL
- SUBSYSTEM DETAILED SCHEDULE
- ENGINEERING/PROCUREMENT/CONSTRUCTION PUNCH LISTS
- COMPLETION WORKING GROUP (CWG)

8/24/81

JOB 7220 MIDLAND PROJECT

TYPICAL START-UP SUB-SYSTEM SCHEDULE

9 MAY 79 REV 1 DWJ
FORECAST 6 SCHEDULE CRITERIA



Job 7220 Midland Project

START-UP SYS NO. 2EAC TITLE REACTOR BLDG. SERVICE WATER

Rev 1 F/O
As of 7-30-81

DESCRIPTION	QUANTITY TO GO		JUN	JUL	AUG	SEPT	OCT	NOTES
MECHANICAL EQUIPMENT	—							
LARGE PIPE	—							
LARGE HANGERS	2 EA			f				
LARGE VALVES	—							1
SMALL PIPE	—							
SMALL HANGERS	—							2,3
SMALL VALVES	0 EA							
HYDRO EA-CT-10 & 11	2		HYDRO PENDING	EA-CT-11 NCR-3547	EA-CT-10 △			
INSTRUMENTS	4							
INSTRUMENT TUBING	400							6,7
INSTRUMENT TEST	8							
ELECTRICAL EQUIPMENT	—							
RACEWAY	-0-							
CABLE PACKAGES	3 EA.	1 PULLABLE	11 CABLES	f	○			
CONNECTIONS	312 EA			J				4
TEST								
ELEC. INSTRUMENTS	4 EA							
S/C (INSULATION)	SP - 1 LF LP - 470 LF							
								2-82 8-82
90 DAY CUT-OFF				8-3-81	*			
PUNCHLIST INPUT					8-31-81 ○			
WALKDOWN							☐ 10-19-81	

CONSTRUCTION COMPLETE 9-21-81

Sched: C. VALOT

Elec: D. SCEDNQUIST

Mech: BILL SWENSON

Q.C.: MIKE ALLARD

Instr:

Other:

S/C: ROY SMITH

MIDLAND UNITS 1 & 2
REMAINING WORK SCHEDULE REV.1--JULY UPDATE
07/14/81

TASK NUMBER	RESTRAINT FROM	S/U NO	TASK DESCRIPTION / SUB GP	MLLA NO	1 START TASK	2 25% COMPLT	3 50% COMPLT	4 75% COMPLT	5 ISSUE FOR REVIEW	6 ISSUE FOR USE	7 ISSUE FOR CONSTR	8 ISSUE P.O.	9 V.I. REL TO ELECT.	10 COMPLT TASK	ACT.# BUDGT
E-10042C	O1AP2		REV TO CKT & RCWY FOR		O1DC1						O1N01				00E720
----------	AP-F		E119 & E121		30SE1F						30N01F				
			ACB+ -PHYS		UNITS 1&2										
					ROUTE CA. 2NGO137J TO NEW LOCATION										
E-10042D	O1MY2		REV TO CONN LIST FOR		O1N01						O1FE2				00E750
----------	AP-F		E119 & E121		30SE1F						30N01F				
	C		ACB+ -CTRL16		UNITS 1&2										
					CONN. LIST TO BE MADE FOR CABLES 1NB3127D, 1NB3128D 2NB3127D & 2NB3128D 2NGO137J										
E-10042F	O1MY2		REV TO PNL MOD FOR E114		O1DE1						O1MR2				00E750
----------	AP-F		& E121		30SE1F						30N01F				
	C		ACB+ -CTRL15		UNITS 1&2										
					REV. PNL 2C52. FOR CABLE 2NGO137J										
E-10043B	O1AP2	COMPL	REV TO L/O FOR E131		O1DC1						O1N01				00E740
----------	A--F		ACB-		O1JN1A						18JN1A				
			ACB+ -PHYS31		UNITS 1&2 ALSO PHYS33										
E-10043C	O1AP2		REV TO CKT & RCWY FOR		O1DC1						O1N01				00E720
----------	A--F		E131		19JN1A										
			ACB+ -ROUT		UNITS 1&2										
E-10046D	O1MY2		REV TO CONN LIST FOR		O1AU1						O1N01				00E750
----------	AP-F		E119,123,121,135		O1DE1F						O4JA2F				
	C		ACC+ -CTRL16		UNITS 1&2; AUX.1&2										
					CONN. LIST TO BE MADE FOR CABLES 1NGO135F & 2NGO135F										
E-10046F	O1MY2		REV TO PNL MODS FOR E119		O1DE1						O1MR2				00E750
----------	AP-F		121,123,135		O1DE1F						O4JA2F				
	C		ACC+ -CTRL15		UNITS 1&2										
					PNL MOD. FOR 1C52 & 2C52 FOR CABLES 1NGO135F & 2NGO135F										
E-10048D	O1MY2		REV TO CONN LIST FOR		O1N01						O1FE2				00E750
----------	AP-F		E353,357,358,361		O1AU1F						O1DC1F				
	C		ACC+ -CTRL16		UNITS 1 & 2										
					CONN. LIST TO BE MADE FOR CABLES 1NST003A & G, 2NST003A&G										
E-10048F	O1MY2		REV TO PNL MODS FOR E353		O1DE1						O1MR2				00E750
----------	AP-F		357,358,361		O1AU1F						O1DC1F				
	C		ACC+ -CTRL15		UNITS 1&2 AUX.BLDG.										

START-UP SUPPORT LIST

SUB SYSTEM NO. 2EAC
CONST COMPL DATE 09-21-81
REV 1

Sub System Title REACTOR BLDG. SERVICE WATER

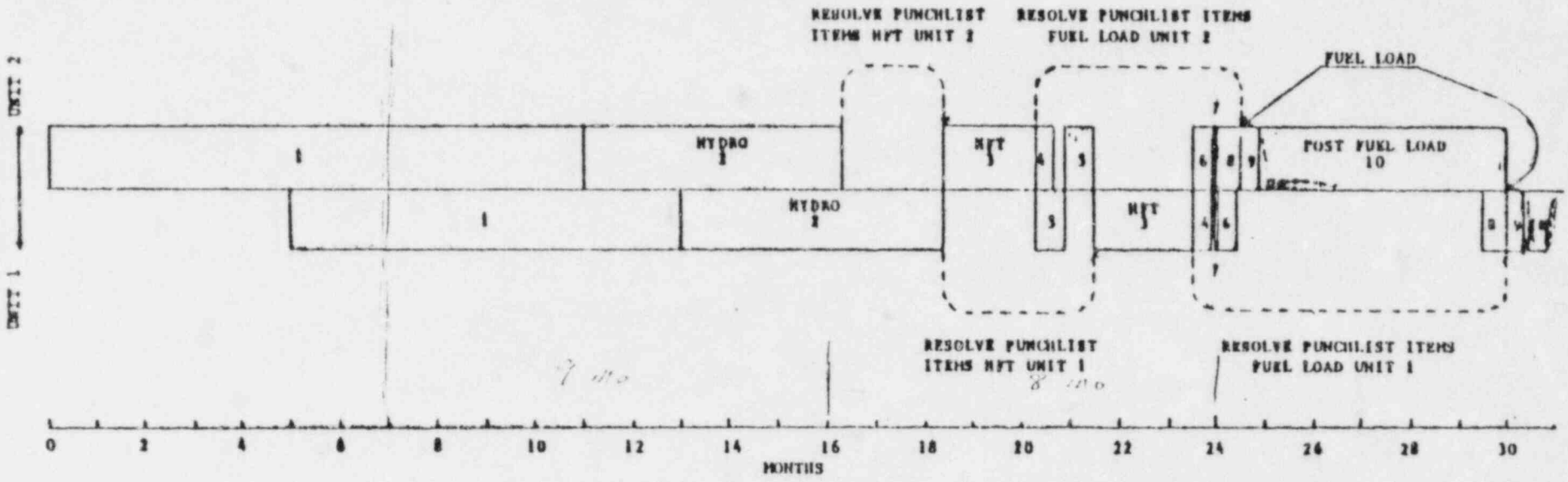
	DESCRIPTION		RESP	FCST DATE	REMARKS
5.	NCR # 2088 HANGER EXPANSION ANCHORS.		SWENSON	F	DISPOSITION REQUIRED
	NCR # 2677 SWAY STRUT VENDOR WELDS.		SWENSON	F	CONSTRUCTION
	NCR # 2920 UNDERSIZE WELDS.		SWENSON	F	CONSTRUCTION
	NCR # 3046 PIPE SPOOL PAINT.		AA	8/13/81F	
	NCR # 3131 SHOCK SUPPRESSOR BUSHING.		SWENSON	F	CONSTRUCTION
	NCR # 3174 SWAY STRUTS & SNUBBERS.		SWENSON	F	CONSTRUCTION
	NCR # 3276 PIPE HANGER MATERIAL.		AA	8/15/81F	
	NCR # 3277 PIPE HANGER MATERIAL.		SWENSON	F	CONSTRUCTION
	NCR 3597 UNAPPROVED MATERIAL SUPPLIER		SWENSON	F	CONSTRUCTION
6.	DELIVER INDICATORS	2TI-1956-2	AA/	9/30/81F	
	J-204-AC-Q	2TI-1957-2	REIGELSPERGER	9/30/81F	
	ITEM # 17.35	2TI-1958-2		9/30/81F	
		2TI-1959-5		9/30/81F	
7.	DELIVER TEMP. ELEMENT-SURPLUS	2TE-1956	AA/	10/9/81F	
	J-233-AC-Q	2TE-1959	REIGELSPERGER	10/9/81F	
	ITEM # 47	2TE-1958		10/9/81F	
		2TE-1957		10/9/81F	

G/M-0180-01

IESI PROGRAM STATUS AND FORECAST REVIEW

A.	TOTAL NUMBER OF PROCEDURES REQUIRED FOR FUEL LOAD	412
B.	NUMBER OF DRAFT PROCEDURES NOT STARTED	100
C.	NUMBER OF DRAFT PROCEDURES BEING WRITTEN	20
D.	NUMBER OF PROCEDURES APPROVED	28
E.	NUMBER OF PROCEDURES IN REVIEW	292
F.	TOTAL NUMBER OF PREOP AND ACCEPTANCE TESTS REQUIRED FOR FUEL LOAD	340
G.	NUMBER OF PREOP AND ACCEPTANCE TESTS COMPLETED	0
H.	NUMBER OF PREOP AND ACCEPTANCE TESTS CURRENTLY IN PROGRESS	3
I.	NUMBER OF SYSTEMS TURNED OVER TO START-UP:	832
	SYSTEMS TURNED OVER	214
	PARTIAL SYSTEMS TURNED OVER	50
	3 ALPHA SYSTEMS	164

MIDLAND UNIT 1 AND 2
PLAN FOR TWO UNIT STARTUP



ENERGIZE, FLUSH, HYDRO & COMP. TEST	1	POST HFT BASELINE	6
RCS HYDRO PHASE CD/FW CYCLE CLEANUP	2	ENFAS TEST PHASE	7
HOT FUNCTIONAL TEST	3	FUEL LOAD PREPS	8
REMOVE HEAD	4	FUEL LOAD	9
SIT/ILRT PHASE	5	POST FUEL LOAD ACTIVITIES (PES)	10

PROCEDURE STATUS

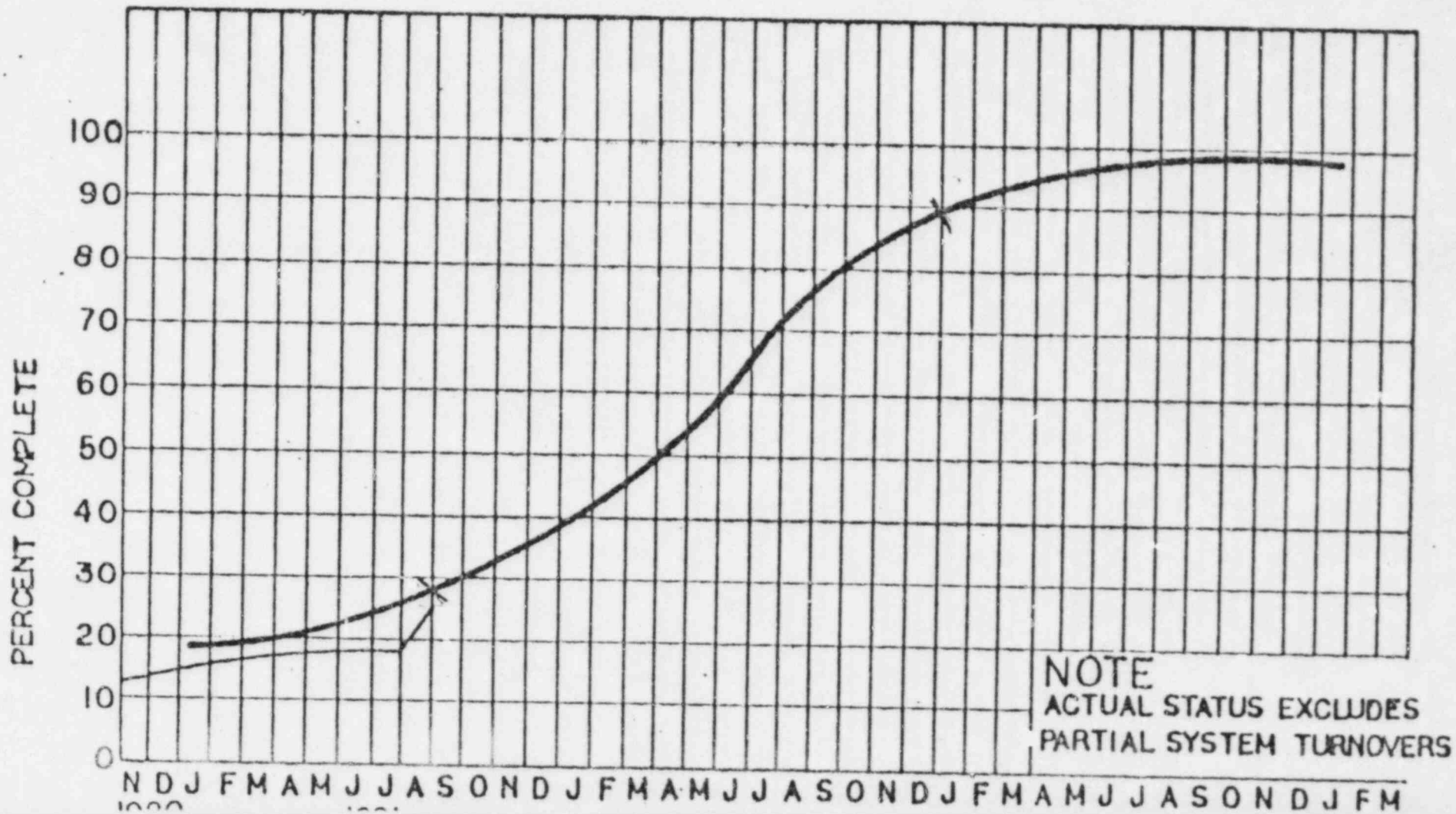
AS OF JULY 1981

	NUMBER	DRAFTED	APPROVED
TEST PROGRAM			
GENERIC	47	72%	57%
EQUIPMENT SPECIFIC	72	62%	15%
ACCEPTANCE + PREOP TESTS	340	73%	5%
OPERATING DEPARTMENT			
	355	89%	73%
MAINTENANCE DEPARTMENT			
	340	81%	69%
CHP DEPARTMENT			
HEALTH PHYSICS RELATED	158	58%	15%
CHEMISTRY RELATED	71	89%	75%
ADMINISTRATIVE DEPARTMENT			
	95	100%	60%

STATUS OF TEST PROCEDURES

- TEST PROCEDURES REQUIRED 412
- TEST PROCEDURES DRAFTED 292
  (70%)
- PROCEDURES REVIEWED THRU TWG. 57
  -ONLY 273 MUST BE REVIEWED BY TWG. (21%)
- TOTAL TEST PROCEDURES APPROVED 28
  (7%)

CONSUMERS POWER COMPANY
MIDLAND UNITS 1 AND 2 - JOB 7220
CPCo SYSTEM TURNOVER SCHEDULE



ELECTRICAL STATUS

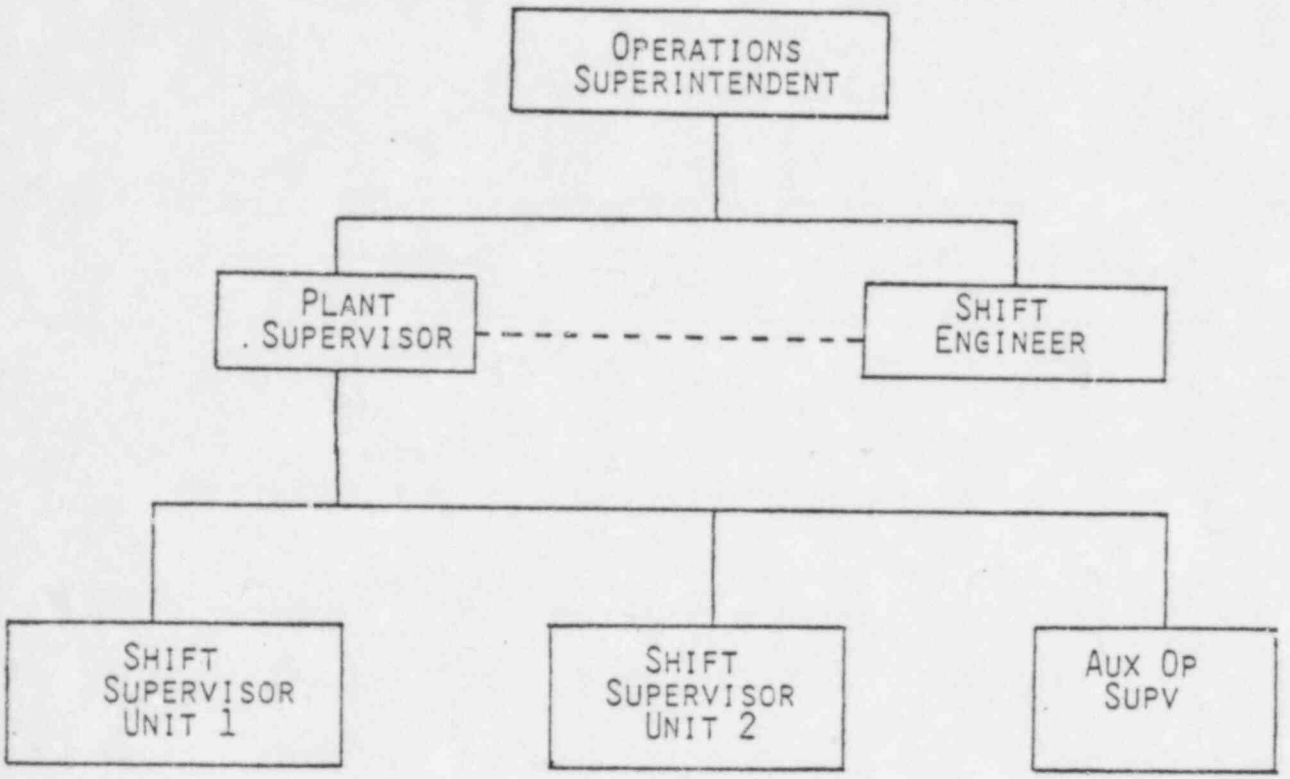
- 40% ENERGIZED
- PROJECT 60% ENERGIZED BY YEAR END

HIGH PRESSURE BOILER PROJECT

MILESTONE SCHEDULE OF ACTIVITIES:

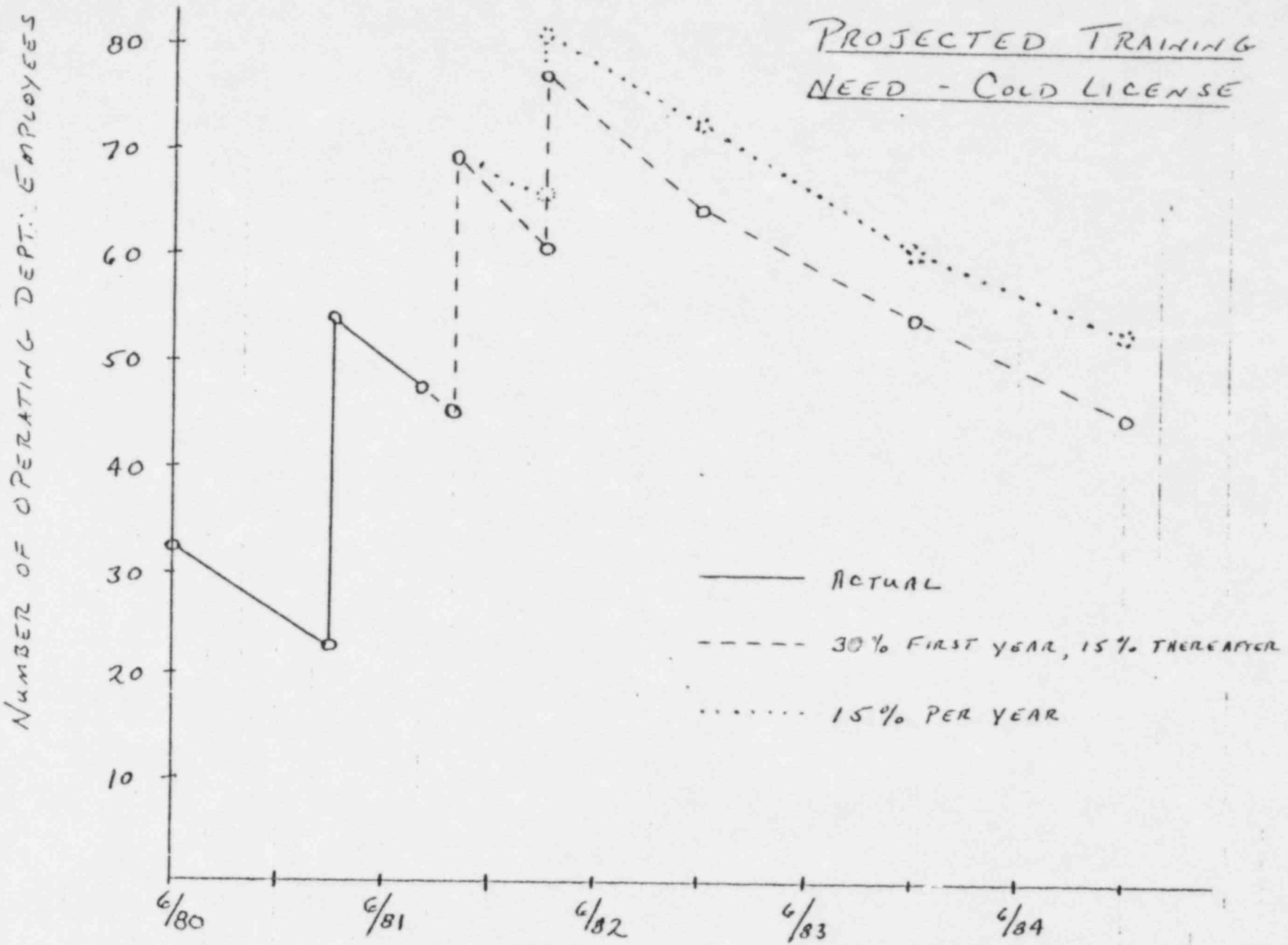
7/15/81	START CIVIL CONSTRUCTION
8/31/81	START MECHANICAL CONSTRUCTION
10/23-11/20/81	BOILER DELIVERY
11/15/81	START ELECTRICAL CONSTRUCTION
2/1/82	COMPLETE CIVIL CONSTRUCTION
3/1/82	COMPLETE MECHANICAL CONSTRUCTION
4/1/82	COMPLETE INSULATION
3/1-6/1/82	TESTING AND CHECKOUT
6/15/82	OPERATIONAL

ORGANIZATION STRUCTURE



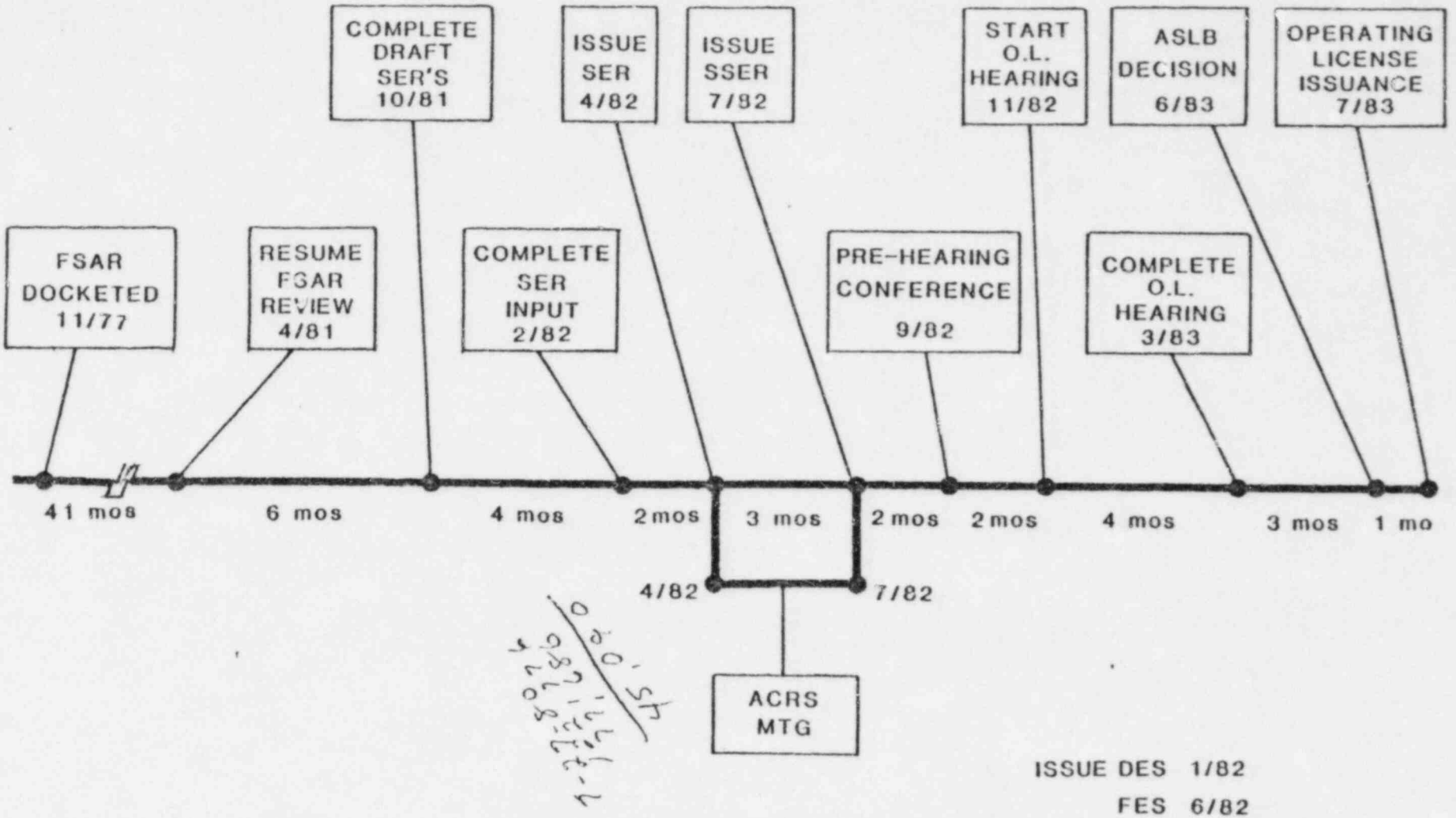
STAFFING ASSUMPTIONS

- Plant Supervisor, 1 per shift	=	6
- Shift Supervisor, 1 per shift per unit	=	12
- Auxiliary Operator Supv, 1 per shift	=	6
- Shift Engineers, 1 per shift	=	6
- Plant Staff with licenses	=	10
SRO	=	40
- Control Operators, 2 per shift per unit	=	24
Expected Total Licenses	=	64


PROJECTED TRAINING NEED - COLD LICENSE
NUMBER OF OPERATING DEPT. EMPLOYEES
80
70
60
50
40
30
20
10
6/80
6/81
6/82
6/83
6/84
ACTUAL
30% FIRST YEAR, 15% THEREAFTER
15% PER YEAR

8/24/81

PROPOSED LICENSING SCHEDULE FOR THE MIDLAND NUCLEAR PLANT



ISSUE DES 1/82

FES 6/82

TJS 8/81

MIDLAND LICENSING STATUS

DOCKET

- FINAL SAFETY ANALYSIS REPORT
- ENVIRONMENTAL REPORT
- SITE EMERGENCY PLAN
- SECURITY

NRC REVIEW

- BRANCH CONTACTS
- QUESTIONS/RESPONSES
- OPEN ITEMS

SAFETY EVALUATION REPORT

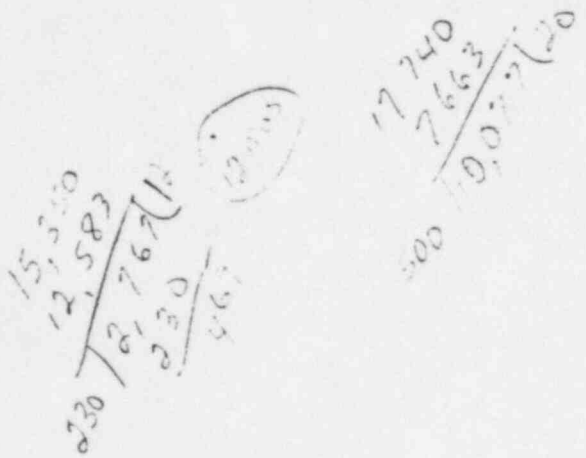
ENVIRONMENTAL STATEMENT

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

TJS 8/81

NUREG-0737 REQUIREMENTS

- RCS VENTING
- AFW FLOW INDICATION
- HIGH RANGE RADIATION MONITORING
- INSTRUMENTATION FOR DETECTION OF INADEQUATE CORE COOLING
- EMERGENCY RESPONSE REAL TIME DOSE PROJECTION



TJS 8/81

OTHER LICENSING ISSUES

- SOILS
- SEISMIC
- EQUIPMENT QUALIFICATION
- FIRE PROTECTION

TJS 8/81

SNUBBER STATUS AND SCHEDULE

AUGUST 25, 1981

There are as of this date, 0 snubbers completely installed in Unit 1 and 12 completely installed in Unit 2. In addition, there are 8 snubbers pinned on one end in Unit 2. These latter pinned snubbers will be completely installed upon resolution of installation interferences.

The schedule is to complete installation of all snubbers in both units by the end of November 1981. At this time, snubber installation is not a constraint to construction or testing.

TECHNICAL SUPPORT CENTER

Started construction on Civil/Structural portion August 10, 1981

Backfill material has been placed and forms started on August 26, 1981

First concrete placement scheduled for August 31, 1981

Civil/Structural portion scheduled for completion by December 14, 1981 with a total of 1,000 CY of concrete required

Status of other items:

1) Approx 15,000 LF of cable will be needed

2) Charcoal ventilation filter is on hand

3) The Radiation Monitoring Equipment is ordered and slated for October 1981 delivery

4) Distribution Panel and Transformer, required by January 1982, is still in engineering

5) Computer is ordered with delivery March 1982

6) Radio Communication Console, needed in April 1982, is an off-the-shelf item

7) Uninterruptable Power Supply System, needed by June 1982, is undergoing bid evaluation

8) The Radiation Monitoring Display, needed by November 1982, will be an adder to an existing Purchase Order

No problems are currently anticipated in meeting any equipment need dates

Completion and testing of entire facility needed by February 1, 1983

8-26-81
JSStrahl

CONTAINMENT QUANTITIES AS OF AUGUST 1, 1981

UNIT 1

	ACTUAL	TOTAL FORCAST	TO GO
LARGE PIPE	11,700	13,200	1,500
SMALL PIPE	16,200	19,300	3,100
CONDUIT	26,000	26,150	150
WIRE & CABLE (200,000'/unit)	NONE (start 9/1/81)	200,000	200,000

UNIT 2

	ACTUAL	TOTAL FORECAST	TO GO
LARGE PIPE	11,560	11,930	370
SMALL PIPE	18,300	22,000	3,700
CONDUIT	25,900	27,700	1,800
WIRE & CABLE (200,000'/unit)	115,000	200,000	188,500

YARD

1. All transformers received, installed and ready for service

2. Deluge system for Unit 2 transformer completed

3. Deluge system for Unit 1 transformer will begin in October of this year.

4. Well drilling for permanent dewatering began on August 17 - two rigs working with third to be on site shortly

5. Pipe profiling - two runs complete - looks good - Southwestern Research Institute to be back on site September 16 and to finish by October 23 - Service water lines 19 & 20 next then 15, 16 and 53 & 54 will include condensate lines

6. UPS facility is being constructed - completion due by October 1, 1981

7. Tech Support Center work started August 10 - Civil/Structural to complete December 4. Arch, Mech & Elec packages to be released in September, November and March respectively. Total complete February 1, 1983.

8. Security fence rework - concrete around posts to begin shortly. Ductbank pulls are in progress

9. Cooling tower nearly complete, have some conduit plus pre-fab control house yet to go

10. Boiler project - steel was received yesterday - schedule for completion is February 1982

11. Borated Water Storage Tank - pre-load specifications released from NRC

12. Pond Blowdown structure - subcontract to be let in September and completion scheduled for April of 1982

13. Calibration Facility - concrete work complete superstructure scheduled for completion in November 1981.

AUX. BUILDING MODULE	CONDUIT	TRAY	S B H	S B P	L B H	L B P	INSTRUMENT	EMERGENCY BORATION
101			400	3000	265	246		
102			C32	2860	127	464		
103			554	2562	159	594		
110	1050		100	400	10	0		
120	3100		418	2850	80	35		
130	4640		450	2650	55	8		
140	3900		321	3000	12	90		
150	9160	79	1060	9014	62	115	184	
160	705	35	432	2752	36	80	56	
170	301	-	67	1584	64	394	116	CCW
175	-	-	178	-	1	-	2	hydro 8/31 to 9/11
180	1771	-	-	1600	49	1143	26	
190								
210	1513	15	134	796	7	-	22	
220	-	-	5	109	-	-	0	
230	545	-	-	-	-	-	9	
240	865	283	-	12	7	-	52	
250	820	357	371	2427	2	-	10	
260	2716	34	110	695	20	19	43	
	31,086	423	4632	36,311	963	3188		

0-26-21

MIDLAND UNIT #1 AND #2
Total Plant Installation Rates

1981	Small Pipe	Small Pipe Hangers	Conduit	Wire and Cable
January	8,556	410	10,339	85,738
February	6,392	560	20,004	120,439
March	7,127	473	20,804	389,422
April	8,660	768	18,676	738,380
May	8,133	329	14,038	520,455
June	5,774	261	12,376	458,801
July	7,269	506	15,591	662,238
Total	51,911	3,307	111,828	2,975,473
Avg Per Month	7,416	472	15,975	425,068

8-26-81

MIDLAND UNIT #1 AND #2
Total Plant Installation Rates

1981	Small Pipe	Small Pipe Hangers	Conduit	Wire and Cable
January	8,556	410	10,339	85,738
February	6,392	560	20,004	120,439
March	7,127	473	20,804	389,422
April	8,660	768	18,676	738,380
May	8,133	329	14,038	520,455
June	5,774	261	12,376	458,80[illegible]
July	7,269	506	15,591	662,238
Total	51,911	3,307	111,828	2,975,47[illegible]
Avg Per Month	7,416	472	15,975	425,068

1981	Large Pipe Hangers	Terminations
January	208	1,947
February	282	1,999
March	234	2,806
April	256	5,831
May	221	6,224
June	168	7,185
July	238	9,938
Total	1,607	35,930
Avg Per Month	230	5,133

QUANTITIES

	TO GO	TOTAL FORECAST
TURBINE 1		
1) INSTRUMENTS	445	960
2) INST. TUBING	14,781	30,171
3) LARGE BORE PIPE	370	37,790
4) LARGE BORE HANGERS	185	2,020
5) SMALL BORE PIPE	3,900	41,200
6) SMALL BORE HANGERS	300	1,427
7) CONDUIT	7,000	63,543
8) CABLE TRAY	+2,900	15,507
TURBINE 2		
1) INSTRUMENTS	71	960
2) INST. TUBING	8,649	31,892
3) LARGE BORE PIPE	140	42,400
4) LARGE BORE HANGERS	180	2,488
5) SMALL BORE PIPE	2,000	46,507
6) SMALL BORE HANGERS	250	1,273
7) CONDUIT	6,000	72,195
8) CABLE TRAY	+ 800	14,526
EVAPORATER BUILDING		
1) INSTRUMENTS	361	1,450
2) INST. TUBING	23,171	42,205
3) LARGE BORE PIPE	500	28,108
4) LARGE BORE HANGERS	130	1,600
5) SMALL BORE PIPE	1,000	40,683
6) SMALL BORE HANGERS	84	2,169
7) CONDUIT	1,000	53,430
8) CABLE TRAY	+600	
DIESEL GENERATOR BUILDING		
1) INSTRUMENTS	58	58
2) INST. TUBING	1,610	1,610
3) LARGE BORE PIPE	1,000	2,770
4) LARGE BORE HANGERS	74	120
5) SMALL BORE PIPE	800	4,713
6) SMALL BORE HANGERS	140	637
7) CONDUIT	500 over scope	14,940
8) CABLE TRAY	+185	

MIDLAND 1 & 2 6-26-81

QUANTITIES TO GO

	CONDUIT	SBH	SBP	LBH	LBP
TURBINE 1	7000	300	3900	185	370
TURBINE 2	6000	250	2000	180	140
EVAP BLDG	1000	84	1000	130	500
D.G. BLD	—	140	800	74	1000
C.I. 1	1150		3,100		1500
C.I. 2	1800		3,200		370
ADD	31,086	4682	36311	963	3188
	47,036	5456	50,811	1632	7068
	130,697	10,077	62,750	2767	15,666

TO GO QUANTITIES

		TO 9.7	TO EL	
CONC	1807			
L.P	15666			
S.P	68750	37995	30,755	5+15=20
LPH	2762	1227	1535	5+10=15
SPH	10,077	8303	1774	16+6=22
TRAY	3679			
CONDUIT	130,697	75297	5400	5+13=18
CABLE	4,277,236	3,247,235 @ 76.10	1,030,000	12+10=22
TRENCH	262,224	223,724 @ 11.90	38,500	20+7=27
INST	5794			

SD	7500 LF/mo	To 90%
	2100 LF/mo	90% to FL. (13 mo.)
SDU	500 ea/mo	To 90%
	300 ea/mo	90% to LF
LPN	230 ea/mo	To 90%
	150 ea/mo	To FL
Conduit	15,000 LF/mo	To 90%
	5,000 LF/mo	90 to FL (13 mo.)

N-plant completion dates s

Aug.

By PAUL RAU
and LORIE SHANE
Daily News staff writer

Nuclear Regulatory Commission officials this morning said they will stick to their earlier prediction for the estimated date of completion of the Midland Nuclear Plant.

That means the commission still believes construction on the plant's unit 2 will be complete by October 1983, and on unit 1 by April 1984. Meanwhile, the Consumer Power Co. still maintains it will complete construction on unit 2 by July 1983, and on unit 1 by December 1983.

Both sides said this morning the three- and four-month differences in projection are not major.

THE NRC decision was made by a panel of NRC officials who heard reports and toured the plant site Tuesday and Wednesday. They are Darl Hood, project manager of the Midland plant; William Lovelace, who issues all forecasts for all U.S. nuclear plants; Elinor G. Adensam, acting chief of NRC licensing branch #4 and Ronald Hernan, a project manager like Hood, but for other nuclear plants.

"The way it comes out is that on the basis of the information you've provided us, barring unforeseen circumstances, we see no reason why the schedules that we projected at our caseload visit of last year should not be met," Hood anounced.

He said the October and April dates are "reaffirmed by the new evaluation."

CONSUMERS OFFICIALS said they were pleased with the announcement and said they believe their projection and the NRC's are "essentially in agreement."

"We're pleased they have reaffirmed their conclusion," Consumers vice president of projects, engineering and construction James Cook said after the brief session today. Cook said he believed the 1980 reorganization of top-level personnel could be termed a major factor in the company's ability to maintain its schedule.

"It's an expression of the commitment of Consumers Power Co. to get this job done in the most expeditious manner," he said.

"It helps our morale tremendously," Don Miller plant site manager, said of the prediction.

He said the decision shows Consumers' "ability to keep up with the schedule."

DESPITE the difference in Consumers project manager projections, Gilbert Keeley said "I think everybody is targeted for our July 1983, date, and we will continue to target the date."

The NRC projection is important because the commission uses that information in deciding how much manpower to put into the Midland case, Hood explained.

"There will be no charge in that priority for Midland," Hood said. He said the NRC still plans to issue its Safety Evaluation Report and Draft Environmental Statement on the plant by May 1, 1982. Hood called the SER a "major milestone in the licensing efforts."

The NRC is aiming to complete SER's for 24 plants in the United States in 1982, and for eight more in 1983, Lovelace said. He and Hood said it was impossible to say where the Midland plant ranked on that list, because schedules and estimated dates of completion at various plants change from year to year.

Lovelace did say that in some other cases the NRC's projection is as much as two years different than the owner's projection.

Hood said that in making their prediction, reports on the plant were "factored into a generic base" and compared with other plants of similar design. The rate of installation is compared to the amount of work remaining, he said. Lovelace admitted after the session he had doubts about the "electrical area" of the plant prior to the evaluation.

He said, however, the reports show Consumers work is "well above industrial efforts," in that area.

Lovelace told Consumers officials "you can't refute what you've done over the last seven months."

WEDNESDAY REPORTS included a presentation by Robert Wheeler, of Consumers, on bulk installation rates.

Wheeler pointed out that Consumers had promised it would "pull" five million feet of cable by mid-1981 and that currently employees have topped the six million point. "Pulling cable" means placing it in conduit trays.

"We've exceeded our estimate to you by 1.3 million feet," Wheeler said.

IN A separate area, Cook charged that a statement by state Attorney General Frank Kelley that there is no proof the Midland nuclear plant is needed in "baloney."

Kelley filed a suit Monday asking the state Court of Appeals to stop the company from selling $363 million in stocks and bonds to pay for the plants.

Kelley also claims the company's customers would be forced to pay millions of dollars in interest and dividends if the stocks and bonds were sold.

"Mr. Kelley's primary purpose appears to be to make Michigan a depressed area for as long as he can keep it that way," Cook said.

In another area, Hood said he sees no problem with extending construction permits for the two units. The permit for unit 2 expires on Oct. 1 and for unit 1, a year later.

He said a decision on that should be made by mid-September.

Wednesday, a dozen Consumers and Bechtel Power Corp. officials gave status reports on various aspects of the Midland project such as installation rates, manpower and the procurement situation for hardware yet to be installed.

Hood had hoped the caseload forecast panel would be able to issue its completion estimate Wednesday, but said after the session the NRC team needed Wednesday night to "digest" all the information presented by Consumers and Bechtel.

IN THEIR reports, officials from the two companies said:

- The nuclear plant is now 71 percent complete, compared to 62 percent at this time last year.
- Forty percent of plant electrical circuits are energized, or connected to power, and 60 percent should be energized by year's end.
- Plant manpower, now at 4,117 per-

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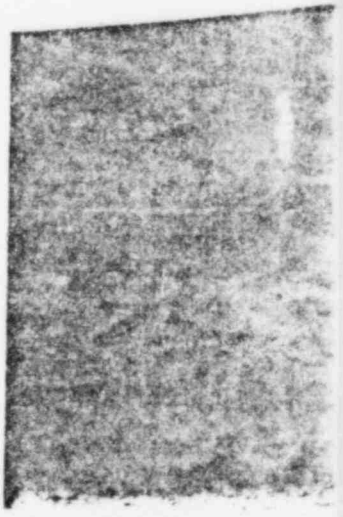

B/37

:ompletion dates stand

Aug 27, 1981

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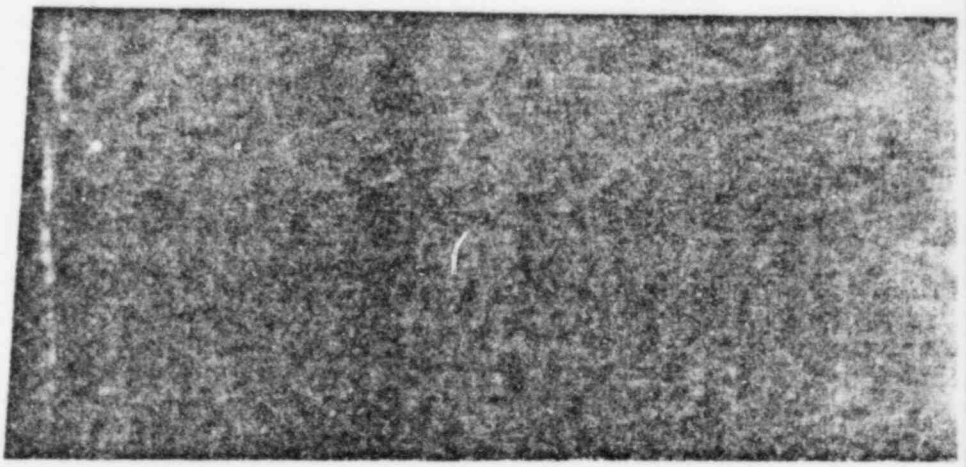
- The nuclear plant is now 71 percent complete, compared to 62 percent at this time last year.
- Forty percent of plant electrical circuits are energized, or connected to power, and 60 percent should be energized by year's end.
- Plant manpower, now at 4,117 persons, will peak in 1982. About 50 pipefitters will be added along with more than 100 electricians and about 130 craftsmen.
- Productivity among these workers is "comparable with the national average for nuclear construction."
- Although work in some areas is two to nine months behind scheule, the first fuel load date in June 1983 should not be delayed.

Officials also said the plant's soil problems while not yet resolved with the NRC, also should not delay the projected fuel load dates.

A Bechtel official said bids will be sought in the near future for work to correct soil problems underneath two buildings, the auxiliary building and the service water intake structure.

Hood agreed that the fact that bidding process is beginning reflects confidence on the part of Consumers that the NRC will permit the type of corrective work that is being bid out.

In mid-October, a federal hearing will resume on the appropriateness of the remedial work proposed by Consumers to fix the soil problems, which have caused cracked and sinking buildings at the plant.



46.

Officials said that powder-like particles called "fines," get back into the water being processed, allowing radioactivity to remain there instead of being transferred into manageable resin beds.

The particles were described as being as small as one ten-thousandth of an inch. Bedell said there was no danger the particles could escape into the environment.

Engineers have been testing the system since July on 90,000 gallons of less radioactive water in holding tanks at the plant.

The Institute for Safe Technology, in today's announcement, calls for GPU to partially decontaminate the water, place it in a special plastic binder or concrete, then ship it off site.

GPU has said it will hold the treated water on site until a final decision is made on its disposal.

The institute also says the NRC's estimate on health effects to TMI workers — one fatal cancer and one genetic mutation — is far too low. The institute, saying it has found errors in the NRC calculations, estimates two to 10 TMI workers may die of cancer as a result of the cleanup.

Press Intelligence, Inc.
WASHINGTON, D.C. 20003

Front Page	Edit Page	Other Page

FLINT, MICHIGAN
JOURNAL AUG 30 1981
EVENING - 105,428
SUNDAY -- 105,494

Consumers N-plant at Midland on schedule

Booth News Service

MIDLAND — The Nuclear Regulatory Commission and Consumers Power Co. remain in "essential agreement" that construction on the firm's $3.1 billion nuclear energy plant is on schedule.

The agreement, announced by the NRC caseload forecast panel, means Consumers will remain high on the agency's priority list of operating license applicants, according to Dari S. Hood, NRC project manager for the Midland plant.

The decision came despite a four-month difference in the estimated completion date of the plant. The panel estimates the completion date of Unit 2 as October 1983 and Unit 1 as April 1984; Consumers says it still is committed to a July 1983 date for loading radioactive fuel pellets, with completion of Unit 1 scheduled in December 1983.

Hood termed the differences "insignificant," and Consumers reaffirmed its commitment to meet the July 1983 date.

"On the basis of the information provided, and barring any unforseen problems, we see no reason why the schedule projected at the last caseload panel meeting cannot be met," Hood said.

"We will continue to apply the resources necessary to meet those dates," he said, adding that the Midland plant's relative position in the race for operating licenses will remain unchanged.

Hood said Midland is "one of the NRC's top priorities, although not necessarily the top one."

Panel member William Lovelace said the NRC will consider 24 operating license applications in 1982, with eight cases scheduled for 1983.

Lovelace concedes he had doubts Consumers could remain on its construction schedule, but said "you can't argue with the progress made over the last seven months."

Evidence presented by Consumers shows the plant is now 71 per cent complete, up 9 per cent from June 1980.

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SCHEDULE FOR SITE VISITS
(10/1/81 THRU 9/30/83)

	PLANT NAME	LAST VISIT	PROPOSED SCHEDULE FOR FY 83
•1.	SEABROOK	9/81	11/15/82 VISITED
•2.	MARBLE HILL	2/79	11/30/82 VISITED
•3.	PERRY	10/81	1/10/83 VISITED
•4.	BEAVER VALLEY 2	-	1/25/83 VISITED
5.	HARRIS	-	2/16/83 VISITED
•6.	NINE MILE POINT 2	-	2/22/83 VISITED
•7.	WATTS BAR	12/80	3/1/83 VISITED
•8.	LASALLE 2/BYRON	-	3/22/83 ~~SCHEDULED~~ VISITED
•9.	RIVERBEND	3/81	3/28/83 ~~SCHEDULED~~ VISITED
•10.	HOPE CREEK	-	4/4/83 ~~SCHEDULED~~ VISITED
•11.	LIMERICK	8/79	4/11/83 ~~SCHEDULED~~ VISITED
12.	MIDLAND	8/81	4/18/83 ~~SCHEDULED~~ VISITED
13.	WATERFORD 3	1/81	~~4/25/83~~ 5/24/83 ~~SCHEDULED~~
14.	PALO VERDE ✓	3/82	~~5/83~~ 6/22/83 SCHEDULED
15.	VOGTLE	-	~~5/83~~ 5/16/83 ~~SCHEDULED~~ VISITED
•16.	SUSQUEHANNA	-	~~5/83~~ 5/23/83 ~~SCHEDULED~~ VISITED
17.	COMANCHE PEAK	4/82	5/83
18.	WOLF CREEK ✓	11/81	~~6/83~~ VISITED
19.	CLINTON ✓	11/80	~~6/83~~ 7/6/83
20.	WNP 2 ✓	10/81	~~6/83~~ 7/11/83
21.	BELLEFONTE	9/81	7/83
22.	CATAWBA ✓	8/81	7/83
23.	BRAIDWOOD ✓	1/81	8/83
24.	FERMI 2	8/82	~~8/83~~ VISITED
25.	SOUTH TEXAS	4/78	8/83
26.	WNP 3	8/82	9/83
27.	MILLSTONE 3	9/82	9/83
28.	CALLAWAY ✓	9/82	9/83