

March 21, 1984
SBN- 640
T.F. E1.2.1

United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing

References: (a) Construction Permits CPPR-135 and CPPR-136, Docket
Nos. 50-443 and 50-444
(b) USNRC Memorandum, dated February 17, 1984, "Caseload
Forecast Panel Meeting and Tour of Seabrook Station",
V. Nerses to G. W. Knighton

Subject: Caseload Forecast Panel Data Package

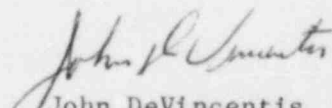
Dear Sir:

We have enclosed a copy of the data package which was presented to the
Caseload Forecast Panel representatives at their March 13 and 14, 1984 visit
to Seabrook Station.

This data package was prepared in response to the panel's agenda
[Reference (b)].

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY


John DeVincentis
Project Manager

JDV/pmb

cc: Atomic Safety and Licensing Board Service List

8403230061 840321
PDR ADOCK 05000443
A PDR

Boon
Limited
Diet

William S. Jordan, III, Esquire
Harmon & Weiss
1725 I Street, N.W. Suite 506
Washington, DC 20006

Roy P. Lessy, Jr., Esquire
Office of the Executive Legal Director
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Robert A. Backus, Esquire
116 Lowell Street
P.O. Box 516
Manchester, NH 03105

Philip Ahrens, Esquire
Assistant Attorney General
Department of the Attorney General
Augusta, ME 04333

Mr. John B. Tanzer
Designated Representative of
the Town of Hampton
5 Morningside Drive
Hampton, NH 03842

Roberta C. Pevear
Designated Representative of
the Town of Hampton Falls
Drinkwater Road
Hampton Falls, NH 03844

Mrs. Sandra Gavutis
Designated Representative of
the Town of Kensington
RFD 1
East Kingston, NH 03827

Jo Ann Shotwell, Esquire
Assistant Attorney General
Environmental Protection Bureau
Department of the Attorney General
One Ashburton Place, 19th Floor
Boston, MA 02108

Senator Gordon J. Humphrey
U.S. Senate
Washington, DC 20510
(Attn: Tom Burack)

Diana P. Randall
70 Collins Street
SEabrook, NH 03874

Donald E. Chick
Town Manager
Town of Exeter
10 Front Street
Exeter, NH 03833

Brentwood Board of Selectmen
RED Dalton Road
Brentwood, New Hampshire 03833

Edward F. Meany
Designated Representative of
the Town of Rye
155 Washington Road
Rye, NH 03870

Calvin A. Canney
City Manager
City Hall
126 Daniel Street
Portsmouth, NH 03801

Dana Bisbee, Esquire
Assistant Attorney General
Office of the Attorney General
208 State House Annex
Concord, NH 03301

Anne Verge, Chairperson
Board of Selectmen
Town Hall
South Hampton, NH 03842

Patrick J. McKeon
Selectmen's Office
10 Central Road
Rye, NH 03870

Carole F. Kagan, Esq.
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. Angie Machiros
Chairman of the Board of Selectmen
Town of Newbury
Newbury, MA 01950

Town Manager's Office
Town Hall - Friend Street
Amesbury, Ma. 01913

Senator Gordon J. Humphrey
1 Pillsbury Street
Concord, NH 03301
(Attn: Herb Boynton)

Richard E. Sullivan, Mayor
City Hall
Newburyport, MA 01950

1.

Attainment
Case Load Forecast Panel
3/14/84

- | | |
|------------------|--|
| 1. V. Nerses | NRC/NRR/DL/LB#3 |
| 2. Steve Page | PSNH PSC MGR, |
| 3. Steve Piven | PSC Asst |
| 4. H.T. Tracy | YARC - PSNH DEPUTY PROT DIR |
| 5. W. Lovelace | NRC/RM |
| 6. R.B. Cheyne | Object Control - UE & C |
| 7. W.J. TAYLOR | ASST. CONSTRUCTION MGR - UE & C |
| 8. W.P. Johnson | VP PSNH |
| 9. D.G. McLain | Startup Manager |
| 10. J. MAYER | Proj. Eng - YARC |
| 11. J. BEALL | NRC/RI |
| 12. H.M. Wescott | NRC/RI |
| 13. AC Cerne | NRC/RI - SRI |

Tour

- | | |
|-------------------|-----------------|
| 1. V. Nerses | NRC/NRR/DL/LB#3 |
| 2. W. Lovelace | NRC/RM |
| 3. ERIC SOSNOWSKI | PSNH |

Attendance List

Core Load Forecast Panel Unit

3/13/84

1. Victor Norses

H.T. TRACY

W.P. Johnson

D.G. McLain

W.B. Derrickson

R.R. Cheyne

DONALD E. MOODY

John De Vincentis

David A. Maidrand

H.M. Wescott

J.E. BEALL

MIKE DAIGREAU

A.M. Ebner

J. MAYER

John Tefft

NRC/NRR/DL/LB#3

YAEC - DEPUTY PROJECT DIRECTOR

PSNH - VP

PSNH - Startup Manager

PSNH - Sr VP

UE&C - Ovg Cont Mgr.

PSNH - STATION MANAGER

YAEC - ENGINEERING MANAGER

YAEC - Asst. Mgr.

R-I USNRC R-I

RI, USNRC

SAPL

UEIC - Proj. Mgr.

YAEC - Proj. Eng

PSNH - STD

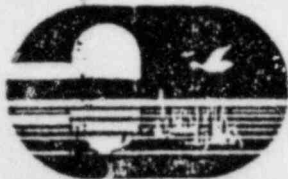
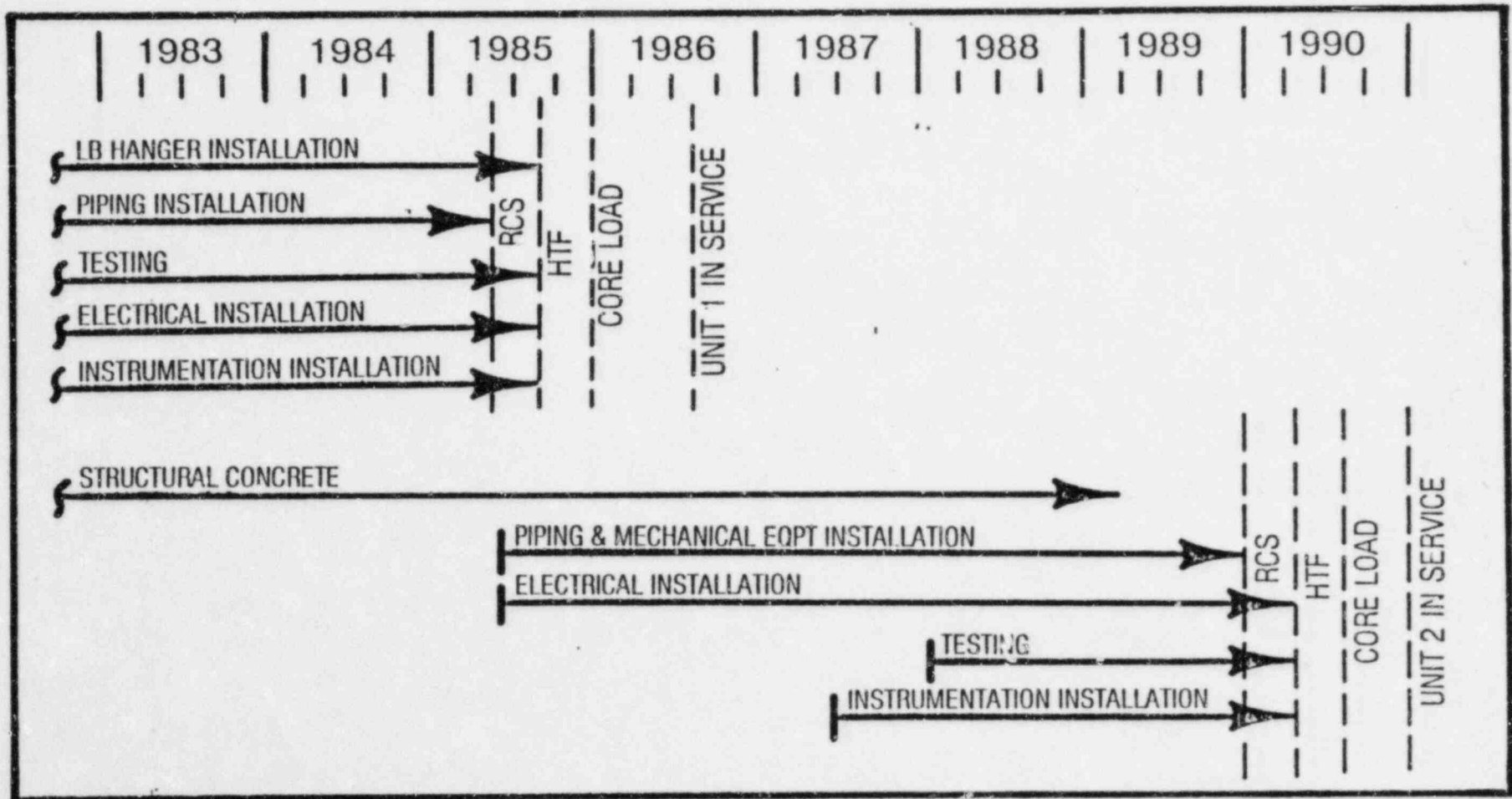
SEABROOK STATION UNIT 1

AND COMMON

CASELOAD FORECAST PANEL

March 13, 1984

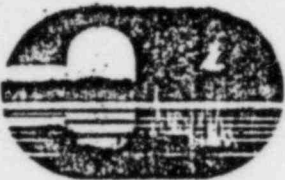
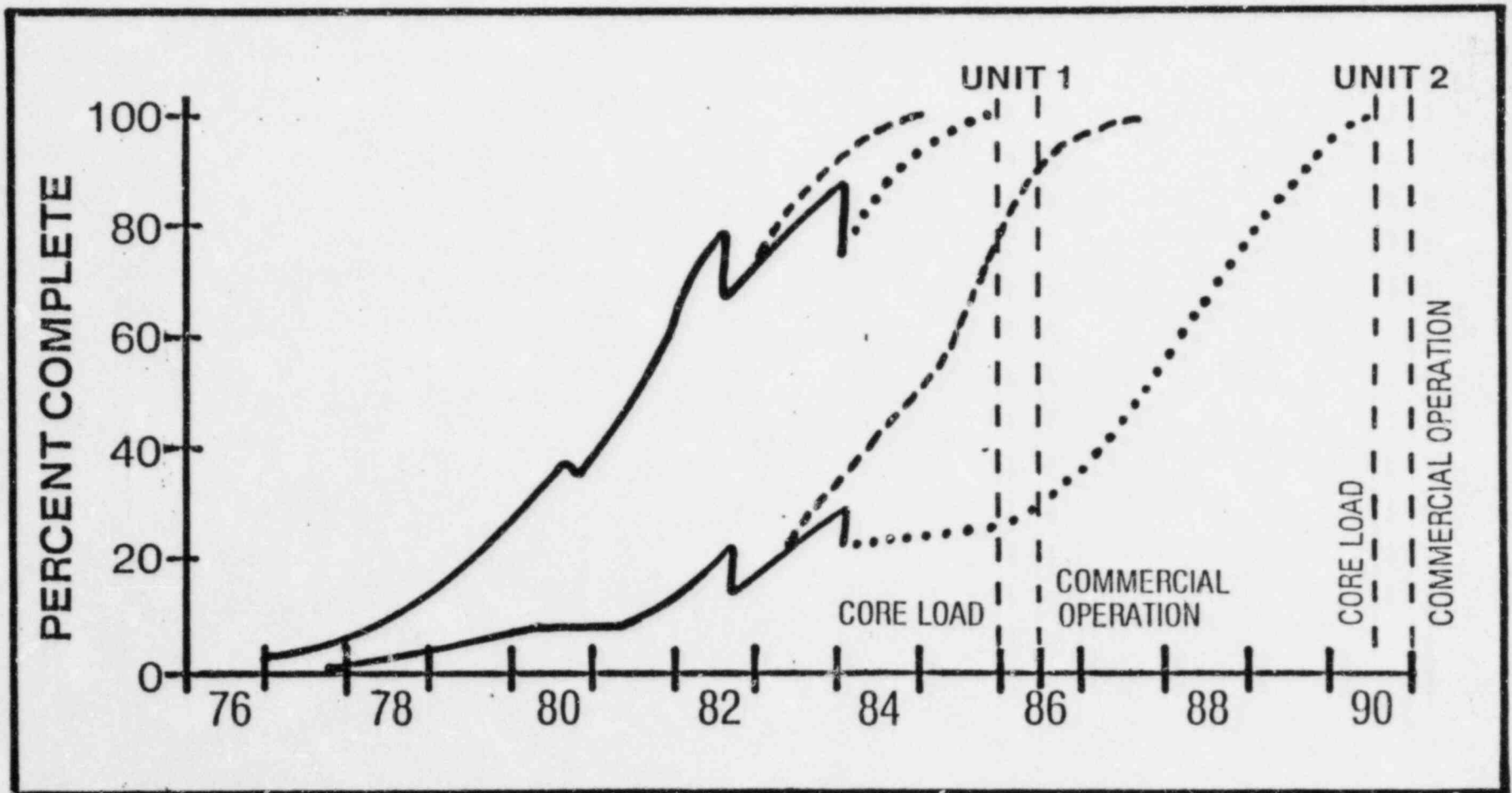
SEABROOK UNITS 1 AND 2 SUMMARY MILESTONE SCHEDULE



PUBLIC SERVICE OF NEW HAMPSHIRE

PSNH

CONSTRUCTION PROGRESS TOTAL PROJECT



PUBLIC SERVICE OF NEW HAMPSHIRE

PSNH

TOTAL PROJECT
PERFORMANCE RATE

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>		<u>Variance From Target</u>	
			<u>To Date</u>	<u>Month</u>	<u>To Date</u>	<u>Month</u>
(1983)						
January			70%	-		
February			72%	2%		
March			74%	2%		
April			75%	1%		
May			78%	3%		
June			80%	2%		
July			81%	1%		
August			83%	2%		
September			85%	2%		
October			86%	1%		
November			88%	2%		
December			73.24%	*		
(1984)						
January			74.44%	1.2%		
February	75.97%	1.53%				
March	77.95%	1.98%				
April	79.73%	1.78%				
May	81.83%	2.10%				
June	83.49%	1.66%				
July	85.02%	1.53%				
August	86.88%	1.86%				
September	88.08%	1.20%				
October	89.46%	1.38%				
November	90.87%	1.41%				
December	92.23%	1.36%				

*NOTE: Percentage drop due to revised estimate.

7

TOTAL PROJECT
PERFORMANCE RATE

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>	<u>Variance</u>
			<u>To Date</u> <u>Month</u>	<u>From Target</u>
			<u>To Date</u> <u>Month</u>	<u>To Date</u> <u>Month</u>
(1985)				
January	93.52%	1.29%		
February	94.56%	1.04%		
March	95.54%	.98%		
April	96.43%	.89%		
May	97.39%	.96%		
June	98.17%	.78%		
July	98.82%	.65%		
August	99.40%	.58%		
September	99.80%	.40%		
October	99.94%	.14%		
November	99.98%	.04%		
December	100.00%	.02%		

986 January

February

March

April

May

June

July

August

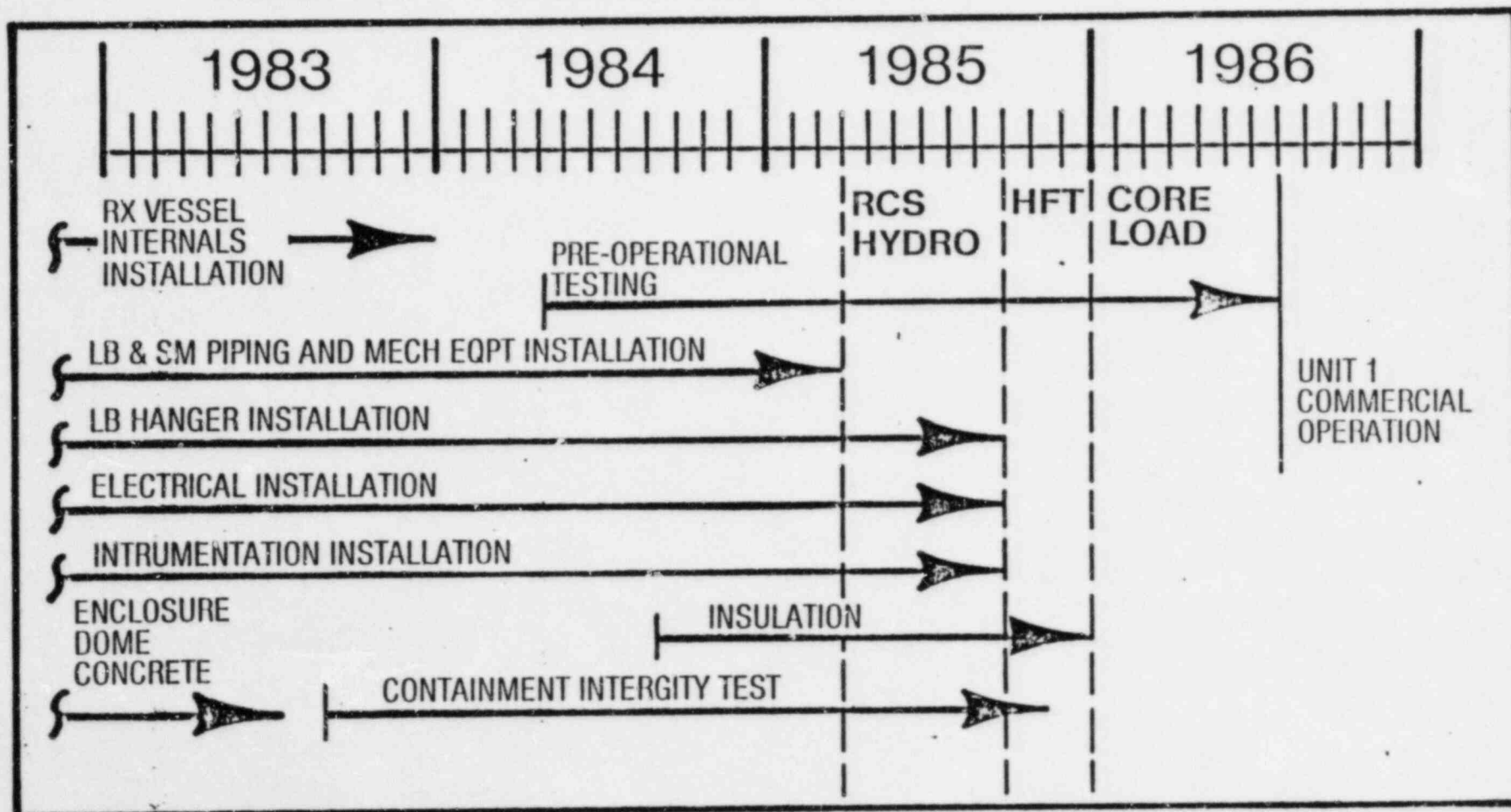
September

SEABROOK STATION
UNIT 1 AND COMMON FACILITIES

<u>STRUCTURE</u>	<u>PERCENT COMPLETE</u>
UNIT #1 AND COMMON	74.44
CONTAINMENT BUILDING	68
TURBINE BUILDING	84
CONTROL BUILDING	83
DIESFL GENERATOR BUILDING	80
PRIMARY AUXILIARY BUILDING	60
FUEL STORAGE BUILDING	87
WASTE PROCESS	65
CIRCULATING WATER/SERVICE WATER PUMP HOUSE	86
TUNNELS	99
COOLING TOWER	88
SWITCH YARD	98
ADMINISTRATION BUILDING	100
ENCLOSURE/MS/FW/PENETRATION/EMERG FEEDWATER PUMP HOUSE	94

PERCENT COMPLETE BASED UPON 1983 ESTIMATE AS OF 1/23/84.

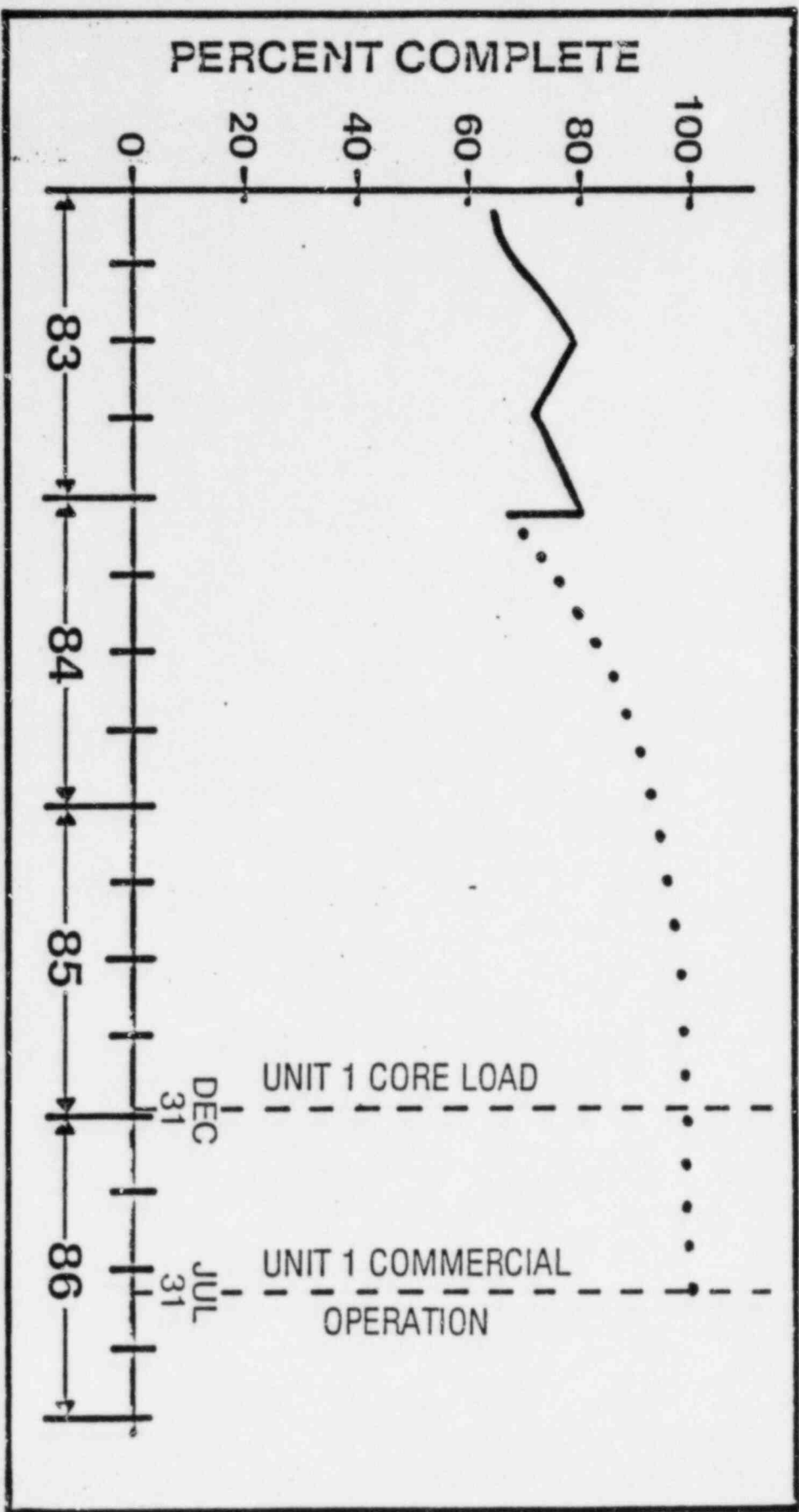
UNIT 1 CONTAINMENT MILESTONES



PUBLIC SERVICE OF NEW HAMPSHIRE

PSNH

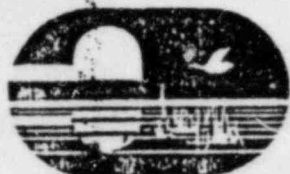
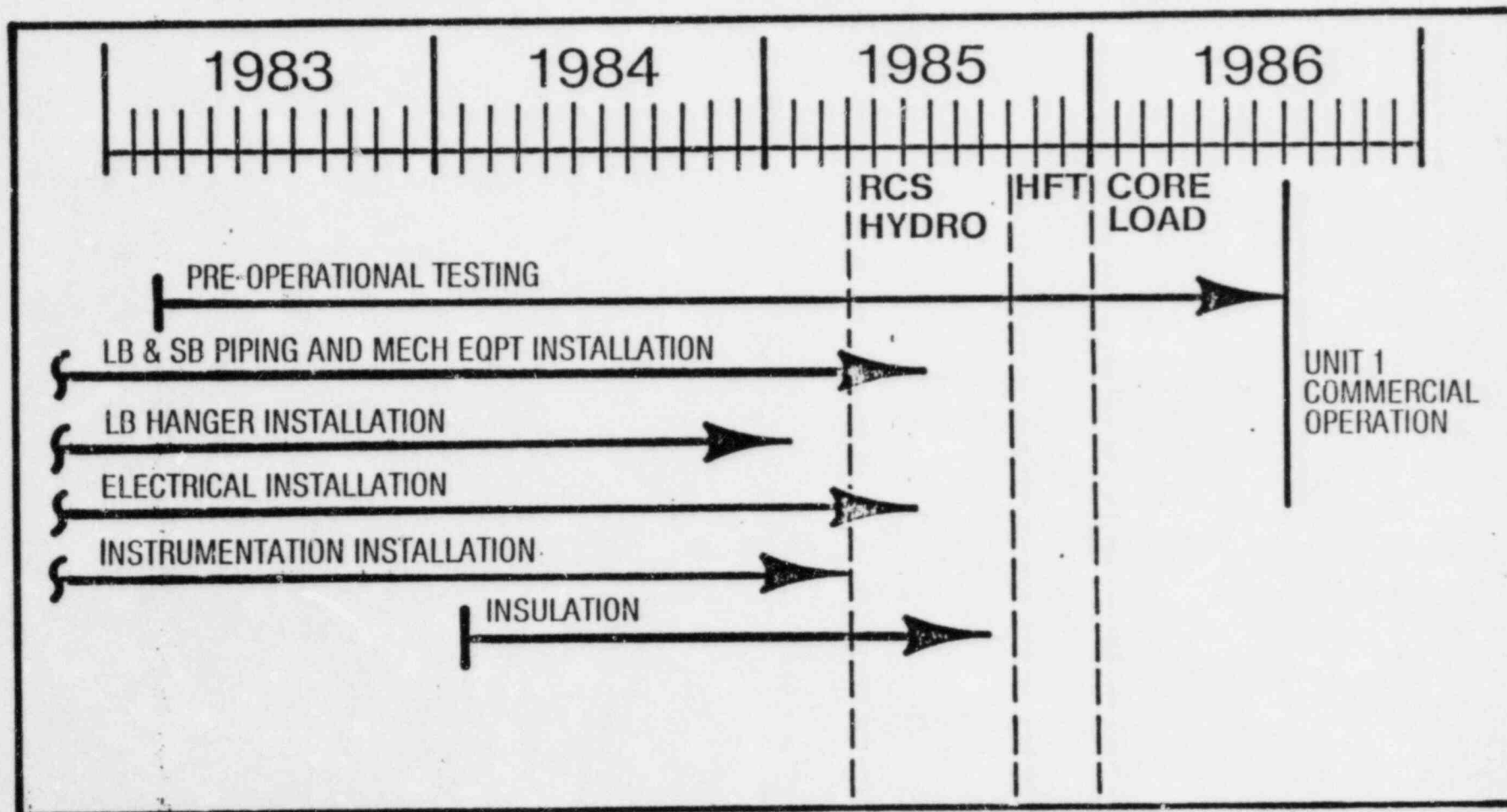
CONTAINMENT BUILDING PERFORMANCE UNIT 1



PUBLIC SERVICE OF NEW HAMPSHIRE

PSNH

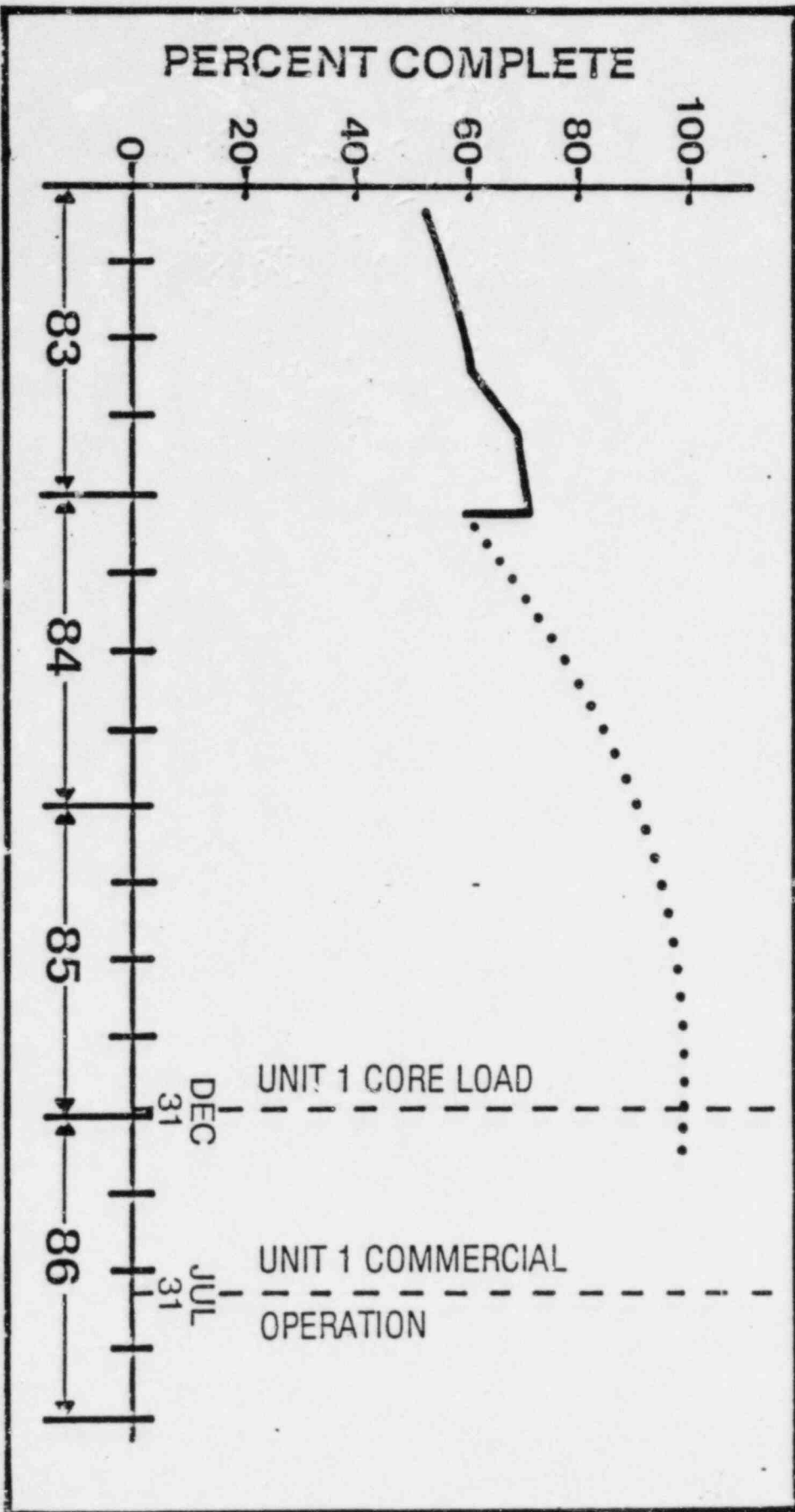
UNIT 1 PRIMARY AUXILIARY BUILDING MILESTONES



PUBLIC SERVICE OF NEW HAMPSHIRE

PSNH

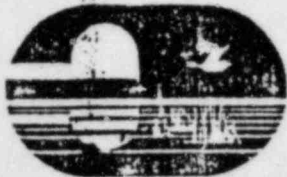
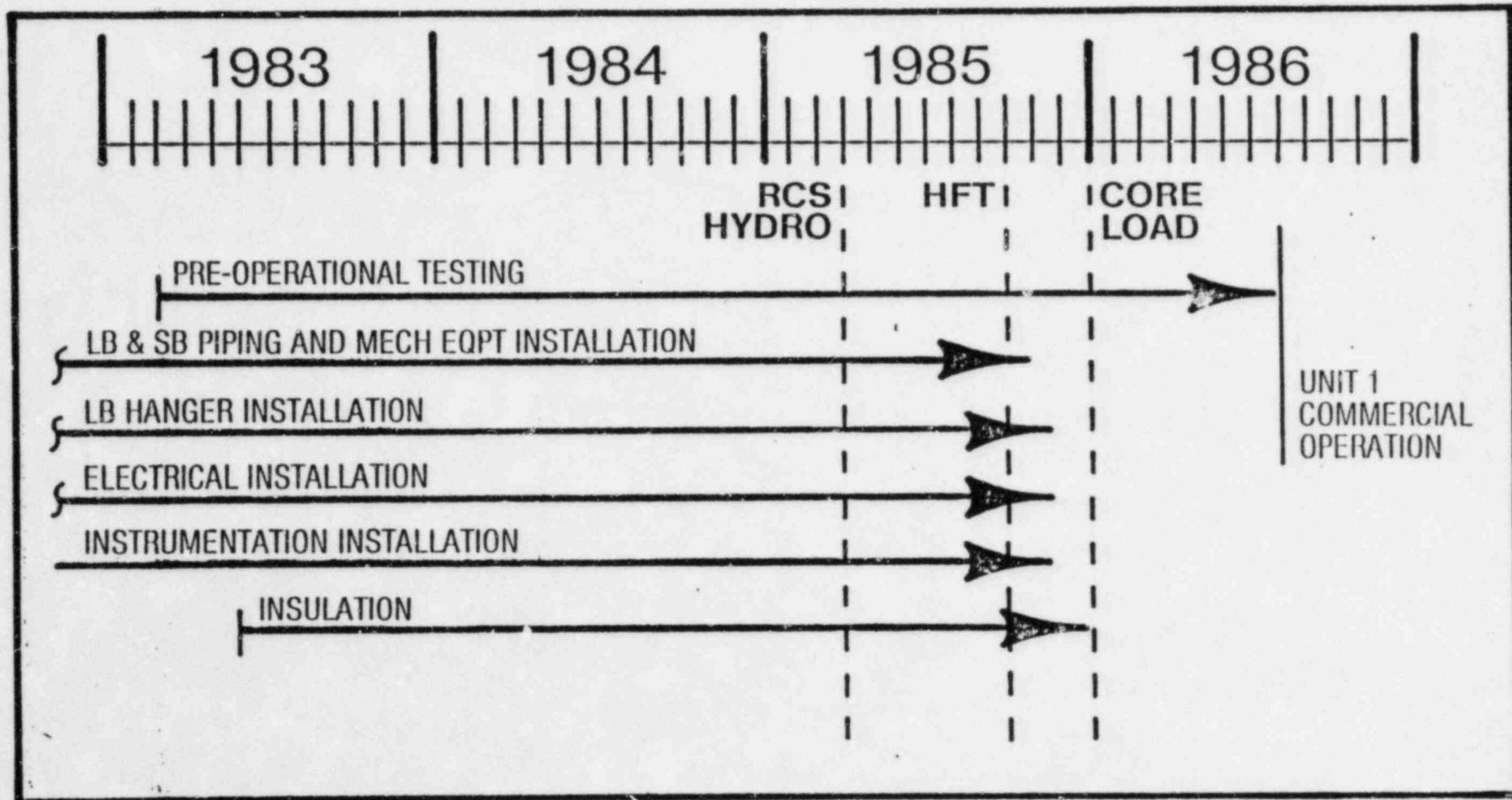
PRIMARY AUXILIARY BUILDING PERFORMANCE UNIT 1



PUBLIC SERVICE OF NEW HAMPSHIRE

PSNH

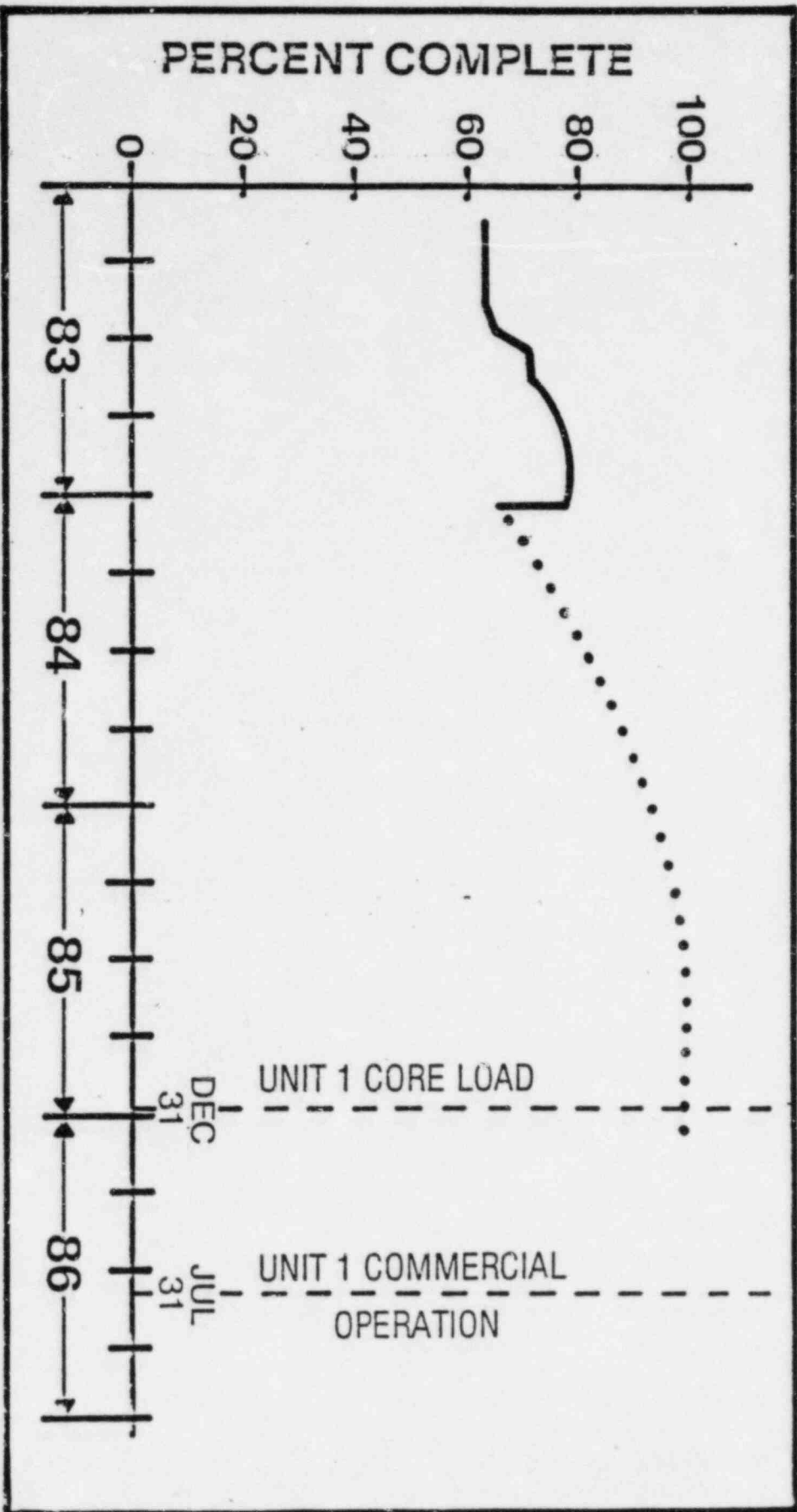
WASTE PROCESSING BUILDING MILESTONES



PUBLIC SERVICE OF NEW HAMPSHIRE

PSNH

WASTE PROCESS BUILDING PERFORMANCE UNIT 1 & COMMON



PUBLIC SERVICE OF NEW HAMPSHIRE

PSNH

MATERIAL PROCUREMENT SUMMARY

PIPE SPOOLS	99.5% RECEIVED
VALVES	98% RECEIVED
EQUIPMENT AND MATERIAL	97% PLACED
ELECTRICAL CABLE	98% RECEIVED

16

SEABROOK STATION
UNIT 1 AND COMMON FACILITIES
PIPE SPOOL PROCUREMENT STATUS

	TOTAL QUANTITY <u>REQUIRED</u>	TOTAL QUANTITY <u>RECEIVED</u>	PERCENT <u>RECEIVED</u>
1. <u>BUILDING</u> TURBINE	3,090	3,081	99.7%
2. PAB	1,421	1,419	99.8%
3. RHR VAULT	297	297	100%
4. WPB	1,384	1,384	100%
5. PENET. AREA	257	257	100%
6. FUEL STOR.	149	149	100%
7. CONTAINMENT	1,392	1,371	98.5%
8. HYDROGEN RECOMB.	22	22	100%
9. DIESEL GEN.	271	271	100%
10. AUX. BOILER	131	131	100%
11. ADM	96	96	100%
12. COOLING TOWER	63	61	97%
13. RCA WALKWAY	10	10	100%
14. WATER TREAT.	79	79	100%
15. MS & FW CHASE	567	567	100%
16. TANK FARM	455	451	99.1%
17. EMERG. FWPH	128	128	100%
18. CW & SW PH	227	213	93.8%
19. CONTROL	64	64	100%
20. STM. GEN. BLWDN.	98	98	100%
21. PIPE TUNNEL	23	23	100%
22. FAN ENCLOSURE	53	53	100%
23. YARD	1,193	1,193	100%
24. CHLORINATION	28	26	92%
25. FIRE PUMPHOUSE BY SUBCONTRACTOR			100%
DELIVERY & INSTALLATION COMPLETED			
26. OTHER AREAS	6	4	66.7%
TOTAL	11,504	11,448	99.5%

17

SEABROOK STATION
UNIT 1 AND COMMON FACILITIES
VALVE PROCUREMENT STATUS

<u>BUILDING</u>	TOTAL QUANTITY <u>REQUIRED</u>	TOTAL QUANTITY <u>RECEIVED</u>	PERCENT <u>RECEIVED</u>
1. TURBINE	2,955	2,950	99%
2. PAB	1,439	1,396	97%
3. RHR VAULT	278	275	99%
4. WPB	1,674	1,664	99%
5. PENET. AREA	165	160	97%
6. FUEL STOR.	218	218	100%
7. CONTAINMENT	1,336	1,336	99%
8. HYDROGEN RECOMB.	41	36	88%
9. DIESEL GEN.	501	494	99%
10. AUX. BOILER	327	327	100%
11. ADM	150	150	100%
12. COOLING TOWER	16	16	100%
13. RCA WALKWAY	29	28	97%
14. WATER TREAT.	165	165	100%
15. MS & FW CHASE	298	293	98%
16. TANK FARM	427	420	98%
17. EMERG. FWPH	149	147	99%
18. CW & SW PH	332	315	95%
19. CONTROL	170	170	100%
20. STM. GEN. BLWDN.	400	399	99%
21. PIPE TUNNEL	0	0	0
22. FAN ENCLOSURE	106	106	100%
23. YARD	259	249	96%
24. CHLORINATION	122	121	99%
25. FIRE PUMPHOUSE BY SUBCONTRACTOR	201	197	98%
DELIVERY & INSTALLATION COMPLETED			
26. GUARD HOUSE	274	272	99%
27. OTHER AREAS	2,159	2,015	93%
TOTAL	14,069	13,775	98%

SEABROOK STATION
UNIT 1 AND COMMON FACILITIES
EQUIPMENT AND MATERIAL PROCUREMENT STATUS

<u>DISCIPLINE</u>	<u>TOTAL PURCHASES PLANNED</u>	<u>PURCHASE ORDERS PLACED</u>	<u>PURCHASE ORDERS CLOSED</u>
STRUCTURAL	50	48 (96%)	36 (72%)
MECHANICAL	51	51 (100%)	50 (98%)
ELECTRICAL	47	46 (98%)	40 (85%)
SUBSTATION	15	15 (100%)	15 (100%)
INSTRUMENTATION AND CONTROL	77	77 (100%)	61 (79%)
MECHANICAL SERVICES	34	32 (94%)	24 (71%)
NUCLEAR	72	69 (96%)	55 (76%)
PIPING	40	36 (90%)	21 (53%)
ARCHITECTURAL	<u>9</u>	<u>9</u> (100%)	<u>6</u> (66%)
TOTAL	395	383 (97%)	308 (78%)

SEABROOK STATION
UNIT 1 AND COMMON FACILITIES
CABLE PROCUREMENT STATUS

POWER CABLE 99.5% RECEIVED

CONTROL CABLE 100% RECEIVED

INSTRUMENT CABLE 96% RECEIVED

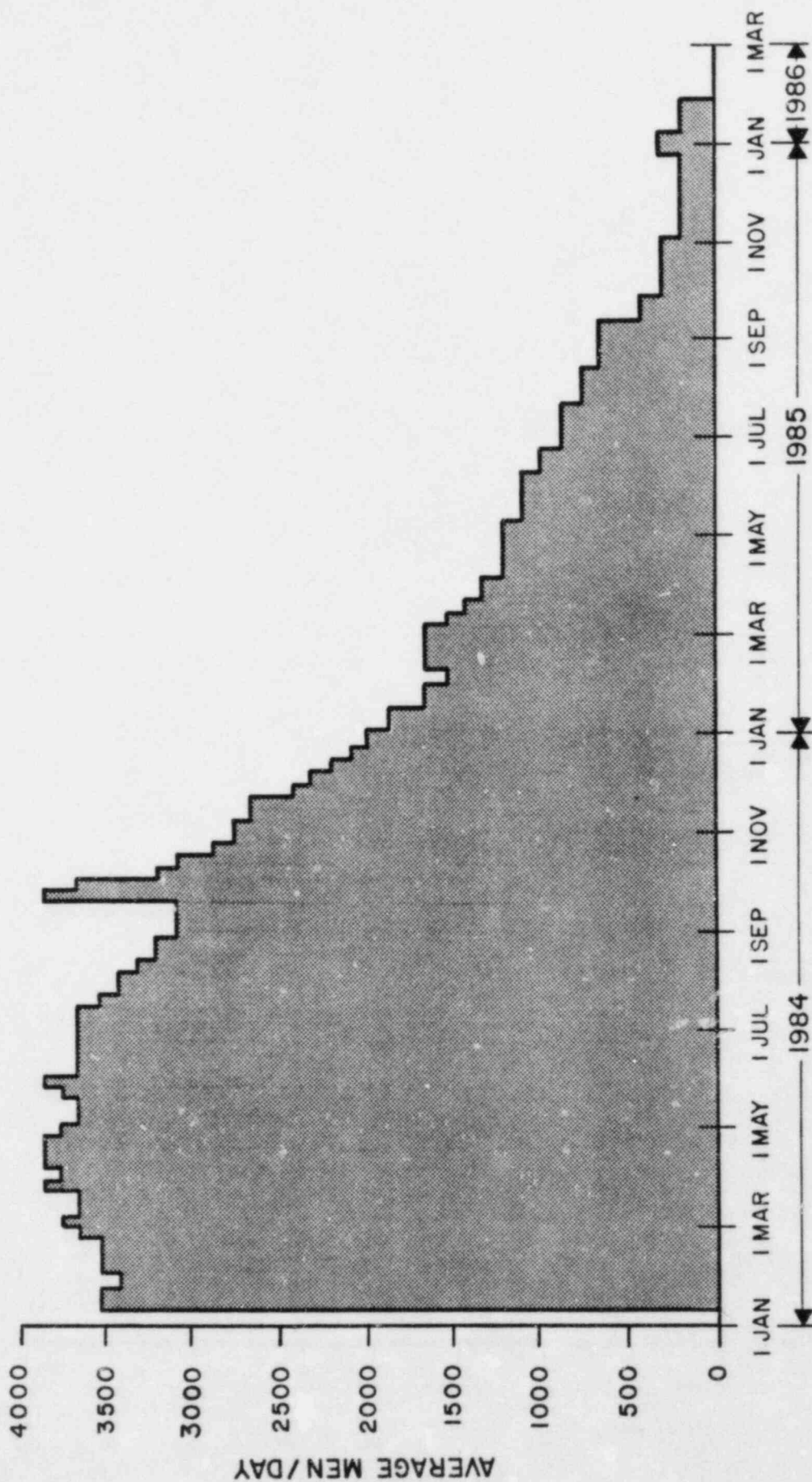
SEABROOK PROJECT
WORK FORCE
UNIT 1 AND COMMON FACILITIES

	<u>2/28/84**</u>	<u>PEAK 1984**</u>
MANUAL	4,948	ESTIMATED
NON-MANUAL	2,670	AT PEAK
TOTAL	7,618	
<u>WORKING 3 SHIFTS</u>	<u>2/28/84</u>	
1ST	6,165	
2ND	1,299	
3RD	<u>154</u>	
TOTAL	7,618	

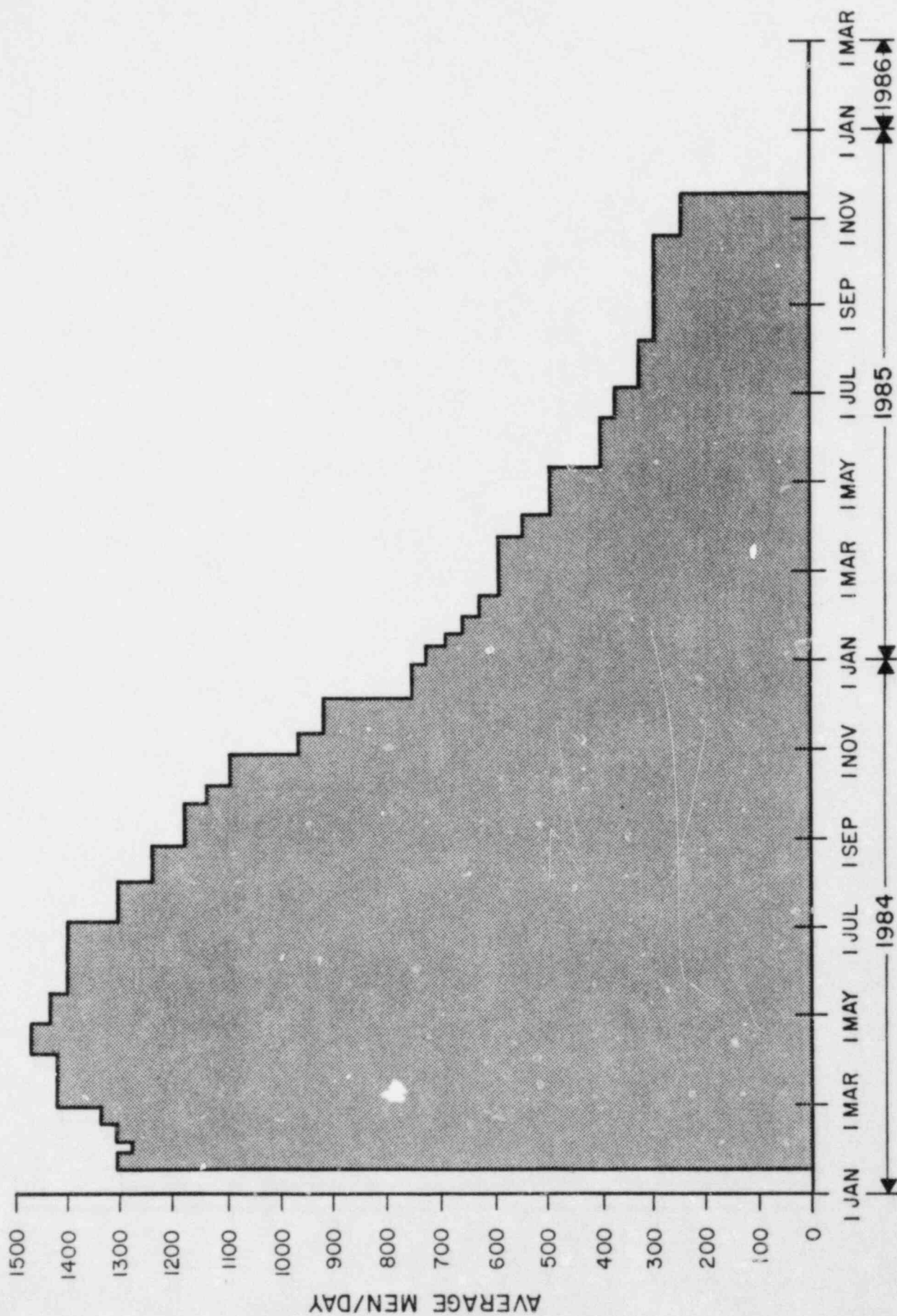
** ON THE PAYROLL
EXCLUDES GUARDS

MARCH, 1984

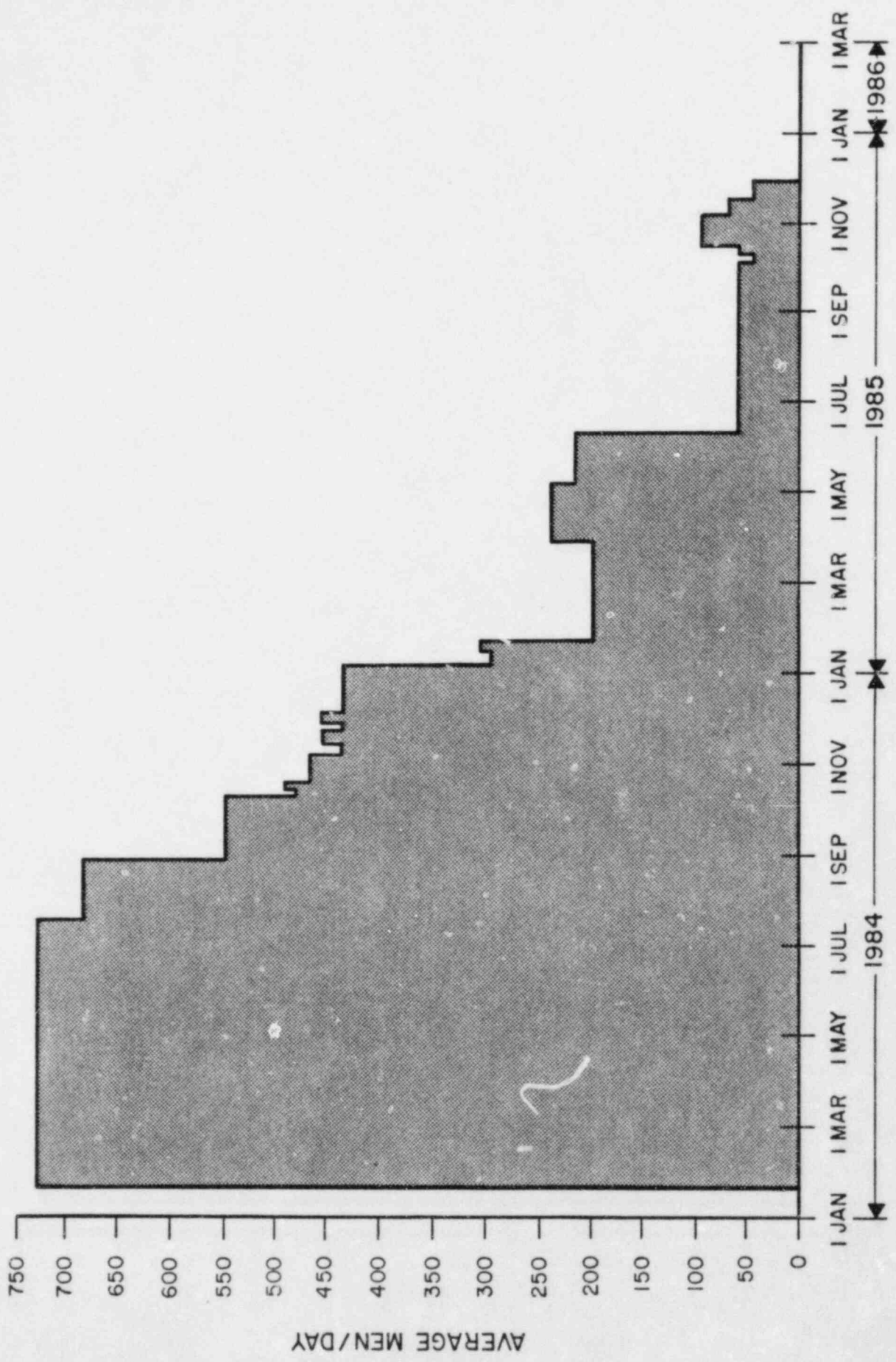
TOTAL PROJECT - All Crafts



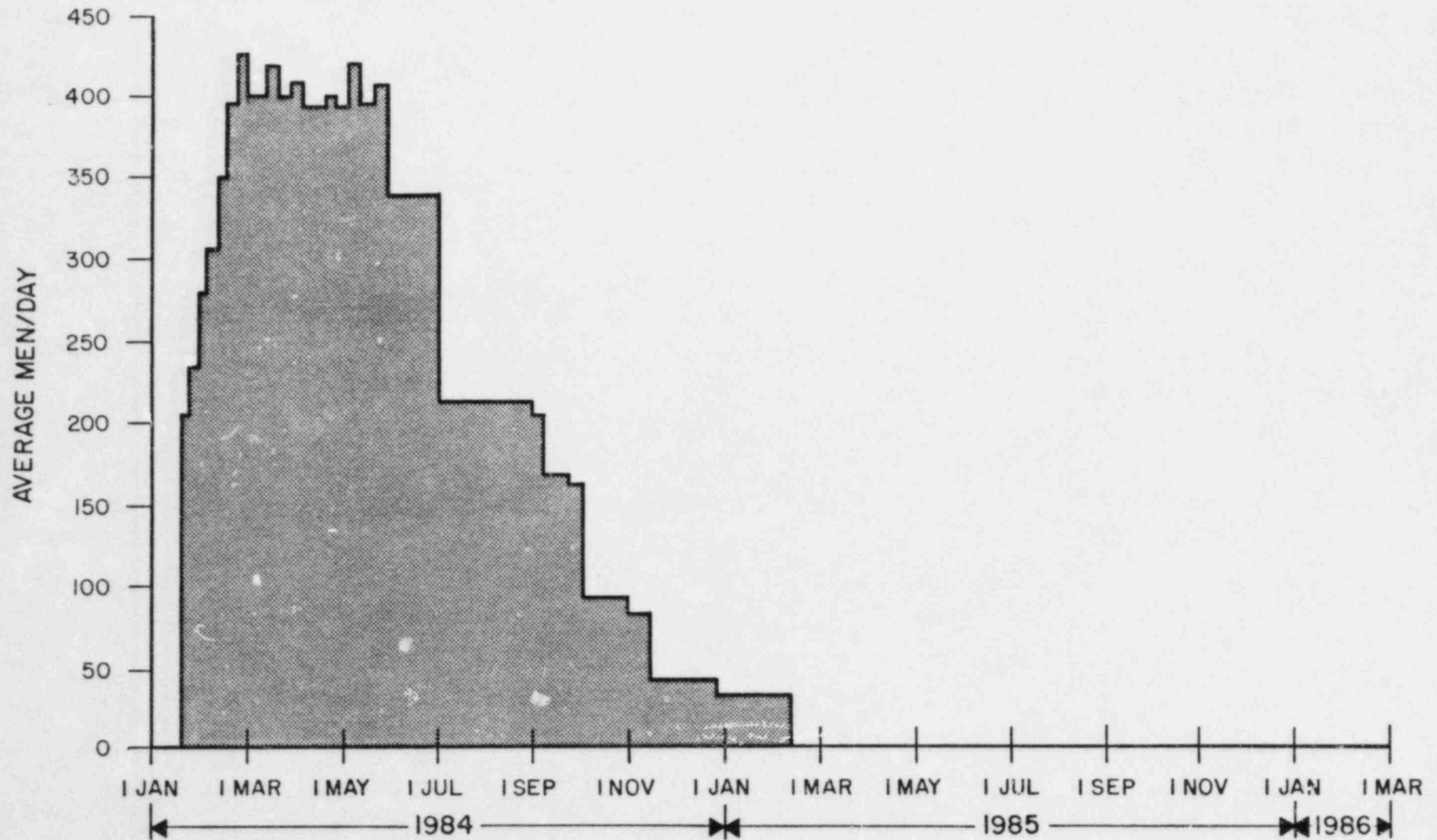
PIPE FITTERS



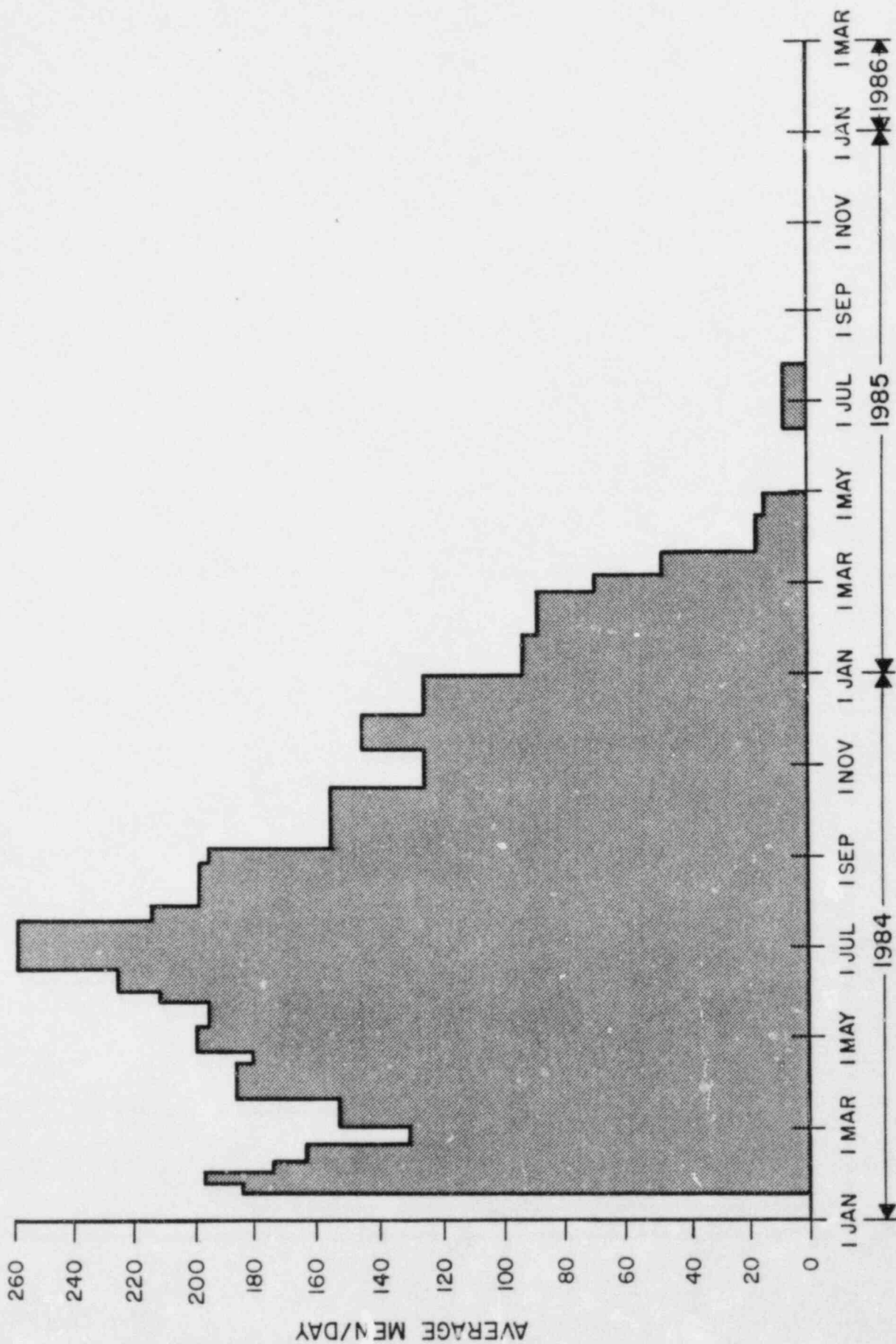
ELECTRICIANS



INSTRUMENT FITTERS



SHEET METAL WORKERS



SEABROOK STATION
UNIT 1 AND COMMON FACILITIES
CRAFT LABOR AGREEMENTS EXPIRATION DATES

ALL LABOR AGREEMENTS ARE FIRM FOR 1984 WITH THE FOLLOWING EXCEPTIONS:

BOILERMAKERS	9/30/84 EXPIRATION
SURVEYORS	10/31/84
FRM QC EMPLOYEES	} CONTRACT UNDER NEGOTIATION
HAH QC EMPLOYEES	

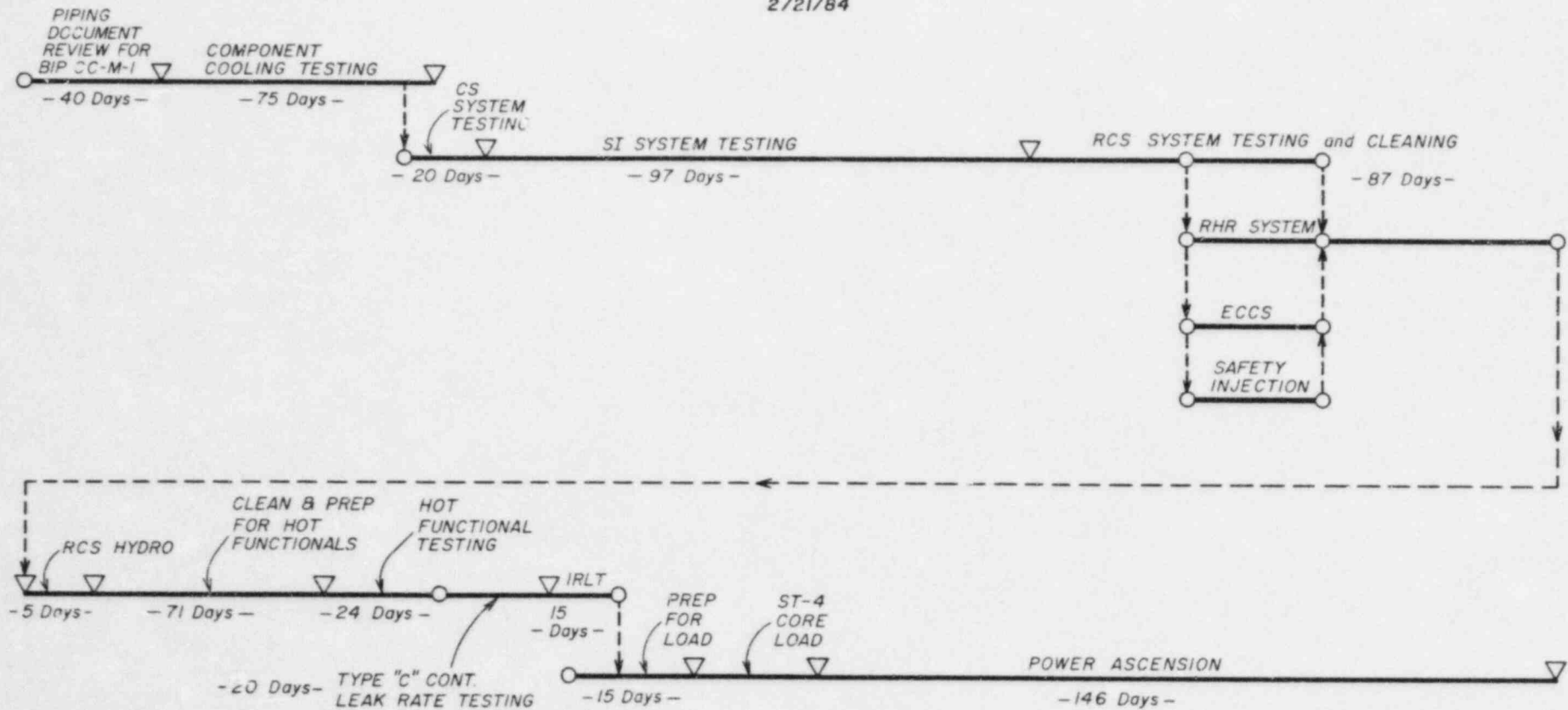
PIPE SUPPORT ENGINEERING STATUS

DESIGN	95% COMPLETE
--------	--------------

DELIVERY	95% RECEIVED
----------	--------------

UNIT 1 & COMMON Critical Path

2/21/84



SEABROOK STATION
UNIT 1 AND COMMON FACILITIES
CONCRETE (CYS)

ITEM	EST. QTY.	QUANTITY INSTALLED TO DATE	QUANTITY REMAINING	% COMPLETE	ESTIMATED UNIT RATE (MH/INIT)	TO DATE UNIT RATE (MH/INIT)
CONTAINMENT BUILDING	34,331	34,276	55	100	8.11	7.89
CONTAINMENT ENCLOSURE	11,120	10,878	242	98	11.97	11.40
TURBINE BUILDING	22,087	22,087	0	100	4.51	4.39
PRIMARY AUXILIARY BLDG.	15,395	15,373	22	100	9.39	9.07
FUEL STORAGE BUILDING	8,528	8,502	26	100	6.54	6.02
ADMINISTRATION BUILDING	5,480	5,480	0	100	6.57	6.53
CONTROL & DIESEL GENERATOR BUILDING	16,156	16,148	8	100	6.35	6.10
WASTE PROCESS BUILDING	28,260	27,836	424	98	6.87	6.84
CIRCULATING & SERVICE WATER PUMP HOUSE	27,923	26,629	1,294	95	5.13	4.70
COOLING TOWER	14,993	14,728	265	98	6.12	5.67
SWITCHYARD	4,327	4,299	28	99	4.85	4.75
FILL CONCRETE	<u>168,327</u>	<u>166,363</u>	<u>1,964</u>	<u>99</u>	<u>1.41</u>	<u>1.41</u>
TOTAL	356,927	352,599	4,328	99	3.90	4.17
TUNNELS	156,459	156,459	0	100	7.10	7.09
OTHERS	94,314	82,466	11,848	87	5.62	4.10

JANUARY 22, 1984

SEABROOK STATION
UNIT 1 AND COMMON FACILITIES
PIPING

<u>ITEM</u>	<u>EST. QTY.</u>	<u>QUANTITY INSTALLED TO DATE</u>	<u>QUANTITY REMAINING</u>	<u>% COMPLETE</u>	<u>ESTIMATED UNIT RATE (MH/UNIT)</u>	<u>TO DATE UNIT RATE (MH/UNIT)</u>
(1)LARGE BORE PIPE (LF)	247,184	178,010	69,174	72	3.57	4.80
LARGE BORE PIPE HANGERS (EA)	8,817	6,608	2,209	75	161.55	127.58
(2)SMALL BORE PIPE (LF)	148,499	105,670	42,829	71	13.52	5.36
CIRCULATING WATER PIPE (LF)	8,346	8,346	0	100	19.93	19.93

(1)2-1/2" AND OVER; INCLUDES YARD AND BUILDING PIPING.

(2) 2" AND UNDER; INCLUDES MANHOURS FOR: HANGERS, VALVES, WELDS, SPECIALTIES, ETC.

JANUARY 22, 1984

31

PIPE HANGER
SUPPORT POINTS
TOTAL PROJECT

AS BUILT

<u>CLASS</u>	<u>LARGE BORE</u>	<u>SMALL BORE</u>	<u>TOTAL</u>	<u>LARGE BORE</u>	<u>SMALL BORE</u>	<u>TOTAL</u>
ASME CLASS 1	235	195	430	13	1	14
ASME CLASS 2	1278	1680	2958	135	94	229
ASME CLASS 3	1631	976	2607	198	108	306
NNS-1	2292	5057	7349	142	107	249
NNS	5881	7032	12913	152	17	169
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	11317	14940	26257	640	327	967

32.

PIPE HANGER
SUPPORT POINTS

CONTAINMENT

AS BUILT

<u>CLASS</u>	<u>LARGE BORE</u>	<u>SMALL BORE</u>	<u>TOTAL</u>	<u>LARGE BORE</u>	<u>SMALL BORE</u>	<u>TOTAL</u>
ASME CLASS 1	235	195	430	13	1	14
ASME CLASS 2	355	699	1054	40	66	106
ASME CLASS 3	623	47	670	58	3	61
NNS-1	479	1743	2222	0	0	0
NNS	-	1	1	0	0	0
	<hr/> 1692	<hr/> 2685	<hr/> 4377	<hr/> 111	<hr/> 70	<hr/> 181

SEABROOK STATION
UNIT 1 AND COMMON FACILITIES
ELECTRICAL

ITEM	EST. QTY.	QUANTITY INSTALLED TO DATE	QUANTITY REMAINING	% COMPLETE	ESTIMATED UNIT RATE (MH/INIT)	TO DATE UNIT RATE (MH/INIT)
CABLE TRAY (LF)	89,092	86,715	2,377	97	1.32	1.25
CONDUIT EMBEDDED & DUCT (LF)	233,105	200,523	32,582	86	.81	.54
CONDUIT RIGID (LF)	349,295	310,964	38,331	89	1.20	1.06
CABLE (LF)						
POWER	1,180,900	815,635	365,265	69	.12	.11
CONTROL	2,040,600	1,929,800	110,800	95	.09	.08
SPECIALTY	150,000	4,292	145,708	3	.10	.06
INSTRUMENTATION	1,765,000	1,555,696	209,304	88	.09	.06
PLANT LIGHTING	572,735	397,127	175,608	69	.20	.20
TERMINATIONS (EA)						
POWER	43,229	18,534	24,695	43	1.66	1.27
CONTROL	76,750	56,738	20,012	74	1.10	.78
SPECIALTY	4,500	-	4,500	-	1.10	-
INSTRUMENTATION	88,700	50,099	38,601	56	1.10	.68
PLANT LIGHTING	-	-	-	-	-	-

JANUARY 22, 1984

VII-3

SEABROOK STATION
UNIT 1 AND COMMON FACILITIES
INSTRUMENTATION

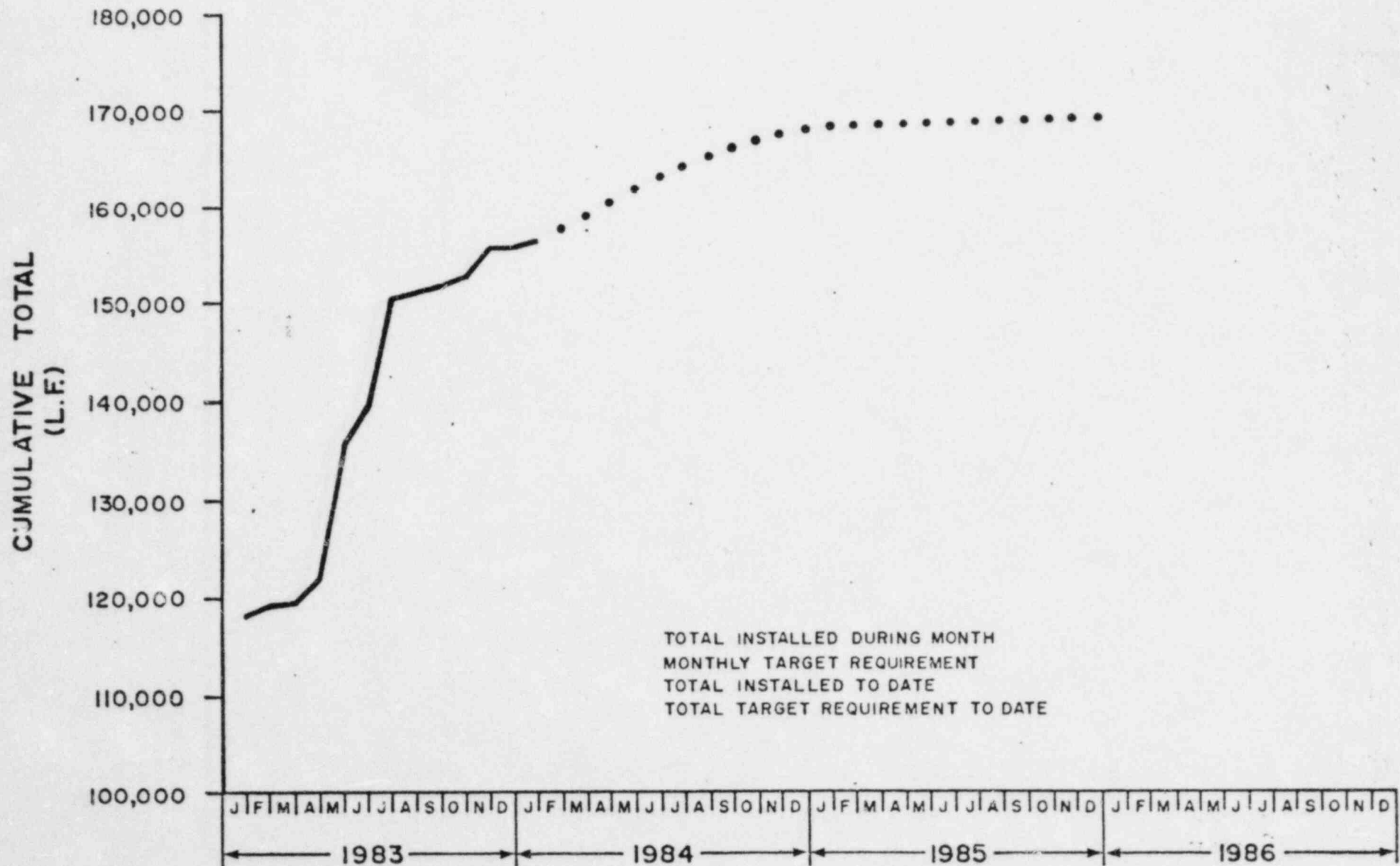
<u>ITEM</u>	<u>EST. QTY.</u>	<u>QUANTITY INSTALLED TO DATE</u>	<u>QUANTITY REMAINING</u>	<u>% COMPLETE</u>	<u>ESTIMATED INIT RATE (MH/INIT)</u>	<u>TO DATE INIT RATE (MH/INIT)</u>
LOCAL INSTRUMENTS & SUPPORTS (EA)	1,750	1,167	583	67	32.26	33.08
LEVEL COLUMNS (EA)	58	39	19	67	209.14	199.90
TUBING (LF)	178,800	90,414	88,386	51	1.00	1.10
TUBING TERMINATE (EA)	8,935	3,377	5,558	38	4.00	3.71
TRAY SUPPORTS (EA)	13,560	8,297	5,263	61	13.50	15.15
TRAY (LF)	55,935	32,544	23,391	58	1.67	1.58
RACKS (EA)	74	57	17	77	56.08	56.58
INSTRUMENT AIR PIPE SMALL BORE (LF)	11,900	10,349	1,551	87	2.00	1.03
INSTRUMENT AIR PIPE HANGERS-SMALL BORE (EA)	1,970	1,756	214	89	15.71	11.49
INSTRUMENT AIR PIPE LARGE BORE (LF)	13,450	13,063	387	97	3.72	2.08
INSTRUMENT AIR PIPE HANGERS-LARGE BORE (EA)	940	763	177	81	32.20	77.32
INCORE TUBING	5,225	4,351	874	83	4.60	5.84

JANUARY 22, 1984

1983 ESTIMATE
UNIT 1 & COMMON SIGNIFICANT QUANTITIES

<u>COMMODITY</u>	<u>UNIT OF MEASURE</u>	<u>1982 QUANTITY</u>	<u>1983 QUANTITY</u>	<u>CHANGE 1982 TO 1983</u>
LARGE BORE PIPE	LF	177,333	169,767	(-) 7,566
LARGE BORE HANGERS	EA	9,826	9,109	(-) 717
SMALL BORE PIPE	LF	134,189	152,351	18,162
SMALL BORE HANGERS	EA	12,086	13,722	1,636
CABLE TRAY	LF	85,800	89,092	3,292
CONDUIT	LF	498,112	582,400	84,288
CABLE	LF	4,453,950	5,156,500	702,550
TERMINATIONS	EA	182,372	214,005	31,633
INSTRUMENT TRAY	LF	45,520	55,935	10,415
INSTRUMENT TUBING	LF	205,000	184,025	(-) 20,975
HVAC DUCT & HANGERS	LB	911,523	920,074	8,551

TOTAL PROJECT LARGE BORE PIPE INSTALLATION RATE UNIT 1 & COMMON



DATA DATE: 1/23/84

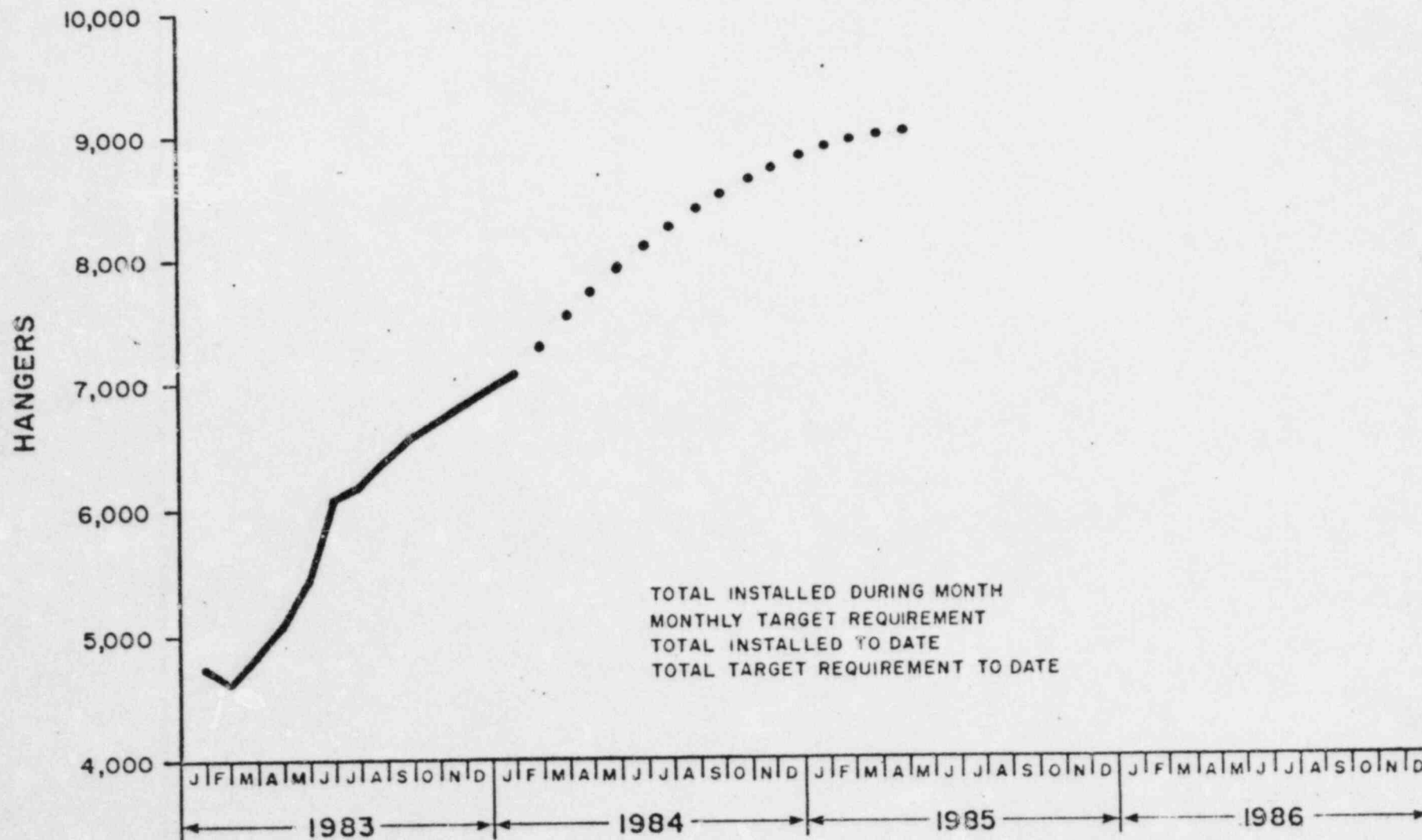
TOTAL PROJECT
LARGE BORE PIPE INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>		<u>Variance</u> <u>From Target</u>	
			<u>To Date</u>	<u>Month</u>	<u>To Date</u>	<u>Month</u>
(1983)						
January			116820	-		
February			118082	1262		
March			118549	467		
April			123144	4595		
May			136014	12870		
June			139366	3352		
July			150200	10834		
August			151253	1053		
September			151883	630		
October			152510	627		
November			155338	2828		
December			156171	833		
(1984)						
January			156512	341		
February	157512	1000	157234	722	<278>	<278>
March	158912	1400				
April	160292	1380				
May	161642	1350				
June	162977	1335				
July	164277	1300				
August	165351	1074				
September	166426	1075				
October	167129	703				
November	167934	805				
December	168442	508				

TOTAL PROJECT
LARGE BORE PIPE INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>	<u>Variance</u>
			<u>To Date</u> <u>Month</u>	<u>From Target</u>
			<u>To Date</u> <u>Month</u>	<u>To Date</u> <u>Month</u>
(1985)				
January	168811	369		
February	169051	240		
March	169188	137		
April	169359	171		
May	169549	190		
June	169614	65		
July	169661	47		
August	169710	49		
September	169735	25		
October	169750	15		
November	169759	9		
December	169767	8		
(1986)				
January				
February				
March				
April				

TOTAL PROJECT LARGE BORE HANGER INSTALLATION RATE UNIT 1



DATA DATE: 1/23/84

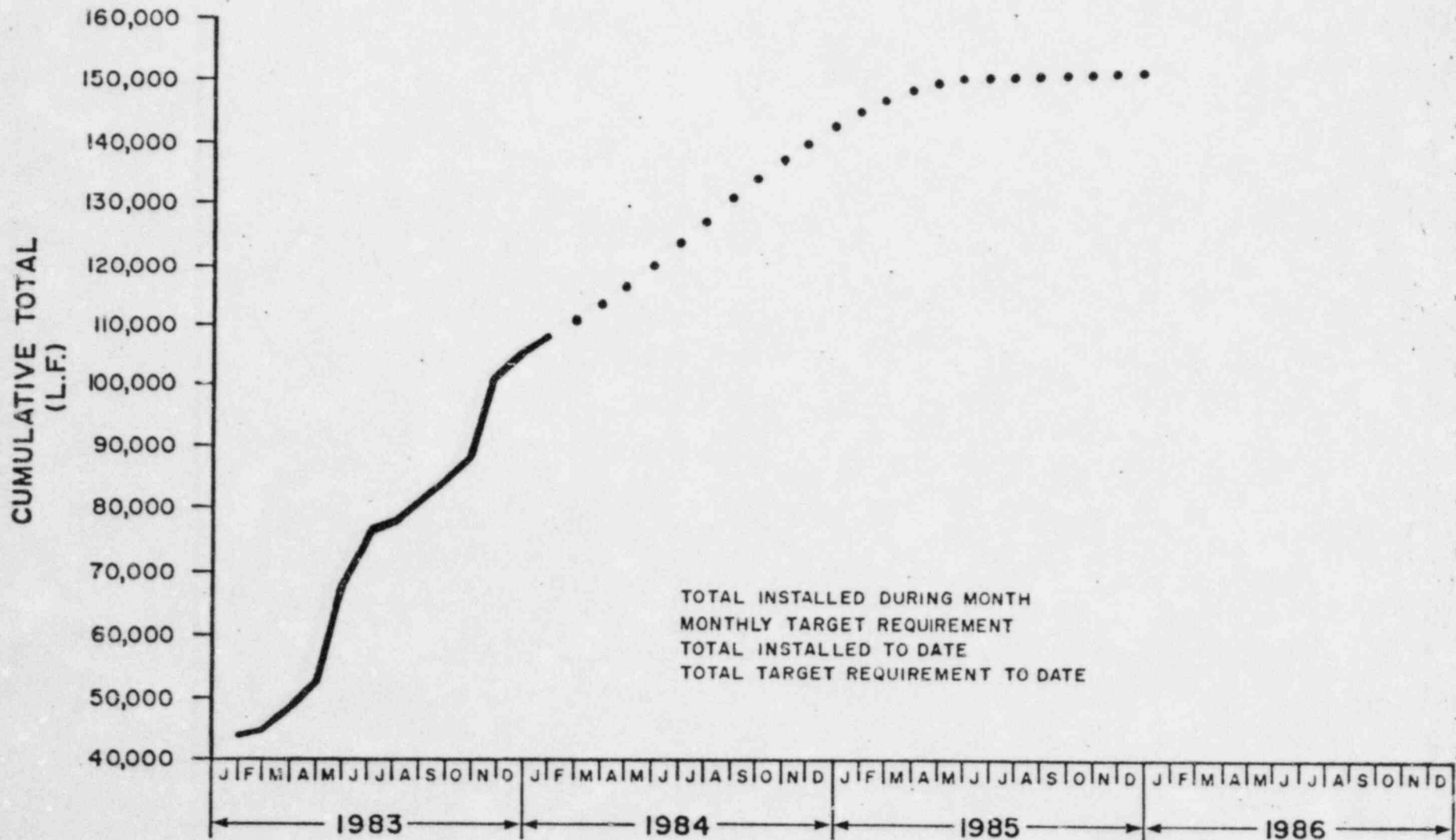
TOTAL PROJECT
LARGE BORE HANGER INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>		<u>Variance From Target</u>	
			<u>To Date</u>	<u>Month</u>	<u>To Date</u>	<u>Month</u>
(1983)						
January			4169	-		
February			4084	(85)		
March			4244	160		
April			4479	235		
May			4778	299		
June			5213	435		
July			5365	152		
August			5622	257		
September			5749	127		
October			5923	174		
November			6269	346		
December			6425	156		
(1984)						
January			6608	183		
February	6788	180	6792	184	4	4
March	6981	193				
April	7236	255				
May	7502	266				
June	7704	202				
July	7912	208				
August	8152	240				
September	8317	165				
October	8464	147				
November	8646	182				
December	8777	131				

TOTAL PROJECT
LARGE BORE HANGERS INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>		<u>Variance</u>	
			<u>To Date</u>	<u>Month</u>	<u>To Date</u>	<u>Month</u>
(1985)						
January	8864	87				
February	8921	57				
March	8957	36				
April	9000	43				
May	9076	76				
June	9093	17				
July	9101	8				
August	9105	4				
September	9108	3				
October	9109	1				

TOTAL PROJECT SMALL BORE PIPE INSTALLATION RATE UNIT 1 & COMMON



DATA DATE: 1/23/84

43

TOTAL PROJECT
SMALL BORE PIPE INSTALLATION

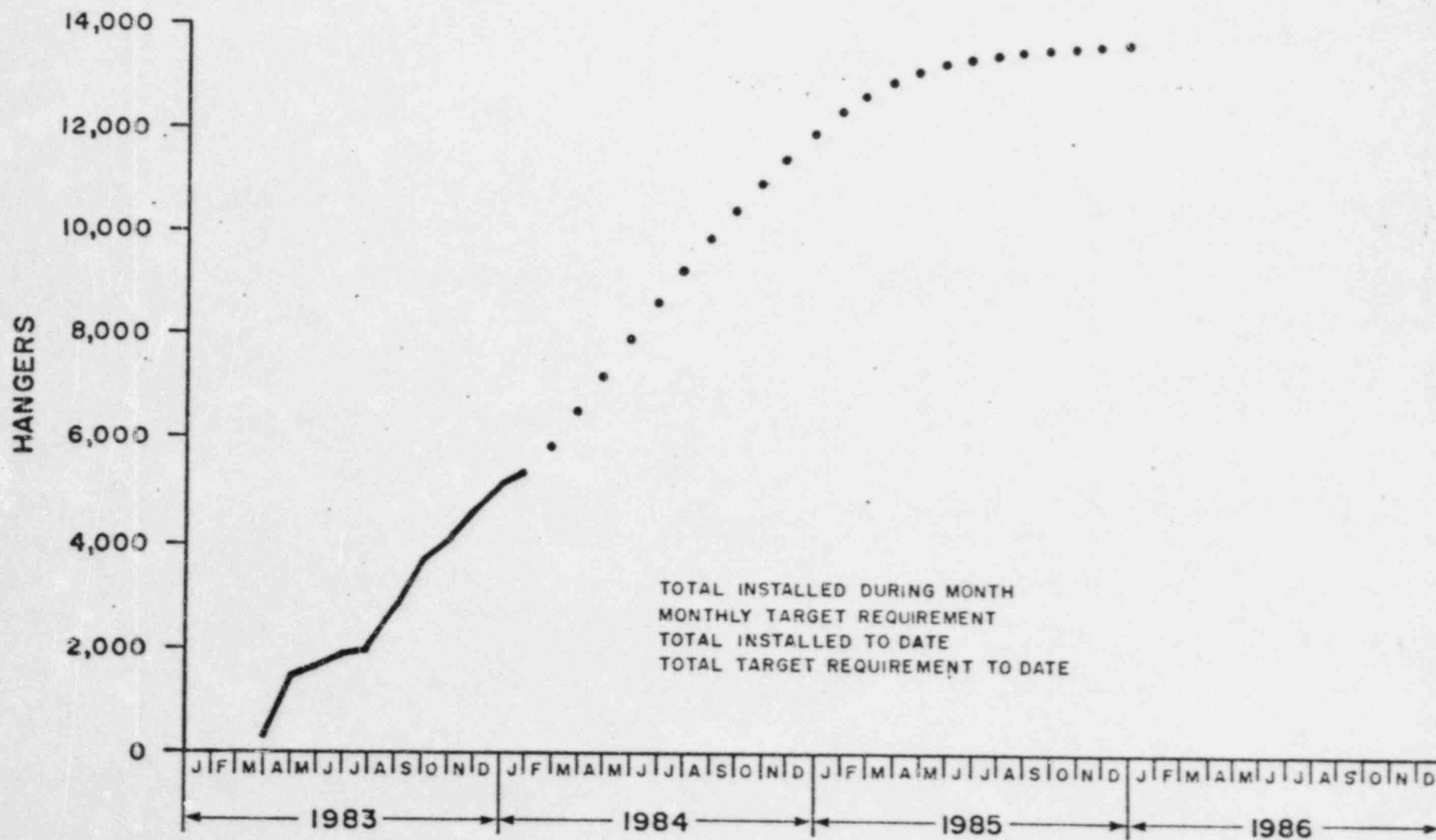
	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>		<u>Variance From Target</u>	
			<u>To Date</u>	<u>Month</u>	<u>To Date</u>	<u>Month</u>
(1983)						
January			43292	-		
February			44692	1400		
March			48542	3850		
April			52979	4437		
May			67068	14089		
June			76095	9027		
July			77145	1050		
August			80552	3407		
September			84586	4034		
October			87252	2666		
November			102161	14909		
December			105584	3423		
(1984)						
January			107415	1831		
February	110735	3320	110152	2737	<583>	<583>
March	113790	3055				
April	116846	3056				
May	120755	3909				
June	123965	3210				
July	126951	2986				
August	130765	3814				
September	133490	2725				
October	136258	2768				
November	139777	3519				
December	142329	2552				

44

TOTAL PROJECT
SMALL BORE PIPE INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>	<u>Variance</u>
			<u>To Date</u> <u>Month</u>	<u>From Target</u>
			<u>To Date</u> <u>Month</u>	<u>To Date</u> <u>Month</u>
(1985)				
January	145079	2750		
February	147054	1975		
March	148490	1436		
April	149657	1167		
May	150574	917		
June	151154	580		
July	151615	461		
August	152003	388		
September	152206	203		
October	152301	95		
November	152338	37		
December	152351	13		
(1986)				
January				
February				
March				
April				

TOTAL PROJECT SMALL BORE HANGER INSTALLATION RATE UNIT 1 & COMMON



DATA DATE: 1/23/84

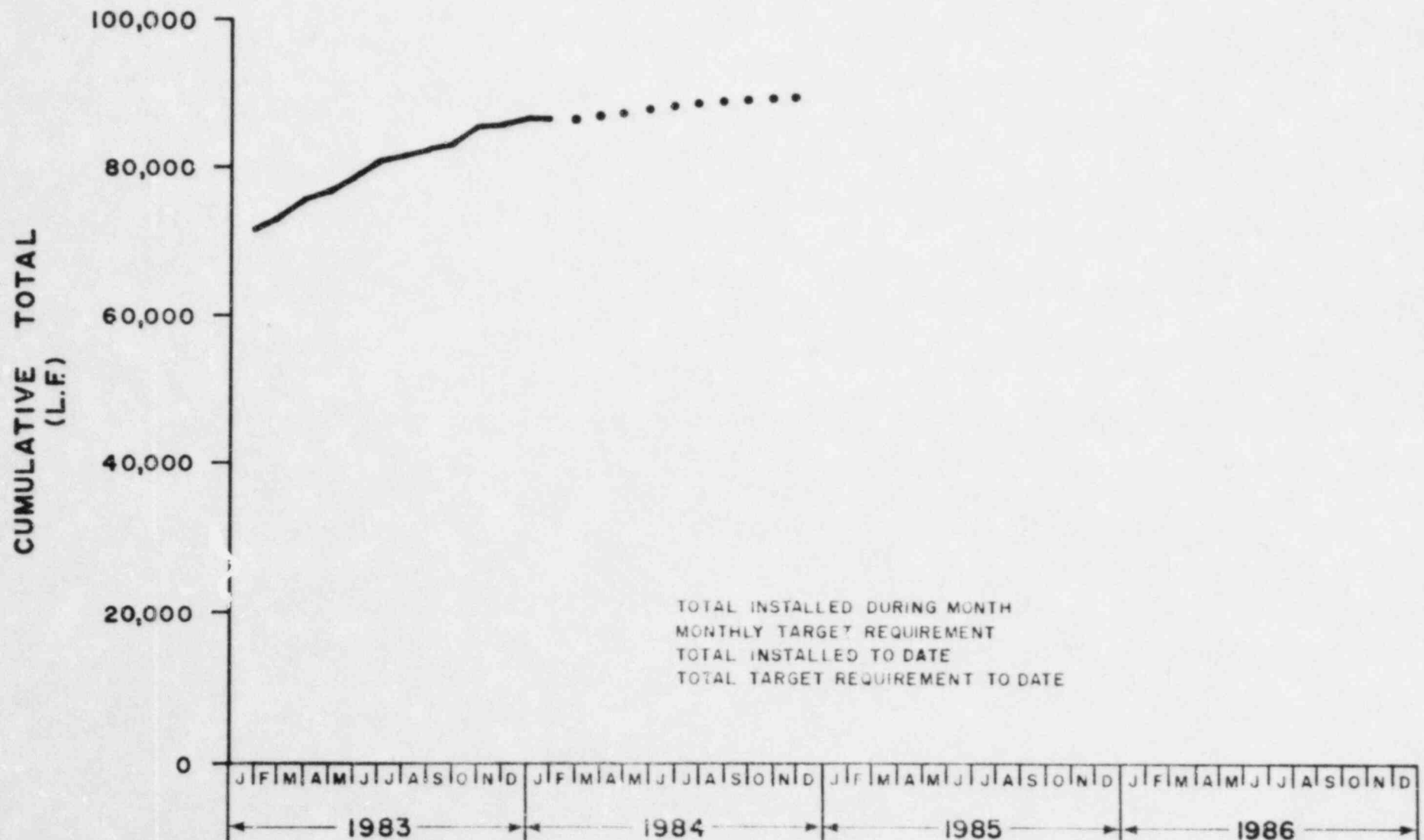
TOTAL PROJECT
SMALL BORE HANGER INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>		<u>Variance</u> <u>From Target</u>	
			<u>To Date</u>	<u>Month</u>	<u>To Date</u>	<u>Month</u>
(1983)						
January						
February						
March			304			
April			1431	1127		
May			1676	245		
June			1924	248		
July			2056	132		
August			2771	715		
September			3715	944		
October			4083	368		
November			4591	508		
December			5073	482		
(1984)						
January			5363	290		
February	5866	503	5554	191	<312>	<312>
March	6492	626				
April	7192	700				
May	7892	700				
June	8555	663				
July	9148	593				
August	9842	694				
September	10367	525				
October	10875	508				
November	11502	627				
December	11951	449				

TOTAL PROJECT
SMALL BORE HANGER INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>	<u>Variance</u>
			<u>To Date</u> <u>Month</u>	<u>From Target</u>
			<u>To Date</u> <u>Month</u>	<u>To Date</u> <u>Month</u>
(1985)				
January	12356	405		
February	12629	273		
March	12898	269		
April	13127	229		
May	13334	207		
June	13432	98		
July	13513	81		
August	13604	91		
September	13654	50		
October	13716	62		
November	13720	4		
December	13722	2		
(1986)				
January				

TOTAL PROJECT CABLE TRAY INSTALLATION RATE UNIT 1 & COMMON



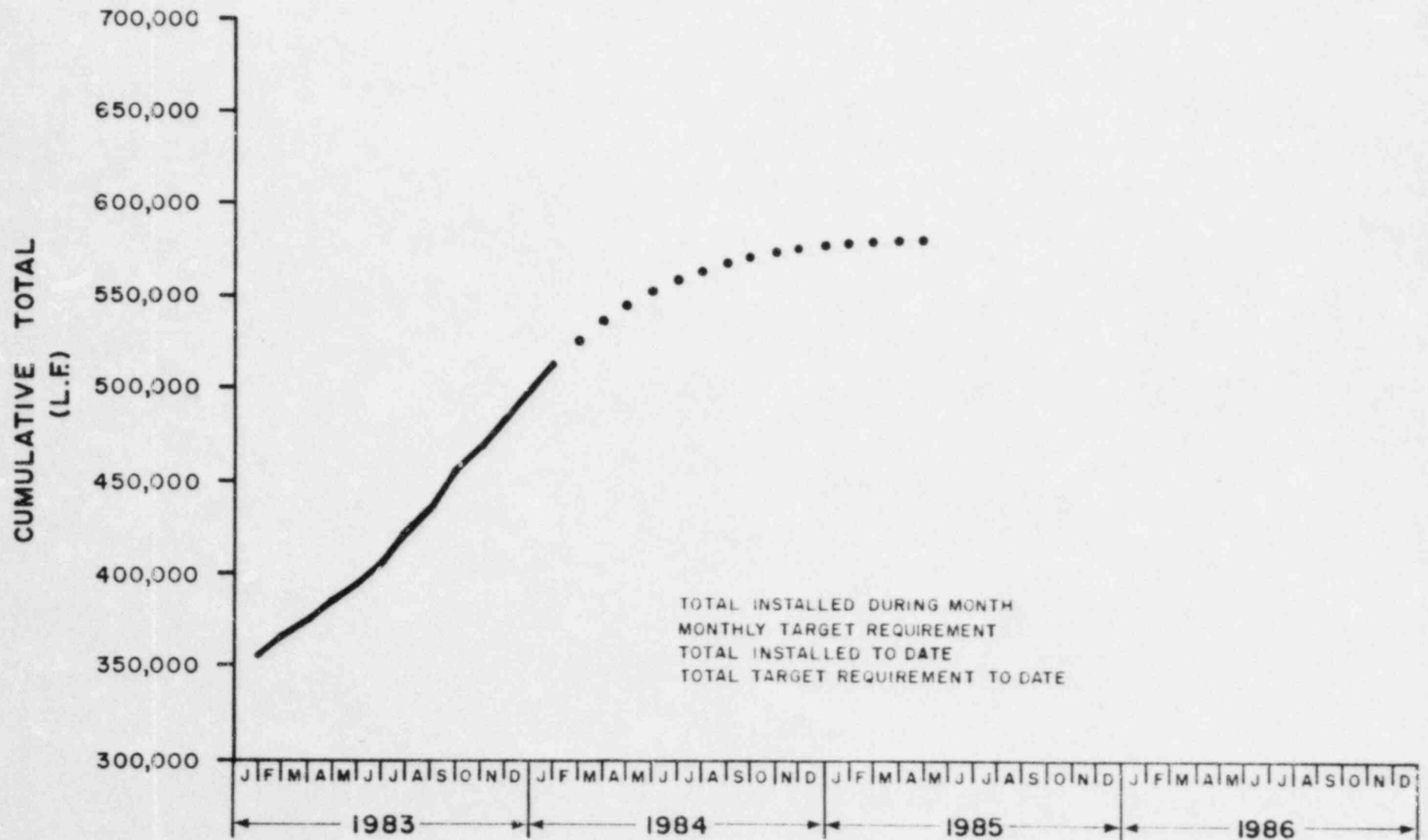
DATA DATE: 1/23/84

87

TOTAL PROJECT
CABLE TRAY INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u> <u>To Date</u>	<u>Month</u>	<u>Variance</u> <u>From Target</u> <u>To Date</u>	<u>Month</u>
(1983)						
January			71,599	-		
February			73,101	1,502		
March			75,728	2,627		
April			76,832	1,104		
May			78,789	1,957		
June			80,653	1,693		
July			81,738	1,085		
August			82,576	838		
September			83,055	479		
October			85,320	2,170		
November			85,876	556		
December			86,579	703		
(1984)						
January			86,715	136		
February	86,851	136	86,964	249	113	113
March	87,023	174				
April	87,461	436				
May	88,058	597				
June	88,618	560				
July	88,828	210				
August	89,036	208				
September	89,076	40				
October	89,086	10				
November	89,092	6				
December						

TOTAL PROJECT RIGID CONDUIT INSTALLATION RATE UNIT 1 & COMMON



DATA DATE: 1/23/84

51

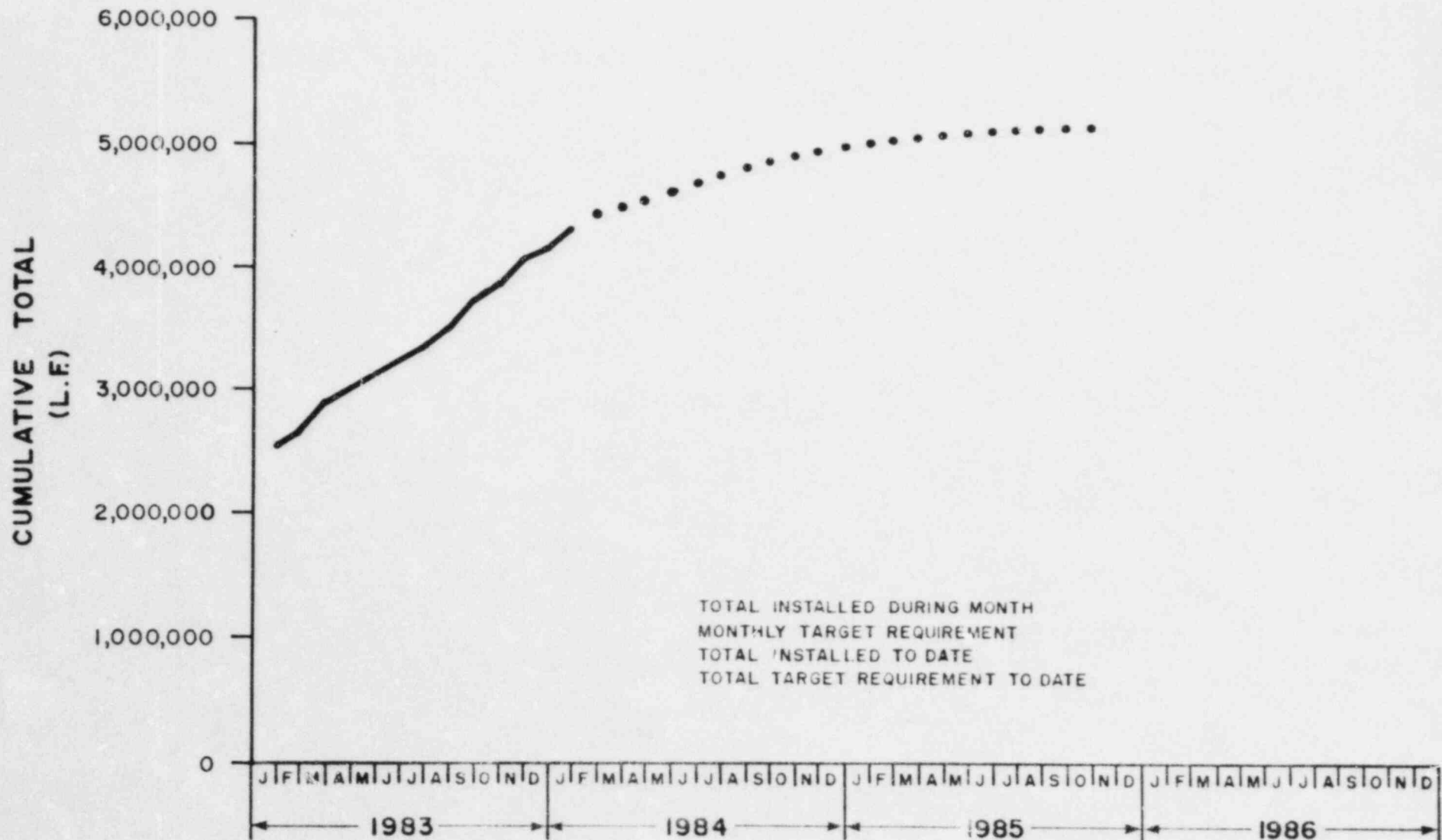
TOTAL PROJECT
RIGID CONDUIT INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>		<u>Variance</u> <u>From Target</u>	
			<u>To Date</u>	<u>Month</u>	<u>To Date</u>	<u>Month</u>
(1983)						
January			356,100	-		
February			367,600	-		
March			376,400	-		
April			385,900	-		
May			394,500	-		
June			405,400	10,683		
July			421,208	15,808		
August			435,750	14,542		
September			456,234	20,484		
October			468,874	12,600		
November			482,394	13,520		
December			499,929	17,535		
(1984)						
January			511,487	11,558		
February	526,000	14,513	525,059	13,572	<941>	<941>
March	537,500	11,500				
April	544,000	6,500				
May	551,000	7,000				
June	558,000	7,000				
July	564,000	6,000				
August	570,000	6,000				
September	573,808	3,808				
October	575,200	1,392				
November	577,030	1,830				
December	578,367	1,337				

TOTAL PROJECT
RIDGID CONDUIT INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>	<u>Variance</u>
			<u>To Date</u> <u>Month</u>	<u>From Target</u>
			<u>To Date</u> <u>Month</u>	<u>To Date</u> <u>Month</u>
(1985)				
January	579,599	1,232		
February	580,299	700		
March	581,036	737		
April	581,743	707		
May	582,093	350		
June	582,400	307		

TOTAL PROJECT CABLE INSTALLATION RATE UNIT 1 & COMMON



DATA DATE: 1/23/84

53

54

TOTAL PROJECT
CABLE INSTALLATION

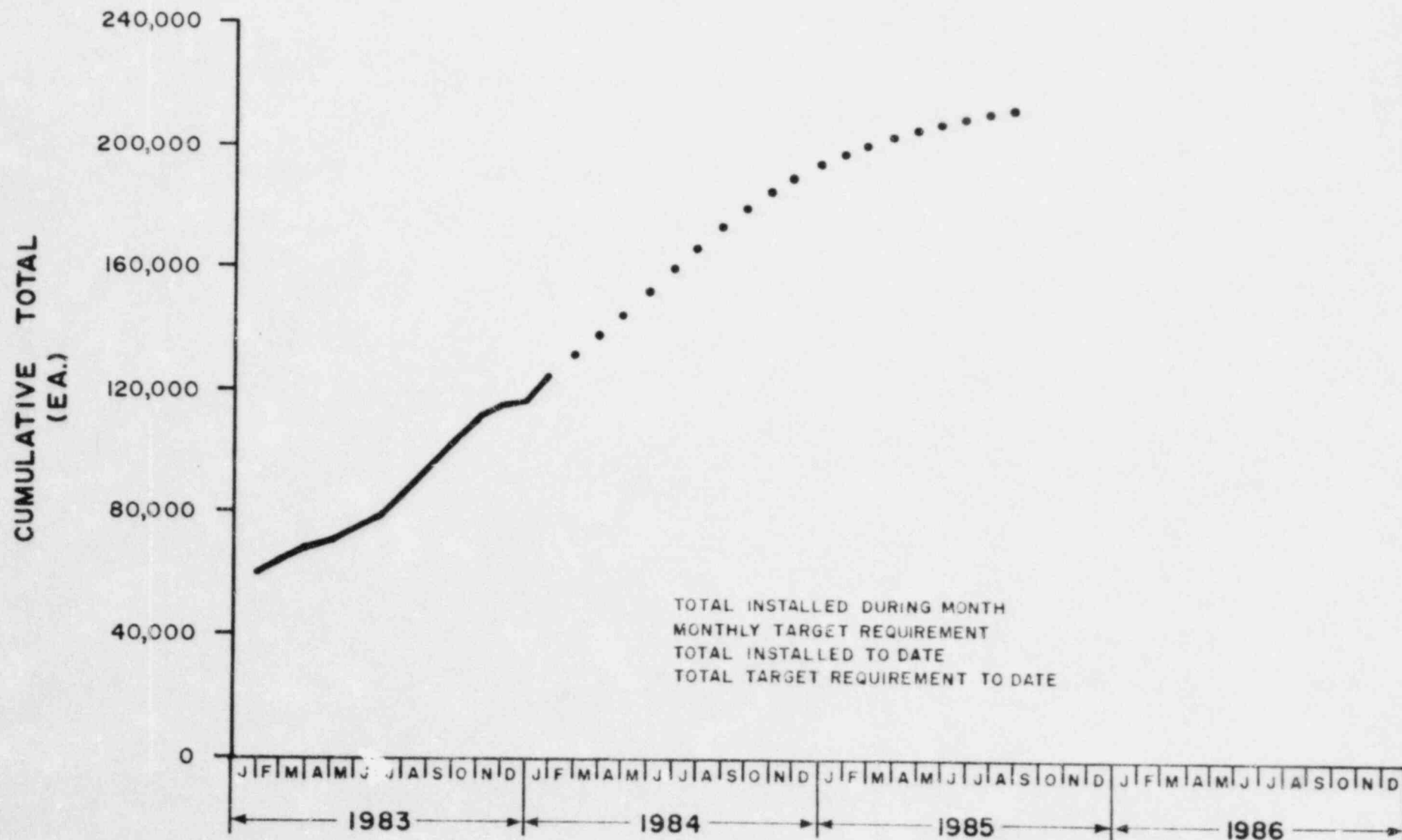
	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>		<u>Variance</u> <u>From Target</u>	
			<u>To Date</u>	<u>Month</u>	<u>To Date</u>	<u>Month</u>
(1983)						
January			2,542,317	137,229		
February			2,695,228	152,911		
March			2,903,470	208,242		
April			3,023,126	119,656		
May			3,142,571	120,571		
June			3,251,134	108,437		
July			3,351,896	100,762		
August			3,502,097	150,201		
September			3,707,214	205,111		
October			3,869,181	161,967		
November			4,056,894	184,111		
December			4,176,149	119,255		
(1984)						
January			4,305,423	129,274		
February	4,450,000	144,577	4,500,951	195,528	50,951	50,951
March	4,510,000	60,000				
April	4,570,000	60,000				
May	4,630,000	60,000				
June	4,700,000	70,000				
July	4,760,000	60,000				
August	4,810,000	50,000				
September	4,860,000	50,000				
October	4,900,000	40,000				
November	4,940,000	40,000				
December	4,975,000	35,000				

55

TOTAL PROJECT
CABLE INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>	<u>Variance</u>
			<u>To Date</u> <u>Month</u>	<u>From Target</u>
			<u>To Date</u> <u>Month</u>	<u>To Date</u> <u>Month</u>
(1985)				
January	5,010,000	35,000		
February	5,040,000	30,000		
March	5,070,000	30,000		
April	5,095,000	25,000		
May	5,115,000	20,000		
June	5,130,000	15,000		
July	5,144,921	14,921		
August	5,152,736	7,815		
September	5,154,520	1,784		
October	5,156,500	1,980		

TOTAL PROJECT TERMINATIONS INSTALLATION RATE UNIT 1 & COMMON



DATA DATE: 1/23/84

26

DATE: 27 FEBRUARY 1984

57

TOTAL PROJECTTERMINATIONS INSTALLATION

<u>DATE</u>	<u>TOTAL TARGET</u>	<u>MONTHLY TARGET</u>	<u>ACTUAL</u>		<u>VARIANCE FROM TARGET</u>	
			<u>TO DATE</u>	<u>MONTH</u>	<u>TO DATE</u>	<u>MONTH</u>
[1983]						
JANUARY			60,818	3,476		
FEBRUARY			64,815	3,996		
MARCH			69,017	4,202		
APRIL			71,178	2,161		
MAY			75,040	3,862		
JUNE			78,732	3,692		
JULY			86,990	8,258		
AUGUST			93,556	6,566		
SEPTEMBER			102,796	9,240		
OCTOBER			110,211	7,415		
NOVEMBER			115,601	5,390		
DECEMBER			120,781	5,180		
[1984]						
JANUARY			125,371	4,590		
FEBRUARY	131,306	5,935	131,230	5,859	<76>	<76>
MARCH	137,306	6,000				
APRIL	146,306	9,000				
MAY	153,306	7,000				
JUNE	160,306	7,000				
JULY	167,306	7,000				
AUGUST	174,306	7,000				
SEPTEMBER	180,306	6,000				
OCTOBER	185,806	5,500				
NOVEMBER	191,324	5,518				
DECEMBER	195,000	3,676				

DATE: 27 FEBRUARY 1984

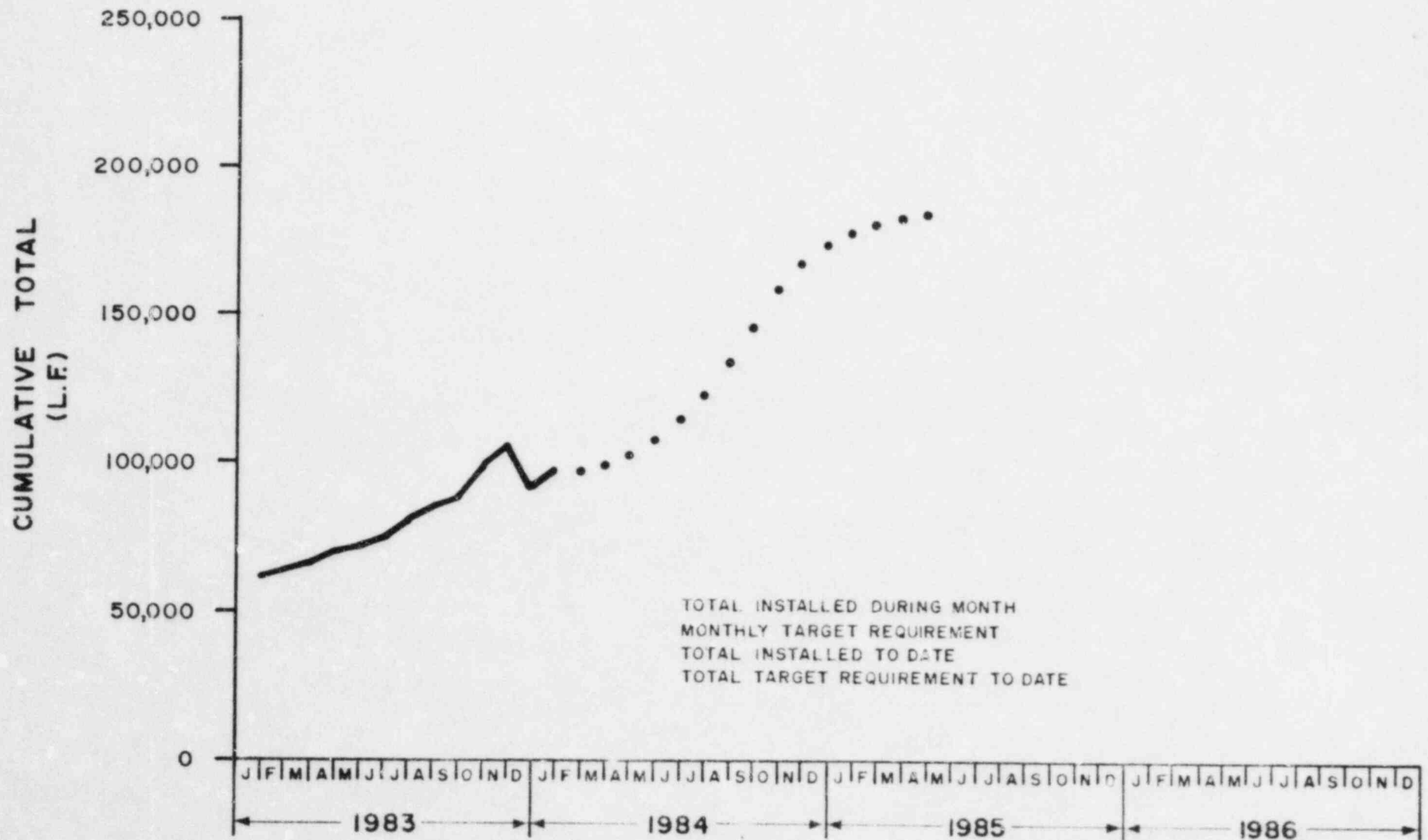
TOTAL PROJECT

58

TERMINATIONS INSTALLATION

<u>DATE</u>	<u>TOTAL TARGET</u>	<u>MONTHLY TARGET</u>	<u>ACTUAL</u>		<u>VARIANCE FROM TARGET</u>	
			<u>TO DATE</u>	<u>MONTH</u>	<u>TO DATE</u>	<u>MONTH</u>
[1985]						
JANUARY	198,164	3,164				
FEBRUARY	201,300	3,136				
MARCH	204,382	3,082				
APRIL	207,028	2,646				
MAY	209,190	2,162				
JUNE	210,941	1,751				
JULY	212,773	1,832				
AUGUST	214,005	1,232				

TOTAL PROJECT INSTRUMENT TUBE INSTALLATION RATE UNIT 1 & COMMON



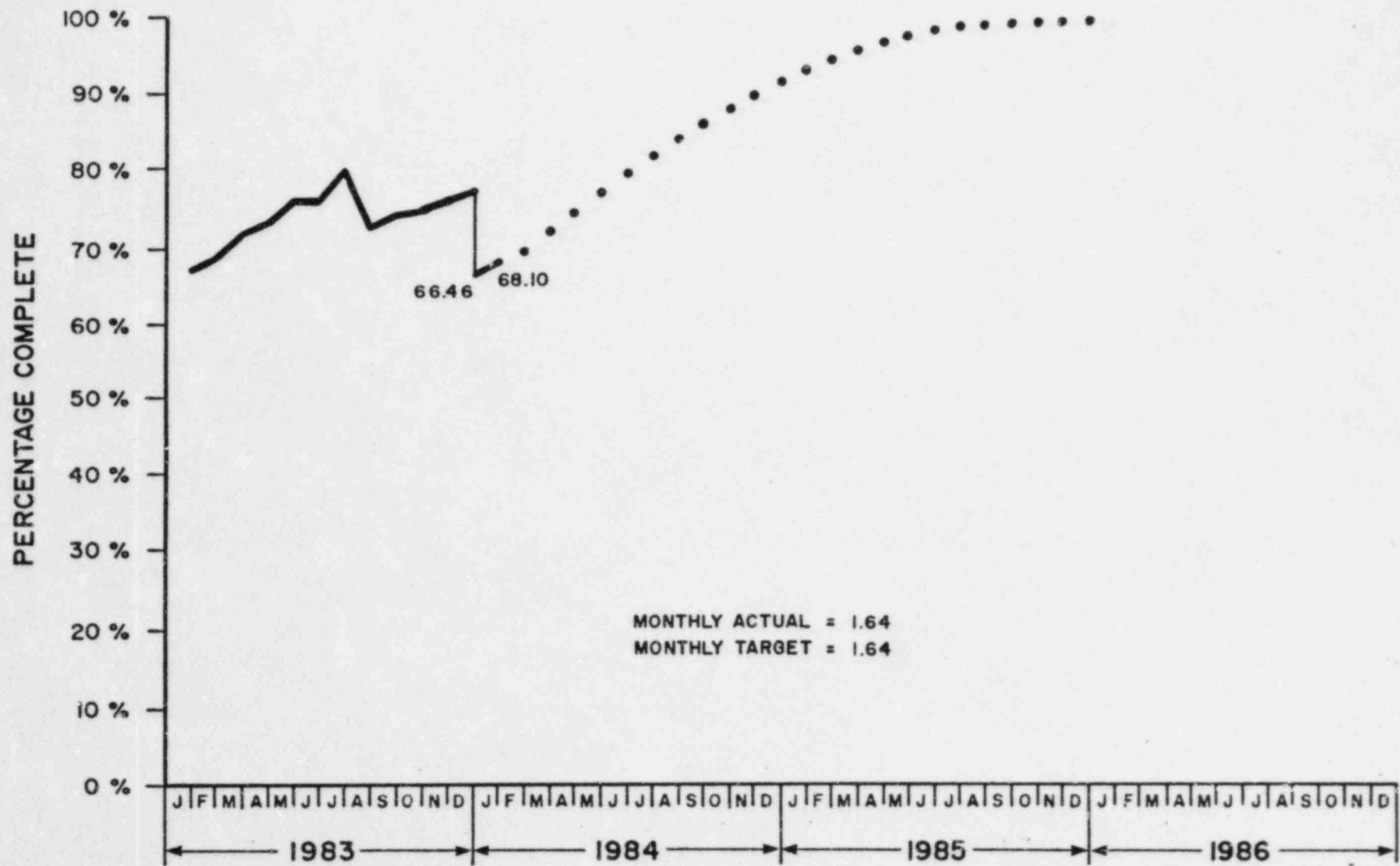
DATA DATE: 1/23/84

59

TOTAL PROJECT
INSTRUMENT TUBE INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>		<u>Variance From Target</u>	
			<u>To Date</u>	<u>Month</u>	<u>To Date</u>	<u>Month</u>
(1984)						
January			96,470			
February	100,259	3,789	101,861	5,391	1,602	1,602
March	107,661	7,402				
April	118,168	10,507				
May	130,406	12,238				
June	141,035	10,629				
July	152,498	11,463				
August	165,350	12,852				
September	174,445	9,095				
October	179,898	5,453				
November	183,049	3,151				
December	183,665	616				
(1985)						
January	183,996	331				
February	184,025	29				
March						
April						
May						
June						
July						
August						
September						
October						
November						
December						

CONTAINMENT BUILDING PERFORMANCE UNIT I



DATA DATE: 1/23/84

62

CONTAINMENT BUILDING
PERFORMANCE RATE

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>		<u>Variance</u> <u>From Target</u>	
			<u>To Date</u>	<u>Month</u>	<u>To Date</u>	<u>Month</u>
(1983)						
January			67%	-		
February			69%	2%		
March			72%	3%		
April			74%	2%		
May			76%	2%		
June			76%	0%		
July			80%	4%		
August			73%	<7>%		
September			74%	1%		
October			75%	1%		
November			76%	1%		
December			*	*		
(1984)						
January	68.10%	-				
February	69.74%	1.64%				
March	72.06%	2.32%				
April	74.39%	2.33%				
May	76.98%	2.59%				
June	79.17%	2.19%				
July	81.28%	2.11%				
August	84.20%	2.92%				
September	86.02%	1.82%				
October	87.83%	1.61%				
November	90.07%	2.24%				
December	91.72%	1.65%				

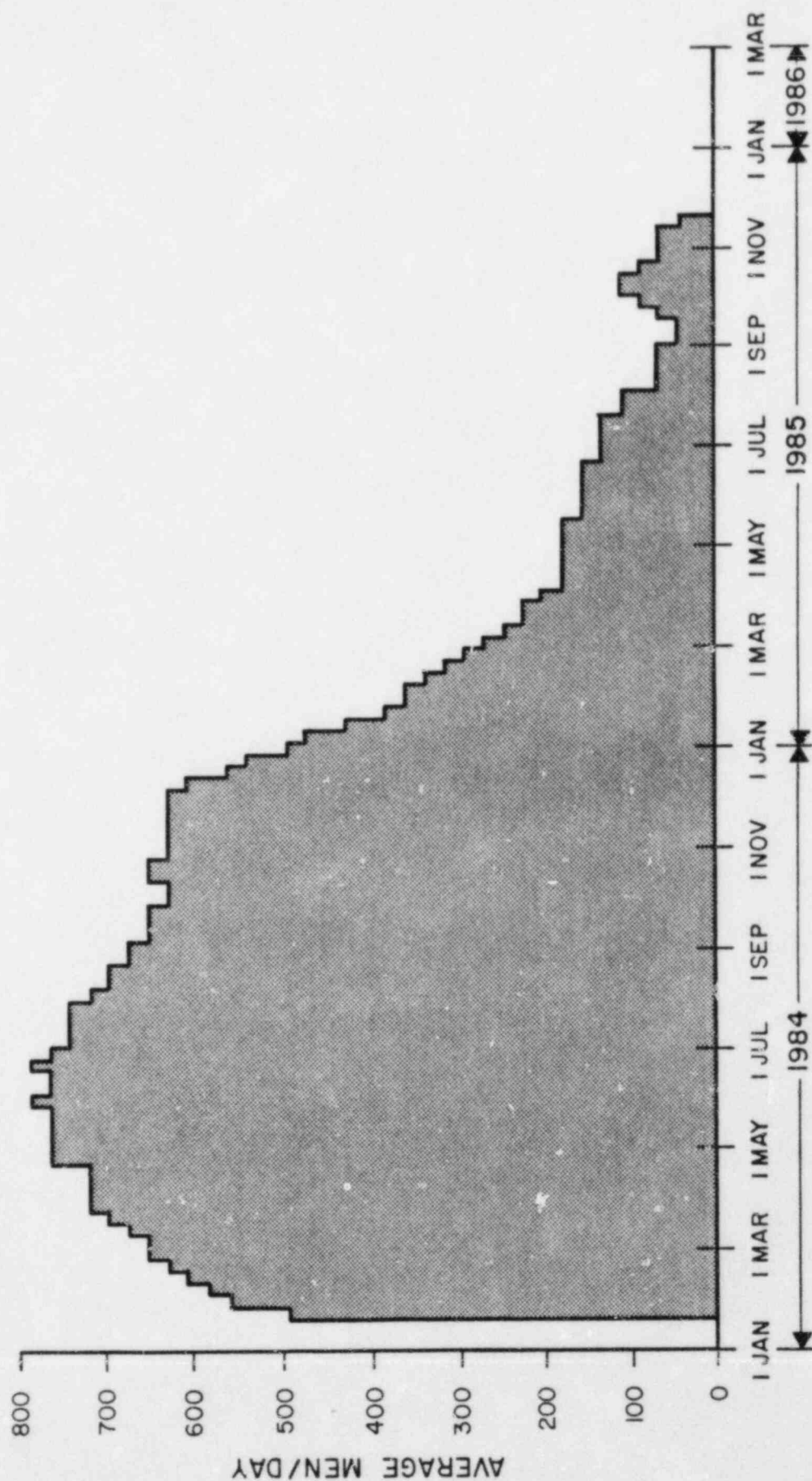
*NOTE: Due to estimate being revised, calculations were not available.

CONTAINMENT BUILDING
PERFORMANCE RATE

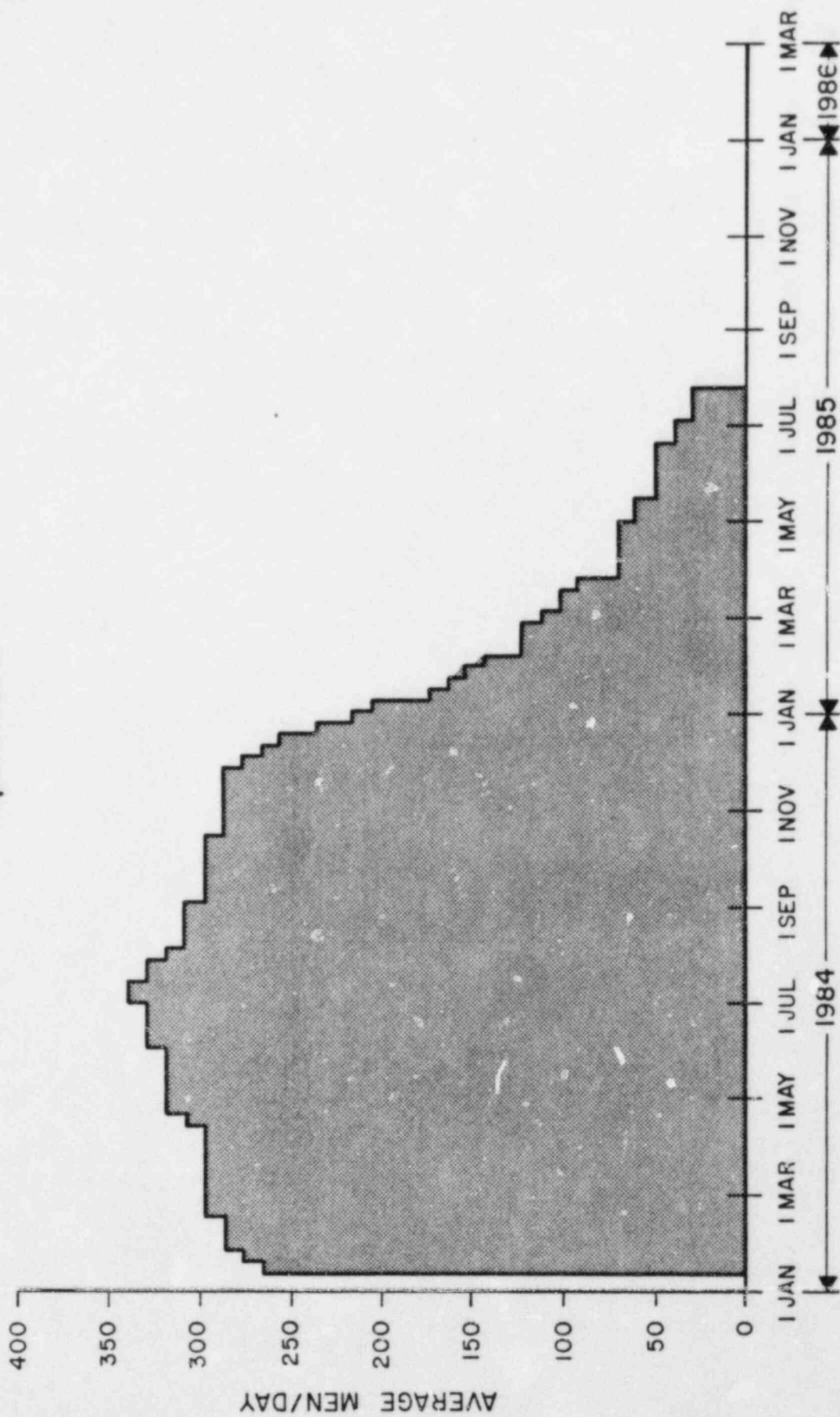
63

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u> <u>To Date</u>	<u>Month</u>	<u>Variance</u> <u>From Target</u> <u>To Date</u>	<u>Month</u>
(1985)						
January	93.51%	1.79%				
February	94.77%	1.26%				
March	95.71%	0.94%				
April	96.52%	0.81%				
May	97.51%	0.99%				
June	98.29%	0.78%				
July	98.83%	0.54%				
August	99.24%	0.41%				
September	99.47%	0.23%				
October	99.88%	0.41%				
November	99.99%	0.11%				
December	100.00%	0.01%				
(1986)						
January						
February						
March						
April						
May						
June						
July						

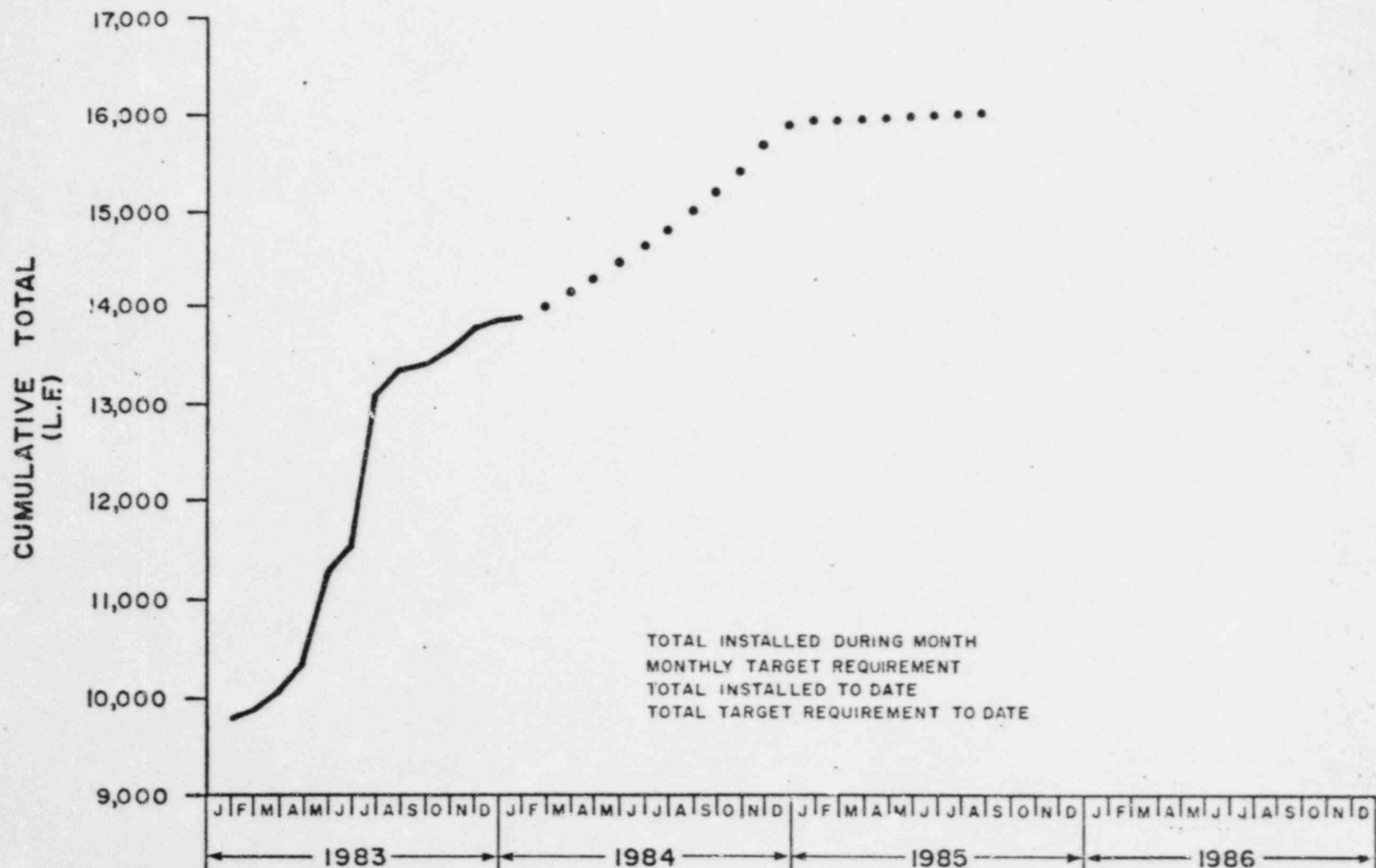
REACTOR CONTAINMENT
- Total Crafts -



CONTAINMENT
- Pipefitters -



CONTAINMENT BUILDING LARGE BORE PIPE INSTALLATION RATE UNIT 1



CONTAINMENT BUILDING
LARGE BORE PIPE INSTALLATION

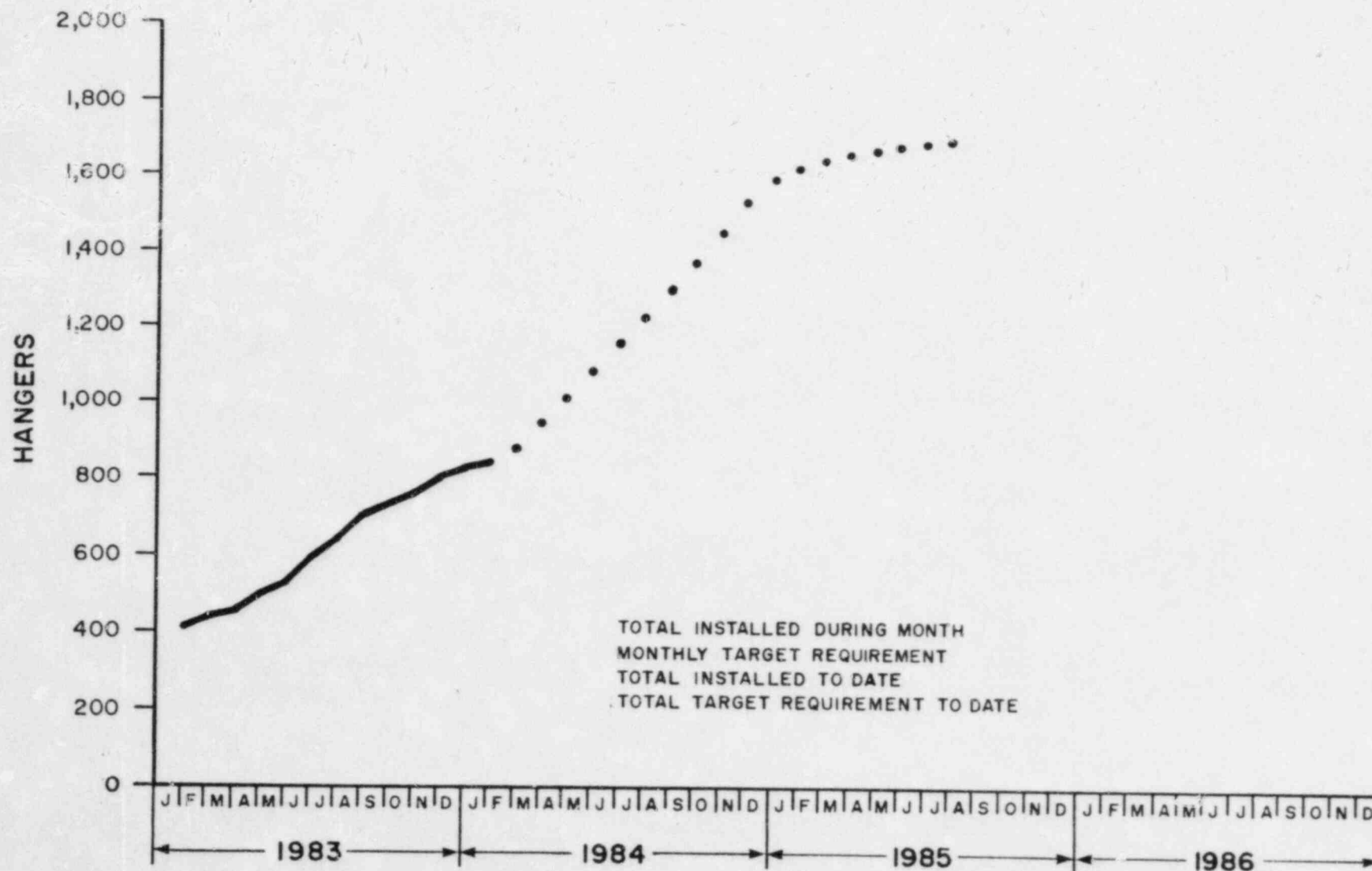
	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>		<u>Variance</u>	
			<u>To Date</u>	<u>Month</u>	<u>To Date</u>	<u>Month</u>
(1983)						
January			9781	-		
February			9822	41		
March			10032	210		
April			10269	237		
May			11274	1005		
June			11550	276		
July			13072	1522		
August			13341	269		
September			13390	49		
October			13540	150		
November			13726	186		
December			13803	77		
(1984)						
January			13884	81		
February	14020	136	14001	117	<19>	<19>
March	14183	163				
April	14338	155				
May	14511	173				
June	14700	189				
July	14870	170				
August	15037	167				
September	15198	161				
October	15400	202				
November	15731	331				
December	15928	197				

68

CONTAINMENT BUILDING
LARGE BORE PIPE INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>	<u>Variance</u>
			<u>To Date</u> <u>Month</u>	<u>From Target</u>
			<u>To Date</u> <u>Month</u>	<u>To Date</u> <u>Month</u>
(1985)				
January	15975	47		
February	15995	20		
March	16004	9		
April	16013	9		
May	16023	10		
June	16027	4		
July	16031	4		
August	16033	2		
September				
October				
November				
December				
(1986)				
January				
February				
March				
April				

CONTAINMENT BUILDING LARGE BORE HANGER INSTALLATION RATE UNIT!



DATA DATE: 1/23/84

69

CONTAINMENT BUILDING
LARGE BORE HANGER INSTALLATION

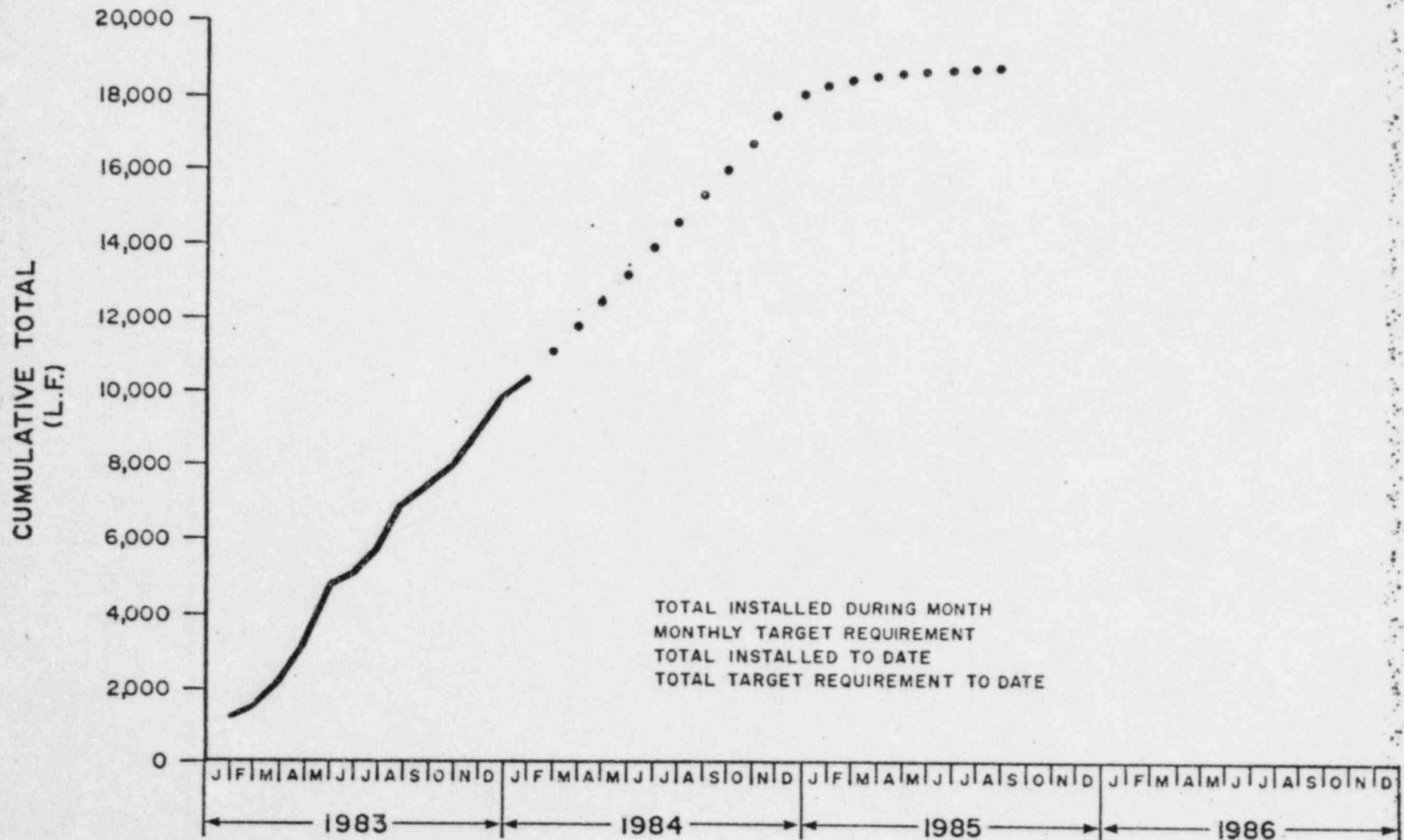
	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>		<u>Variance From Target</u>	
			<u>To Date</u>	<u>Month</u>	<u>To Date</u>	<u>Month</u>
(1983)						
January			412	-		
February			438	26		
March			455	17		
April			494	39		
May			527	33		
June			594	67		
July			641	47		
August			702	61		
September			739	37		
October			765	26		
November			801	36		
December			833	32		
(1984)						
January			848	15		
February	881	33	884	36	3	3
March	948	67				
April	1015	67				
May	1090	75				
June	1155	65				
July	1221	66				
August	1310	89				
September	1378	68				
October	1444	66				
November	1527	83				
December	1587	60				

71

CONTAINMENT BUILDING
LARGE BORE RANGER INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u> <u>To Date</u>	<u>Month</u>	<u>Variance</u> <u>From Target</u> <u>To Date</u>	<u>Month</u>
(1985)						
January	1614	27				
February	1632	18				
March	1648	16				
April	1662	14				
May	1679	17				
June	1685	6				
July	1689	4				

CONTAINMENT BUILDING SMALL BORE PIPE INSTALLATION RATE UNIT 1



DATA DATE: 1/23/84

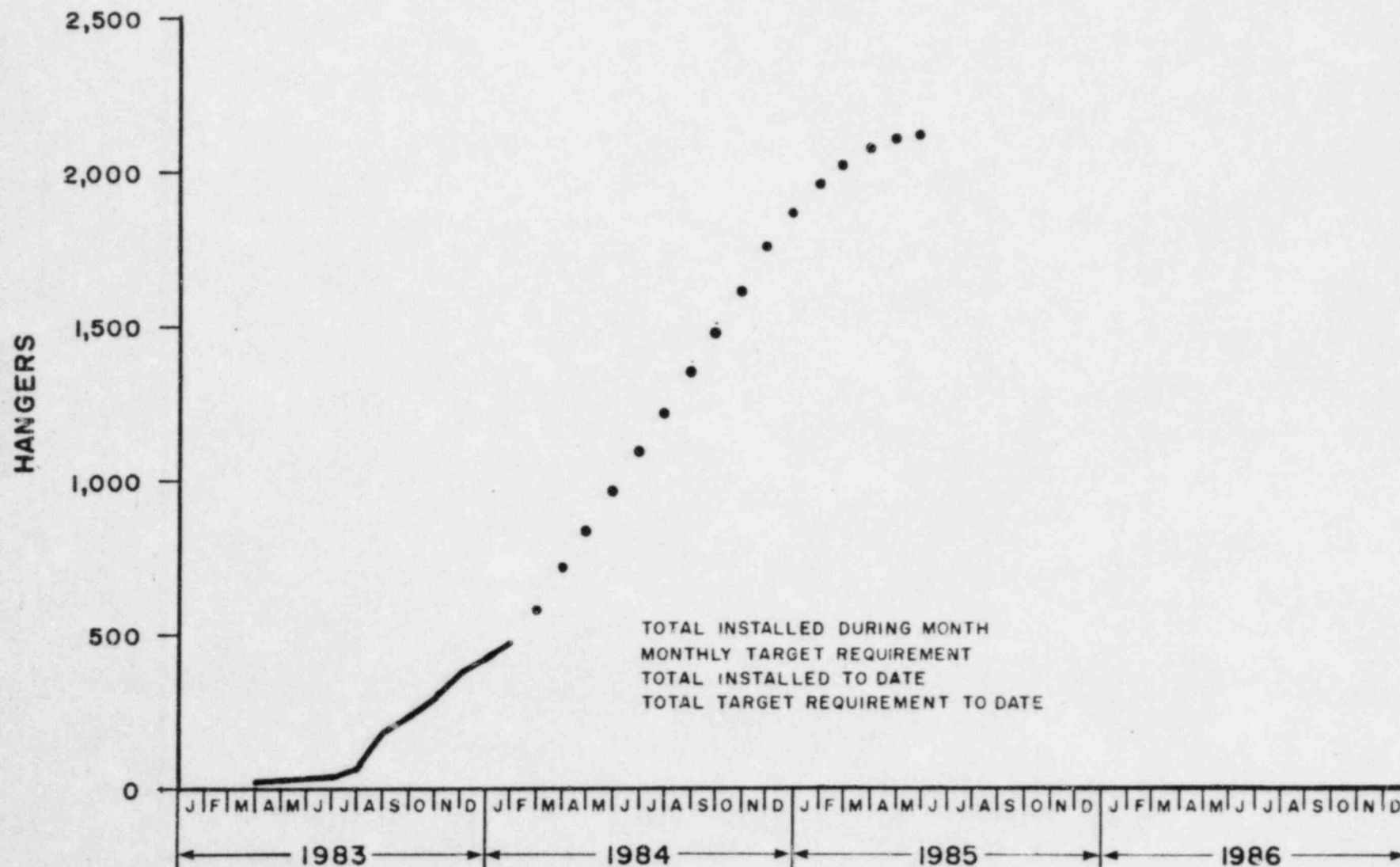
CONTAINMENT BUILDING
SMALL BORE PIPE INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u> <u>To Date</u>	<u>Month</u>	<u>Variance</u> <u>From Target</u> <u>To Date</u>	<u>Month</u>
(1983)						
January			1199	-		
February			1364	165		
March			2181	817		
April			3123	942		
May			4667	1544		
June			5099	432		
July			5675	576		
August			6776	1101		
September			7303	527		
October			7981	678		
November			8858	877		
December			9853	995		
(1984)						
January			10308	455		
February	11108	800	11167	859	59	59
March	11908	800				
April	12708	800				
May	13508	800				
June	14067	559				
July	14608	541				
August	15414	806				
September	16082	668				
October	16689	607				
November	17469	780				
December	17919	450				

CONTAINMENT BUILDING
SMALL BORE PIPE INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>	<u>Variance</u>
			<u>To Date</u> <u>Month</u>	<u>From Target</u>
			<u>To Date</u> <u>Month</u>	<u>To Date</u> <u>Month</u>
(1985)				
January	18332	413		
February	18489	157		
March	18592	103		
April	18668	76		
May	18704	36		
June	18737	33		
July	18767	30		
August	18787	20		
September				
October				
November				
December				
(1986)				
January				
February				
March				
April				

CONTAINMENT BUILDING SMALL BORE HANGER INSTALLATION RATE UNIT 1



DATA DATE: 1/23/84

75

CONTAINMENT BUILDING
SMALL BORE HANGER INSTALLATION

76

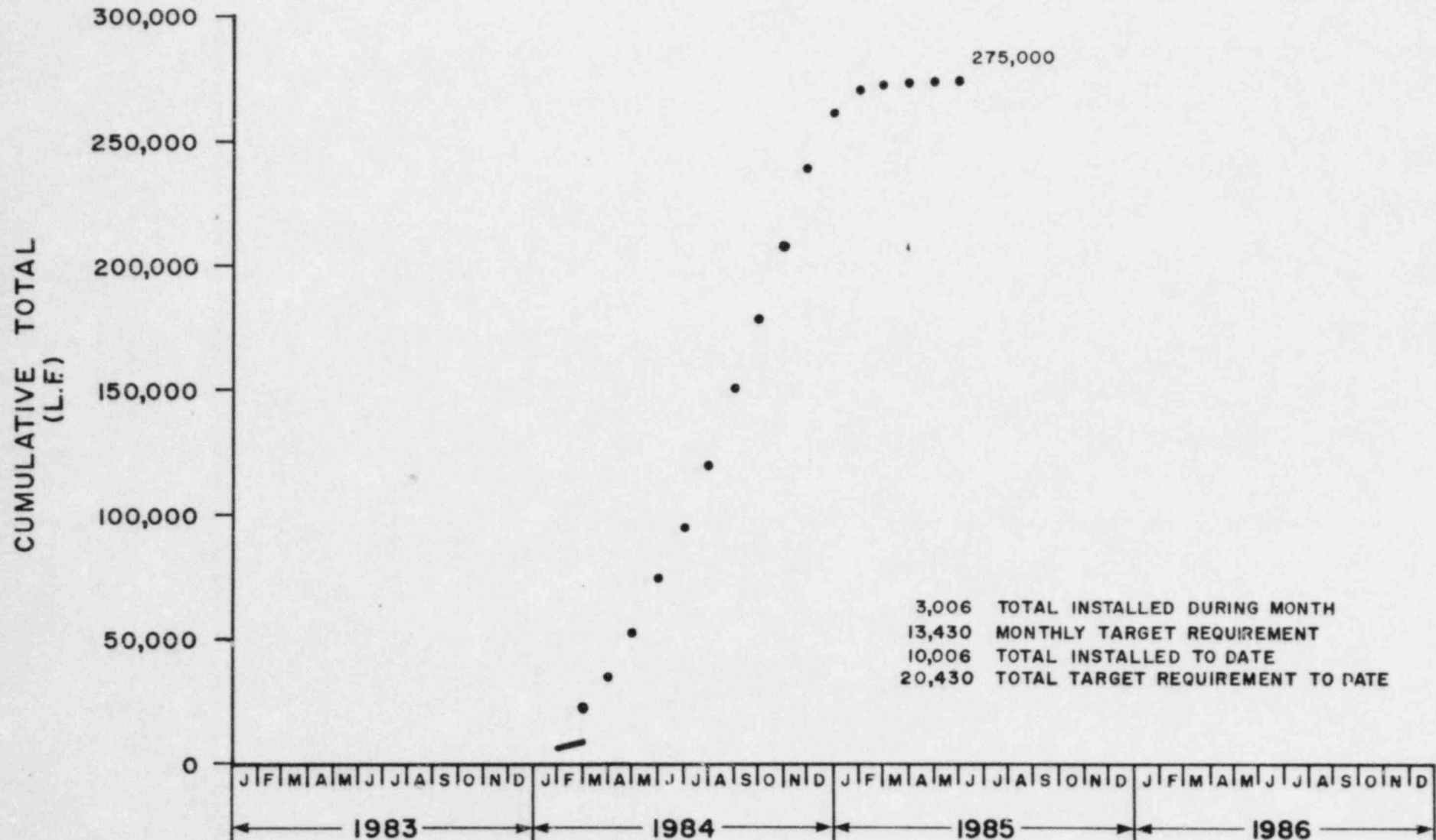
	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>		<u>Variance</u>	
			<u>To Date</u>	<u>Month</u>	<u>From Target</u>	
			<u>To Date</u>	<u>Month</u>	<u>To Date</u>	<u>Month</u>
(1983)						
January						
February						
March			7			
April			14	7		
May			20	6		
June			30	10		
July			62	32		
August			176	114		
September			235	59		
October			297	62		
November			374	77		
December			425	51		
(1984)						
January			472	47		
February	585	113	476	4	<109>	<109>
March	722	137				
April	833	111				
May	972	139				
June	1091	119				
July	1224	133				
August	1380	156				
September	1503	123				
October	1626	123				
November	1774	148				
December	1876	102				

CONTAINMENT BUILDING
SMALL BORE HANGER INSTALLATION

77

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u> <u>To Date</u>	<u>Month</u>	<u>Variance</u> <u>From Target</u> <u>To Date</u>	<u>Month</u>
(1985)						
January	1972	96				
February	2033	61				
March	2088	55				
April	2117	29				
May	2128	11				
June						
July						
August						
September						
October						

CONTAINMENT BUILDING CABLE INSTALLATION RATE UNIT 1



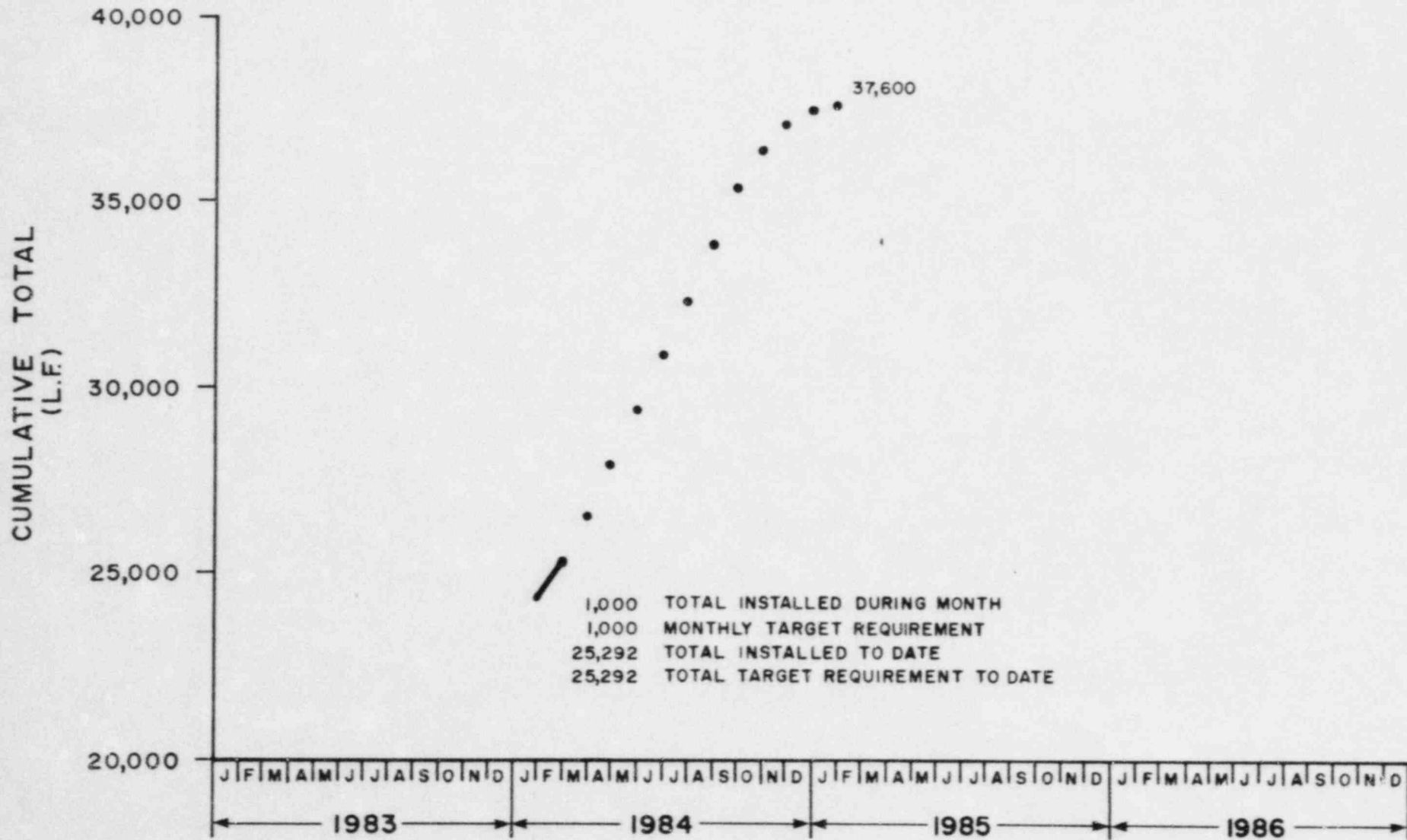
DATA DATE: 2/21/84

CONTAINMENT BUILDING
CABLE INSTALLATION

79

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u> <u>To Date</u>	<u>Month</u>	<u>Variance</u> <u>From Target</u> <u>To Date</u>	<u>Month</u>
(1984)						
January			7,000			
February	20,430	13,430	10,006	3,006	<10,424>	<10,424>
March	36,149	15,719				
April	54,516	18,367				
May	76,115	21,599				
June	95,074	18,959				
July	120,074	25,000				
August	150,074	30,000				
September	179,909	29,835				
October	208,921	29,012				
November	239,699	30,778				
December	262,877	23,178				
(1985)						
January	271,105	8,228				
February	273,405	2,300				
March	274,114	709				
April	274,823	709				
May	275,000	177				
June						
July						
August						
September						
October						
November						
December						

CONTAINMENT BUILDING RIGID CONDUIT INSTALLATION RATE UNIT 1



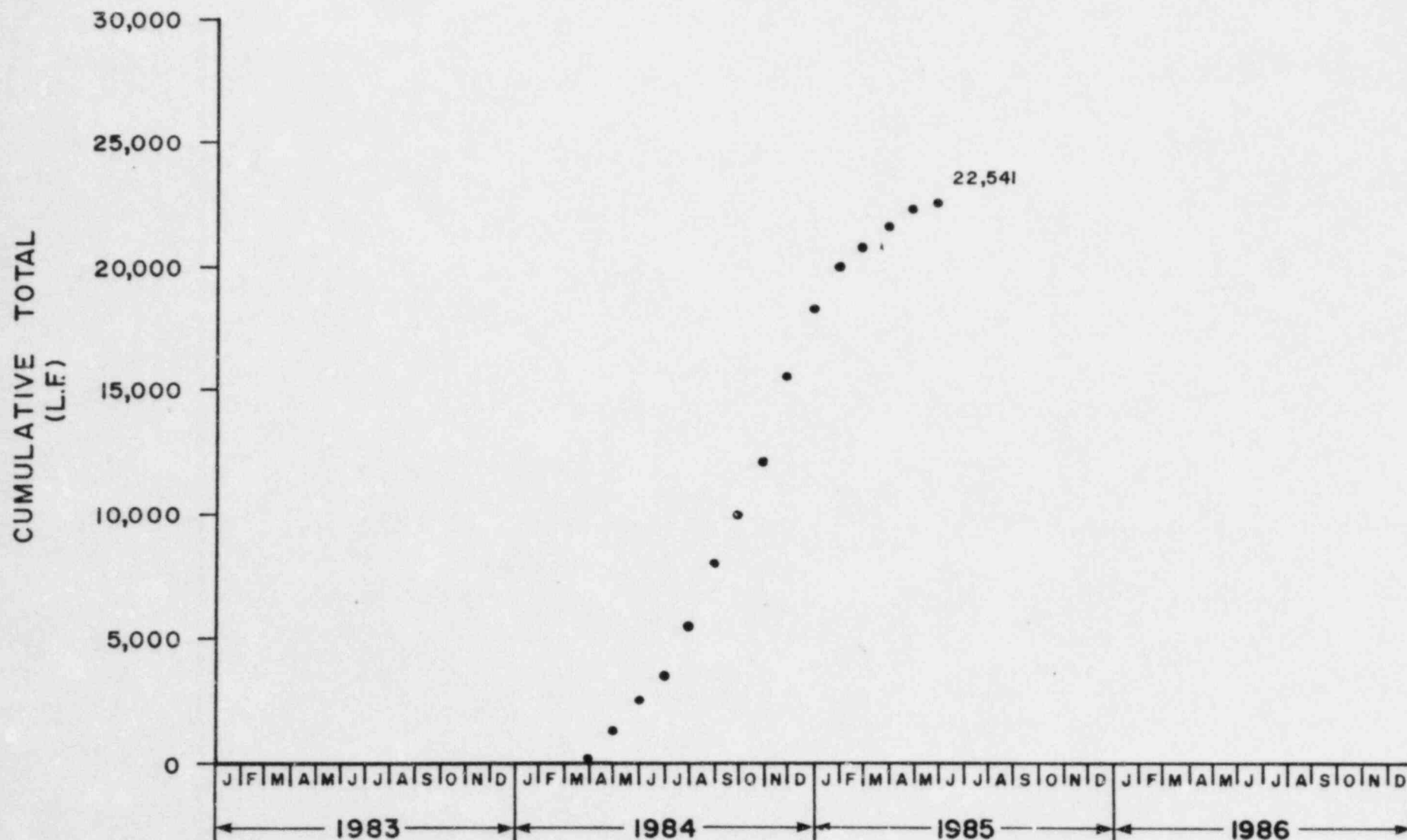
DATA DATE: 2/21/84

CONTAINMENT BUILDING
RIGID CONDUIT INSTALLATION

81

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u> <u>To Date</u>	<u>Month</u>	<u>Variance</u> <u>From Target</u> <u>To Date</u>	<u>Month</u>
(1984)						
January			24,292			
February	25,292	1,000	25,292	1,000	0	0
March	26,592	1,300				
April	27,992	1,400				
May	29,392	1,400				
June	30,892	1,500				
July	32,392	1,500				
August	33,892	1,500				
September	35,292	1,400				
October	36,340	1,048				
November	37,049	709				
December	37,452	403				
(1985)						
January	37,600	148				
February						
March						
April						
May						
June						
July						
August						
September						
October						
November						
December						

INSIDE CONTAINMENT TERMINATIONS INSTALLATION RATE UNIT 1



DATA DATE: 2/21/84

82

83

I-S CONTAINMENT
TERMINATIONS INSTALLATION

	<u>Total Target</u>	<u>Monthly Target</u>	<u>Actual</u>		<u>Variance From Target</u>	
			<u>To Date</u>	<u>Month</u>	<u>To Date</u>	<u>Month</u>
(1984)						
January			0			
February	0	0	0	0	0	0
March	175	175				
April	1,498	1,323				
May	2,563	1,065				
June	3,529	966				
July	5,500	1,971				
August	8,039	2,539				
September	10,010	1,971				
October	12,150	2,140				
November	15,537	3,387				
December	18,305	2,768				
(1985)						
January	20,019	1,714				
February	20,821	802				
March	21,586	765				
April	22,350	764				
May	22,541	191				
June						
July						
August						
September						
October						
November						
December						

UNITED ENGINEERS AND CONSTRUCTORS

PROJECT- SEABROOK - UNIT 1 AND COMMON

REPORT DATE- 14MAR84 (30)

REPORT-HISTOGRAM BY DURATION

DATA DATE-21FEB84

PHILA. RECEIVED DWGS

PAGE NO. 1

STRUCTURAL
HISTOGRAM BY DURATION

INCREMENTAL RESOURCE CURVE

36

36

34

32

T 30

A 26

S 20

K 24

J 22

W 20

E 18

F 16

K 14

12

10

8

6

4

2

0

X

X

X

X

X

X

X

X

X

X

X

X

X

X

18FEB

28APR

7JUL

15SEP

24NOV

2FEB

13APR

23JUN

31UG

9NOV

1JAN

19MAR

PERIOD STARTING DATES

TIME INCREMENT
REPRESENTS 1 WEEK

TOTAL CUM VALUE =

12.3

PROJECT- SEABROOK - UNIT 1 AND COMMON

DATA BYTE=21868864

PAGE NO. 3

INCREMENTAL RESOURCE CURVE

76

77

6

2

19

2

22

18

“

3

7 76

22

22

7A

59

2

92

1

1

1

• • • • •

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1

2nd APR

7 JUL

7552P

26 NOV

REF:

13 APR

22722

19 AUG

АОНБ

12 JAN

2928

PERIOD STARTING DATE:

THE INCREMENT
REPRESENTS 1 WEEK

(TOTAL CUM VALUE = 228.2)

UNITED ENGINEERS AND CONSTRUCTORS

REPORT DATE- 14MARE4(30) REPORT-HISTOGRAM BY DURATION

PROJECT- SEABROOK - UNIT 1 AND COMMON

DATA DATE-21FEB44

PHILA. RECEIVED DMGS

PAGE NO. 5

PIPING
HISTOGRAM BY DURATION

INCREMENTAL RESOURCE CURVE

260

252

438

224

T 210

A 198

S 182

K 168

J 154

W 140

E 126

E 112

K 98

84

70

56

42

28

14

0

18FEB

8APR

7JUL

15SEP

24NO

2FEB

13APR

22JUN

31AUG

9NOV

18JAN

29MAR

PERIOD

TIME DATES

TIME INCREMENT

(TOTAL CUM VALUE = 1725.)

REPRESENTS 1 WEEK

58

UNITED ENGINEERS AND CONSTRUCTORS

PROJECT- SEABROOK - UNIT 1 AND COMMON

REPORT DATE- 14MAR84 303

REPORT-HISTOGRAM BY DURATION

DATA DATE-21FEB84

PHILA. RECEIVED DWGS

PAGE NO. 4

FOREIGN PRINTS
HISTOGRAM BY DURATION

INCREMENTAL RESOURCE CURVE

190

170

160

150

140

130

120

110

100

90

80

70

60

50

40

30

20

10

0

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

18FEB
1984

28APR

7JUL

15SEP

24NOV

2FEB
1985

13APR

22JUN

31AUG

9NOV

18JAN
1986

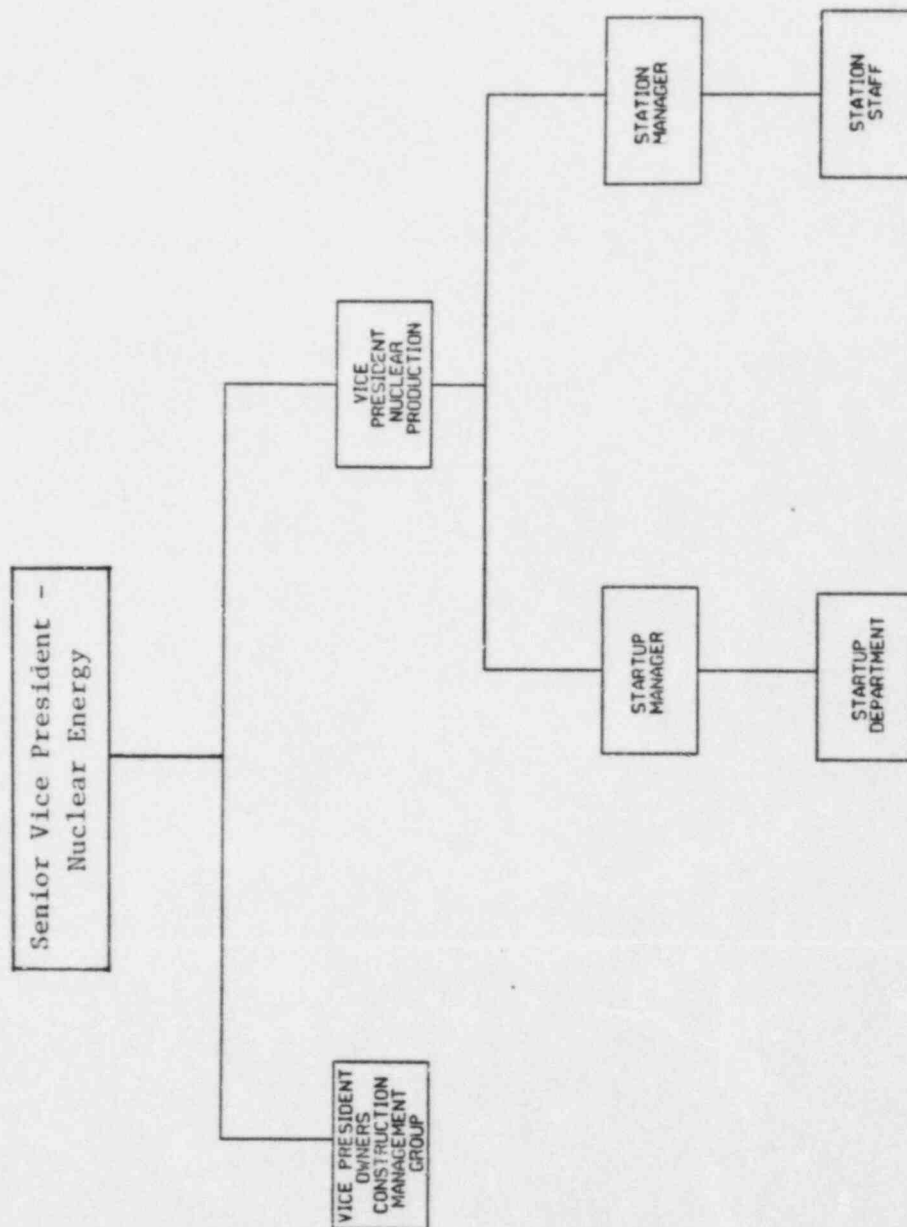
29MAR

PERIOD STARTING DATES

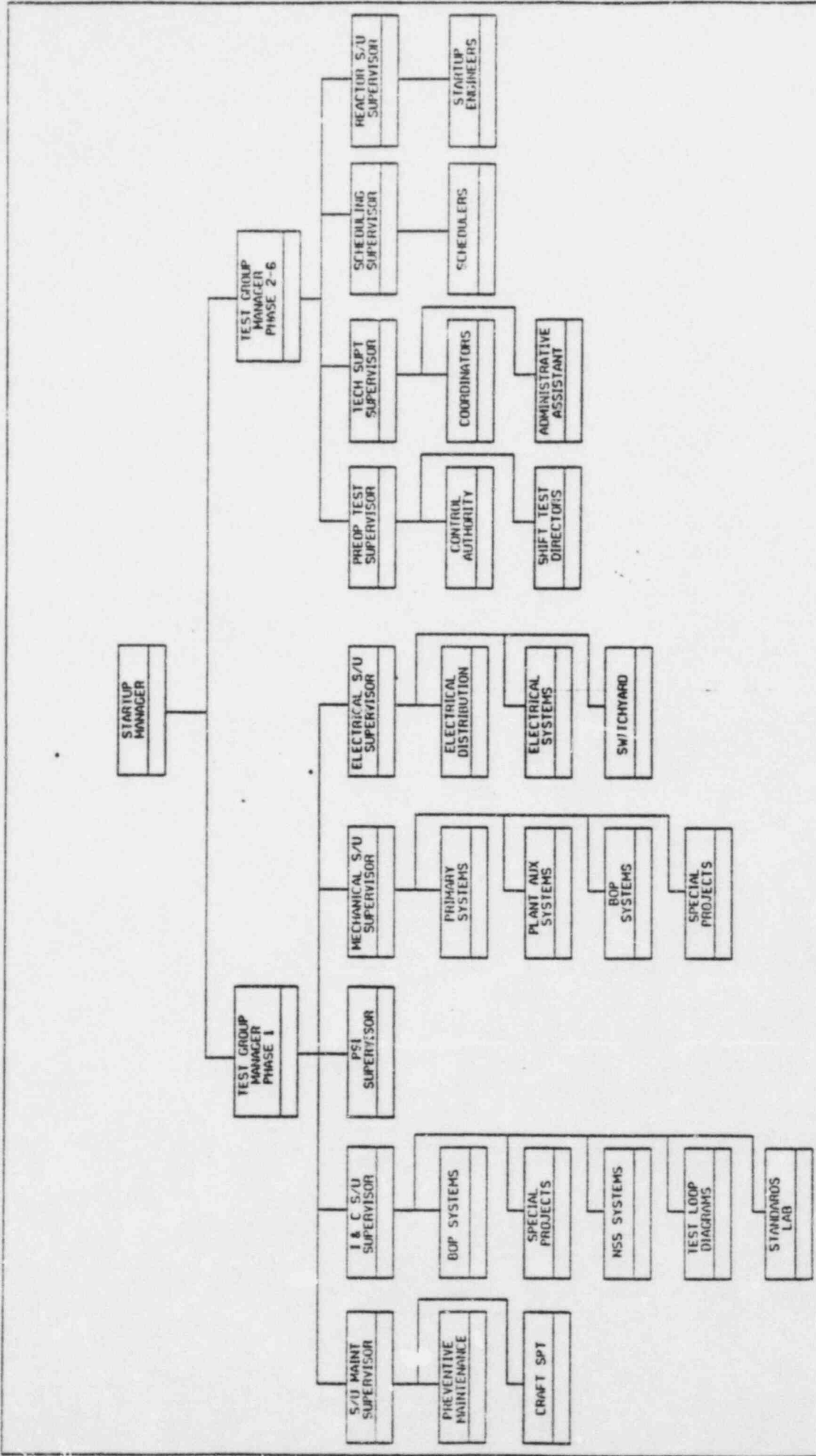
TIME INCREMENT
REPRESENTS 1 WEEK

TOTAL CUM VALUE = 395.0

PUBLIC SERVICE OF NEW HAMPSHIRE



:
REPORTING LINES OF SEABROOK STATION
STAFF AND STARTUP TEST DEPARTMENT



SEABROOK STATION
STARTUP TEST DEPARTMENT
ORGANIZATION

SEABROOK STATION STARTUP MANPOWER

	CURRENT LOADS	PROJECTED PEAKS
ENGINEERS	81	90
TECHNICIANS		
– INSTRUMENT	28	55
– ELECTRICAL	47	50
CRAFTS		
– MECHANICAL	104	
– ELECTRICIANS	37	

SEABROOK UNIT NO. 1

SCHEDULE MILESTONES

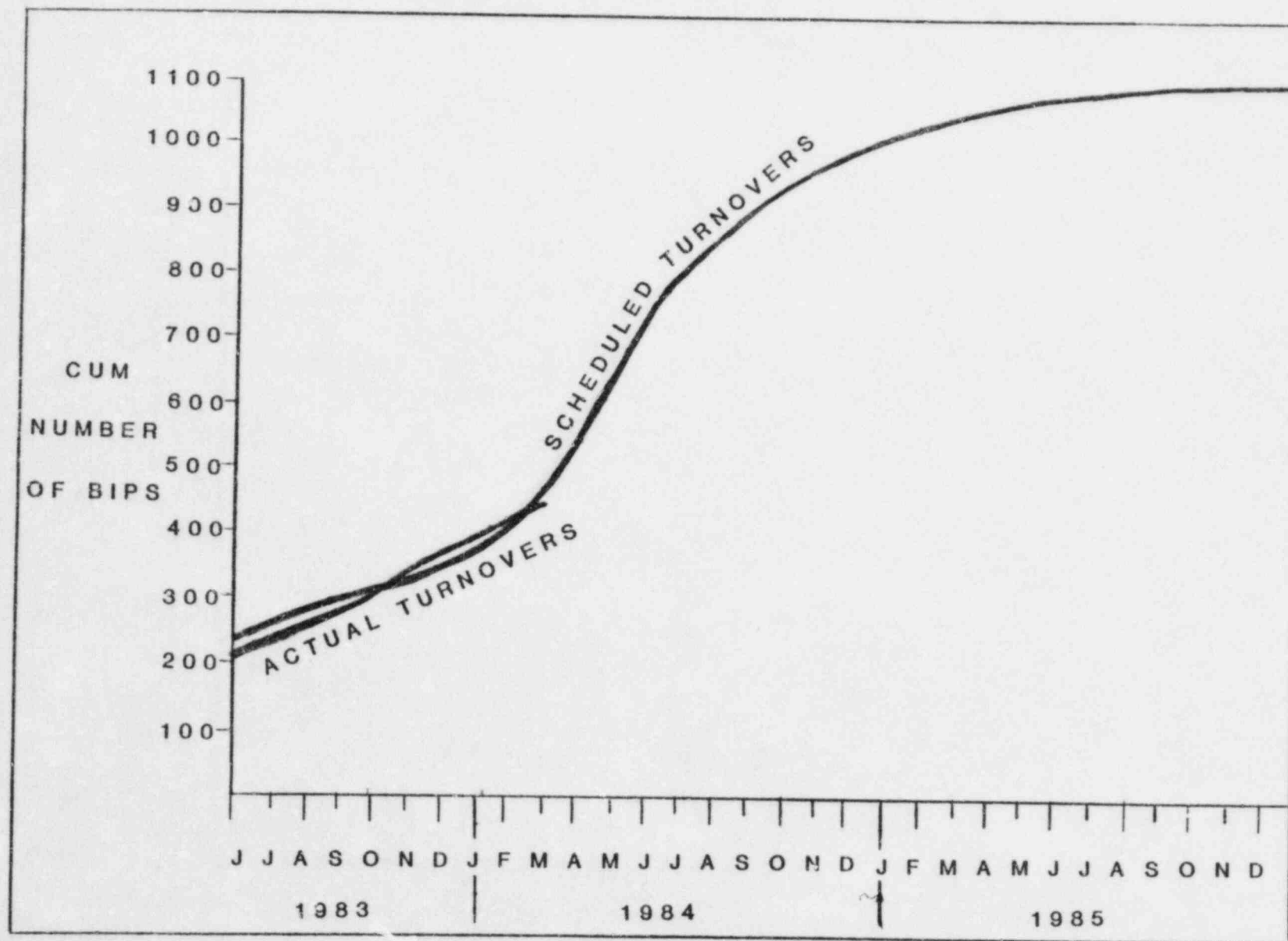


<u>MILESTONE</u>	<u>SCHEDULED</u>	<u>MILESTONE</u>	<u>SCHEDULED</u>
1) REAC VSL PRE-SERV INSPECTION	15MAR84	7) MAIN STEAM/SG HYDRO	28MAR85
2) SECONDARY SYS CHEM CLEAN	1APR84	8) PT-35 RCS HYDRO	21MAY85
3) INITIAL START BOTH DIESEL GENS	1MAY84	9) PT-38 ESF INTEGRATED TEST	7AUG85
4) RC-1 REACTOR COOLANT SYS T/O	9OCT84	10) PT-40 HOT FUNCTIONAL	9SEP85
5) MAIN CONDENSER GROSS VAC TEST	30NOV84	11) PT-36 & 37.1 SAT & ILRT	12NOV85
6) RCS IN-VESSEL FLUSHES	16JAN85	12) CORELOAD	26DEC85

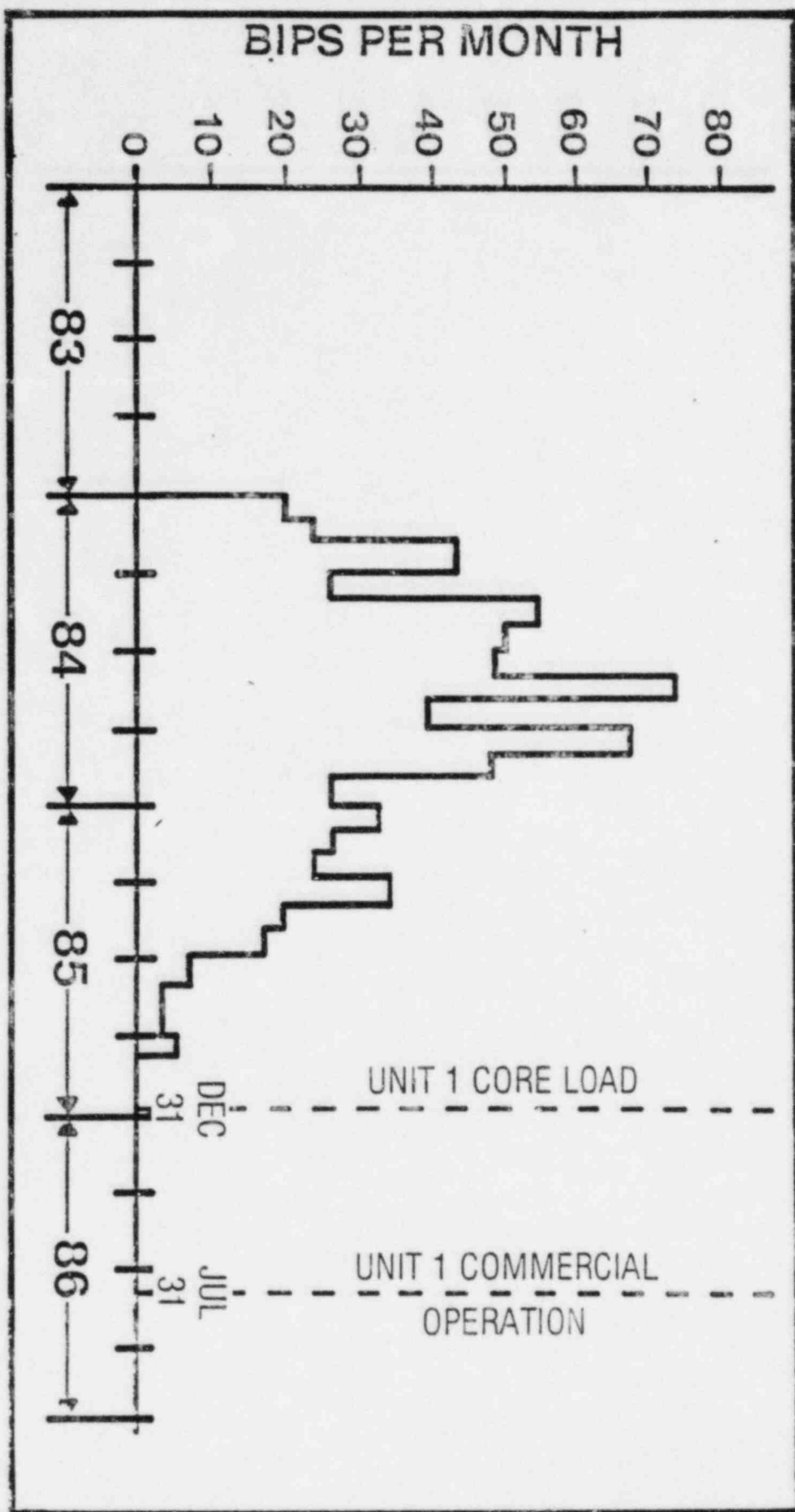
BUILDING & AREA TURNOVER MILESTONES**BUILDING****TURNOVER DATE**

ADMINISTRATION BLDG	(actual) 3/29/82
INTAKE STRUCTURE	8/27/84
DISCHARGE STRUCTURE	9/20/84
DIESEL GENERATOR BLDG	10/29/84
CIRC WATER PUMPHOUSE	12/24/84
COOLING TOWER	2/19/85
FUEL STORAGE BLDG	6/18/85
PRIMARY AUXILIARY BLDG	8/13/85
TANK FARM	8/30/85
SERVICE WATER PUMPHOUSE	9/25/85
CONTROL BLDG	10/08/85
CONTAINMENT BLDG	10/24/85
WASTE PROCESSING BLDG	11/26/85

BIP TURNOVERS SCHEDULE VS. ACTUAL



BIPS REQUIRED TO T/O PER MONTH UNIT 1 & COMMON



PUBLIC SERVICE OF NEW HAMPSHIRE

PSNH

SYSTEMS TRANSFERRED TO PSNH
OPERATIONAL JURISDICTION

<u>SYSTEM</u>	<u>DATE</u>
AUXILIARY STEAM (PARTIAL)	11/05/82
AUXILIARY STEAM CONDENSATE (PARTIAL)	1/14/83
AUXILIARY STEAM HEATING (PARTIAL)	1/14/83
CONTROL BUILDING AIR HANDLING (PARTIAL)	11/04/82
DEMINERALIZED WATER (PARTIAL)	10/15/82
FIRE PROTECTION (PUMPS & TANKS)	10/15/82
HOT WATER (ADMINISTRATION BLDG.)	11/05/82
INSTRUMENT AIR (DRYER SKIDS)	11/05/82
SERVICE AIR (COMPRESSORS & RECEIVERS)	11/05/82
WATER TREATMENT	11/04/83

CONDITIONAL ACCEPTANCE TURNOVER
STARTUP TO PSNH

<u>SYSTEM</u>	<u>DATE</u>
ADMINISTRATION BLDG. HVAC	9/26/83
AUXILIARY BOILERS	9/26/83
CHILLED WATER	9/26/83
480 VOLT MOTOR CONTROL CENTERS Nos. 161, 162, 163, AND 262	9/26/83
SOUND POWERED PHONES	3/08/84
SWITCHYARD	3/09/84

SEABROOK STATION
PHASE 1 CONSTRUCTION VERIFICATION TEST STATUS

<u>GENERAL TEST</u>	<u>TOTAL NO.</u>	<u>APPROVED</u>	<u>IN REVIEW</u>	<u>IN PREPARATION</u>	<u>DRAFT NOT STARTED</u>
MECHANICAL	4	3	1	0	0
FLUSHING	4	4	0	0	0
INTEGRITY	1	1	0	0	0
INSTRUMENTATION	46	45	0	1	0
ELECTRICAL	46	44	1	0	1
SPECIALTY INSTRUMENTATION (RPS, RMS, ETC.)	59	34	10	14	1
TOTAL GT'S	167	131	12	15	2

SEABROOK STATION

STATUS OF TEST PROCEDURE PREPARATION
(PHASES 2 THROUGH 6)

<u>TEST TYPE</u>	<u>TOTAL NUMBER</u>	<u>JTG APPROVED</u>	<u>DRAFTS IN JTG COMMITTEE</u>	<u>DRAFTS IN REVIEW</u>	<u>DRAFTS IN PREPARATION</u>	<u>DRAFTS NOT STARTED</u>
PREOPERATIONAL (PT)	88	7	41	37	0	3
ACCEPTANCE (AT)	87	27	27	33	0	0
STARTUP (ST)	53	0	0	53	0	0
TOTAL PT/AT	175	34	68	70	0	3
TOTAL TESTS	228	34	68	123	0	3

PHASE 1 TESTING STATUS

SCHEDULED TEST PACKAGES	5554	
TEST PACKAGES COMPLETE	759	(14%)
HYDRO PACKAGES SCHEDULED	476	
HYDRO PACKAGES COMPLETE	56	(12%)
CLEANING PACKAGES SCHEDULED	306	
CLEANING PACKAGES COMPLETE	60	(20%)
WEIGHTED COMPLETION OF PHASE 1 TESTING		(11%)

ACCEPTANCE TESTS AND PREOPERATIONAL TESTS COMPLETE

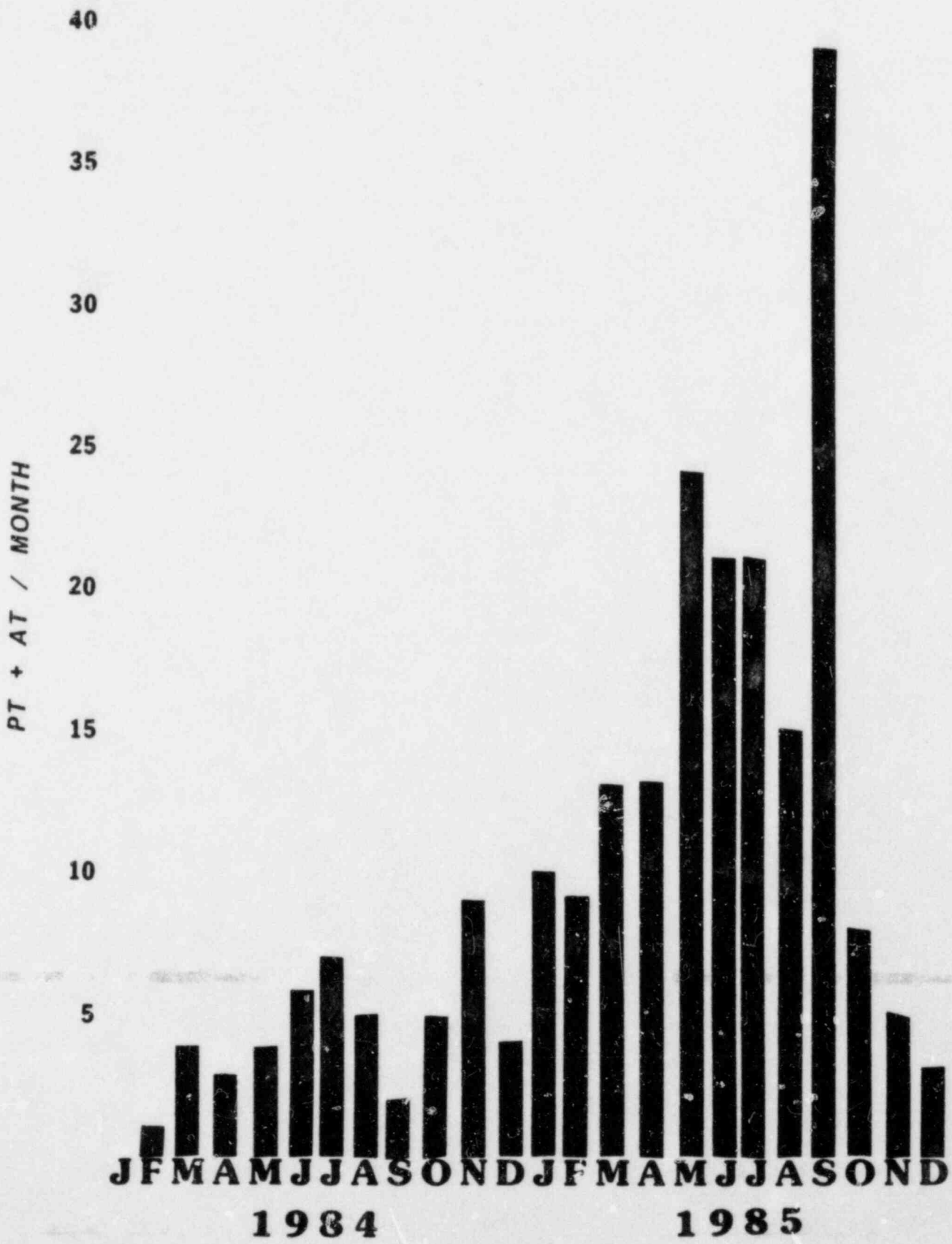
		<u>PERFORMED</u>	<u>JTG APPROVED</u>
1-AT-38	AUXILIARY BOILER	MAR 83	9/1/83
1-AT-51	SERV BLDG RCA HEAT & VENT	MAY 83	7/6/83
1-AT-55.1	ADMIN BLDG VENTILATION	MAR 83	6/27/83
1-AT-55.3	ADMIN BLDG - CHILLED WATER	NOV 82	11/24/82
1-AT-60	GENERATOR LEAK TEST	NOV 83	
1-AT-13.8	TRANSFMER AREA FIRE PROT	FEB 84	
1-AT-7	SECONDARY COMP COOL'G	MAR 84	

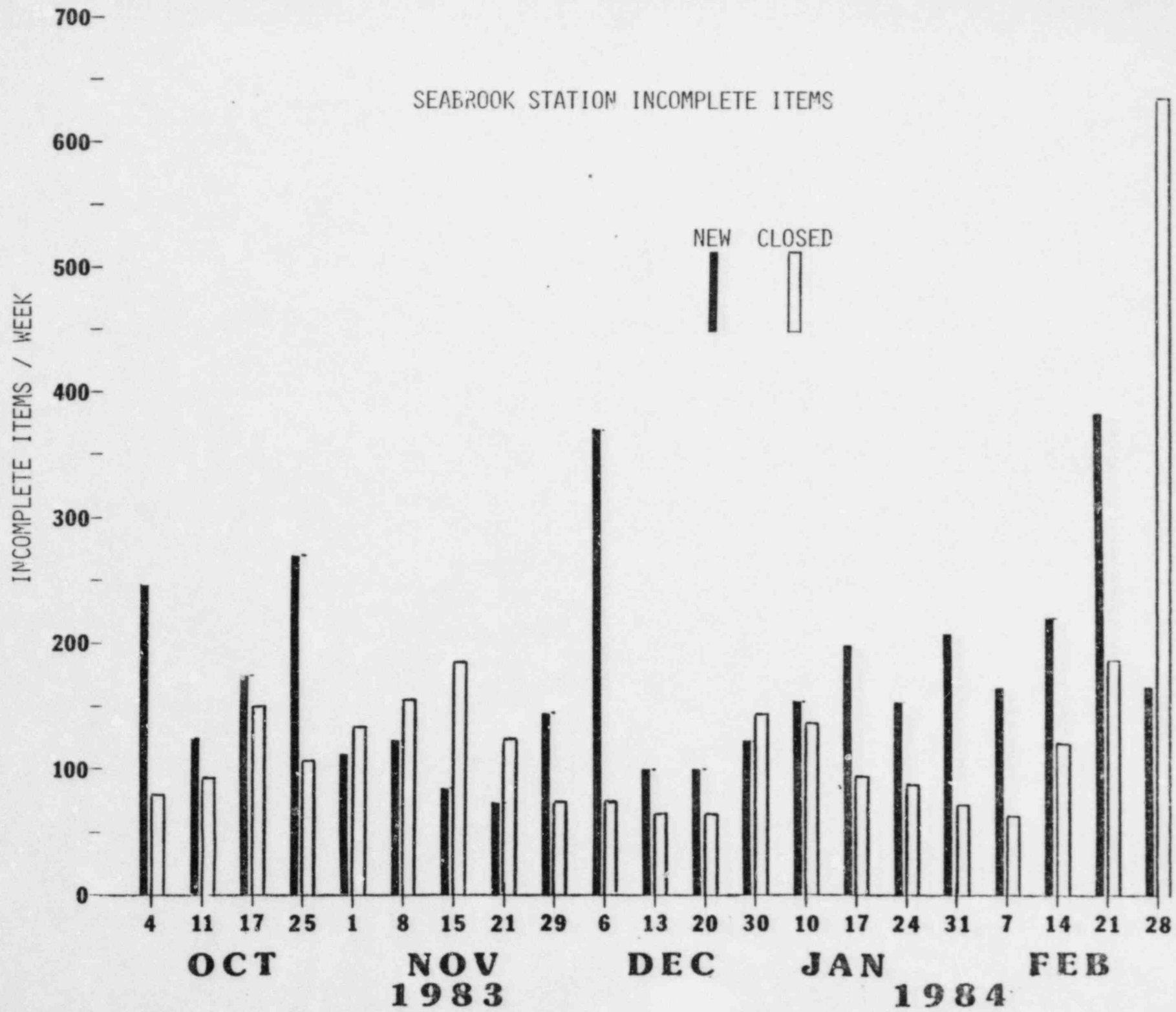
SEABROOK STATIONSUMMARY OF MAJOR EVOLUTIONS

WATER TREATMENT PLANT	MARCH 1982
FIRED AUXILIARY BOILER	FEBRUARY 1982
ENERGIZED RAT'S	MARCH 1982
ENERGIZED BUS 1 THROUGH 6	APRIL-MAY 1982
START ENERGIZING SUBSTATIONS AND MCC'S	JUNE 1982
INITIAL TESTING OF THE BALANCE OF PLANT PROCESS INSTRUMENTATION RACK	FEBRUARY 1983
SECONDARY COMPONENT COOLING SYSTEM AVAILABLE FOR SERVICE AS REQUIRED	MARCH 1983
LUBE OIL/SEAL OIL SYSTEM FLUSH COMPLETED	APRIL 1983
CONTROL ROOM MANNED BY OPERATIONS	APRIL 1983
INITIAL TESTING OF THE PRIMARY PROCESS INSTRUMENTATION RACKS	MAY 1983
START PHASE 1 TESTING OF STATION COMPUTER	MAY 1983
MAIN TURBINE OPERATED ON TURNING GEAR	JULY 1983
COMPLETED MAIN CONDENSER HYDROSTATIC TEST	AUGUST 1983
TUNNELS - FLOOD START	NOVEMBER 1983
COMPLETED TURBINE GENERATOR LEAK TEST, AT-60	NOVEMBER 1983
SERVICE WATER PUMPHOUSE BASIN FILLED WITH WATER TO OPERATING LEVEL	NOVEMBER 1983
START CONTAINMENT BLDG. SPRAY FLUSH/HYDROLASING	JANUARY 1984
STARTED LONG-TERM LAY-UP OF MAIN TURB. GEN.	FEBRUARY 1984
COMPONENT COOLING - TRAIN B IN SERVICE	FEBRUARY 1984
STARTED FILLING REACTOR VESSEL FOR PRE-SERVICE INSPECTION	MARCH 1984

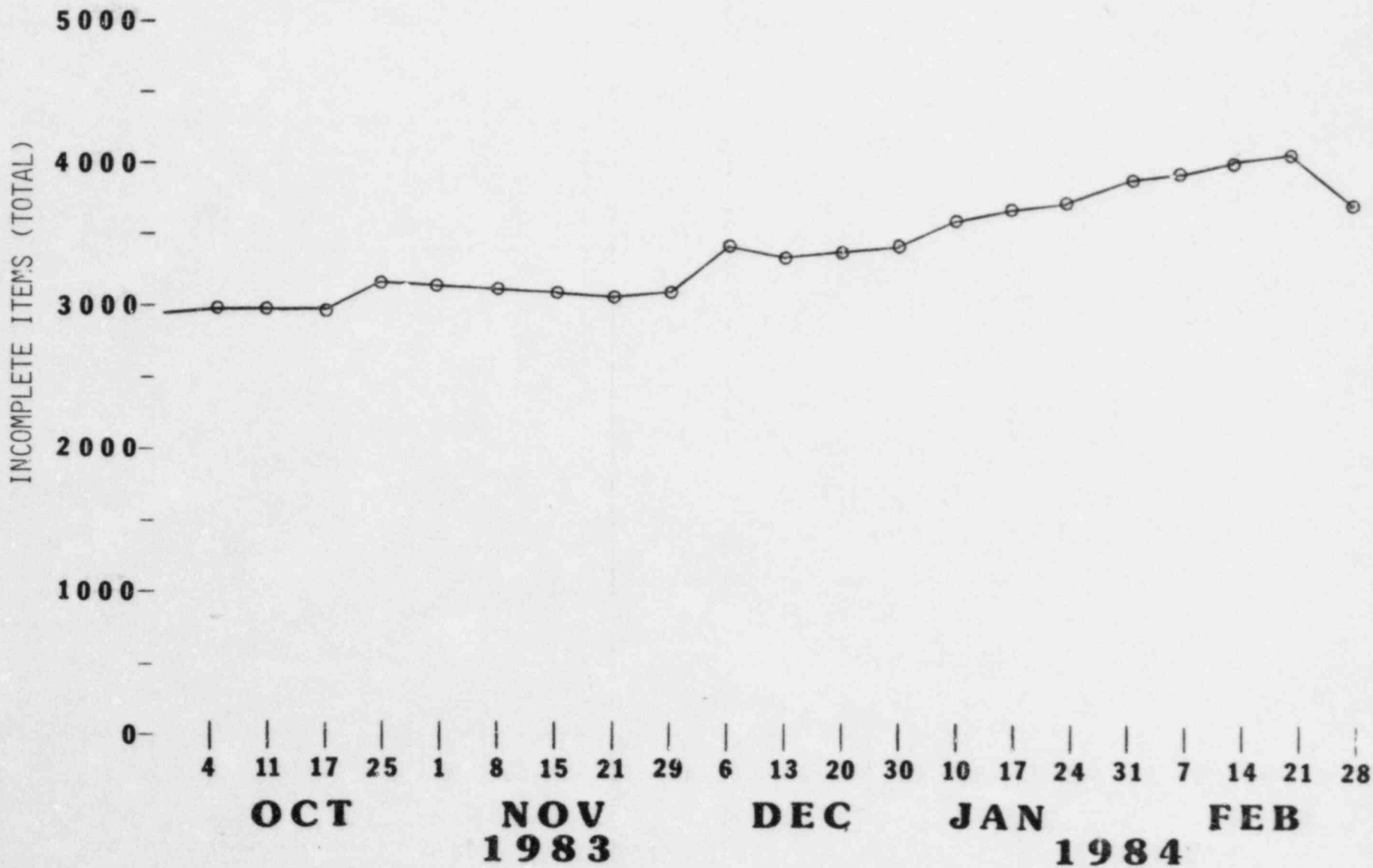
SEABROOK STATION

PREOPERATIONAL & ACCEPTANCE TEST DISTRIBUTION





SEABROOK STATION INCOMPLETE ITEMS



START-UP TEST DEPARTMENT

PROJECT-SEAGROOK UNIT 1 & COMMON

REPORT DATE- 13MAR84(15)

REPORT- ATS, PTS

DATA DATE-21FEB84

SORTED NUMERICALLY-UNLEVELED NETWORK

PAGE NO. 1

WORK ITEM NO.	ORG. DUR.	REM. DUR.	PCT. CMP.	CC	CODES	DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT	
19144422	7	7	0	1		AT -1.1 FEEDWATER SYS	3JUN85	11JUN85	23AUG85	6SEP85	61	
19992473	5	5	0	0		AT-1.2 FEEDWATER (HFT)	HFT	9SEP85	13SEP85	40CT85	10OCT85	19
19291630	5	5	0	1		AT-2 HEATER DRNS + EXTRACTION STM	21FEB85	27FEB85	30AUG85	6SEP85	133	
19144042	10	10	0	1		AT -3.1 CONDENSATE SYS	24JAN85	6FEB85	7AUG85	20AUG85	135	
19992474	5	5	0	0		AT-3.2 CONDENSATE (HFT)	HFT	9SEP85	13SEP85	40CT85	10OCT85	19
19144432	5	5	0	1		AT 4.1 MN & COND VAC & INTEGRITY TEST	24MAY85	31MAY85	21AUG85	27AUG85	61	
19024030	5	5	0	1		AT-4.2 WATER PRIME	AR-2	8FEB85	14FEB85	12AUG85	16AUG85	127
19144230	5	5	0	0		AT-5.1 SECONDARY SAMPLING SYS-AUX BOILER	CAS-2	22FEB84	28FEB84	18DEC85	24DEC85	45R
19144240	5	5	0	1		AT-5.2 SECONDARY SAMPLING SYS CONDENSATE	CAS-3	24JAN85	30JAN85	14AUG85	20AUG85	140
19144250	5	5	0	0		AT-5.3 SECONDARY SAMPLING SYS-S/G RECIRC	CAS-3	24JAN85	30JAN85	14AUG85	20AUG85	140
19184024	14	14	0	1		AT -6 CIRC WATER SYS	17MAY85	6JUN85	19AUG85	6SEP85	64	
19304030	7	7	0	1		AT -7 SEC COMP COOL WTR SYST	23AUG84	6SEP84	9AUG85	19AUG85	238	
19172430	5	5	0	0		AT-8 DEGAS SYSTEM	CS-2	1JUL85	8JUL85	30AUG85	6SEP85	43
19494441	5	5	0	1		AT-9 REACTOR WATER MAKEUP	RMW-1	22FEB84	28FEB84	7MAY85	13MAY85	303
19992475	5	5	0	0		AT-10.1 SAMPLING-REACTOR COOLANT	HFT	9SEP85	13SEP85	40CT85	10OCT85	19
19992476	5	5	0	0		AT-10.2 SAMPLING-STEAM GENERATOR	HFT	9SEP85	13SEP85	40CT85	10OCT85	19
19992477	5	5	0	0		AT-10.3 SAMPLING-AUXILIARIES	HFT	9SEP85	13SEP85	40CT85	10OCT85	19
19992478	5	5	0	0		AT-10.4 SAMPLING-SECONDARY	HFT	9SEP85	13SEP85	40CT85	10OCT85	19
19405330	20	20	0	1		AT-10.5 SAMPLING-POST ACCIDENT MONITOR	25DEC84	25JAN85	11OCT85	8NOV85	199	
19991520	5	5	0	1		AT -11 KC DRN SYS	21DEC84	28DEC84	29MAR85	4APR85	67	

START-UP TEST DEPARTMENT

PROJECT-SEABROOK UNIT 1 & COMMON

REPORT DATE- 13MARB84 (13)

REPORT- ATS, PTS

DATA DATE-21FEB84

SORTED NUMERICALLY-UNLEVELED NETWORK

PAGE NO. 2

WORK ITEM NO.	ORG. DUR.	REN. DUR.	PCT. CMP.	CC	CODES	DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
19544034	10	10	0	1		AT-12.1 INSTRUMENT AND SERVICE AIR SYSTEM 1A-SA	7JUN85	20JUN85	23AUG85	6SEP85	54
19544035	10	10	0	0		AT-12.2 INSTRUMENT AIR-CONTAINMENT 1A-9	29MAR85	11APR85	23AUG85	6SEP85	102
19321752	5	5	0	0		AT-13.1 FIRE PUMP HOUSE FLOW CAP	4OCT84	11OCT84	30AUG85	6SEP85	227
19321762	5	5	0	0		AT-13.2 FIRE PUMP HOUSE HVAC	6MAR84	12MAR84	30AUG85	6SEP85	375
19321772	5	5	0	0		AT-13.3 TURBINE BUILDING AUTO/SPRINKLR & DELUGE	17OCT84	23OCT84	26JUL85	1AUG85	194
19321782	5	5	0	0		AT-13.4 CB & DGB AUTOMATIC SPRINKLER	7SEP84	13SEP84	22APR85	26APR85	155
19321792	5	5	0	0		AT-13.5 CHL TUNNEL & ELEC PENN DELUGE SPRINKLER	15OCT84	19OCT84	20JUN85	26JUN85	171
19321802	5	5	0	0		AT-13.6 HALON SYSTEM TESTING	9AUG84	15AUG84	23APR85	30APR85	176
19321812	10	10	0	0		AT-13.7 FIRE DETECTION TEST	1FEB85	14FEB85	23AUG85	6SEP85	141
19321820	5	34	100	0		AT-13.8 TRANSFORMER AREA FIRE PROTECTION	17FEB84A	22FEB84A			390
19661626	10	10	0	1		AT -14 RADIO ACTIVE GASEOUS WASTE SYS	5JUN85	18JUN85	23AUG85	6SEP85	56
19954030	20	20	0	1		AT -15 L.W SYS	30JUL85	26AUG85	12NOV85	10DEC85	72
19531630	15	15	0	1		AT -16 SPENT RESIN SLUICE	14JAN85	1FEB85	19NOV85	10DEC85	214
19961630	10	10	0	1		AT-17 SOLID WASTE SYSTEM WS-1	9DEC85	20DEC85	11DEC85	24FEB85	2
19084630	10	10	0	1		AT -18 BRS SYS BRS -4	21AUG85	4SEP85	23AUG85	1JEP85	2
19531630	5	5	0	1		AT 19.1 SG BLOWDOWN SYS	9JUL85	15JUL85	30AUG85	6SEP85	38
19992479	5	5	0	0		AT-19.2 S/G BLOWDOWN (HFT) HFT	9SEP85	13SEP85	4OCT85	10OCT85	19
19694030	10	10	0	1		AT-20.1 WASTE PROCESS BUILDING VENT WAH	16MAY85	30MAY85	5JUL85	18JUL85	34
19894032	0	0	0	0		AT-20.2 WASTE PROCESS BUILDING HEATING WAH	30APR85	30APR85	19JUL85	19JUL85	56
19061630	10	10	0	1		AT 21.1 CONT COOL SYS -CAH -1	29MAY85	11JUN85	5JUL85	18JUL85	26

108

START-UP TEST DEPARTMENT

PROJECT-SEABROOK UNIT 1 & COMMON

REPORT DATE- 13MAR84 (13)

REPORT- AT5, PTS

DATA DATE-21FEB84

SORTED NUMERICALLY-UNLEVELED NETWORK

PAGE NO. 3

WORK ITEM NO.	ORG. DUR.	REM. DUR.	PCT. CMP.	CC	COJES	DESCRIPTION		EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
19992460	5	5	0	0		AT-21.2 CONT T COOLING (HFT)	HFT	9SEP85	13SEP85	40CT85	100CT85	19
19151624	10	10	0	1		AT -22 CONT PURGE SYS -COP -1		22FEB85	7MAR85	23AUG85	6SEP85	127
19281630	10	10	0	1		AT -24.1 ELECTRICAL PENET AREA AC		25DEC84	11JAN85	23AUG85	6SEP85	165
19992461	5	5	0	0		AT-24.2 ELECT PENETR (HFT)	HFT	9SEP85	13SEP85	40CT85	100CT85	19
19041630	10	10	0	1		AT -25 TURB HLDG HEAT AND VENT		24DEC84	8JAN85	22AUG85	5SEP85	167
19151622	40	40	0	1		AT-26 ROD CONTROL SYSTEM	CP-1	21FEB85	17APR85	15AUG85	100CT85	122
19534222	50	50	0	1		AT -27 ROD POSITION INDICATION SYS		18JUL85	26SEP85	110CT85	240ECH5	60
19256234	40	40	0	1		AT-28.1 STATION COMPUTER	SC	21AUG84	31DEC84	1MAY85	6SEP85	173
19256236	10	10	0	0		AT-28.2 STATION COMPUTER	SC	19SEP84	20CT84	11DEC85	24DEC85	307
19995216	20	20	20	1		AT-29 PRIMARY PLANT INSTRUMENTATION	SSPS-2	19OCT84	16NOV84	110CT85	8NOV85	246
19533463	20	20	0	0		AT-30.1 LOOP 3	RMS-25	8APR85	6MAY85	23MAY85	20JUN85	32
19533472	60	60	0	0		AT-30.2 LOOPS 1,2&3	RMS-25	20MAY85	13AUG85	15AUG85	8NOV85	61
19523222	45	45	0	1		AT -31 SEISMIC -PHASE 2 TESTING		14MAR85	16MAY85	210CT85	24DEC85	152
19991515	50	10	0	1		AT-33 COMMUNICATION	SPC-2	26MAR85	8APR85	23AUG85	6SEP85	105
19991714	15	15	0	1		AT -34 EMERG LIGHTING		22MAY85	12JUN85	16AUG85	6SEP85	60
19991813	30	30	0	1		AT -35 POLAR CRANE		30AUG84	120CT84	20JUN85	1AUG85	201
19144532	5	5	0	1		AT -36 GLAND SEAL SYS		15JAN85	21JAN85	21AUG85	27AUG85	152
19544350	5	5	0	1		AT-37 FEEDWATER PUMP LUHE OIL SYS	FW-2	1MAR85	7MAR85	14AUG85	20AUG85	115
19011630	7	15A	100	1		AT 38 AUX BLK		21FEB83A	10MAR83A			389
19544120	5	5	0	1		AT-39 TRANS & PURIF		26DEC84	2JAN85	10JUL85	16JUL85	135

START-UP TEST DEPARTMENT

PROJECT-SEABROOK UNIT 1 & COMMON

REPORT DATE- 15MAR84 (15)

REPORT- ATS, PTS

DATA DATE-21FEB84

SORTED NUMERICALLY-UNLEVELED NETWORK

PAGE NO. 4

WORK ITEM NO.	ORG. DUR.	REM. DUR.	PCT. CMP.	CC	CODES	DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT	
19474030	10	17A	100	1		AT -40 WT SYSTEM	27NOV83A	20DEC83A	<i>ON HOLD need to rigat deaerator section</i>		303	
19414030	10	10	0	1		AT -41 MAIN LUBE OIL SYSTEM	11MAY84	24MAY84	16AUG85	29AUG85	318	
19262420	21	21	0	1		AT-42.1 EHC SYSTEM	EHC-1	2JUL84	31JUL84	8AUG85	6SEP85	277
19371030	5	5	0	1		AT-42.2 HF SYSTEM	8MAR84	14MAR84	13AUG85	19AUG85	360	
19402210	5	5	0	1		AT -43 SEAL OIL SYSTEM	25MAY84	1JUN84	30AUG85	6SEP85	318	
19354030	5	5	0	1		AT -44 GEN STATOR COOL SYS	4APR84	10APR84	13AUG85	19AUG85	341	
19230220	5	5	0	1		AT -46 DM -0	21FEB85	27FEB85	30AUG85	6SEP85	133	
19093034	5	5	0	1		AT -47 COMPUTER RM HVAC	21DEC84	28DEC84	19JUL85	25JUL85	144	
19271030	5	5	0	1		AT -48 EMERG FD WTR PMPHSE HEAT & VENT	30JUL85	5AUG85	4DEC85	10DEC85	87	
19393430	5	5	0	1		AT -49 NON ESS SWGR + DG + CONT BLDG HEAT	20MAR85	26MAR85	4DEC85	10DEC85	178	
19394030	5	5	0	1		AT -50 PAD + FSB HEAT	1AUG85	7AUG85	29AUG85	5SEP85	20	
19001030	5	23A	100	1		AT-51 SERV BLDG RCA HEAT -VENT	19APR83A	20MAY83A			389	
19191024	5	5	0	1		AT -52 CW HSE HEAT + VENT	13NOV84	19NOV84	30AUG85	6SEP85	201	
19244430	5	5	0	1		AT -53 MS + FW PIPE CHASE VENT SYS	16NOV84	22NOV84	26JUL85	1AUG85	173	
19002230	5	6A	100	1		AT-55.1 ADMIN/SERV BLDG NON-RCA VENTS AAH-1	14MAR83A	21MAR83A			389	
19002330	5	6A	100	1		AT-55.2 ADMIN BLDG - SERVICE AREA	HW-1	3MAY83A	10MAY83A	<i>on Hold Section incomplete</i>		389
19002430	5	6A	100	1		AT-55.3 ADMIN BLDG & SERVICE AREA A/C	CHW-1	22DEC82A	31DEC82A		390	
19003430	5	13A	100	1		AT 56 AUX BLR WT SYS HEAT VENT SYSTEM	19APR83A	14MAY83A	<i>on hold for completion of a penetration seal</i>		390	
19001030	5	5	0	1		AT -57 NON -ESSENTIAL SWGR VENT	22MAR84	28MAR84	4DEC85	10DEC85	427	
19211030	30	30	0	1		AT -58 PLANT DRN & OIL SEP SYS	20DEC84	1FEB85	26JUL85	6SEP85	150	

110

START-UP TEST DEPARTMENT

PROJECT-SEABROOK UNIT 1 & COMMON

REPORT DATE- 15MAR84 (15)

REPORT- AT5, PTS

DATA DATE-21FEB84

SORTED NUMERICALLY-UNLEVELED NETWORK

PAGE NO. 5

WORK ITEM NO.	ORG. DUR.	REM. DUR.	PCT. CMP.	CC	CODES	DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT	
14104020	10	10	0	1		AT-59.1 CHLORINATION SYSTEM	CL	9JUL85	22JUL85	23AUG85	6SEP85	33
14130034	5	5	0	0		ACCEPTANCE TEST 59.2	CLA-1	27FEB85	5MAR85	26NOV85	3DEC85	188
17003034	5	5A	100	0		AT-60 GENERATOR AIR TEST W/GE	HGG-1	14NOV83A	18NOV83A			348
14504030	7	7	0	1		AT -61 SW + CW SCREEN WASH		17MAY85	28MAY85	2DEC85	10DEC85	135
14381034	5	5	0	1		AT -62 GEN H2 CO2 GAS SYS		31DEC84	7JAN85	26JUL85	1AUG85	144
14492432	5	5	0	0		AT-63 INITIAL TURBINE ROLL	HFT	9SEP85	13SEP85	4OCT85	10OCT85	19
14593245	3	3	0	1		AT-64 REACTOR CAVITY SKIMMER	SF-2	15MAR85	19MAR85	22MAR85	26MAR85	5
14002024	5	5	0	0		AT-65 EQUIPMANT VENTILATION	VG-1 AT-65	25FEB85	1MAR85	16AUG85	22AUG85	121
14491130	5	5	0	0		AT-66 NON-ESSENTIAL BATTERIES		17MAY84	23MAY84	23APR85	30APR85	234
14471024	4	4	0	1		PT 1.1 RCP INITIAL OPS		15MAY85	20MAY85	15MAY85	20MAY85	0
14492450	5	5	0	0		PT-1.2 RC PUMP (HFT)	HFT	9SEP85	13SEP85	4OCT85	10OCT85	19
14475020	10	10	0	1		PT -2.1 PZR REL TK		8JAN85	21JAN85	20MAR85	2APR85	50
14492451	5	5	0	0		PT-2.2 PRESSURIZER RELIEF TANK (HFT)	HFT	9SEP85	13SEP85	4OCT85	10OCT85	19
14492452	5	5	0	0		PT-3 RCS VIBRATION (HFT)	HFT	9SEP85	13SEP85	4OCT85	10OCT85	19
14492453	5	5	0	0		PT-4 RCS THERMAL EXPANSION (HFT)	HFT	9SEP85	13SEP85	4OCT85	10OCT85	19
14171400	5	5	0	0		PT-5.1 CHARGING SYSTEM OPERATION	CS-1	6FEB85	12FEB85	14MAY85	20MAY85	67
14173450	5	5	0	0		PT-5.2 BORIC ACID	CS-3	10DEC84	14DEC84	14MAY85	20MAY85	107
14492454	5	5	0	0		PT-5.3 CVCS BORIC ACID (HFT)	HFT	9SEP85	13SEP85	4OCT85	10OCT85	19
14174400	15	15	0	0		PT-6.1 BTRS SYS	CS-4	27JUN85	18JUL85	16AUG85	6SEP85	35
14492455	5	5	0	0		PT-6.2 CVCS-BTRS (HFT)	HFT	9SEP85	13SEP85	4OCT85	10OCT85	19

START-UP TEST DEPARTMENT

PROJECT-SEABROOK UNIT 1 & COMMON

REPORT DATE- 13MAR84(13)

REPORT- ATS, PTS

DATA DATE-21FEB84

SORTED NUMERICALLY-UNLEVELED NETWORK

PAGE NO. 6

WORK ITEM NO.	ORG. DUR.	REM. DUR.	PCT. CMP.	CC	CODES	DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT	
19471030	5	5	0	1		PT -7 RHR SYS	15MAR85	26MAR85	15MAR85	26MAR85	0	
19471920	5	5	0	1		PT-8.1 SAFETY INJECTION	15MAR85	26MAR85	15MAR85	26MAR85	0	
19471920	5	5	0	1		PT-8.2 ECCS BORON INJECTION TANK	15MAR85	26MAR85	15MAR85	26MAR85	0	
19492450	5	5	0	0		PT-9 EMERG COKE COOLING (HFT)	HFT	9SEP85	13SEP85	4OCT85	10OCT85	19
19471020	4	4	0	1		PT -10 ACCUM BLOWDOWN	22JAN85	25JAN85	6FEB85	11FEB85	11	
19402033	5	5	0	1		PT-11 CONT SUMP OPS	RH-1	4JAN85	10JAN85	23JAN85	29JAN85	13
19104030	5	5	0	1		PT -12 -1 CONT SPRAY	21FEB85	27FEB85	23JUL85	29JUL85	105	
19104032	3	3	0	1		PT -12 -2 NOZZLE	28FEB85	4MAR85	30JUL85	1AUG85	105	
19441034	10	10	0	1		PT-13.1 MSIV TEST	MS-1	10JUN85	21JUN85	19JUL85	1AUG85	28
19492457	5	5	0	0		PT-13.2 MAIN STM ISOL VALVES (HFT)	HFT	9SEP85	13SEP85	4OCT85	10OCT85	19
19341030	7	7	0	1		PT -14.1 EMERG FDWTR SYS	15MAR85	25MAR85	12AUG85	20AUG85	103	
19492458	5	5	0	0		PT-14.2 EMERG FEEDWATER (HFT)	HFT	9SEP85	13SEP85	4OCT85	10OCT85	19
19492463	5	5	0	0		PT-14.3 EMERG FWPH VENTILATION	HFT	9SEP85	13SEP85	4OCT85	10OCT85	19
19025023	7	7	0	1		PT-15.1 SERVICE WATER	SW-3	9APR85	17APR85	26APR85	7MAY85	13
19025030	20	20	0	1		PT 15.2 SERV WTR PMP + TOWER ACTUATION	10APR85	16MAY85	8MAY85	5JUN85	13	
19021030	7	7	0	1		PT 15.3 COOLING TOWER PERFORMANCE TEST	1AUG85	9AUG85	30OCT85	11OCT85	44	
19031030	7	7	0	1		PT 15.4 SERV WTR PMP/SE COOL TOWER HVAC	13DEC84	21DEC84	17JUL85	25JUL85	148	
19025232	20	20	0	1		FINAL FLOW BAL/SHD VERIFY AT OP LVL PT-15.5 SW-3	17MAY85	14JUN85	6JUN85	3JUL85	13	
19021034	5	04	100	1		PT-15.6 PERFORM MIN NPSH VERIF-P-110 A&H	SW-1&2	11SEP83A	19SEP83A	BEING RESCHEDULED PUMP REPLACED, 253		
19025240	5	5	0	0		PT-15.7 COOLING TOWER PUMP UP LEVEL	SW-1&2	21FEB84	27FEB84	22FEB85	28FEB85	253

VOIDED -

BEING RESCHEDULED
PUMP REPLACED,

112

START-UP TEST DEPARTMENT

PROJECT-SEABROOK UNIT 1 & COMMON

REPORT DATE- 13MAR84 (13)

REPORT- ATS, PTS

DATA DATE-21FEB84

SORTED NUMERICALLY-UNLEVELED NETWORK

PAGE NO. 7

WORK ITEM NO.	ORG. DUR.	REM. DUR.	PCT. EMP.	CC	CODES	DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
19325224	10	10	0	1		SWPH PUMP NPSH MIN LEVEL PT-15.8 SW-3	13DEC84	27DEC84	3JAN85	16JAN85	13
19325250	10	10	0	0		PT-15.9 PMPHSE JP LEVEL SW-1&2	28JAN85	8FEB85	14FEB85	28FEB85	13
19325260	15	15	0	0		PT-15.10 PUMP TRIP/START SW-1&2	17MAY85	7JUN85	13JUN85	3JUL85	18
19325263	3	3	0	0		PT-15.11 CT MAKE UP PUMP SW-1&2	6AUG85	8AUG85	4SEP85	6SEP85	20
19112557	5	5	0	1		BEGIN PT-16.1 PRIMARY COMPONENT COOLING CC	5MAR85	11MAR85	8MAY85	14MAY85	45
19116170	5	5	0	0		PT-16.2 PRIMARY COMPONENT COOLING SYSTEM CC-7&8	20MAR85	26MAR85	14MAY85	20MAY85	38
19592047	10	10	0	0		SPENT FUEL POOL COOLING SYSTEM PT-17.1 SF-1	30OCT84	13NOV84	16NOV84	30NOV84	12
19592049	10	10	0	1		SPENT FUEL POOL CLEAN-UP PT-17.2 SF-1	15OCT84	26OCT84	16NOV84	30NOV84	23
19511622	60	60	0	1		PT -18 EXCORE NUC INSTRU SYS PHASE 2 TESTING	17JAN85	11APR85	19FEB85	14MAY85	22
19703430	30	30	0	1		SOLID STATE PROT N -PHASE 2 TESTS PT-19+20SSPS-2	13MAY85	24JUN85	13JUN85	25JUL85	22
19202622	30	30	0	1		CONTINUE PT-19+20 SSPS-2	25JUN85	6AUG85	26JUL85	6SEP85	22
19904322	3	5	0	1		PT -21 CONTAINMENT ISOL VLVS	4NOV85	8NOV85	4NOV85	8NOV85	0
19244030	5	5	0	1		PT 22.1 CONT ENCL VENTS	25JUN85	1JUL85	27JUN85	3JUL85	2
19992459	5	5	0	0		TP-22.2 CONT T ENCLOSURE (HFT) HFT	9SEP85	13SEP85	4OCT85	10OCT85	19
19244130	5	5	0	1		PT 23 CONT EXH	14FEB85	21FEB85	27JUN85	3JUL85	92
19244334	20	20	0	1		PT 24 CONT ENCLOSURE LEAK PLATE TEST	2JUL85	30JUL85	5JUL85	1AUG85	2
19121624	5	5	0	1		PT 25.1 H2 ANALYZER	16MAY85	22MAY85	19JUL85	25JUL85	44
19124023	10	10	0	1		PT-25.2 H2 THERMAL RECOMBINER CGC-2	2MAY85	15MAY85	19JUL85	1AUG85	54
19121630	3	5	0	1		PT 25.3 BACK UP PURGE	2JUL85	9JUL85	26JUL85	1AUG85	17
19065623	5	5	0	1		PT -26 CONT AIR RECIRC SYS	12JUN85	18JUN85	12JUL85	18JUL85	21

113

START-UP TEST DEPARTMENT

PROJECT-SEABROOK UNIT 1 & COMMON

REPORT DATE- 13MAR84 100

REPORT- ATS, PTS

DATA DATE-21FEB84

SORTED NUMERICALLY-UNLEVELED NETWORK

PAGE NO. 8

WORK ITEM NO.	CRG. DUR.	REM. DUR.	PCT. CMP.	CC	CODES	DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
19301022	5	5	0	1		PT 27.1 FUEL BLDG VENT	21MAY85	28MAY85	14JUN85	20JUN85	17
19301026	5	5	0	1		PT 27.2 EXH FILTER	21MAY85	28MAY85	14JUN85	20JUN85	17
19JY5040	10	10	0	0		PT-28.1 CONTROL ROOM HVAC	C9A 14DEC84	28DEC84	12JUL85	25JUL85	144
19JY7037	5	5	0	1		PT-28.2 CONTROL ROOM VENT	31DEC84	7JAN85	26JUL85	1AUG85	144
19JY5034	5	5	0	1		PT-28.3 POS. PRESSURE ENVEL. TEST CONTROL ROOM	5OCT84	12OCT84	19JUL85	25JUL85	196
19JY1034	5	5	0	1		PT-29 EMERGENCY SWITCHGEAR	C9A-1&2 7JUN84	13JUN84	4DEC85	10DEC85	374
19344430	5	5	0	1		PT-30 EMERG AC DIST. (UAT/HAT TRANSFER)	SY-3 29MAY85	4JUN85	24SEP85	30SEP85	82
19Y91410	75	75	0	1		PT-31 125V DC DISTRIBUTION SYSTEM	24MAY84	10SEP84	1MAY85	15AUG85	234
19Y91210	60	60	0	1		PT-32 120 VAC INSTRU POWER SUPPLY	1MAR84	24MAY84	13JUN85	6SEP85	323
19230030	10	10	0	1		PT 33.1 DIESEL GENERATOR	DG 3JAN85	16JAN85	30APR85	13MAY85	81
19201024	10	10	0	1		PT 33.3 DG VENT SYS	19JUN84	2JUL84	30APR85	13MAY85	216
19311022	15	15	0	1		PT 34.1 NEW FUEL HANDLING EQUIPMENT	FHB-2 22MAR85	11APR85	31MAY85	20JUN85	49
19311030	14	14	0	1		PT-34.2 FINAL INDEXING	FHC-1 4DEC85	23DEC85	5DEC85	24DEC85	1
19Y92410	5	5	0	1		PT -35 RCS + HYDRO	21MAY85	28MAY85	21MAY85	28MAY85	0
19Y94034	15	15	0	1		PT-36 & 37.1 (TYPE A) SAT & ILRT	12NOV85	3DEC85	12NOV85	3DEC85	0
19Y94324	20	20	0	0		COMPL PT-37.2 TYPE B LEAK RATE TESTING	11OCT85	8NOV85	11OCT85	8NOV85	0
19Y94320	15	15	0	0		COMPL PT-37.3 TYPE C CONT LEAK RATE TESTING	11OCT85	1NOV85	11OCT85	1NOV85	0
19202020	20	20	0	1		PT -38 ESF INTEG	7AUG85	4SEP85	11OCT85	8NOV85	46
19230030	4	4	0	1		COMPL PT-39 LOSS OF OFFSITE POWER	11OCT85	17OCT85	30OCT85	4NOV85	12
19Y92430	24	24	0	1		PT -40 HOT FUNCTIONAL TESTING	9SEP85	10OCT85	9SEP85	10OCT85	0

START-UP TEST DEPARTMENT

PROJECT-SEAHOOK UNIT 1 & COMMON

REPORT DATE- 13MARCH 1985

REPORT- ATS, PTS

DATA DATE-21FEB84

SORTED NUMERICALLY-UNLEVELED NETWORK

PAGE NO. 9

WORK ITEM NO.	ORG.	REM.	PCT	CC	CODES	DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
19992462	1	1	0	0		PT-40.1 PRES R PRESS & LEVEL CONTR	HFT 9SEP85	9SEP85	26SEP85	26SEP85	13
19992461	1	1	0	0		PT-40.2 RCS LEAK DETECTION SYSTEM	HFT 10SEP85	10SEP85	27SEP85	27SEP85	13
19992462	1	1	0	0		PT-40.3 S/G WTR LEVEL INSTR VERIF	HFT 11SEP85	11SEP85	30SEP85	30SEP85	13
19992463	1	1	0	0		PT-40.4 PRIMARY& SECONDARY INSTR	HFT 12SEP85	12SEP85	1OCT85	1OCT85	13
19992464	1	1	0	0		PT-40.5 REMOTE SHUTDOWN PANEL	HFT 13SEP85	13SEP85	2OCT85	2OCT85	13
19992465	1	1	0	0		PT-40.6 PRES R & MSSV SETPT VERIF	HFT 16SEP85	16SEP85	3OCT85	3OCT85	13
19992466	1	1	0	0		PT-40.7 CONDENSER STEAM PUMP	HFT 17SEP85	17SEP85	4OCT85	4OCT85	13
19992467	1	1	0	0		PT-40.8 S/G ATMOS STEAM RELIEF VLV	HFT 18SEP85	18SEP85	7OCT85	7OCT85	13
19992468	1	1	0	0		PT-40.9 SW & PCCW PERF (HFT)	HFT 19SEP85	19SEP85	8OCT85	8OCT85	13
19992469	1	1	0	0		PT-40.10 HEAT REMOVAL DEMONSTATION	HFT 20SEP85	20SEP85	9OCT85	9OCT85	13
19992470	1	1	0	0		PT-40.11 CONT T PENETR COOL G CAP	HFT 23SEP85	23SEP85	1OCT85	1OCT85	13
19992471	5	5	0	0		PT-41 INTEGRATED PLANT HEATUP	HFT 9SEP85	13SEP85	4OCT85	10OCT85	19
19992472	5	5	0	0		PT-42 INTEGRATED COODN (HFT)	HFT 3OCT85	9OCT85	4OCT85	10OCT85	1
19992435	19	19	0	1		PT-43 REACTOR POST HOT FUNCT INSPECTION	11OCT85	7NOV85	15OCT85	8NOV85	1
19991618	20	20	0	1		PT -44 PLANT VENTILATION SYS FILTER TESTING	19JUN85	17JUL85	26NOV85	24DEC85	110
19993390	10	10	0	0		PT-45 PAH VENT SYS	PAH-1 1APR85	12APR85	7JUN85	20JUN85	47

115

ENGINEERING STATUS

UNIT 1 AND COMMON

DRAWINGS

98% COMPLETE

SPECIFICATIONS

98% COMPLETE

SEABROOK STATION
UNIT 1 AND COMMON FACILITIES
ENGINEERING AND DESIGN STATUS

DRAWINGS

<u>DISCIPLINE</u>	<u>TOTAL REQUIRED</u>	<u>TOTAL ISSUED</u>	<u>PERCENT ISSUED</u>
STRUCTURAL	1,035	1,017	98%
SUPPORTS	58	56	97%
MECHANICAL	420	419	99%
SUPPORTS	125	124	99%
ELECTRICAL	854	806	94%
I&C	2,301	2,300	99%
MECHANICAL SERVICES	258	253	98%
SUPPORTS	55	55	100%
NUCLEAR	1,299	1,223	94%
SUPPORTS	718	695	97%
SUBSTATION	155	147	95%
ARCHITECTURAL	<u>235</u>	<u>235</u>	<u>100%</u>
TOTAL	7,513	7,330	98%

FEBRUARY 20, 1984

III-2

SEABROOK STATION
UNIT 1 AND COMMON FACILITIES
ENGINEERING AND DESIGN STATUS

<u>SPECIFICATIONS</u>			
<u>DISCIPLINE</u>	<u>TOTAL REQUIRED</u>	<u>TOTAL ISSUED</u>	<u>PERCENT ISSUED</u>
STRUCTURAL	89	86	97%
MECHANICAL	54	54	100%
ELECTRICAL	48	48	100%
I & C	76	76	100%
MECHANICAL SERVICES	50	49	98%
NUCLEAR	71	70	99%
SUBSTATION-	11	11	100%
ARCHITECTURAL	40	40	100%
PIPING	35	32	91%
CONSTRUCTION	17	17	100%
PROJ. STANDARD DOCUMENTS	<u>32</u>	<u>32</u>	<u>100%</u>
TOTAL	523	515	98%

FEBRUARY 20, 1984

III-1

SEABROOK STATION
UNIT 1 AND COMMON FACILITIES

SCHEDULAR IMPACT OF TMI REQUIREMENTS (NUREG-0737) AND CURRENT
LICENSING ISSUES

- o CRITERIA FOR CONSIDERATION OF NUREG-0737
ITEM IN CFP
 - o MAJOR CONSTRUCTION (DUE TO NATURE OF ITEM)
 - o EQUIPMENT AVAILABILITY
- o NUREG-0737 ITEMS CONSIDERED FOR CFP (SAME AS FOR 11/82 CFP)
 - o TECHNICAL SUPPORT CENTER
 - o EMERGENCY OPERATIONS FACILITY
 - o SAFETY PARAMETER DISPLAY SYSTEM
 - o POST-ACCIDENT SAMPLING SYSTEM
 - o PLANT SHIELDING REVIEW
 - o REACTOR VESSEL HEAD VENT
- o SEABROOK ACTIVITY AND SCHEDULAR INFLUENCE OF NUREG-0737
ITEMS CONSIDERED (CURRENT STATUS OF ITEMS CONSIDERED AT 11/82 CFP)
- o OTHER LICENSING ACTIVITY CONSIDERED FOR CFP AND SEABROOK SCHEDULAR
INFLUENCE (SAME AS FOR 11/82 CFP)
 - o ENVIRONMENTAL QUALIFICATION OF EQUIPMENT
 - 1. NSSS - ELECTRICAL
 - 2. BOP - ELECTRICAL
 - 3. MECHANICAL
 - o APPENDIX R (FIRE PROTECTION)
 - o APPENDIX E (E - PLANNING)
 - o RVLIS

ENVIRONMENTAL QUALIFICATION OF SAFETY-RELATED EQUIPMENT

ELECTRICAL EQUIPMENT

NSSS

W USERS GROUP 95% COMPLETE
PLANT SPECIFIC REVIEW 60% COMPLETE
NO EXPECTED IMPACT ON CONSTRUCTION

BOP

85% COMPLETE
NO EXPECTED IMPACT ON CONSTRUCTION

MECHANICAL EQUIPMENT

REVIEW COMPLETE
NO IMPACT ON CONSTRUCTION

SEISMIC QUALIFICATION OF SAFETY-RELATED EQUIPMENT

- o 70% EQUIPMENT FULLY QUALIFIED
- o 30% ADDITIONAL VERIFICATION REQUIRED
 - o ARS VERIFICATION PROGRAM RESOLVING CONCERNS
- o SQRT AUDIT SUMMARIES - UPDATING
 - o TO NRC MID 1984
 - o NO AUDIT SCHEDULED

SCHEDULAR IMPACT OF 10CFR50.55(e) DEFICIENCIES

- o 19 ITEMS REPORTED SINCE 11/82 CFP
 - o 6 ITEMS CLOSED
 - o 5 ITEMS SCHEDULED TO BE COMPLETED
 - o 8 ITEMS UNDER EVALUATION
- o NO FORESEEABLE SCHEDULAR IMPACT

ATWS

- o RULEMAKING NOT SCHEDULED
- o No NRR REQUIREMENTS
- o WOG HANDLING GENERICALLY
- o POSSIBLY NO PRE-FUEL LOAD REQUIREMENTS

HIGH ENERGY LINE BREAK

	PERCENT ENGINEERED	EXPECTED COMPLETION	IMPACT ON CONSTRUCTION
PIPE WHIP	95	JUNE, 1984	NONE IDENTIFIED
JET IMPINGEMENT	50	JULY, 1984	NOTE 1
FLOODING	80	JUNE, 1984	NOTE 2
ENVIRONMENTAL EFFECTS	60	JULY, 1984	NOTE 3
INDUCED TRANSIENTS	70	JUNE, 1984	NOTE 4

NOTE 1: SOME CABLES WILL HAVE TO BE RE-ROUTED AND SOME IMPINGEMENT SHIELDS INSTALLED.

NOTE 2: PROBABLE CHANGES - UPGRADE INSTRUMENTATION, REVIEW DRAINS, QUALIFIED SUMP PUMPS.

NOTE 3: PROBABLE CHANGES - UPGRADE INSTRUMENTATION, ADDITIONAL DOORS, MINOR STRUCTURAL CHANGES.

NOTE 4: CONTROLLED CLOSURE CHECK VALVES TO BE INSTALLED ON EACH FEEDWATER LINE.
SEVERAL PIPE SUPPORTS TO BE MODIFIED. TWO NEW SUPPORTS TO BE ADDED.

PIPE STRESS (AS-BUILT) ANALYSIS

- o CAD SYSTEM OPERATIONAL
- o FEEDWATER LINE AS-BUILT AND ANALYZED WITH CAD SYSTEM
- o REMAINDER BEING RESCHEDULED PER BASE-LINE SCHEDULE

N-STAMP CERTIFICATION PROGRAM

- o COMPONENTS
 - o SHOP STAMPED
 - o STEAM GENERATORS - AFTER RCS HYDRO
- o FIELD FABRICATION
 - FIRST N-5 DATA FORMS UNDER PREPARATION

UPDATING DRAWINGS AND SPECIFICATIONS TO AS-BUILT CONDITIONS

- o AS-BUILT DRAWINGS DEFINED IN AP-39 AND LISTED AND SCHEDULED BY TP-11
- o STATUS

<u>CONTRACTOR</u>	<u>TOTAL SUBMITTED</u>	<u>ESTIMATE DRAWING TOTAL</u>
FBI	98	1150
GRINNELL	9	81
HAH	384	2900
JCI	26	450
PERINI	1157	1172
NOTER	153	153
PDM	243	255
P.H.	<u>652</u>	<u>11000</u>
TOTAL	2728	~ 17000

- o UE&C DESIGN DRAWINGS AND SPECIFICATIONS - CONTINUALLY (180 DAY MAXIMUM DELAY)
- o PROGRAM UNDER CONTINUAL REVIEW

PRESSURIZER RELIEF VALVE

- o PIPING DESIGN MEETS LATEST EPRI TEST CRITERIA
- o VALVES ON SITE
- o PIPING BEING INSTALLED
- o VALVE SCHEDULED TO BE INSTALLED BY 4-1-84

SOLID WASTE HANDLING SYSTEM

- o VOLUME REDUCTION AND SOLIDIFY LIQUIDS
- o ENCAPSULATE AND SOLIDIFY FILTER CARTRIDGES & MISCELLANEOUS ITEMS
- o PROVIDE FOR MOBILE PROCESSING SERVICES
 - o OPERATIONAL PRIOR TO FUEL LOAD
 - o AMENDMENT 52 DESCRIBES CONTRACT SERVICES
 - o 95% EQUIPMENT PURCHASED
 - o 30% DRAWINGS COMPLETED

THERMAL BARRIER COOLING SYSTEM

EQUIPMENT

ALL EQUIPMENT SHIPPED EXCEPT:

SURGE TANK - EXPECTED DELIVERY JUNE, 1984

PUMPS - EXPECTED DELIVERY MARCH 16, 1984

PIPING

ALL EQUIPMENT SHIPPED

PIPE SUPPORTS

APPROXIMATELY 50% COMPLETE AND DELIVERED

CONSTRUCTION

HEAT EXCHANGERS ARE SET. PUMPS SCHEDULED TO BE INSTALLED BY MARCH 31, 1984. BASELINE SCHEDULE SHOWS AN EARLY FINISH DATE OF FEBRUARY, 1985.

SEISMIC CATEGORY II/I REVIEW

- ° COVERED UNDER TECHNICAL PROCEDURE - 4 (TP-4)
- ° REVIEW IS UNDER WAY
- ° LAST ISSUE OF REPORT REV. 1 DATED 12/21/83

SEABROOK STATION
UNIT I AND COMMON FACILITIES

OPERATING PROCEDURES

	REQUIRED FOR FUEL LOADING	NOT STARTED	IN PREPARATION & APPROVAL	APPROVED *
ADMINISTRATIVE	176	19	36	121
OPERATIONAL	556	48	146	362
SURVEILLANCE	388	95	213	80
MAINTENANCE	580	115	317	148
EMERGENCY	155	16	47	92
TOTAL	1855	293	759	803
TOTAL %	100	16	41	43

* APPROVED MEANS APPROVED AT THE DEPARTMENT SUPERVISOR LEVEL OR ABOVE.

3/1/84

SEABROOK STATION
UNIT 1 STAFF TRAINING

EQUIVALENT % OF EMPLOYEES WHO HAVE COMPLETED THEIR TRAINING								PROJECTED COMPLETION DATE
	52%	68%	74%	84%	53%	70%	46%	
TRAINING CATEGORIES	AUXILIARY OPERATIONS (31)	MANAGEMENT PROFESSIONAL (100)	CHEMISTRY TECHNICIANS (13)	MAINTENANCE MECHANICS (32)	MAINTENANCE ELECTRICIANS (19)	INST. & CONTROL TECHNICIANS (41)	HEALTH PHYSICS TECHNICIANS (13)	
INTRODUCTORY	X	X	X	X	X	X	X	12/84
FUNDAMENTALS	X	X	X	X	X	X	X	12/84
PLANT SYSTEMS	X	X	X	X	X	X	X	12/84
TECHNICAL SKILLS	X	X	X	X	X	X	X	12/84
MANAGEMENT SKILLS	X							12/84
G.E.T.	X	X	X	X	X	X	X	9/85

3/1/84

SEABROOK STATION
UNIT I STAFFING
STATION ORGANIZATION

	EMPLOYEED AS OF 3/1/84	PROJECTED ONE UNIT	AUTHORIZED TWO UNITS
NUCLEAR ENERGY FUNCTIONAL UNIT			
<u>EXECUTIVES</u>	3	3	3
NUCLEAR CONSTRUCTION			
CONSTRUCTION MANAGEMENT *	16	16	16
SITE MANAGEMENT *	9	9	9
<u>NUCLEAR PRODUCTION</u>			
SEABROOK STATION	411	485	515
SEABROOK STARTUP TEST DEPARTMENT *	11	11	11
NUCLEAR PROJECTS	15	16	16
SEABROOK TRAINING CENTER	27	33	33
NUCLEAR SERVICES GROUP	16	18	17
NUCLEAR ENGINEERING GROUP	4	7	6
NUCLEAR QUALITY GROUP	16	28	28
NUCLEAR INFORMATION SYSTEMS GROUP	17	19	19
TOTAL	545	645	673

* FIGURES INDICATE PSNH EMPLOYEES ONLY. THESE FUNCTIONAL UNITS INCLUDE NON-PSNH MEMBERS.

SEABROOK STATION
UNIT I STAFFING
STATION ORGANIZATION

	EMPLOYEED AS OF 3/1/84	PROJECTED	AUTHORIZED
<u>STATION MANAGEMENT & STAFF</u>	19	19	19
<u>ADMINISTRATIVE SERVICES</u>	75	93	93
<u>TECHNICAL SERVICES</u>	248	288	288
<u>OPERATIONS</u>	69	85	85
<u>TOTAL</u>	411	485	485

OPERATOR AND SENIOR OPERATOR LICENSES

	ONSITE	CONTRACTED	PROJECTED	REQUIRED
SRO	20*	0	18	8
RO	24*	0	30	8

* PREVIOUS LICENSES; THERE ARE CURRENTLY NO SEABROOK LICENSES ISSUED.