

NRC CASELOAD FORECAST PANEL MEETING

SHOREHAM NUCLEAR POWER STATION

MAY 8, 1980

A. AGENDA

B. LILCO PRESENTATION MATERIAL

LILCO PRESENTATION AGENDA

1. Introduction. J. P. Novarro
2. Schedule Overview W. J. Museler
 - A. Review of January 1979 Objectives and Results
 - B. Shoreham Rescheduling Effort
 - C. Reasons for Schedule Delay
3. Engineering and Procurement Status. B. R. McCaffrey
 - A. Base Engineering Status
 - B. Engineering Manpower Status
 - C. Change Control System
 - D. Major Modifications - (Engineering Status, excluding TMI)
 - E. Procurement Status
4. Construction Status W. J. Museler
 - A. Bulk Quantities
 - B. Critical Path System Quantities
 - C. Mark II Containment Modifications
 - D. TMI Modifications
 - E. System Completion Status
 - F. Critical Path Schedule
 - G. Project Monitoring Program
 - H. 1980 Milestones
 - I. Critical Schedule Areas
5. Craft Labor Status. W. J. Museler
 - A. Manpower Projections
 - B. Labor Contracts

6. Specific NRC Questions. W. J. Museler

- A. I & E Circular No. 79-25 (including Supplement A)
- B. Base Plate Flexibility
- C. "K" Line Status
- D. Small Bore Pipe Status
- E. Off-Gas System Modifications

7. Startup Presentation. J. H. Taylor

- A. Summary
- B. Procedure Status
- C. Procedures Not Yet Approved
- D. Tests Completed and In Progress
- E. Turnover Curve
- F. Preoperational/Acceptance Test Curve
- G. NSSS Test Schedule

8. Current Percent Complete W. J. Museler

9. Summary W. J. Museler

10. NRC Questions

. LUNCH.

NRC SITE TOUR (P.M.)

NRC Site Tour to be conducted by the NRC Resident Inspector, J. Higgins -
NRC Personnel Only.

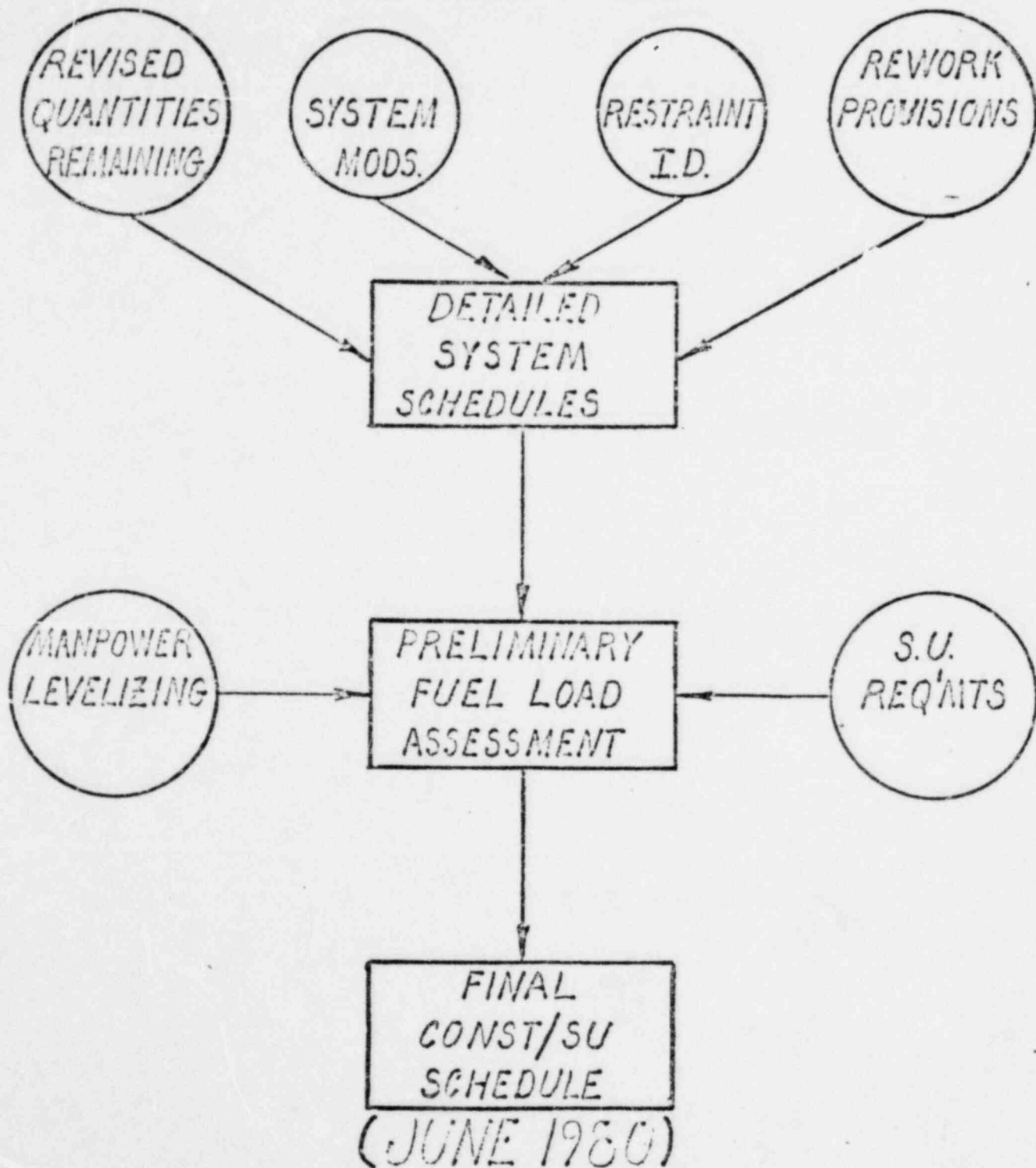
SECTION 1
INTRODUCTION

SECTION 2
SCHEDULE OVERVIEW

1979 MILESTONES

1. FLOOD SCREENWELL
2. CIRCULATING WATER SYSTEM TEST
3. COMPLETE TURBINE GENERATOR
4. INTEGRATED SYSTEM FLUSH
5. RPV HYDRO
6. SERVICE WATER AVAILABLE
7. COMPLETE DIESEL GENERATORS

SHANAHAN RESCHEDULING PROCESS



REASONS FOR DELAY

1. MK II MODIFICATIONS
2. EFFECT OF REGULATORY REQUIREMENTS
 - A) PBIC
 - B) PBOC
 - C) SERVICE WATER MODIFICATIONS
 - D) SEPARATION REQUIREMENTS
 - E) LPCI MOTOR GENERATOR SETS
 - F) DC AND AC VOLTAGE STUDIES
3. INSTALLATION RATE CHANGES
4. INCREASED REWORK
5. CONDUIT DESIGN REQUIREMENTS
6. ASME III DOCUMENTATION REQUIREMENTS

SECTION 3

ENGINEERING AND PROCUREMENT STATUS

BASE ENGINEERING
COMPLETION STATUS

- OVERALL COMPLETION (EXCL. TMI, CONSTR. SUPPT., ADMIN)	-- 95%
- OVERALL COMPLETION (W/TMI)	-- 90%
- <u>STRUCTURAL</u>	
MAJOR STRUCTURAL DESIGN (EXCEPT SAMPLING)	-- 98%
MARK II REEVALUATION	-- 80%
- <u>MECHANICAL/PIPING</u>	
PIPING DWGS INITIALLY COMPLETE (EXCEPT INERT- ING/TMI)	-- 98%
- <u>PIPE SUPPORTS</u>	
INITIAL DESIGNS (EXCL. TMI)	-- 97%
- <u>ELECTRICAL</u>	
CABLE TICKETS 17,206/18024	-- 95%
WIRING DIAGRAMS 950/983	-- 97%

ENGINEERING MANPOWER
STONE & WEBSTER

(PROJECT ASSIGNED)

- 1) BOSTON -- 231 (42% ENG. MECH.)
 - 2) SITE ENGR -- 63
 - 3) TORONTO -- 30 (100% ENG. MECH.)
 - 4) TASK FORCE -- 64*
-
- 433

* TASK FORCE = 64 S&W PLUS 45 JOB SHOP

SIGNIFICANT PLANT MODIFICATIONS
CHANGE CONTROL PROGRAM

-- CCF PROGRAM

-- CCF's IDENTIFIED - 273

-- CCF's ENGR COMPL. - 141

-- BALANCE CCF's TO COMPL. - 132

SYSTEM ENGINEERING COMPLETION REVIEW AND CONTROL PROGRAM

CHANGE CONTROL FORM

C. P. Lombardi - 9/13/79
Responsible Engineer

System/No. PA2/6 Title of Change Drywell Cooling (WCH-2713)

System Title Reactor Building Closed Loop Cooling Water System

(No. assigned by P. J. Holden)

Rev. 0 Approved By

Sam Project Engineer

Issue Date

12/30/79

Issue to:

Others:

B. W. McCaffrey - LILCO (WR) E. J. Prebazon
J. L. Taylor - LILCO (WR) A. E. Hechony
L. E. Moore - SAM (WR) G. R. Meiner
W. Hunt - LILCO (WR) D. Shair
P. J. Holden - Boston File R. F. Deering
C. A. Mercione - Cabinet File J. Arden, Jr.

R. E. Partier

C. Lombardi

G. Partier

A. P. McCarthy

The system has been changed as follows: (Describe change in detail and identify documents required and projected issue dates on Sheet 2 and reissue to show document numbers with issue numbers.)

REGLOC System changes to implement drywell cooling fix, includes 2 - 100% capacity ASME III H's, 4 TCV's, 4 TI's, 4 PI's, 2 TE with local flow indicators, 10" piping with manual valves and check-valves, etc. (Issue of 11 H's is delayed; however, procurement of hardware is required immediately).

See CCF's T41/1, T41/2 & P41/13 for balance of this change.

Route (1) Lead Engineer, (2) P. J. Holden, (3) E. J. Prebazon.

12/10/79
 12/10/79

512/5
 CHANGE CONTROL FORM
 REV. 3 CH. 2 OF 2
 11-15-79

Indicate in where not required

<u>Document Type</u>	<u>Complete (C) or Projected Issue Date</u>	<u>Document Numbers or IIRs (Indicate issue numbers)</u>
1. Flow Diagram (FD)	<u>11-15-79</u>	<u>FM-151</u>
2. Piping Diagram (PP)	<u>11-15-79</u>	<u>FM-151 AND 152</u>
3. Stress Analysis	<u>12-15-79</u>	<u>IR</u>
4. Pipe Support (PS)	<u>12-15-79</u>	
5. Logic Diagram (LD, LDC)	<u>1-9-80</u>	
6. Instrument Loop Diagram	<u>1-9-80</u>	
7. Elementary Diagram (ED)	<u>12-15-79</u>	
8. Wiring Diagram (WD)	<u>2-15-80</u>	
9. Cable & Raceway Schedules	<u>2-15-80</u>	<u>IR</u>
10. Test Loop Diagram	<u>Note 1</u>	
11. Instrument Drawing (ID)	<u>1-9-80</u>	
12. Machine Loc. Drawing (ML)	<u>IR</u>	
13. Structural Dwg. (FC, PS)	<u>12-15-79</u>	
14. Manufacturers' Drawings (requiring field modifications)	<u>11-15-79</u>	
15. Purchasing (Identify Items)	<u>10-31-79</u>	<u>IR</u>
<u>ASME III Heat Exchangers</u>	<u>10-15-79</u>	<u>C-10-4-79</u>
<u>Piping, including manual valves</u>	<u>11-22-79</u>	
<u>Instruments & Controls</u>	<u>See CH. 3 of 3</u>	

Note 1: Three weeks from issue of
 wiring diagrams except as noted.

Date Engineering Completed _____

SIGNIFICANT PLANT MODIFICATIONS

<u>CHANGE CONTROL NUMBER</u>	<u>DESCRIPTION</u>	<u>LAST ACTION DATE</u>
B21/6	LOOSE PARTS MONITORING	FE/CT 6/15/80
E41/6	DC VOLTAGE FIX	FE 5/1/80 C
G11/3	SUPPRESSION POOL PUMP BACK	FK 8/24/80
P41/4	RB SERVICE WATER SYS. CHANGES	BZ/FK 5/30/80
P41/13	NEW TURBINE BLDG. S.W. PUMPS	FK 6/5/80
P42/6	DRYWELL COOLING HXC	FK 6/30/80
R23/2	TRIP NON-CAT I LOADS (480V)	C
R42/1	ADDITION OF BLACK BATTERIES	FE/CT 8/30/80
T47/1	DRYWELL COOLING	FK 5/27/80
---	ATWS-RPT ADDITION	C

PROCUREMENT STATUS

<u>ITEM</u>	<u>DELIVERED/TOTAL QTY.</u>	<u>% DELIVERED</u>
1. LARGE BORE PIPE	7,939/7,989 SPOOLS	99%
2. LARGE BORE VALVES	2,316/2,346 VALVES	99%
3. LARGE BORE HANGERS	4,805/4,930 HANGERS ⁽¹⁾	97%
4. ELECTRICAL CABLE	6,219,250/5,224,000 Ft. ⁽²⁾	84%
5. INSTRUMENTATION	13,450/14,050 INSTRUMENTS ⁽³⁾	96%

¹THERE ARE APPROXIMATELY 10,800 LARGE BORE HANGERS. 4,930 WERE THE RESPONSIBILITY OF THE FABRICATOR (125 SNUBBER ASSEMBLIES REMAIN TO BE SHIPPED). MATERIAL TO COMPLETE THE 6,000 FIELD FABRICATED HANGERS IS ON SITE.

²TOTAL FIGURES FROM COMPUTER RUN (MAY 1980), AND TAKE-OFF OF ALL P.O.'S LISTED AS OF 4/30/80. THERE ARE 4,490,037 FT. INSTALLED TO DATE.

³INCLUDES MOTOR OPERATED VALVES, RELIEF VALVES, CONTROL VALVES, AND HAND VALVES WITH POSITION SWITCHES (I.E., UNIQUELY NUMBERED VALVES).

SECTION 4
CONSTRUCTION STATUS

BULK QUANTITY COMPLETION STATUS

<u>ACTIVITY</u>	<u>PREVIOUS ESTIMATE</u>	<u>CURRENT ESTIMATE</u>	<u>INSTALLED</u>	<u>% COMPLETE</u>
CONCRETE - CUBIC YARDS	119,000	135,000	129,600	96
LARGE BORE PIPE - LINEAR FEET	107,000	110,000	108,600	99
LARGE BORE HANGERS - EACH	9,300	10,100	8,650	85
BLDG SVC PIPE - LINEAR FEET	---	33,000	31,600	96
SMALL BORE PIPE - LINEAR FEET	97,000	113,000	103,000	91
SMALL BORE HANGERS - EACH	12,000	12,000	8,830	72
CABLE TRAY - LINEAR FEET	55,000	56,000	55,700	99
CABLE - LINEAR FEET	4,200,000	5,234,000	4,396,000	84
CONDUIT - LINEAR FEET	344,000	465,000	337,000	72
TERMINATIONS - EACH	165,000	252,600	177,700	70
INSTRUMENTS - EACH	4,700	4,900	4,150	85

CRITICAL PATH SYSTEMS QUANTITIES

<u>ITEMS</u>	<u>TOTAL REQUIRED</u>	<u>TOTAL REMAINING</u>	<u>% COMPLETE</u>
L.B. PIPE (Ft.)	27,841	797	97
L.B. PIPE SPOOLS (No.)	2,542	114	96
L.B. PIPE WELDS (No.)	4,446	124	97
S.B. PIPE (Ft.)	22,211	1,089	95
L.B. HGRS & SUPPORTS	1,960	425 (230 F.C.)	78
L.B. HGRS REDESIGN (MK-II)	297	161	54
S.B. HGRS & SUPPORTS	2,336	797	66
INSTRUMENTS (No.)	932	90	90
INSTRUMENT TUBING (Ft.)	19,363	1,144	94
ELECTRICAL CABLES (No.)	5,135	1,241	76
ELECTRICAL CABLES (Ft.)	1,229,474	254,863	79
CONDUIT (Ft.)	115,520	27,927	76
TERMINATIONS (No.)	73,511	19,342	74

MARK II MODIFICATIONS

1. PIPING REROUTES	COMPLETE
2. PIPING OVERSTRESS MODIFICATIONS	4 REMAINING
3. DOWNCOMER BRACING (PLUS LATER CHANGE IN ELEVATION)	COMPLETE
4. ADD QUENCHERS FOR SRVD'S	COMPLETE
5. PIPE SUPPORT MODIFICATIONS (1)	419 REQUIRED 165 COMPLETE
6. STRUCTURAL STEEL MODIFICATIONS	COMPLETE (2)

NOTE: 1. 1500 REACTOR BUILDING SUPPORTS WERE
REDESIGNED FOR MARK II LOADS PRIOR
TO INSTALLATION.

2. EXCEPT FOR A FEW PLATFORMS.

TMI
SIGNIFICANT PLANT IMPACTS
(NUREG-0573)

SRV TESTING

SRV POSITION INDICATION

CORE COOLING INSTRUMENTATION

DIVERSE CONTAINMENT ISOLATION

INERTING

PLANT SHIELDING AND ENVIRONMENTAL
QUALIFICATION

POST ACCIDENT SAMPLING

TECHNICAL SUPPORT CENTER

CONTROL ROOM DESIGN REVIEW

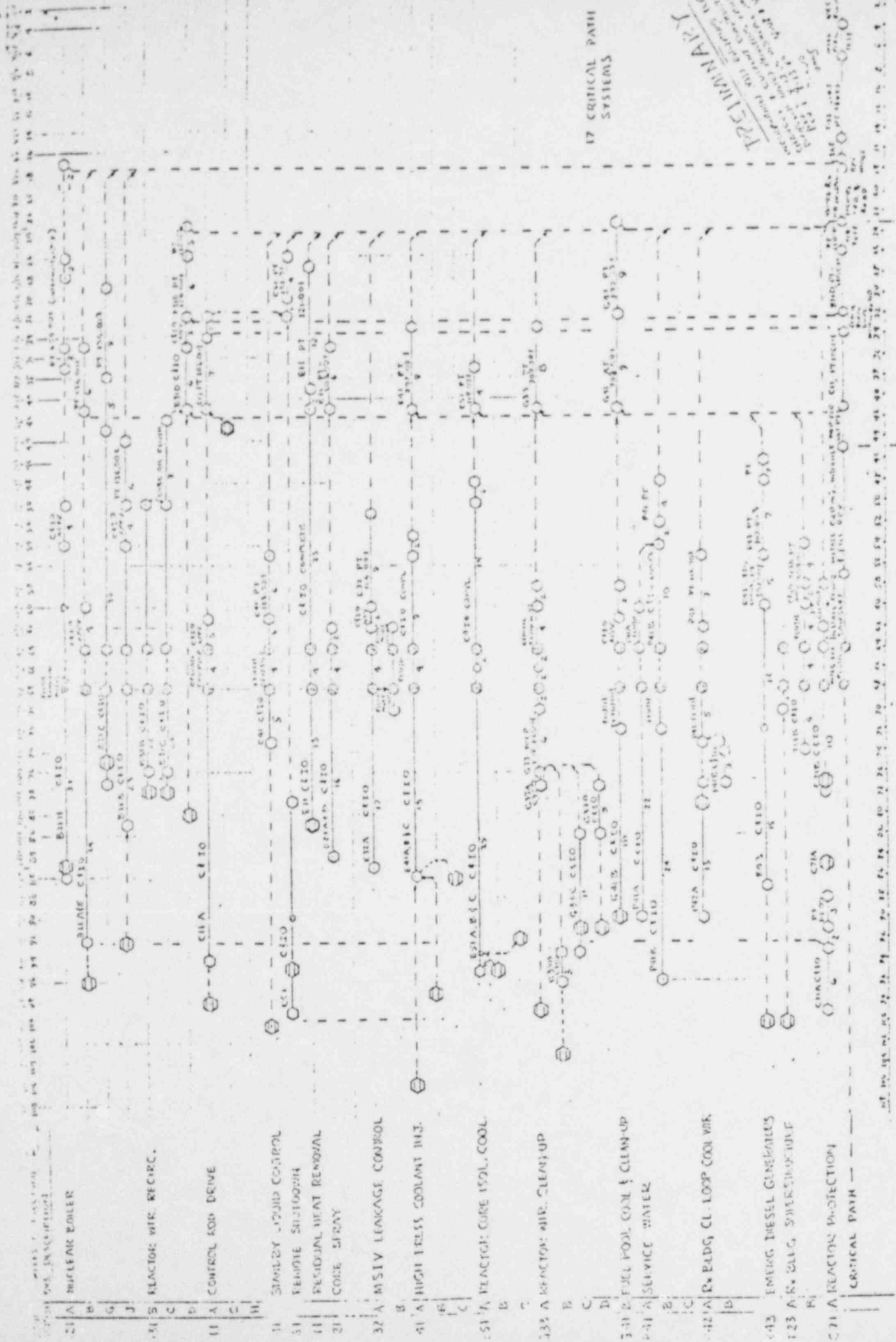
SYSTEM COMPLETION STATUS

TOTAL SUBSYSTEM PACKAGES	264
PACKAGES TURNED OVER	116
PACKAGES REMAINING	148

NOTE: TURNOVER SCHEDULE WILL BE ADDRESSED
IN STARTUP SECTION.

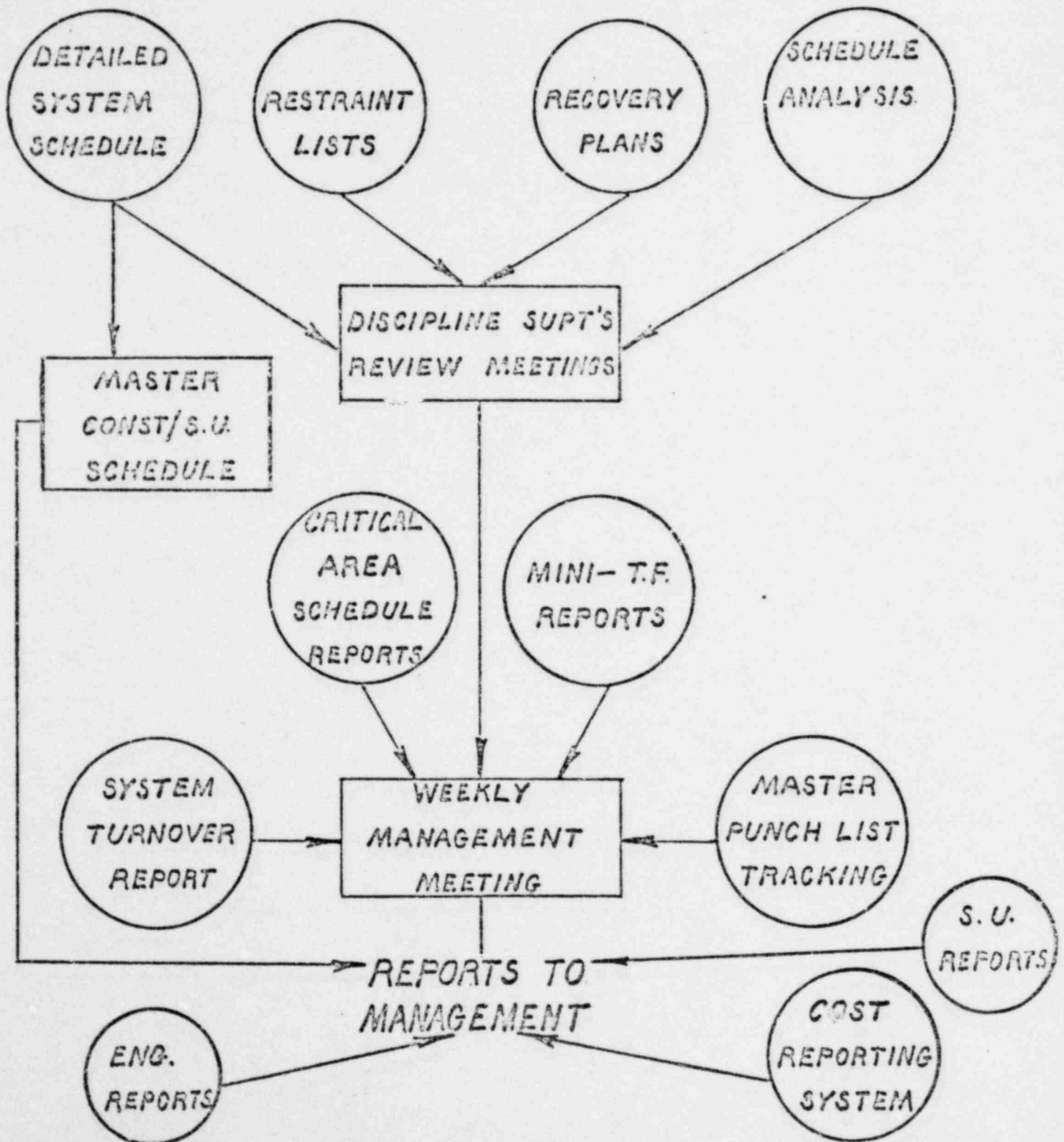
17 CRITICAL PATH SYSTEMS

PRELIMINARY
 Prepared by: [illegible]
 Checked by: [illegible]
 Date: [illegible]



CRITICAL PATH — — — — —

PROJECT MONITORING PROGRAM



CRITICAL SYSTEM STATUS SUMMARY

SYSTEM NO.	SYSTEM NAME	PACKAGE	BRIEF DESCRIPTION	STATUS		CURRENT STATUS	SLACK AVAIL.
				-WKS	5-7-80 0	+WKS DATE	
B21	NUCLEAR BOILER	A	RPV-PIPING & VALVES	ELECTRICAL		11-10-80	0
		A		MECHANICAL		9-22-80	0
		B	RPV-INSTRUMENTATION	ELECTRICAL		9-15-80	0
		B		MECHANICAL		9-1-80	0
B31	REACTOR RECIRC	C	BALANCE OF SYSTEM	ELECTRICAL		4-27-81	0
		C		MECHANICAL		10-13-80	0
		D	PUMP MOTOR & CONTROLS	ELECTRICAL			0
		D		MECHANICAL		10-13-80	-1
E11	RHR	A	"B" LOOP FOR RPV HYDRO	ELECTRICAL		12-15-80	0
		A		MECHANICAL		8-4-80	+1½
		B	BALANCE OF SYSTEM	ELECTRICAL			0
		B		MECHANICAL			0
E21	COLE SPRAY	A	PPG. & VALV. FOR HYDRO	ELECTRICAL		6-16-80	0
		A		MECHANICAL		10-20-80	0
		B	BALANCE OF SYSTEM	ELECTRICAL			0
		B		MECHANICAL			0
E32	MSIVLCS	-	ASSOC. MECHANICAL	MECHANICAL			-5
		-	ASSOC. ELECTRICAL	ELECTRICAL			0

1980 MILESTONES

1. BEGIN DG TESTING
2. ESTABLISH SERVICE WATER AVAILABILITY
3. TURNOVER CRITICAL PATH SYSTEMS TO
STARTUP
4. PERFORM INTEGRATED SYSTEMS FLUSH
(IMPROVE PRELIMINARY SCHEDULE)
5. COMPLETE STEAM TUNNEL MODIFICATIONS

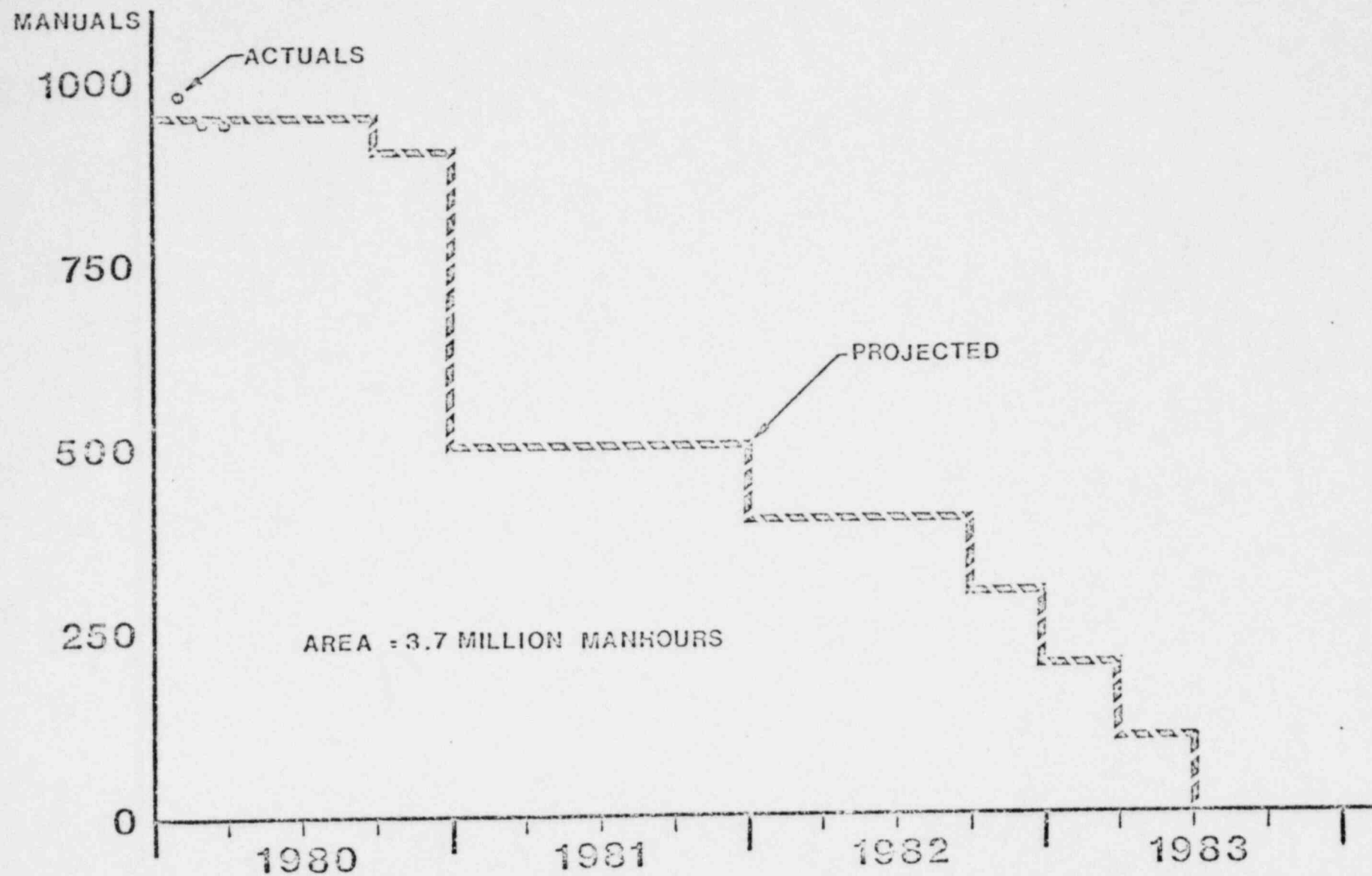
CRITICAL SCHEDULE AREAS

1. CONDUIT DESIGN
2. ASME III HYDROSTATIC TESTING
3. TMI & OTHER NRC CHANGES
(FINALIZE CRITERIA)
4. MATERIAL DELIVERIES
(SPECIFIC CP ITEMS)

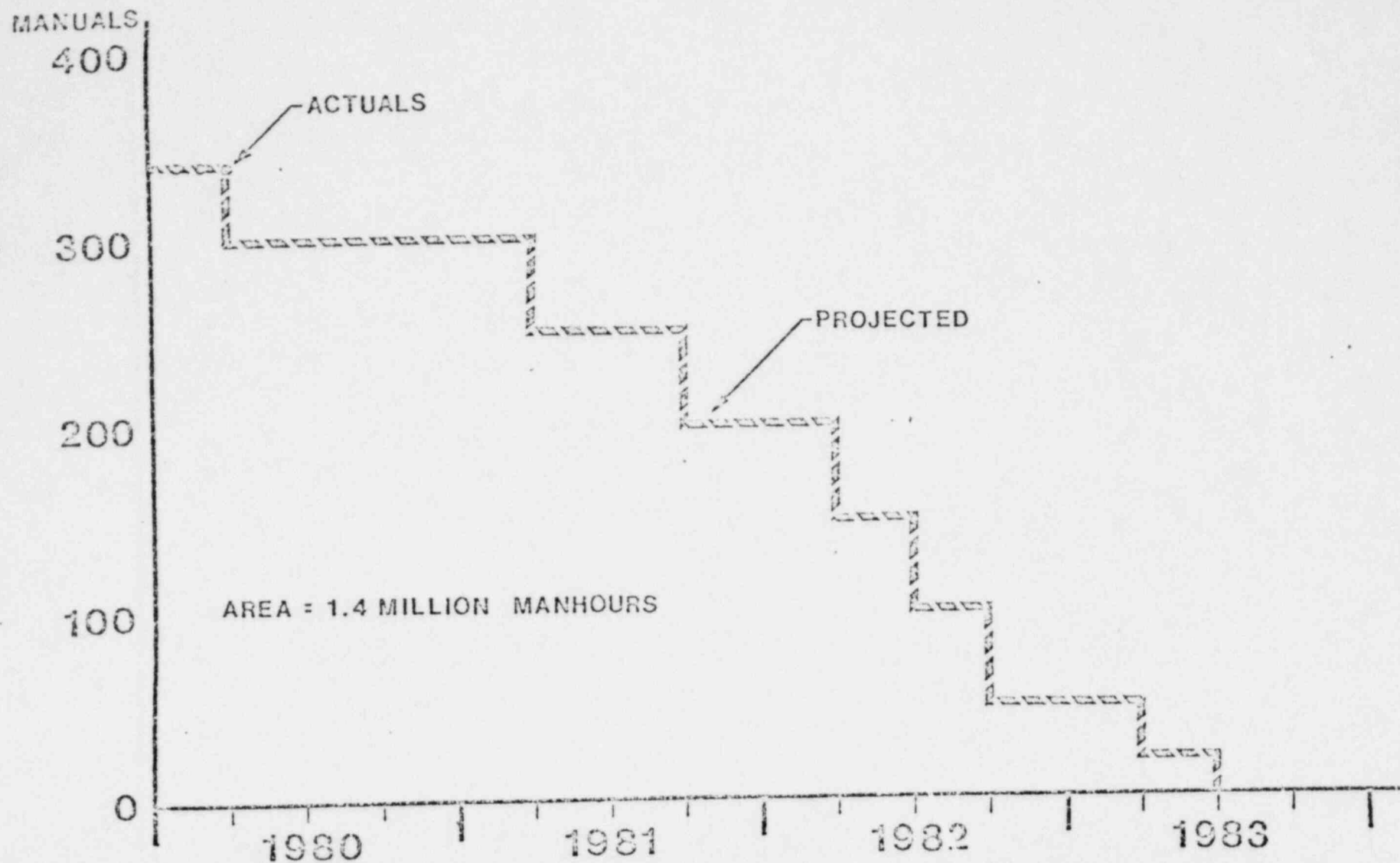
SECTION 5

CRAFT LABOR STATUS

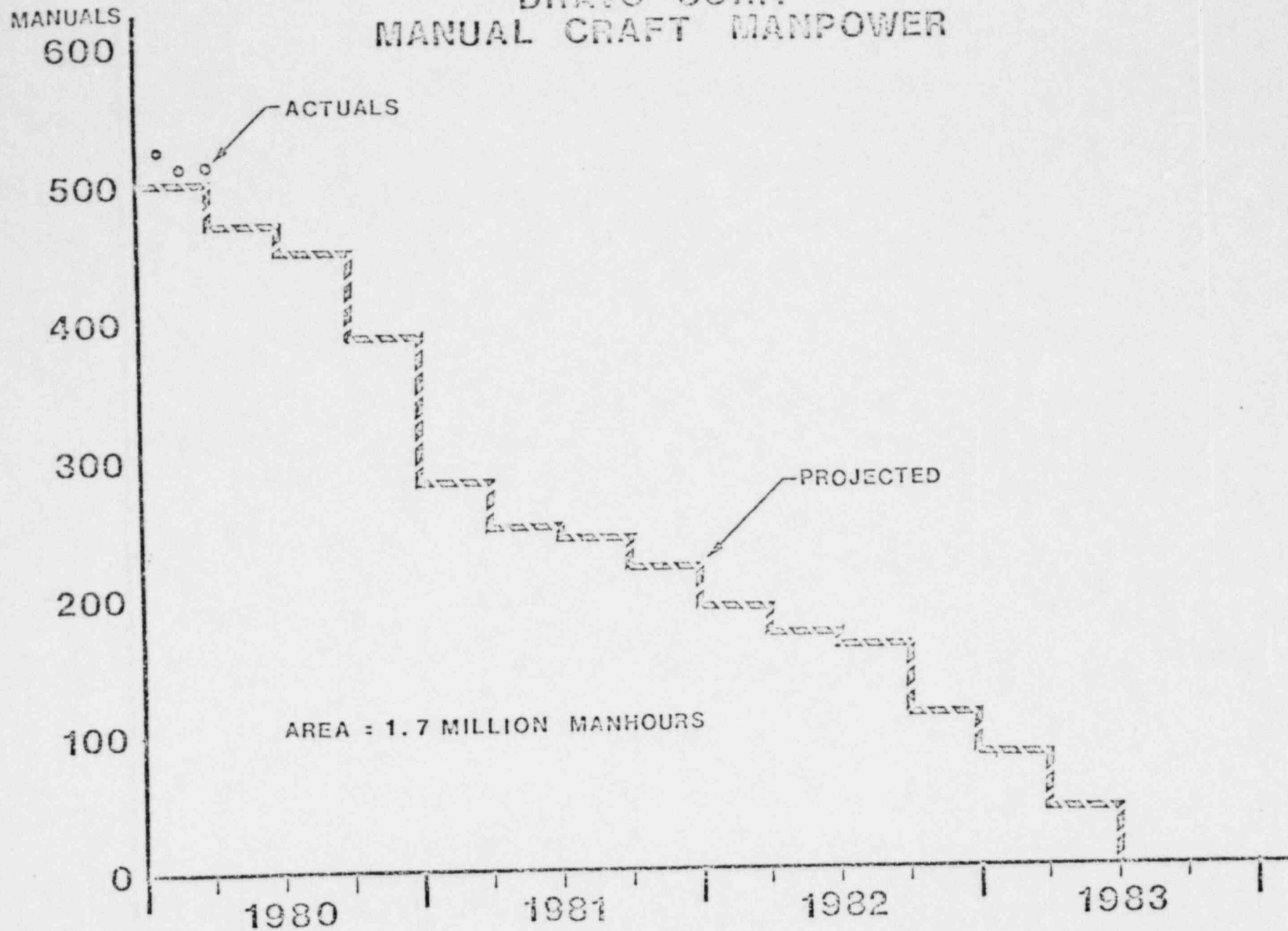
COURTER & CO. MANUAL CRAFT MANPOWER



COMSTOCK / JACKSON CO. MANUAL CRAFT MANPOWER



DRAVO CORP. MANUAL CRAFT MANPOWER



LABOR CONTRACT STATUS

<u>CRAFT</u>	<u>CONTRACT EXPIRATION DATE</u>
PAINTERS	3-31-81
ELECTRICIANS	4-30-81
CARPENTERS	6-30-81
CEMENT MASON	6-30-81
IRONWORKERS	6-30-81
LABORS	6-30-81
MILLWRIGHTS	6-30-81
OPERATING ENGINEERS	6-30-81
SURVEYORS	6-30-81
METAL LATHERS	6-30-81
ASBESTOS WORKERS	6-30-81
PILE DRIVERS/DOCK BUILDERS	6-30-81
TIME CHECKERS	6-30-81
STEAMFITTERS	6-30-81
BOILERMAKERS	7-31-81
SHEETMETAL WORKERS	8-31-81
ELEVATOR CONSTRUCTORS	8-18-81
WATER PROOFERS	9-30-81
TEAMSTERS	6-30-82
RIGGERS	6-30-82
PLUMBERS	6-30-82

SECTION 6

SPECIFIC NRC QUESTIONS

I&E CIRCULAR 79-25

SNUBBERS

ISSUES:

1. DUST COVERS
2. SNUBBER BRACKET
3. SUPPRESSOR CAPACITY
112 vs 120 KIPS

STATUS:

B/P SUPPLYING MODIFIED PARTS

COMPLETION DATE:

NOT A RESTRAINT ON TESTING

BASE PLATE FLEXIBILITY

SUPPORTS AFFECTED:

CAT I	400
CAT II	400
TOTAL	800

MODIFICATIONS REQUIRED:

1. ADD GUSSETS
2. REPLACE BASE PLATE
(THICKER PLATES)

STATUS:

COMPLETE

CRITICAL REACTOR BUILDING PIPING

I. SMALL BORE PIPE

- REACTOR TOTAL - 37,632 LIN. FT.
- REACTOR REMAINING - 2,473 LIN. FT.
- PERCENT COMPLETE - 93%

II. PREVIOUS CRITICAL PATH "K" LINES

- ALL 89 INSTALLED FOR COLD HYDRO
- 4 LINE PRESENTLY BEING REWORKED

OFF-GAS SYSTEM STATUS

CONCERNS:

1. MILLSTONE I DETONATION
2. BF-3 CHARCOAL BURN

SNPS MODIFICATIONS:

1. TEMPERATURE DETECTION IN DECAY TANK
2. ADDITIONAL PURGE PROVISIONS
3. ADDITIONAL H₂ ANALYZERS
4. IMPROVED TRAIN TRANSFER LOGIC
5. PREHEATING OF STANDBY LOOP

INSTALLATION STATUS:

1. PIPING - COMPLETE
2. INSTRUMENTATION - 8/80
3. ELECTRICAL - 8/80

SECTION 7

STARTUP PRESENTATION

STARTUP PRESENTATION

ATTACHMENTS

DESCRIPTION

- | | |
|----|--------------------------------------|
| 1. | Status Summary |
| 2. | Procedure Status |
| 3. | Procedures Not Yet Approved |
| 4. | Tests Completed And In Progress |
| 5. | Turnover Curve |
| 6. | Preoperational/Acceptance Test Curve |
| 7. | NSSS Test Schedule |
| 8. | Test Manpower Requirements |

I

PREOPERATIONAL TEST PROGRAM

STATUS SUMMARY

<u>System/Subsystem Turnovers</u>	117(265) = 44%
NSSS	5(47) = 11%

Checkout and Initial Operations

Started	103
Completed	60(265) = 23%

Flushes

Started	25
Completed	17(55) = 31%

Acceptance/Preoperational Tests

Started	14
Completed	11(137) = 8%

<u>Procedures</u>	Approved	208(274) = 76%
Preoperational Test Procedures		53(78) = 68%

Startup Completion $\approx$ 20%

II STARTUP PROCEDURE WRITING STATUS

MAY 01, 1980

	TOTAL	APPROVED	TECHNICAL REVIEW	DRAFT REVIEW	DRAFT STARTED	NOT STARTED
ACCEPTANCE TEST PROC.	59	36	1	0	16	6
FLUSHING PROC.	55	51	1	0	3	0
GENERIC C&IO PROC.	31	31	0	0	0	0
SPECIFIC C&IO PROC.	51	37	1	0	7	6
PREOPERATIONAL TEST PROC.	78	53	0	2	12	11
TOTAL	274	208	3	2	38	23
%	100	75.9	1.1	0.7	13.9	8.4

III DRAFT PROCEDURE STARTED

AT.000.001 Cranes (Turbine & Radwaste Bldg.)
AT.000.002 Groundings
AT.000.006 Cathodic Protection
AT.110.001 Feedwater Heaters, Ext. Steam Htrs. Drains
AT.130.001 Turbine Lube Oil & Turning Gear
AT.301.001 138 KV System
AT.308.001 4160V Normal Bus Distribution
AT.318.001 125V DC Station Lighting
AT.640.001 Area Radiation Monitoring
AT.692.001 Turbine Control & Supervisory Inst.
AT.702.001 Equipment Drainage & Floor Drains
AT.715.001 Sampling System
AT.715.002 Sampling System
AT.715.003 Sampling System
AT.715.004 Sampling System
AT.715.005 Sampling System

CF.307.002 Emerg. Diesel Gen. Air Start Sys. Flush
CF.710.001 Low Conductivity Liquid Radwaste Sys. Flush
CF.714.001 Radwaste Offgas Sys. Flush

CS.108.001 Emerg. Diesel Gen. Fuel Oil Stor. & Xfer Sys.
CS.108.002 Emerg. Diesel Gen. Jacket Water Sys.

CS.307.001 Emerg. Diesel Generator Lube Oil Sys.
CS.307.002 Emerg. Diesel Generator Air Start Sys.
CS.630.001 Process Radiation Monitoring Specific C&IO
CS.640.001 Area Radiation Monitoring Sys. Specific C&IO

PT.106.001 Control Rod Drive Sys. Pre-Op Test
PT.129.001 Turbine High Pressure Control
PT.136.003 Automatic Depressurization Sys.
PT.307.003 Emerg. Diesel Gen. Electric Pre-Op Test
PT.307.004 Emerg. Diesel Gen. Reliability Qualification
PT.309.001 4160V Power Distribution Pre-Op Test
PT.609.001 Rod Sequence Control Sys. Pre-Op Test
PT.630.001 Process Radiation Monitoring Sys. Pre-Op Test
PT.654.001 Primary Containment Integrated Leak Test Type "A"
PT.711.001 High Conductivity Liquid Radwaste Sys. Pre-Op Test
PT.713.001 Solid Radwaste Sys. Pre-Op Test
PT.714.001 Radwaste Off Gas System Pre-Op Test

III PROCEDURE NOT STARTED

AT.000.005	Cathodic Protection
AT.000.007	Cathodic Protection
AT.115.001	Generator Exciter
AT.310.001	480V Normal Bus Distribution
AT.670.001	Integrated Security Building Consoles Test
AT.670.002	Integrated Security System Test
CS.670.008	In Plant Security System
CS.670.009	Security System Lighting, Perimeter & Yard
CS.670.010	Security Communications System
CS.670.011	Security Building Console Interfacing
CS.670.012	Control Security Console/Interfacing
CS.703.001	Fuel Handling and Vessel Servicing Equipment Test
PT.Z12.001	Personnel Monitoring & Survey Inst.
PT.Z14.001	Laboratory Equipment
PT.116.001	MSIV Leakage Collection System
PT.307.002	Electrical System Integrated Pre-Op Test
PT.314.001	120V AC Power Distribution
PT.403.002	Primary Containment Liquid Leakage Detection Sys.
PT.650.001	Primary Containment Isolation System
PT.654.004	Primary Containment Instrumentation
PT.704.001	Reactor Building Polar Crane Pre-Op Test
PT.710.001	Low Conductivity Liquid Radwaste System Pre-Op Test
PT.712.001	Liquid Chem Waste Pre-Op Test

NOTE: All procedures scheduled to be approved by October 1980.

IV COMPLETED PROCEDURESREMARKS

AT.101.001 Aux. Boiler
AT.105.001 Cond. Stor & Xfer
AT.114.001 Gen. Isol & Bus Cooling
AT.131.001 Domestic Water
AT.409.001 O&S HVAC
AT.422.001 Hot Water Heating & Glycol

PT.107.001 Makeup Demineralizer
PT.117.001 I&S Air P.T.
PT.608.001 RDCS
PT.6 6.001 RPIS
PT.651.001 Computer
PT.316.001 24VDC

1%
1%
1%

CF.101.001 Boilout of Aux. Boilers
CF.101.004 Aux. Blr. Stem. & FW Recirc Flush
CF.101.006 Aux. Blr. F.O. Stor. & xfer Flush
CF.102.001 Circ. Water System Flush
CF.103.001 Cond. & FW Flush
CF.104.001 Cond. DI Flush
CF.105.001 Cond. Stor. & xfer Flush
CF.107.001 Makeup DI Flush
CF.113.001 Stator Cooling Water Flush
CF.117.001 I&S Air Flush
CF.126.001 TBCLCW Flush
CF.130.002 Transfer & REPT L.O. Flush
CF.131.001 Domestic Water Flush
CF.132.001 Hypochlorination Sys. Flush
CF.422.001 Hot Water Htg. Sys. Flush
CF.422.002 Glycol Htg. Sys. Flush

In Prog.

Partial Comp.

CS.102.001 Circ H₂O Transient Test

CS.102.002 " " "
CS.102.004 " " "
CS.102.005 " " "
CS.102.006 " " "
CS.102.009 " " "
CS.102.010 " " "
CS.102.011 " " "
CS.102.012 " " "
CS.102.013 " " "
CS.102.014 " " "
CS.102.015 " " "
CS.102.016 " " "
CS.102.017 " " "
CS.102.018 " " "
CS.102.019 " " "
CS.102.020 " " "
CS.102.021 " " "

CS.608.001 RDCS
CS.610.001 RPIS
CS.651.001 Computer

99%
99%
99%

CONSTRUCTION TURNOVER CURVE
SHOREHAM NUCLEAR POWER STATION-UNIT-1

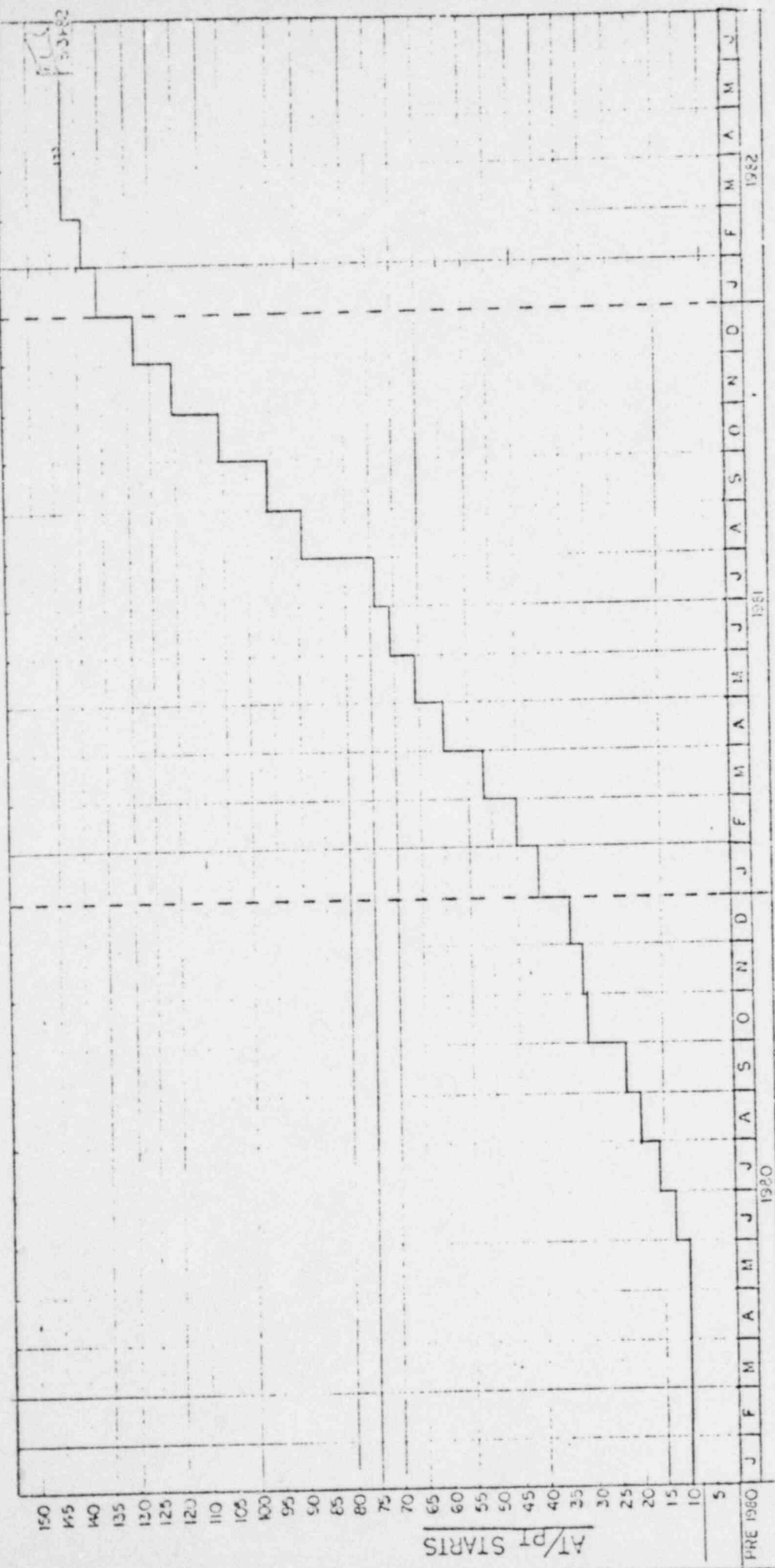
STATUS AS OF: 5-2-80

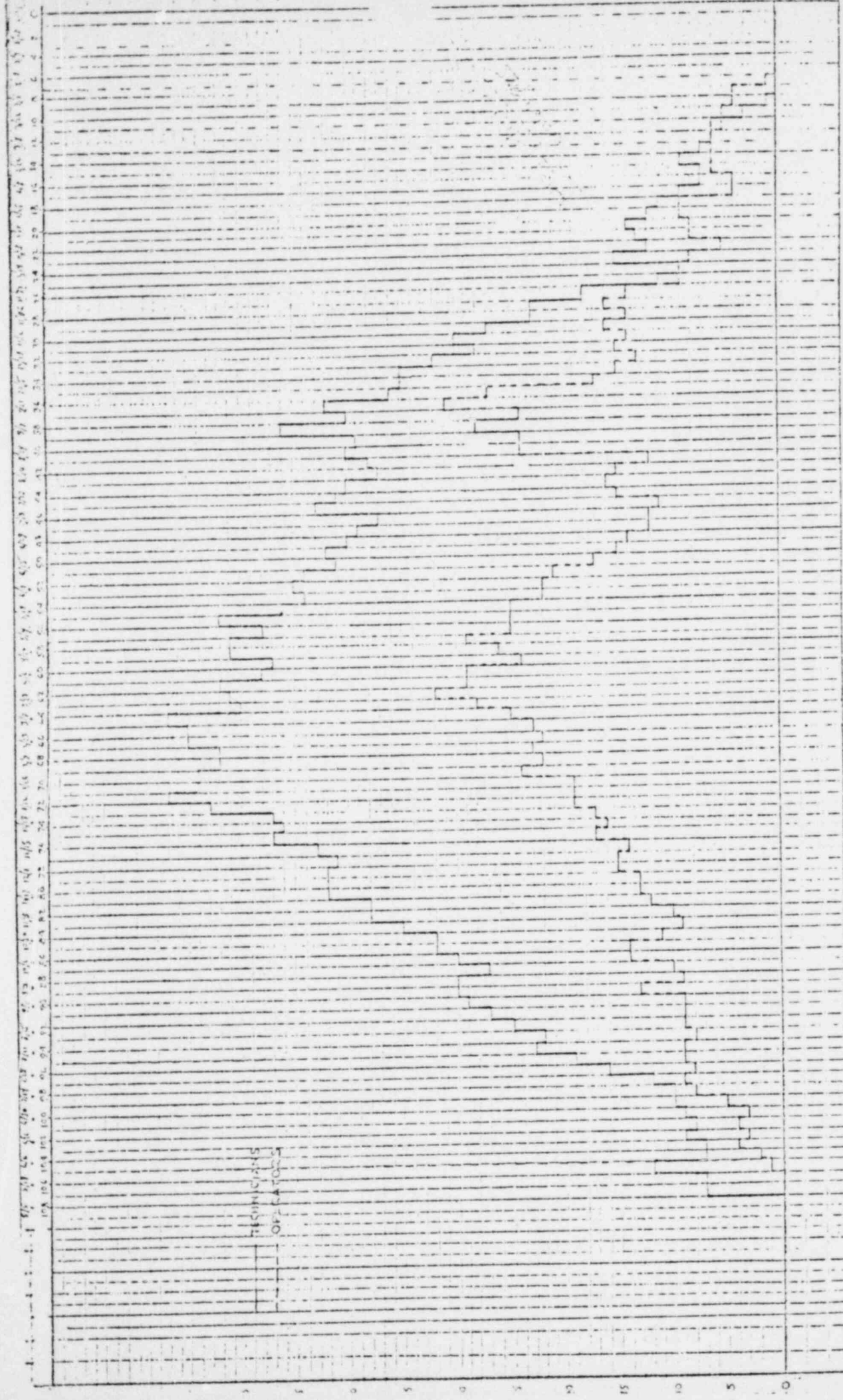


RECEIVED TURNOVERS 287
TURNOVERS TO DATE 7
TOTAL 294

ACCEPTANCE & PRE OPERATIONAL TEST (STARTS REQ'D TO SUPPORT 5-31-82 FUEL LOAD)

STATUS AS OF: 5-2-80





SECTION 8

CURRENT PERCENT COMPLETE

PERCENT COMPLETE

80% (3/31/82)

BASED ON CURRENT PROJECT ESTIMATE
AND 5/31/82 FUEL LOAD DATE

SECTION 9

SUMMARY

SUMMARY

1. SCHEDULE SLIPPAGE DUE TO
 - A) IMPACT OF REGULATORY CHANGES
 - B) INCREASED MANHOUR INSTALLATION RATES
 - C) INCREASED REWORK
2. SHOREHAM RESCHEDULING EFFORT
 - A) REGULATORY CHANGES QUANTIFIED AND INCLUDED ON SCHEDULE
 - B) PROVIDES FOR NETWORK INCREASES
 - C) UTILIZES LATEST SNPS SITE MANHOUR RATES
 - D) ALLOWS ADEQUATE TIME FOR SYSTEM DOCUMENTATION CLEARING FOR T.O.
 - E) ASSUMES 5 DAY 40 HOUR WEEK (O.T. & SHIFT WORK AVAILABLE MARGIN)
3. FUEL LOAD DATE 5-31-82
4. MASTER SCHEDULE - JUNE 1980
5. SCHEDULE UNCERTAINTIES
 - A) TMI CHANGES
 - B) AVAILABILITY OF CRITICAL PERSONNEL
 - C) MATERIAL DELIVERIES FOR CP SYSTEM MODIFICATIONS