(7)

594 Conax - Delphi - Panels

HS1-P177A
HS1-P177B
2HS1-P037

to be held awaiting Spec Rev VII which will be Standardized 1/12/83 Tentative ship date 5/83 based on vendor receipt of drawings and audit/spot inspection

462 & Sentry Equipment - Post Accident Sampling

OP87-P001	4/83
OP87-P002	
OP87-P005	
1P87-P003	
1P87-P004	
2P87-P003	
2P87-P004	

Scheduled to ship 5/83

501 General Electric - ER15 *	Scheduled Delivery Date
1) Video Graphic CRT Equipment for Unit 1	7/83 *
2) Remote Center Console (P805) for Unit 1	10/83 *
3) Video Graphic CRT Equipment for Simulator	7/83
4) Graphic Development System for Simulator	5/83

* RE equipment numbers are not yet available.

BISTAM TURNOVER

JURISDICTION

Systems + Subsystems T/O to NTS from Construction

UNIT	SCOPED SYSTEM	AREA	AREA TEAM	TURNOVER DATE NTS	TURNOVER DATE PPD	REMARKS
1	L51C	SW	5	1/2/80	5/14/82	SWPH Overhead Crane
1	L51D	EW	5	1/2/80		EWPH " "
1	L51AAB	TB	3	1/24/80	8/23/82	TB " "
1	L51E	CW	5	1/1/80	6/1/82	CWPH " "
1	P20B	WT	3	6/24/80	3/4/82	Make-up Wtr. Pretreatment
1	P21A	WT	3	6/24/80	5/4/82	Two Bed Demin. Storage
0	M37	WT	3	7/23/80	12/12/80	W T B Ventilation
1	R51A	TB	3	9/16/80		Communications-Turbine Complex
1	P65	AB	3	9/10/80	6/21/82	Aux. Boiler Chemical Treat
1	R51B	Const. Bldgs.	5	9/22/80		Communications-Guard House & Disp
1	R42 A-H	TPC	3	9/25/80		D C Systems
1	P22A	WT	3	9/26/80	3/4/82	Mixed Bed Demineralizer
1	P20A	WT	3	9/30/80		Make-up Water Pretreatment
1	P54A	YD	5	11/3/80		Aux. Boiler Fire Protection
0	P62	AB	3	11/6/80	1/22/82	Aux. Boiler Fuel Oil System
1	P54B	YD	5	11/7/80		Interbus Transformer Fire Protection
1	P51A-C	TB	3	11/10/80		Service Air to Support Aux. Boiler
1	P52-1	TB	3	11/10/80		Inst. Air to Support Aux. Boiler
1	P21B-1	TB	3	11/5/80		Demon. Water to Support Hydro Lazer
1	R11C	YD	5	11/.4/80	6/29/82	"C" Interbus Transformer to Support
1	S11A	YD	5	11/18/80		Start-up Transformer
0	1P61A-1	AB	3	11/21/80		Aux. Boiler Equip.
1	R22A	TPC	3	11/21/80		13.8 KV Switchgear L10
1	R22B	TPC	3	11/21/80		13.8 KV Switchgear L11
1	R22C	TPC	3	11/21/80		13.8 KV Switchgear L12
1	R23A	TPC	3	11/21/80		480V Switchgear F1A
1	R23B	TPC	3	11/21/80		" " F1B
1	R23C	TPC	3	11/21/80		" " F1C
1	R23D	TPC	3	11/21/80		" " F1D
1	R23E	TPC	3	11/21/80		" " F1E
1	R23F	TPC	3	11/21/80		" " F1F

JURISDICTION

UNIT	SCOPED SYSTEM	AREA	AREA TEAM	TURNOVER DATE NTS	TURNOVER DATE PPD	REMARKS
1	P55A	TB	3	11/26/80		Heating System
1	P55B	MB	3	11/24/80		Heating System
1	P55C	IB	1	11/24/80		Heating System
1	P55D	AB	1	11/24/80		Heating System
0	P61A-2	AB	3	11/24/80		Aux. Boiler System Necessary for Boil
0	P52-2	MB	3	11/24/80		Inst. Air to Support P55
1	M41	MB	e	12/3/80		Heater Bay Vent. for winter heat
1	R22D	TPC	3	12/16/80		4.16. KV. Switchgear
1	R22E	TPC	3	12/16/80		4.16. KV Switchgear
1	M35	TB	3	12/18/80		T.B. Ventilation
1	M42	TPC	3	12/18/80		TPC Ventilation
1	P61A	AB	3	12/22/80		Auxiliary Steam
1	M38-1	AY	1	1/6/81		Auxiliary Bldg. Vent. for Winter heat
1	M33-1	TB	1	1/6/81		Int. Bldg. Vent. for Winter heat
1	R13	CC	4	1/15/81		P.C.C.C. Panels (Includes 1R61)
2	L51A	TB	3	1/29/81		TB Overhead Crane
2	L51A	TB	3	1/29/81		TB Overhead Crane
1	P40	SW	5	4/3/81	6/16/82	Service Water Wash
1	P64	Yard	5	4/3/81		Industrial Waste Disposal
1	E15A	RB	2	4/7/81		Containment Spray
1	E15B	RB	2	4/7/81		Containment Spray
1	R11A	Yard	5	4/10/81	6/2/82	"A" Inter. Bus Trans.
1	M14-1	IB	1	4/30/81		Containment Vessel DW Purge
2	L51F	CW	5	6/5/81		CWPH Overhead Crane
1	M14-2	IB	1	6/17/81		Drywell Purge Fans
1	L51C	C	2	6/30/81		RB Polar Crane
1	R22F	CC	4	7/2/81		Metal Clad Switchgear 5KV & 15KV
1	R22G	CC	4	7/2/81		" " " " "
1	R22H	CC	4	7/2/81		" " " " "
1	P11E	TB	3	7/7/81		Cond. Transfer & Storage
1	P21B	--	--	7/17/81		Two-bed Demin. Water

JURISDICTION

UNIT	SCOPED SYSTEM	AREA	AREA TEAM	TURNOVER DATE NTS	TURNOVER DATE PPD	REMARKS
1	P43A	CC	4	7/17/81		Nuclear Closed Cooling
1	P43B	CC	4	7/17/81		Nuclear Closed Cooling
1	P12A-1	TB	3	7/27/81		Condensate Seal Water
2	E13	CC	4	8/10/81		P.G.C.C. Panels
1	P41A	--	--	8/10/81		Service Water
1	C91	CC	4	8/17/81		Computer
1	P51D	CC	4	9/3/81		Service Air
1	P52A	CC	4	9/4/81		Inst. Air
1	R23G	CC	4	9/22/81		480 V. Load Centers
1	R23K	CC	4	"		" " "
1	R23L	CC	4	"		" " "
1	R23M	CC	4	"		" " "
1	R23N	CC	4	"		" " "
1	P51E	CC	4	9/11/81		Service Air
1	P56-1	--	--	9/30/81		Plant Security
1	M46A	SW	5	10/5/81		SWPH Ventilation
1	P66A	CC	4	10/2/81	8/17/82	Sanitary Drain & Sewer
1	L51W	TB	1	10/2/81		Fuel Handling Bldg. Overhead Crane
1	R14A	TB	3	10/7/81		110 VAC Inverters
1	R14C	CC	4	10/7/81		" " "
1	P56A-2	--	--	10/21/81		Plant Security
1	R14B	CC	4	10/29/81		110 VAC Inverters
1	P56A-3	--	--	11/5/81		Plant Security
1	P54E-1	CC	4	11/18/81		CO_2 Fire Protection-Computer Room
1	L56	CC	4		11/11/81	CC Machine Shop Equipment
1	P56A-4	--	--	12/11/81		Plant Security
1	M48	RW	4	12/17/81		Radwaste Control Room HVAC
1	M49	CC	4	12/17/81		Smoke Clearing
1	M31-1	RW	4	12/17/81		Radwaste HVAC (Supply Only)
1	M41-1	HB	3	12/17/81		Heater Bay HVAC (Supply only)
1	M71-1	YD	5	12/21/81		Circulating Water

SYSTEM TURNOVER

JURISDICTION

UNIT	SCOPED SYSTEM	AREA	AREA TEAM	TURNOVER DATE		REMARKS
				NTS	PPD	
1	G50C-1	RW	4	1/20/82		Radwaste Control Room Panel
1	N61	TB	3	3/5/82		Condenser
1	S42	TB	3	3/9/82	9/21/82	Transmission Station Feeders
1	S11B	YD	5	4/29/82		Main Transformers
1	S11C	YD	5	4/29/82		Auxilary Transformer
1	P56A-5	CC	4	5/6/82		Plant Security
1	P46	TB	3	5/14/82		Turbine Bldg. Chilled Water
1	P44	TB	3	5/18/82	9/29/82	Turbine Bldg. Closed Cooling
1	M31	RW	4	5/28/82		Radwaste Bldg. Ventilation
2	R23A-1	TB	3	6/4/82		480 Volt Load Centers
2	R23B-1	TB	3	6/4/82		480 Volt Load Centers
2	R23C-1	TB	3	6/4/82		480 Volt Load Centers
2	R23D-1	TB	3	6/4/82		480 Volt Load Centers
1	M31	RW	4	6/9/82		Radwaste Bldg. Ventilation
2	R42A-1	TB	3	6/15/82		D. C. System
2	R42C-1	TB	3	6/15/82		D. C. System
1	N32-1	TB	3	6/15/82		Turbine Control (EHC)
1	G50E	TP	3	6/25/82		Liquid Radwaste
1	N34B	TB	3	6/28/82		Turbine Lube Oil
1	P51F	RW	4	6/30/82		Service Air
1	P51J	OG	3	6/30/82		Service Air
1	N41	TB	3	6/30/82		Turbine Generator
1	M46B	TB	3	7/7/82		Turbine Lube Oil Area Ventilation
1	R24S	CC	4	7/19/82		Motor Control Centers
1	R24T	CC	4	7/19/82		Motor Control Centers
1	R24W	CC	4	7/19/82		Motor Control Centers
2	E15	RB	2	7/28/82		Containment Spray
1	P52B	--	1,3&4	7/30/82		Instrument Air
1	P81	TB	3	9/14/82		Chemical Cleaning
1	N31/39	TB	3	9/15/82		Turbine and Turning Gear
1	R24Q	TB	3	9/24/82		Motor Control Centers

SYSTEM TURNOVER

JURISDICTION

UNIT	SCOPED SYSTEM	AREA	AREA TEAM	TURNOVER DATE		REMARKS
				NTS	PPD	
1	R24R	TB	3	9/24/82		Motor Control Centers
1	R24P	HB	3	9/29/82		Motor Control Centers
1	R24U	TP	3	9/29/82		Motor Control Centers
1	R24V	CW	5	9/29/82		Motor Control Centers
1	R24Y	RW	4	9/29/82		Motor Control Centers
1	P54F	YD	5	10/8/82		Fire Protection-Yard
1	N23	TB	3	10/27/82		Condensate Filter
1	N21	TB	3	11/2/82		Condensate
1	M46D	IB	1	11/11/82		Misc. Ventilation
1	N42	TB	3	11/16/82		Hydrogen Seal
1	G61A	Various	1,3,4	11/23/82		Liquid Radwaste Sumps
1	G50B	RW	4	12/3/82		Liquid Radwaste and Disposal
1	G50C	RW	4	12/3/82		Liquid Radwaste and Disposal
1	R52C	IB	1	12/6/82		Maintenance and Calibration
1	P55B	HB	3	12/7/82		Building Heating
1	N34A	TB	3	12/13/82		Lube Oil
1	R36B	WTB	3	12/13/82		Heat Tracing and Anti-Freeze Protection
1	R11B	YD	5	12/17/82		Interbus Transformer
1	R24A	CC	4	12/17/82		Motor Control Centers
1	R24C	CC	4	12/17/82		Motor Control Centers
1	R23Q	TP	3	12/21/82		480 Volt Load Centers

✓ Acceptance or Pre Op Completed

PNPP MASTER PARTS LIST (MPL) INDEX

KEY: N64A System
B Subsystem (from Elem Diag)

B13 Reactor and Internals
B21 Nuclear Boiler (NSSS)
A Process Instrumentation
C Auto Depressurization
H Nuc Stm Supply Shutoff Sys
B33 Reactor Recirculation
B Jet Pump Instrument
C11 Control Rod Drive
- Reactor Man Control
A Rod Control and Info
B Hydraulic Control
C34 Feedwater Control
C41 Standby Liquid Control
C51 Neutron Monitoring
- Transverse Incore Probe
A Start-Up Range (SMR, IRM)
B Power Range (LPRM, APRM)
C Start-Up Range Det Dr
C61 Remote Reactor Shutdown
C71 Reactor Protection
B Motor Generator Set Contr
C85 Steam Bypass
C91 Computer
C95 Emerg Response Info (ERIS)
D17 Plant Rad Monitoring
D17A Process Rad Monitoring
D19 Post Accident Rad Mon
D21 Area Rad Monitoring
D23 Cntmt Atmosphere Mon
D51 Environs Monitoring
E12 Residual Heat Removal
E15 Containment Spray
E21 Low Pressure Core Spray
E22 High Pressure Core Spray
B Diesel Generator
E31 Leak Detection
E32 MSIV Leakage Control
E51 Rx Core Isolation Cooling
E61 Integrated Leak Rate Test
F11 Fuel Servicing Equipment
F12 Servicing Aids
F13 Rx Vessel Servicing Equip
F14 In-Vessel Servicing Equip
F15 Refueling Equipment
F16 Storage Equipment
F17 Under Rx Vessel Serv Eq
F41 Start-Up Equipment
F42 Fuel Transfer Equipment
G33 Reactor Water Cleanup
G36 RWCU Filter/Demin
G41 Fuel Pool Cool & Cleanup
G42 Suppr Pool Cleanup
G43 Suppr Pool Makeup
G50 Liquid Radwaste Disposal
G51 Solid Radwaste Disposal
G60 Miscellaneous Sumps
G61 Liquid Radwaste Sumps
H13 Control Room Panels
H22 Local Panels & Racks GE
H51 Local Pan & Racks Non-GE
J11 Fuel
L51 Cranes Hoists & Elevators
L52 Serv Bldg Mach Shop Equip
L53 Motor Op Louver Operators
L54 Rolling Steel Door Opers
L55 Misc Kitchen Equipment
L56 CC Mach Shop Eq (Contamin)
M11 Containment Vessel Cool
M12 Deleted (Cntmt Pool Air)
M13 Drywell Cooling
M14 Cntmt Vessel & D/W Purge
M15 Annulus Exhaust Gas Treat
M16 Drywell Vacuum Relief
M17 Containment Vacuum Relief
M21 Controlled Access HVAC
M23 MCC Swgr & Misc Area HVAC
M24 Battery Room Exhaust
M25 Control Room HVAC
M26 Control Room Emerg Recirc
M27 Computer Room HVAC
M28 Emerg Pump Area Cooling
M29 Con & Comp Rm Humidif
M31 Radwaste Bldg Ventilation
M32 ESW Pump House Ventilation
M33 Intermediate Bldg Vent
M35 Turbine Bldg Cool & Vent
M36 Off-Gas Bldg Exhaust
M37 Wtr Treat Bldg Ventilation
M38 Auxiliary Bldg Ventilation
M39 ECCS Pmp Room Cooling
M40 Fuel Hndl Bldg Vent
M41 Heater Bay Ventilation
M42 Turbine Pwr Complex Vent
M43 DG Bldg Ventilation
M44 Service Bldg HVAC
M45 Circ Wtr Pump House Vent
M46 Miscellaneous Ventilation
M47 Steam Tunnel Cooling
M48 Radwaste Contr Room Vent
M49 Smoke Clearing
M50 Guard House HVAC (Nonsaf)
M51 Combustible Gas Control
M52 Tech Sup Cnt HVAC (Nonsaf)
M53 Trn Cnt/EOF Vnt Sy (Nonsaf)
N11 Main Steam
N11A Reheat Steam
N21 Condensate
N22 Main, Reheat Extr & Misc Dr
N23 Condensate Filtration
N24 Condensate Demin
N25 HP Htr Drains & Vents
N26 LP Htr Drains & Vents
N27 Feedwater
N27A Injection Wtr & Warmup
N31 Turbine
N32 Turbine Control (EHC)
N33 Steam Seal
N34 Lube Oil
N35 Hydrogen Supply
N36 Extraction Steam
N39 Turning Gear
N41 Generator
N42 Hydrogen Seal
N43 Generator Stator Cool
N51 Excitation
N61 Condenser & Auxiliaries
N62 Condenser Air Removal
N64 Off-Gas
N64A Off-Gas Vault Refrig
B Off-Gas Refrig Chill Liq
N71 Circulating Water
N71A Cond Cleaning (AMERTAP)
P11 Cond Transfer & Storage
P12 Condensate Seal Water
P20 Makeup Wtr Pretreat
P21 Two-Bed Demineralizer
P22 Mixed-Bed Demineralizer
P33 Turbine Plant Sampling
P34 Nuclear Sampling
P35 Reactor Plant Sampling
P40 Service Wtr Screen Wash
P41 Service Water
P42 Emergency Closed Cooling
P43 Nuclear Closed Cooling
P44 Turbine Bldg Closed Cool
P45 Emergency Service Water
P46 Turbine Bldg Chilled Wtr
P47 Control Complex Chill Wtr
P48 SW & ESW Chlorination
P49 ESW Screen Wash
P50 Cntmt Vessel Chilled Wtr
P51 Service Air
P52 Instrument Air
P53 Penetration Pressurization
P54 Fire Protection
P54A Constr & Fire Wtr Supply
P55 Building Heating
P56 Plant Security
P57 Safety-Related Instr Air
P61 Auxiliary Steam
P62 Aux Boiler Fuel Oil
P63 Sanitary Waste Treatment
P64 Industrial Waste Disposal
P65 Aux Boiler Chem Treatment
P66 Sanitary Drain & Sewer
P67 Storm Drain and Sewer
P71 Potable Water Supply
P72 Plant Underdrain
P81 Preop Chemical Cleaning
P82 Misc Chemical Treatment
P83 Cool Tower Acid Addition
P84 Cooling Twr Chlorination
P85 Plant Discharge Dechlorin
P86 Nitrogen Supply
P87 Post Acc Sampl Sys (PASS)
R10 Plant Electrical
R11 Station Transformers
R13 Isolated Phase Bus
R14 110VAC Vital Inverters
R15 Tech Sup Cnt Uninter Pwr
R22 Metal Clad Swgr 5-15 kV
R23 480 Volt Load Centers
R24 Motor Control Centers
R25 Dist Panels-120,240&480V
R31 Power Cable and Wire
R32 Control Cable and Wire
R33 Conduits and Trays
R34 Grounding Grid
R35 Cathodic Protection
R36 Heat Trcg & Anti-Frez Pro
R37 Lightning Protection
R41 Instruments
R42 DC Sys: Batt, Chrgs, Sw. Bd
R43 Standby Diesel Generator
R44 Standby DG Starting Air
R45 Standby DG Fuel Oil
R46 Standby DG Jacket Wtr Cool
R47 Standby DG Lube Oil
R48 Stdby DG Exh, Intk, Crnkcs
R50 Off-Site Communications
R51 Communi. (Intra-Plant)
R52 Maintenance & Calibration
R53 Exclusion Area Paging System
R54 Prompt Alerting System
R61 Main Contr Rm Annunciator
R62 Local Annunciator
R63 Loose Parts Monitoring
R71 Lighting
R72 Penetrations-Electric
S11 Power Transformers
S41 Step-Up Station
S42 Transmission Sta
T23 Containment De

Total Systems
Total Subsys
Total Liste

R55

Systems + Subsystems that have completed Pre-op or Acceptance Test

* after Nov. 30

E15
1L51A-B|F
1L51C
1L51D
L51G
2L51A-B|F
M37
GP20A
1P21A
P22A
P40
P44
* P51
* P52
P54 (4)
P62
* P64
P65
R11A
R11C
R42A-H
1S11A

NUCLEAR TEST SECTION

TEST PROGRESS SUMMARIES

MONTH OF NOVEMBER 1982

UNIT 1 & COMMON

Total Completion - Weighted Percent 37.3
Total Test Activities Completion - Weighted Percent 13.6
Total Software Support Completion - Weighted Percent 23.7

ITEMS	TOTAL ACTIVITIES (WTD.VALUE)	DEV. FROM PREV. MONTH	THIS PERIOD SCHEDULED START	THIS PERIOD SCHEDULED COMP.	THIS PERIOD ACTUAL START	THIS PERIOD ACTUAL COMP.	TO DATE SCHEDULED START	TO DATE SCHEDULED COMP.	TO DATE ACTUAL START	TO DATE ACTUAL COMP.	% COMP.	WTD % COM
TEST ACTIVITIES												
TURNOVER-NCS/NTS	333 (2.5)	+ 3	57	53	7	7	242	232	122	114	34.2%	.8%
C & R TESTING	672 (35.0)	+ 9	71	46	26	6	422	223	280	131	19.5%	6.8%
STEM FLUSH/RUN IN	321 (15.0)	+11	28	21	11	19	141	112	88	93	29.0%	4.3%
RE-OP ACCEPTANCE TESTING	485 (15.0)	+ 4	4	3	2	2	48	35	41	35	7.2%	1.1%
URNOVER-NTS/PPD	181 (2.5)	+ 3	3	3	0	0	31	31	16	16	8.8%	.2%
TAL TEST ACTIVITIES	1992 (70.0)	+30	163	126	46	34	884	633	547	389	19.5%	13.6%
FTWARE SUPPORT												
MINISTRATIVE PROCEDURES	57 (2.5)		N/A	N/A	0	0	N/A	N/A	57	57	100.0%	2.5%
STEM SCOPING PKGS.	314 (5.0)		N/A	N/A	0	64	N/A	N/A	314	314	100.0%	5.0%
. PROCEDURES (ECP,GEN,ICP)	436 (9.0)		N/A	N/A	-	-	N/A	N/A	323	314	73.0%	6.6%
T SPECIFICATIONS	169 (4.0)		N/A	N/A	15	3	N/A	N/A	167	154	96.1%	3.8%
SH INSTRUCTIONS	75 (3.0)		N/A	N/A	-	5	N/A	N/A	56	50.	71.7%	2.1%
T PROCEDURES	226 (5.5)		N/A	N/A	33	10	N/A	N/A	151	97	56.9%	3.1%
's	41 (1.0)		N/A	N/A	-	-	N/A	N/A	23	22	54.7%	.5%
L SOFTWARE SUPPORT	1318 (30.0)		N/A	N/A	-	-	N/A	N/A	1091	1008	80.5%	23.7%

ware Figure adjustments are result of updated projection.

: N/A means Not Applicable to this category.

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.	TITLE	PRELIM.	APPRVL	COMMENTS
1	TP 1 B13 P 001	RPV Flow Induced Vibr. w/o Fuel (GE-17A)			
2	TP 1 B21A P 001	Nuclear Boiler: Proc. Instr. (GE-4)		820719	
3	TP 1 B21C P 001	Nuclear Boiler: ADS (GE-4)			
4	TP 1 B21H P 001	Nuclear Boiler: NSSSS (GE-4)			
5	TP 1 B33 P 001	Reactor Recirc. System (GE-8)			
6	TP 1 B33 P 002	Reactor Recirc. Flow Contr. Valve (GE-8)	820907		
7	TP 1 C11A P 001	Rod Control & Information (GE-9)			
8	TP 1 C11B P 001	Control Rod Drive Hydraulic System (GE-10)	82-0726		
9	TP 1 C34 P 001	Feedwater Control (GE-1)			
10	TP 1 C41 P 001	SLCS (includes R36 portion) (GE-3)			

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

£ ID	PROC. NO./ CURRENT REV.	TITLE	PRELIM.	APPRVL	COMMENTS
11	TP 1 C51A P 001	Neutron Monitor Sys: SUR (A,B,C) (GE-22A)	811012		
12	TP 1 C51A P 002	Neutron Monitor Sys: IR (A,B,C) (GE-22B)	811115		
13	TP 1 C51B P 001	Neutron Monitor Sys: APRM (A,B,C) (GE-22C)	820818		
14	TP 1 C51C P 001	Neutron Monitor Sys: Recirc Flow Bias (GE-22D)	820601		
15	TP 1 C51D P 001	NMS: Traversing Incore Probe Sys. (GE-23)	820922		
16	TP 1 C61 P 001	Remote Reactor Shutdown (GE-14)		820201	
17	TP 1 C71 P 001	Reactor Protection System (GE-21)			
18	TP 1 C71 P 002	Reactor Protection Sys. (MG Sets) (GE-21)			
19	TP 1 C85 A 001	Steam Bypass and Pressure Control (GE-30, 31B)		820520	
20	TP 1 C85 A 002	Steam Bypass and Press Regult HPU (GE-30, 31B)		820902	

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.	TITLE	PRELIM.	APPRVL	COMMENTS
21	TP 1 C91 A 001	Process Computer (GE-28)	821011		
22	TP 1 D17 P 001	PRMS: Non-GE Channels (TS-D17)	820917		
23	TP 1 D17A P 001	PRMS: Off-Gas Post Treatment RMS (GE-25F)		820208	
24	TP 1 D17B P 001	PRMS: Off-Gas Pretreatment RMS (GE-25B)		811111	
25	TP 1 D17D P 001	PRMS: Containment Vent. Exh. RMS (GE-25E)		810730	
26	TP 1 D17E P 001	PRMS: Main Steam Line RMS (GE-25C)		810529	
27	TP 1 D17F P 001	PRMS: ESW Liq. Loops A/B RMS (GE-25D)		820331	
28	TP 1 D17G P 001	PRMS: Liq. Rad-waste Effl. RMS (GE-25D)		820201	
29	TP 1 D17H P 001	PRMS: NCCWS Liq. RMS (GE-25D)		820201	
30	TP 1 D21 P 001	Area Radiation Monitoring (TS-D21)		811028	

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.	TITLE	PRELIM.	APPRVL	COMMENTS
31	TP 1 D51 A 001	Seismic Instrument System (TS-D51)		821108	
32	TP 1 E12 P 001	Residual Heat Removal System (GE-5)	801007		
33	TP 2 E15 P 001	Containment Spray System		820614	
34	TP 1 E21 P 001	Low Pressure Core Spray System (GE-12)		820604	
35	TP 1 E22 P 001	High Pressure Core Spray System (GE-13)			
36	TP 1 E22 P 002	HPCS Diesel Generator (GE-13)			
37	TP 1 E31 P 001	Leak Detection (GE-19)		820331	
38	TP 1 E32 P 001	MSIV Leakage Control System (GE-7)		820727	
39	TP 1 E51 P 001	Reactor Core Isol. Cooling System (GE-6)			
40	TP 1 E53 P 001	Containment Isol. System (includes GE-4 valves) (TS-E53)		820319	

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.	TITLE	PRELIM.	APPRVL	COMMENTS
41	TP 1 E61 P 001	Local Leak Rate Test (TS-E61)			Waiting on PPD prepared surveillance Proc. & FSAR Table Rev.
42	TP 1 E61 P 002	Integrated Leak Rate Test (TS-E61)	811106		
43	TP 1 E61 P 003	1LRT Instrument Calibration (TS-E61)	820104		
44	TP 1 E61 P 004	Inter-Sys LOCA Leakage Rate Test (TS-E61D)			
45	TP 1 E62 P 001	Drywell Leak Test (TS-E62)	810813		
46	TP 1 E64 P 001	Shield Building Leak Rate Test (TS-E64)	810708		
47	TP 1 E66 P 001	Drywell Structural Integ. Test (SIT) (TS-E66)	820331		
48	TP 1 E68 P 001	System Vibration Testing (TS-E68)			
49	TP 1 F11 P 001	Fuel Servicing Equipment (GE-11)	820728		
50	TP 1 F12 P 001	Servicing Aides (GE-11)			

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.	TITLE	PRELIM.	APPRVL	COMMENTS
51	TP 1 F14 P 001	In RPV Servicing Equipment (GE-11)	820715		
52	TP 1 F15 P 001	Refueling Equipment (GE-11)			
195	TP 1 F16 P 001	Storage Racks (GE-11)			
53	TP 1 F17 P 001	Under RPV Servicing Equip. (GE-11)			
54	TP 1 F42 P 001	Fuel Transfer Equipment (GE-11)			
55	TP 1 G33 P 001	Reactor Water Cleanup System (GE-2)	820915		
56	TP 1 G36 P 001	RWCU Filter/ Demineralizer (GE-2)	820923		
57	TP 1 G41 P 001	Fuel Pool Cooling and Cleanup System (TS-G41)		820924	
58	TP 1 G42 P 001	Suppression Pool Cooling & Cleanup (TS-G42)	810317		
59	TP 1 G43 P 001	Suppression Pool Makeup (TS-G43)		811109	

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.		TITLE	PRELIM.	APPRVL	COMMENTS
60	TP 0 G50	P 001	Liquid Radwaste (TS-G50)	820712		
61	TP 0 G51	P 001	Solid Radwaste Disposal (TS-G51)			
62	TP 1 G60	A 001	Miscellaneous Sumps (TS-G60)		820504	
63	TP 1 G61	A 001	Liquid Radwaste Sumps (TS-G61)		820504	
64	TP 0 L51	A 002	ESW Pump House Crane (TS-L51)		791121	
65	TP 0 L51	A 003	Serv. Water Pump House Ovrh. Crane (TS-L51)		791031	
66	TP 0 L51	P 002	Fuel Handling Area Crane (TS-L51)		810514	
67 Rev 2	TP 1 L51	A 0C1	Circ Water & Turb. Bldg Crane (TS-L51)		(790417) Missing Rev. 0 & 1	
68	TP 1 L51	P 001	Reactor Bldg. Plr. Crane (TS-L51)		810326	
69	TP 2 L51	A 001	Circ. Wtr. & Turb. Bldg. Crane (TS-L51)		810119	

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.		TITLE	PRELIM.	APPRVL	COMMENTS
70	TP 2 L51	P 001	Reactor Bldg. Polar Crane (TS-L51)		820224	
71 Rev. 1	TP 1 M11	P 001	Containment Vessel Cooling (TS-M11)		820402 (821011)	
72 Rev. 1	TP 1 M13	P 001	Drywell Cooling System (TS-M13)		811119 (821011)	
73 Rev. 1	TP 1 M14	A 001	Containment Vessel ATG	M	811118 (821011)	
74	TP 1 M15	P 001	Annulus Exhaust Gas Treatment		820614	
75	TP 1 M16	P 001	Drywell Vacuum Relief (TS-M16)	821014		Had released on 8-24-82 by PY-GAI/CEI-5369
76 Rev. 1	TP 0 M21	A 001	HVAC-Controlled Access Area (TS-M21)		820504 (820924)	
77	TP 1 M23	P 001	HVAC-Batt MCC, Swgr, Misc. Equip. Area (TS-M23)		820623	
78 Rev. 1	TP 0 M25	P 001	HVAC-Control Room, incl. CR Emerg Recirc. (TS-M25)		820614 (820924)	
79 Rev. 1	TP 0 M27	A 001	HVAC - Computer Room (TS-M27)		810630 (821011)	

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.		TITLE	PRELIM.	APPRVL	COMMENTS
80 Rev. 1	TP 0 M28	P 001	HVAC-ECCS Pump Area Cooling		810218 (821108)	
81	TP 0 M29	A 001	HVAC-Contr/Comp. Rm. Humidification (TS-M29)		811106	
82 Rev. 1	TP 1 M31	A 001	HVAC-Radwaste Bldg. Ventil (TS-M31)		810630 (821011)	
83	TP 1 M32	P 001	HVAC-ESW Pp House Ventil (TS-M32)		810609	
84	TP 0 M33	A 001	HVAC-Intermediate Building (TS-M33)		810821	
85 Rev. 1	TP 1 M35	A 001	HVAC-Turbine Bldg. Cooling (TS-M35)		810529 (821005)	
86	TP 1 M36	P 001	HVAC-Off-Gas Bldg. Exhaust		811118	
87	TP 0 M37	A 001	HVAC-Water Treatment Bldg. (TS-M37)		800610	
88 Rev. 1	TP 1 M38	A 001	HVAC-Aux. Bldg. Ventilation (TS-M38)		810708 (821011)	
89	TP 1 M39	P 001	HVAC-ECCS Pump Room Cooling (TS-M39)		811019	

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.		TITLE	PRELIM.	APPRVL	COMMENTS
90	TP 0 M40	P 001	HVAC-Fuel Handl Bldg. Ventilation (TS-M40)		811113	
196	TP 1 M41	A 001		820406		
91 Rev. 1	TP 1 M42	A 001	HVAC-Turbine Power Complex Ventil. (TS-M42)		810528 (821011)	
92	TP 1 M43	P 001	HVAC-D/G Bldg. Ventilation (TS-M43)		810630	
93	TP 0 M44	A 001	HVAC - Service Building (TS-M44)			CEI hold
94	TP 1 M45	A 001	HVAC-Circ Water Pump House Ventil. (TS-M45)		801029	
95	TP 0 M46	A 001	HVAC-Miscellaneous Ventil. Systems (TS-M46)		811215	
96	TP 1 M47	A 001	HVAC-Steam Tunnel Cooling (TS-M47)		820524	
97	TP 0 M48	A 001	HVAC-Radwaste Control Rm. Vent. (TS-M48)		800730	
98	TP 1 M49	A 001	HVAC-Smoke Venting (TS-M49)		800606	

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.	TITLE	PRELIM.	APPRVL	COMMENTS
99	TP 1 M51 P 001	HVAC-Combustible Gas Control (TS-M51)	820923		
100	TP 0 M99 A 001	Plant Environmental Conditions			
101	TP 1 N21 A 001	Condensate System (TS-N21)		820326	
102	TP 1 N23 A 001	Condensate Filtration System (TS-N23)		810916	
103	TP 1 N24 A 001	Condensate Demineral System (TS-N24)		820601	
104	TP 1 N27 A 001	Feedwater System (TS-N27)	821207		
105	TP 1 N31 A 001	Main Turbine System (TS-NONE)			No TS Sched. No AT warranted (BOP)
106	TP 1 N32 A 001	Main Turbine: EHC (GE-30)	821013		
107	TP 1 N33 A 001	Steam Seal System (TS-N33)	820406		
108	TP 1 N34 A 001	Main Feedpump Lube Oil System (TS-N34)		820630	

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

.E ID	PROC. NO./ CURRENT REV.	TITLE	PRELIM.	APPRVL	COMMENTS
109	TP 1 N35 A 001	Hydrogen Supply System			
110	TP 1 N41 A 001	Main Generator (incl. Excit Sys) (TS-N41)	811015		
111	TP 1 N42 A 001	Generator Hydrogen Seal Oil System (TS-NTS)			No TP warranted (BOP)
112	TP 1 N43 A 001	Generator Stator Cooling System (TS-NTS)			No TP warranted (BOP)
113	TP 1 N62 A 001	Condenser Air Removal System (TS-N62)		820506	
114	TP 1 N64 A 001	Off-Gas Charcoal Vault Refrig. Sys. (TS-N64)	820810		
115	TP 1 N64 P 001	Off-Gas Process System (GE-16)			
116	TP 1 N71 A 001	Circ. Water Sys. (incl. Ametrap Sys) (TS-N71)	820811		
117 Rev. 1	TP 1 P11 A 001	Condensate Trasf & Storage Sys. (TS-P11)		810130 (820706)	
118	TP 1 P12 A 001	Condensate Seal Water System (TS-P12)		820720	

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.	TITLE	PRELIM.	APPRVL	COMMENTS
119	TP 0 P20 A 001	Makeup Water Pretreatment Sys. (TS-P20)		820714	
120 Rev. 1	TP 0 P21 A 001	Two-Bed Water Dem. & Distribution Sys (TS-P21)		801007 (810224)	
121	TP 0 P22 A 001	Mixed-Bed Demin. & Distribution Sys (TS-P22)		810902	
122	TP 1 P33 A 001	Turbine Plant Sampling (TS-P33)	820202		CEI Hold 9-22-80 Need addendum to FSAR.
183	TP 1 P34 A 001	Nuclear Plant Sampling TS-P34 in Review			
123	TP 1 P35 A 001	Reactor Plant Sampling (GE-02)	820601		
124 Rev. 1	TP 0 P40 A 001	Service Water Screen Wash (TS-P40)		800910 (820120)	
125	TP 0 P41 A 001	Service Water System (TS-P41)		800911	
126	TP 1 P42 P 001	Emergency Closed Cooling System (TS-P42)		820105	
127 Rev. 1	TP 1 P43 A 001	Nuclear Closed Cooling System (TS-P43)		811201 (820916)	

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.	TITLE	PRELIM.	APPRVL	COMMENTS
128 Rev. 2	TP 1 P44 A 001	Turb Bldg Closed Cooling System (TS-P44)		810804 (820714)	
129	TP 1 P45 P 001	Emergency Service Water System (TS-P45)	810728		
130	TP 1 P46 A 001	Turbine Bldg Chilled Water Sys (TS-P46)		820519	
131	TP 0 P47 P 001	Control Complex Chilled Water Sys. (TS-P47)	811014		
132 Rev. 1	TP 1 P48 A 001	Serv./Emerg. Serv. Water Chlor. Sys (TS-P48)		810430 (820610)	
133 Rev. 1	TP 0 P49 P 001	ESW Screen Wash System (TS-P49)		810514 (820111)	
134 Rev. 1	TP 0 P50 A 001	Containment Vessel Chilled Water Sys. (TS-P50)		820504 (821011)	
135 Rev. 1	TP 1 P51 A 001	Service Air System (TS-P51)		810930 (821025)	
136 Rev. 1	TP 1 P52 A 001	Instrument Air System (TS-P52)		820720 (820922)	
137	TP 1 P52 A 002	Loss of Instrument Air Test (TS-P52)			

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.	TITLE	PRELIM.	APPRVL	COMMENTS
138	TP 0 P53 P 001	Penetration Pressurization Sys (TS-P53)	800923		On hold pending design change.
139	TP 0 P54 A 001	Fire Protec. Sys.- Aux. Boiler (TS-P54B)		801029	
140	TP 0 P54 A 002	Fire Protec. Sys.- Remainder of Sys. (TS-P54C)	820713		GAI issued prelim.
141	TP 0 P54 A 003	Fire Protec. Sys.- Cardox (TS-P54D)	821025		
142	TP 0 P54 P 001	Fire Protection Sys-Transformers (TS-P54A)		791123	Test completed.
143	TP 1 P54 A 001	Fire Protec. Sys.- Mn Gen Transf A (TS-P54A)		810807	
144	TP 1 P54 A 002	Fire Protec. Sys.- Mn Gen Transf B (TS-P54A)		810807	
145	TP 1 P54 A 003	Fire Protec. Sys.- Mn Gen Transf C (TS-P54A)		810807	
146	TP 1 P54 A 004	Fire Protec. Sys.- Unit Aux. Transf. (TS-P54A)		810807	
186	TP 2 P54 A 001	FPS-Mn. Gen. Transformer A (TS-2P54A)			

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.	TITLE	PRELIM.	APPRVL	COMMENTS
187	TP 2 P54 A 002	FPS-Mn. Gen. Transformer B (TS-2P54A)			
188	TP 2 P54 A 003	FPS-Mn. Gen. Transformer C (TS-2P54A)			
189	TP 2 P54 A 004	FPS-Unit Aux. Transformer (TS-2P54A)			
190	TP 2 P54 A 005	FPS-Start-Up Transformer (TS-2P54A)			
191	TP 2 P54 A 006	FPS-Interbus Transformer A (TS-2P54A)			
192	TP 2 P54 A 007	FPS-Interbus Transformer B (TS-2P54A)			
193	TP 2 P54 A 008	FPS-Interbus Transformer C (TS-2P54A)			
194	TP 2 P54 A 009	FPS-Mn. Gen. Transformer-Spare			
147	TP 0 P55 A 001	Building Heating System (TS-P55)		810415	
148	TP 1 P56 A 001	Plant Security System (TS-P56)			

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.		TITLE	PRELIM.	APPRVL	COMMENTS
149	TP 1 P57	P 001	Safety-Related Instrument Air (TS-P57)	800930		
150	TP 0 P61	A 001	Auxiliary Steam System (TS-P61)	820823		
151	TP 0 P62	A 001	Auxiliary Boiler Fuel Oil System (TS-P62)		800807	
152	TP 0 P64	A 001	Industrial Waste Disposal System (TS-P64)		810610	
153 Rev. 1	TP 0 P65	A 001	Auxiliary Boiler Chemical Treatment (TS-P65)		800821 (820224)	Test results approved.
154	TP 1 P66	A 001	Sanitary Drain & Sewer System (TS-NONE)			No AT warranted (BOP)
155	TP 0 P67	A 001	Storm Drain and Sewer System (TS-NONE)			No AT warranted (BOP)
156	TP 0 P72	P 001	Plant Foundation Underdrain System (TS-P72)	800710		
157	TP 0 P83	A 001	Cooling Tower Acid Addition System (TS-P83)	820916		
158	TP 0 P84	A 001	Cooling Tower Chlorine System (TS-P84)	801121		

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

TE ID	PROC. NO./ CURRENT REV.	TITLE	PRELIM.	APPRVL	COMMENTS
197	TP 1 P86 A 001	Nitrogen Supply System	800718		
159	TP 1 P99 A 001	Post Fuel Load BOP System Vibr. Testing (TS-P99)			
160	TP 1 R10 A 001	Normal AC Power Distribution Sys. (TS-R10)			
161	TP 1 R11 A 001	Station Transf Interbus A Transf. (TS-R11)		810407	
162	TP 1 R11 A 002	Station Transf - LH1B Interbus Transformer (TS-R11)		810803	
163	TP 1 R11 A 003	Station Transf - Interbus C Transf (TS-R11)		801103	
164	TP 1 R13 A 001	Isolated Phase Bus (TS-R13)	811009		
165	TP 1 R14 A 001	120V AC Vital Inv. and Distribution (TS-R14)		810930	
166	TP 1 R22 P 001	1E 4kV Switchgear (Metal Clad) (TS-R22)		810615	
167	TP 1 R23 P 001	480V AC Load Centers (TS-R23)		810605	

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.		TITLE	PRELIM.	APPRVL	COMMENTS
168	TP 1 R24	P 001	Motor Control Centers (TS-R24)			
169	TP O R35	A 001	Cathodic Protec. System (TS-R35)		810615	
170	TP 1 R42	A 001	(Non 1E) DC System (TS-R42A)		811006	
171	TP 1 R42	P 001	1E DC System (TS-R42)	800124		
172	TP 1 R43	P 001	Div. 1 Standby Diesel Generator (TS-R43)	810713		
173	TP 1 R43	P 002	Div. 2 Standby Diesel Generator (TS-R43)	810716		
198	TP 1 R44	P 001		810716		
199	TP 1 R44	P 002		810727		
200	TP 1 R45	P 001		810720		
201	TP 1 R45	P 002		810617		

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

.E ID	PROC. NO./ CURRENT REV.	TITLE	PRELIM.	APPRVL	COMMENTS
207	TP 1 R46 P 001		810708		
202	TP 1 R46 P 002		810630		
203	TP 1 R47 P 001		810630		
204	TP 1 R47 P 002		810630		
174	TP 0 R50 A 001	Off-site Communi-cations System (TS-R50)	800922		
175	TP 0 R51 A 001	Intra-Plant Com-munications Sys (TS-R51)	800128		
176	TP 0 R52 A 001	Plant Maintenance/ Cal. Comm. (TS-R51)	820909	—	
177	TP 0 R53 A 001	On-Site Communica-tions-Parimeter Evacuation (TS-R51)	820616		GAI TP drft. arrived 820526
205	TP 0 R55 A 001	Permanent Plant Telephone System DC Equipment		820819	
178	TP 1 R61 A 001	Sequence of Events Recorder (TS-R61)		801125	

PNPP UNIT 1

NTS TEST PROCEDURE INDEX AND STATUS

E ID	PROC. NO./ CURRENT REV.		TITLE	PRELIM.	APPRVL	COMMENTS
179	TP 1 R63	A 001	Loose Parts Monitoring System (TS-R63)		820720	
206	TP 1 R75	P 001		810311		
180	TP 1 R76	P 001	ECCS Init. Loss of Offsite Power (TS-R76)	820817		
181	TP 1 S11	A 001	Start-Up Transformer (TS-S11A)		791204	
182	TP 1 S11	A 002	(Main and Aux) Pwr Transformers (TS-S11B)		820609	
184	TP 2 S11	A 001	Start-Up Transformer (TS-2S11A)			
185	TP 2 S11	A 002	Main and Aux. Transformers (TS-2S11B)			

193/A/FF-1/N/jg

Initials : Date
Prepared By : KLS 6/27/82
Approved By :

KEI/CEI in relation to Progress

1	2	3	4	5	6
YEAR/MONTH	KEI	CEI	Project Period Progress	Project Cum. Progress	
1980					
JAN	316	324	1.33	46.29	
FEB	323	242	1.28	47.57	
MAR	330	250	1.51	49.08	
APR	339	254	1.52	50.60	
MAY	344	262	1.19	51.79	14.21% total period progress
JUNE	338	223	1.15	52.94	
JULY	328	290	1.38	54.32	T-5A Schedule
AUG	321	301	0.99	55.31	
SEPT	317	299	1.04	56.35	
OCT	317	295	0.95	57.30	
NOV	327	302	0.98	58.28	
DEC	327	308	0.89	59.17	
1981					
JAN	326	310	1.12	59.42	← converted to T-6 sched
FEB	334	310	0.79	60.21	
MAR	342	313	1.43	61.64	
APR	354	316	1.10	62.74	11.96% total period progress
MAY	356	316	1.05	63.79	
JUNE	362	316	.84	64.63	
JULY	371	320	* 0.99	* 63.93	* Adjustment in EAC mhrs
AUG	381	323	* 0.85	* 64.11	* Adjustment in EAC mhrs
SEPT	325	351	1.21	65.33	
OCT	395	391	* 1.07	* 66.03	* Adjustment in EAC mhrs.
NOV	402	410	0.77	66.80	
DEC	413	409	* 0.74	* 67.35	* Adjustment in EAC mhrs
1982					
JAN	416	413	* 0.73	* 67.14	* Adjustment in EAC mhrs.
FEB	418	423	* 0.65	* 67.56	* Adjustment in EAC mhrs
MAR	422	424	* 0.76	* 69.26	* Adjustment in EAC mhrs
APR	435	431	0.46	68.72	
MAY	436	455	* 0.45	* 69.14	* Adjustment to Spec Prog
June	448	447	0.57	69.68	* HANGER ADJUSTMENT
July	455	486	0.75	70.41	* HANGER ADJ 3.05% prog
Aug	452	486	0.97	71.68	* ADJUSTMENT TO SP-40
Sep	437	528	0.76	72.44	
Oct	439	583	0.77	73.09	* ADJUSTMENT TO SP-40
Nov	443	611	0.72	73.80	* CA ADJUSTMENT TO SP-16
Dec	446	618	0.75	* 74.50	* HANGER ADJUSTMENT SP-40/45

	I	F	M	A	M	J	J	A	S	O	N	D	'84	85	'86	'87	'88
CEI	59	64	67	71	72	72	72	72	72	72	72	72	72	60	60	60	26
GAI	10	10	10	10	10	10	10	10	10	10	10	10	10	8	10	13	6
KEI	8	10	10	12	12	13	13	13	13	13	13	13	13	10	11	11	5
EXEMPT - S+S	0	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1
NON-EX - TECHN.	1	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	1
NON-EX - OFFICE CLK	7	7	7	8	8	9	9	9	9	9	9	9	9	7	7	7	3
OTHER	76	76	78	79	81	85	87	92	93	94	95	95	95	55	69	78	39
TOTAL	153	160	165	172	175	180	182	187	188	189	190	190	190	133	150	162	76

Actual NTS Manning
as of 1-1-83
156

NUCLEAR CONSTRUCTION DEPARTMENT MANNING

SECTION: NUCLEAR TEST SECTION

DATE: NOVEMBER 26, 1982

AREA 2
FACILITY 08
ZONE

	JAN					FEB				MAR				APR		
	3	10	17	24	31	7	14	21	28	7	14	21	28	4	11	1
1																
2																
3																
4	NNI 17 53 %															
5	PATCH BIOSHIELD															
6																
7	DICK CORP 17															
8	FILL BIOSHIELD VOIDS															
9																
10																
11	GE 38 39															
12	ISI TRACK & REFLECTIVE INSUL.															
13																
14																
15																
16																
17																
18																
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PNPP

CLEVELAND ELECTRIC

ILLUMINATING CO.

REV	PLAN	SCHED	DATE

LEGEND:

SCHEDULE .....

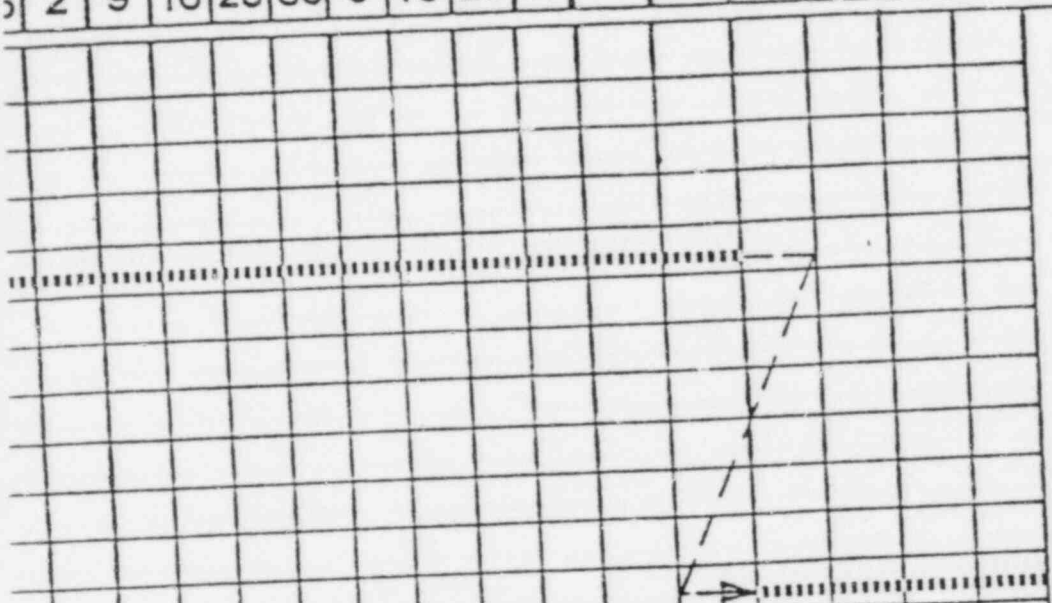
ACTUAL ———

CRIT. PATH — · —

STATUS DATE —

83

MAY					JUN				JU	AU	SE	OC	NO	DE
5	2	9	16	23	30	6	13	20	27						



NOTES:

OURCE:

REA TEAM & COMPOSITE SCHEDULE GROUP

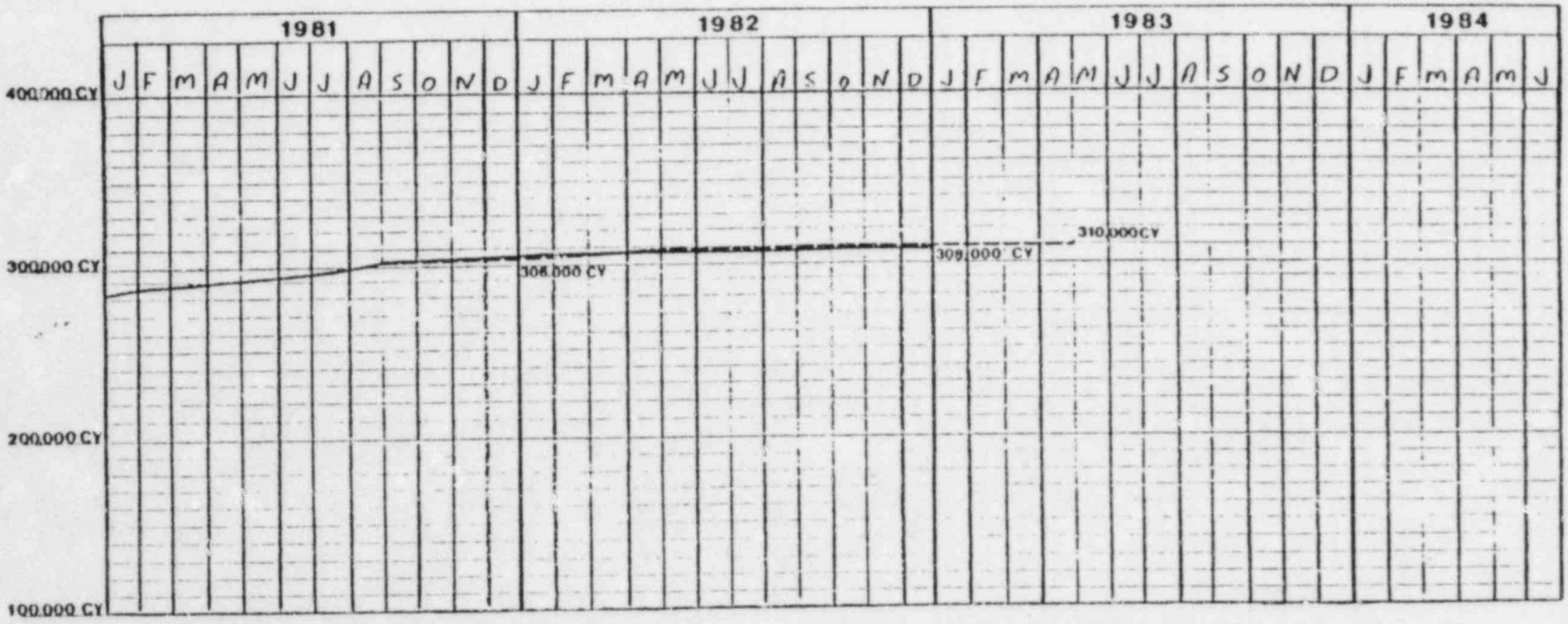
TITLE:

REACTOR BUILDING #1
EL. 599' IDW
BIOSHIELD FIX

SCHEDULE NO.

SHEET 42 OF

S-091



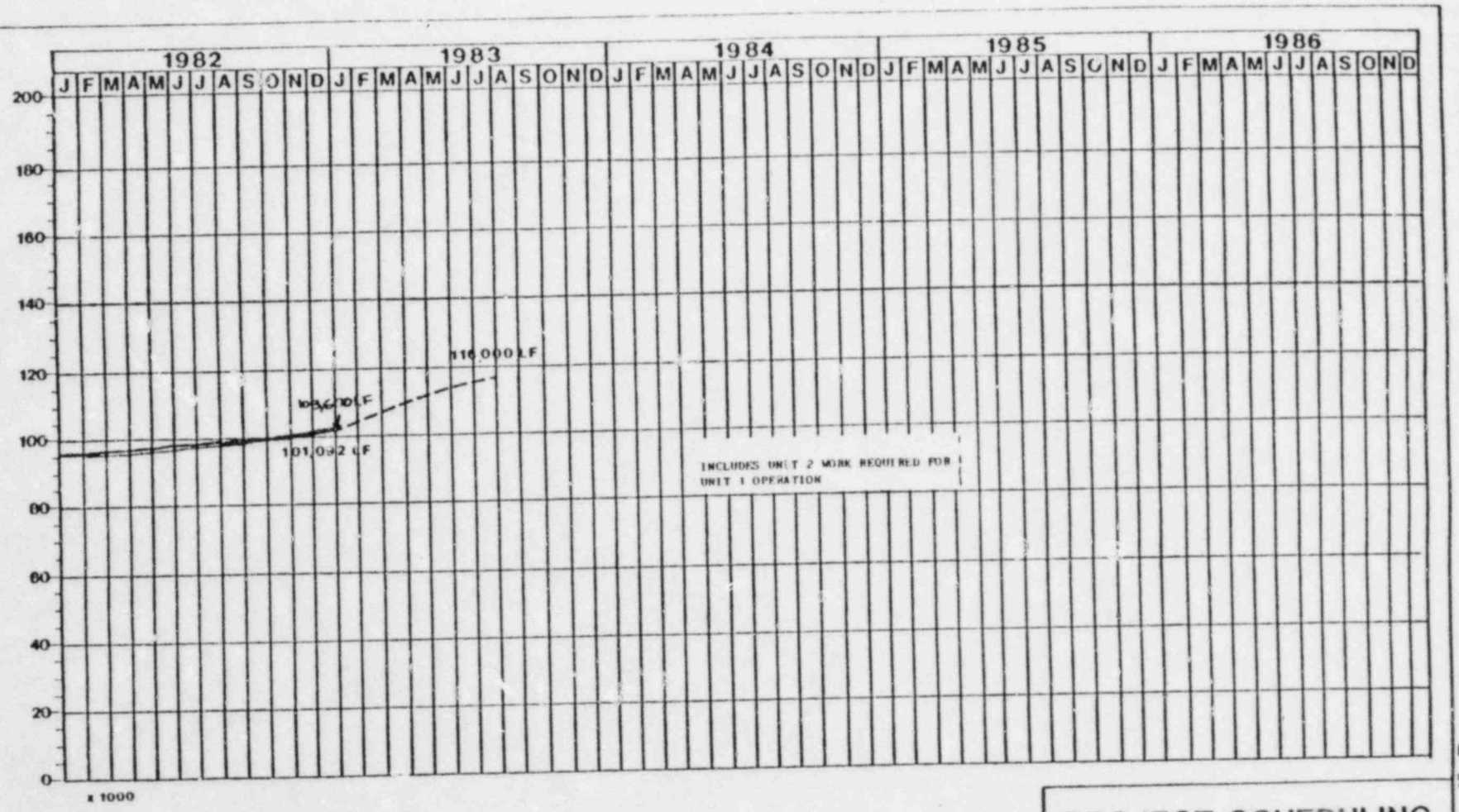
ACTUAL ———

SCHEDULED - - - - - -

NO.	REVISION	DATE		DATE

THE CLEVELAND ELECTRIC ILLUMINATING CO.
PERRY NUCLEAR POWER PLANT
PROJECT SCHEDULING

CONCRETE 1 & COMMON



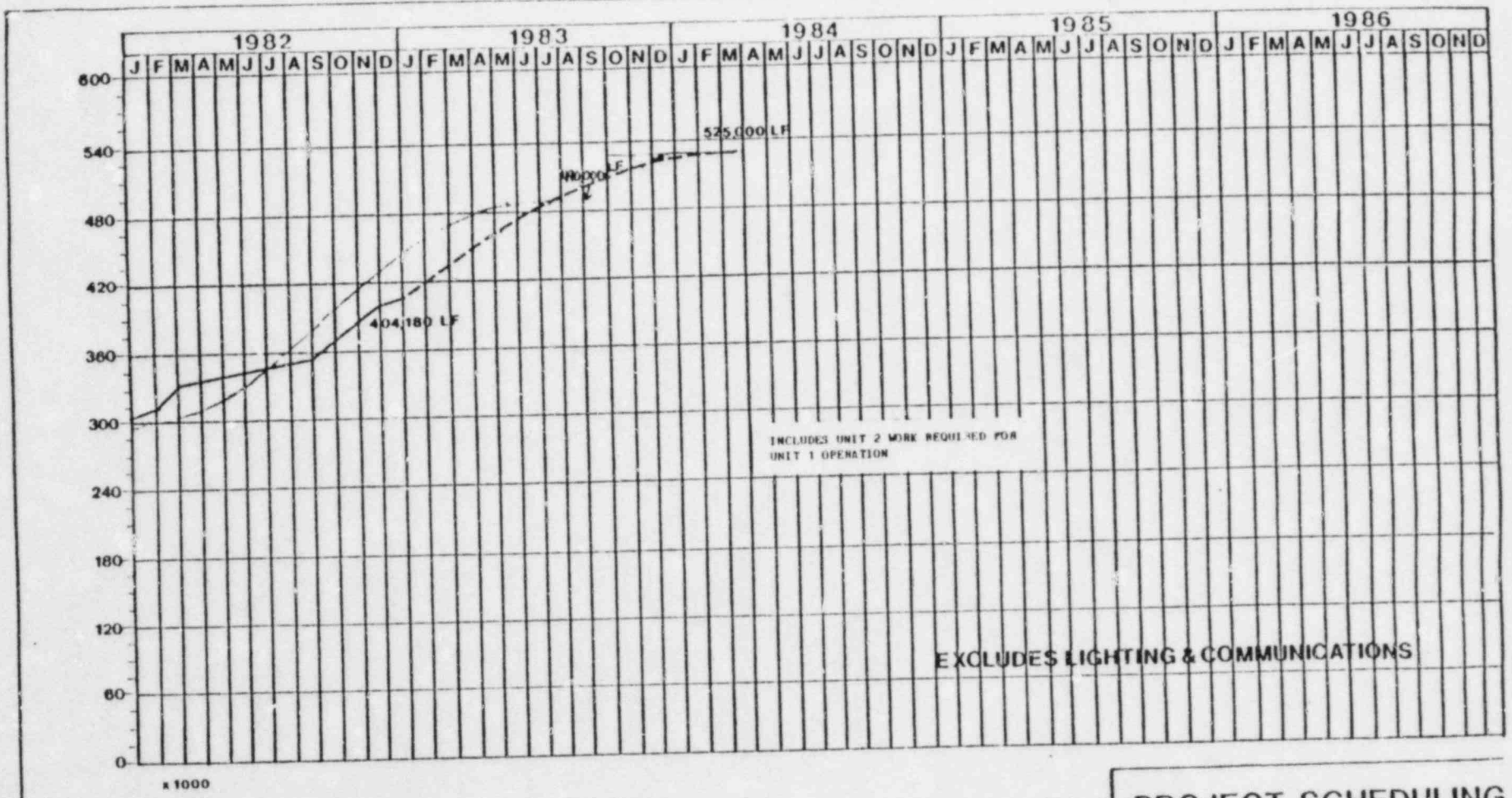
ACTUAL: _____

SCHEDULED: _ _ _ _ _ _ _

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP. 33/34 CABLE TRAY
For UNIT 1 OPERATION



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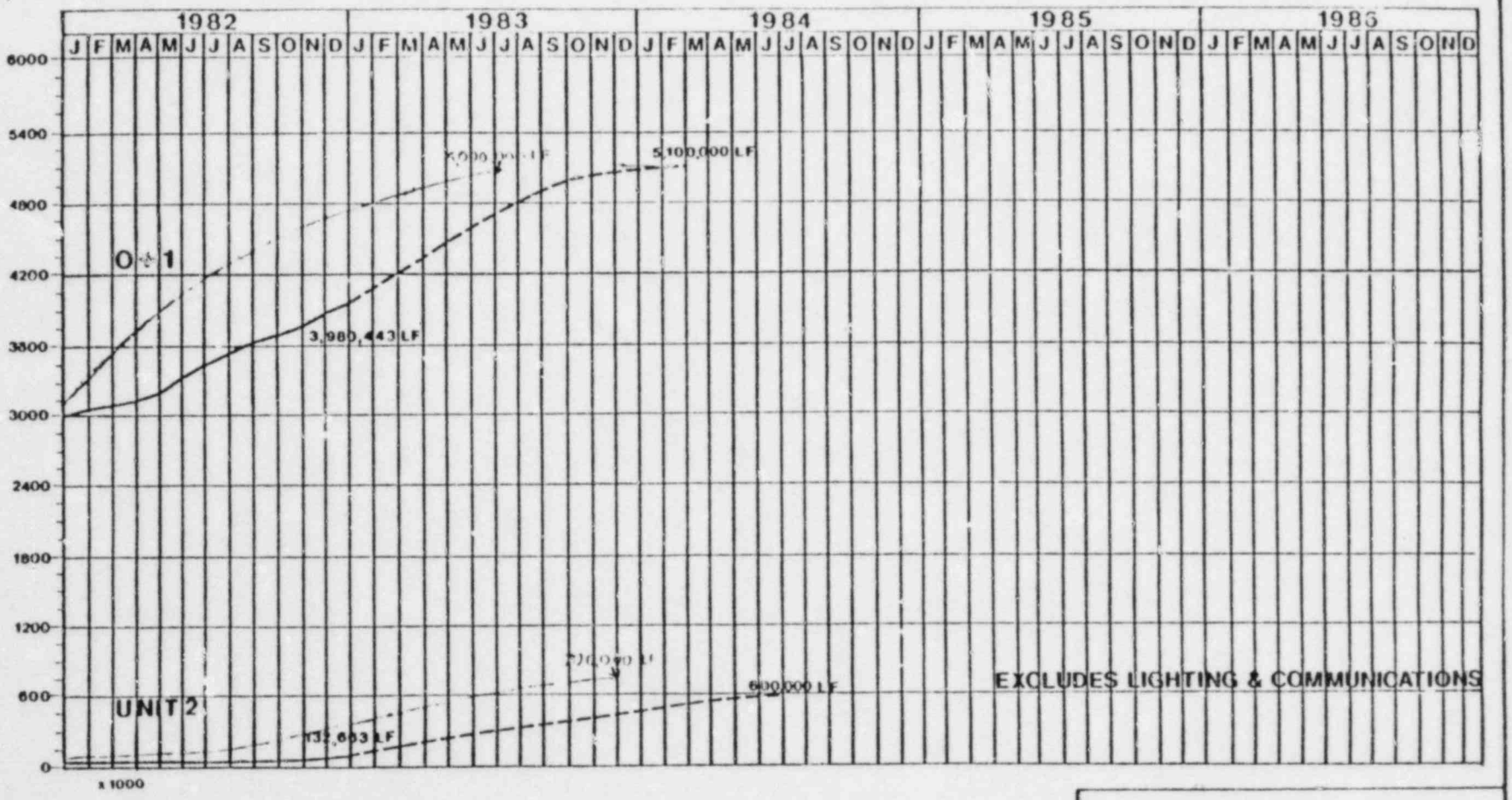
NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP.33/34 CONDUIT

For UNIT 1 OPERATION



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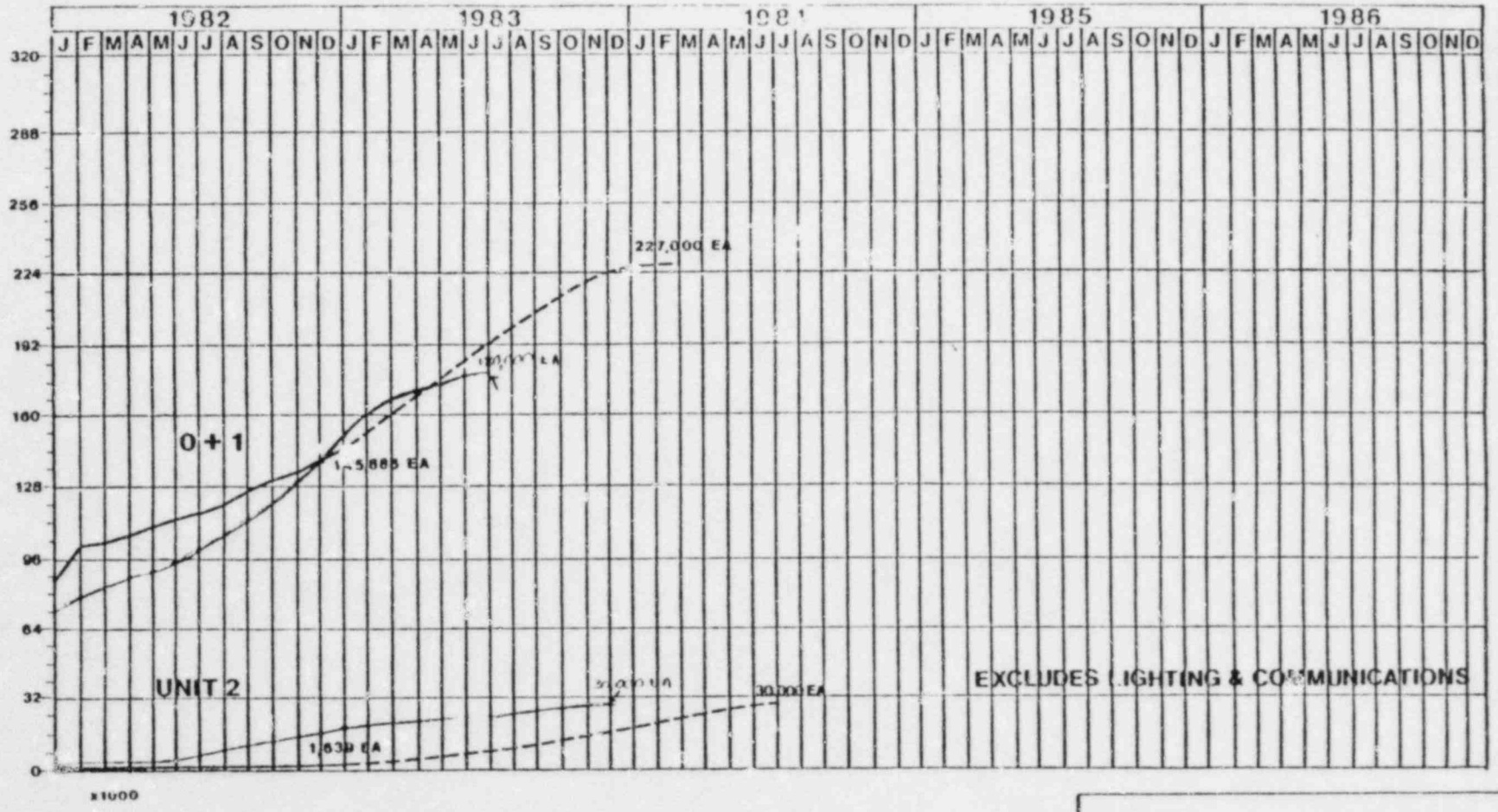
NO.	REVISION	DATE		DATE

PROJECT SCHEDULiNG

SP. 33/34 CABLE

For UNIT 1 OPERATION



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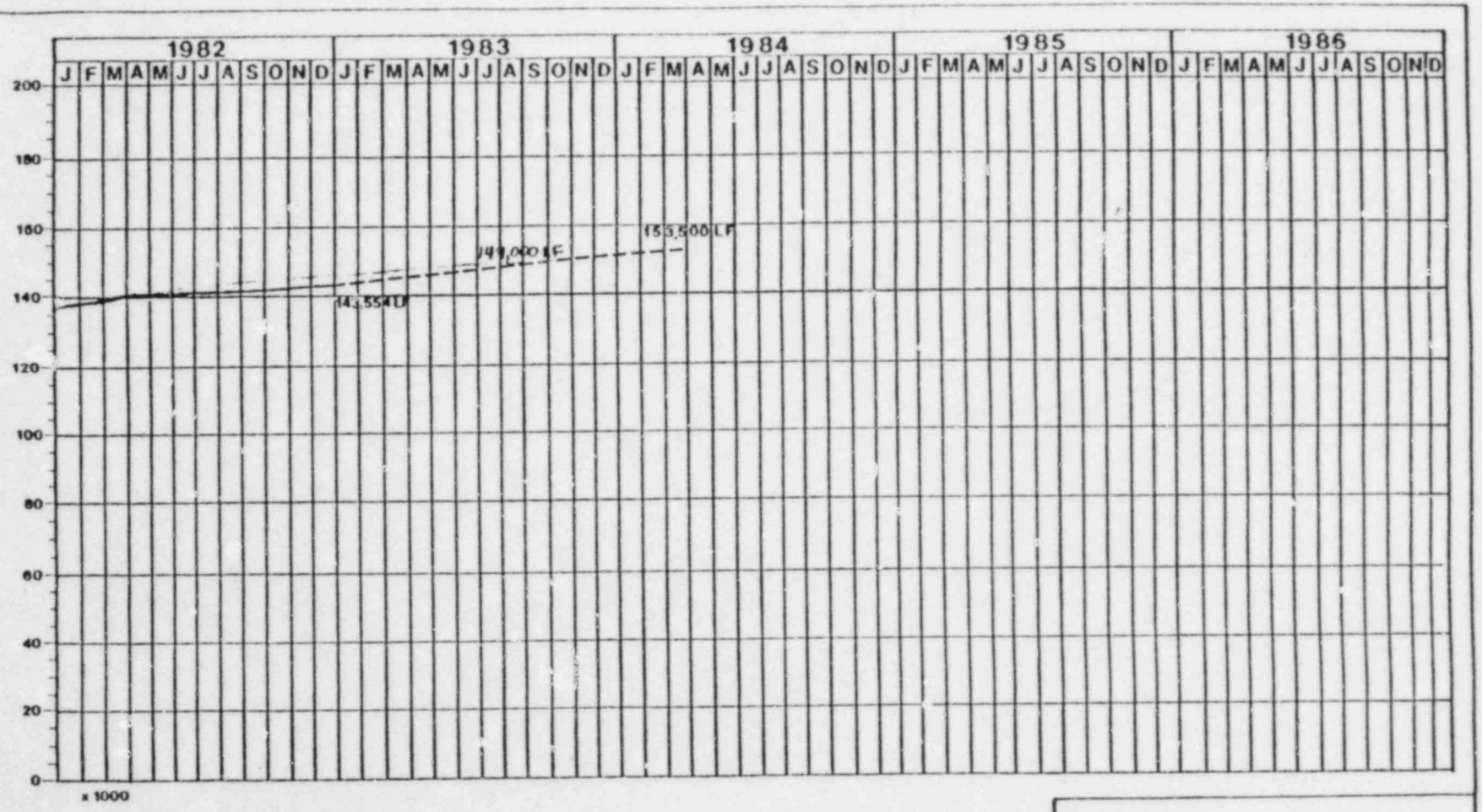
NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP. 33/34 TERMINATIONS
For UNIT 1 OPERATION



ACTUAL : ————————

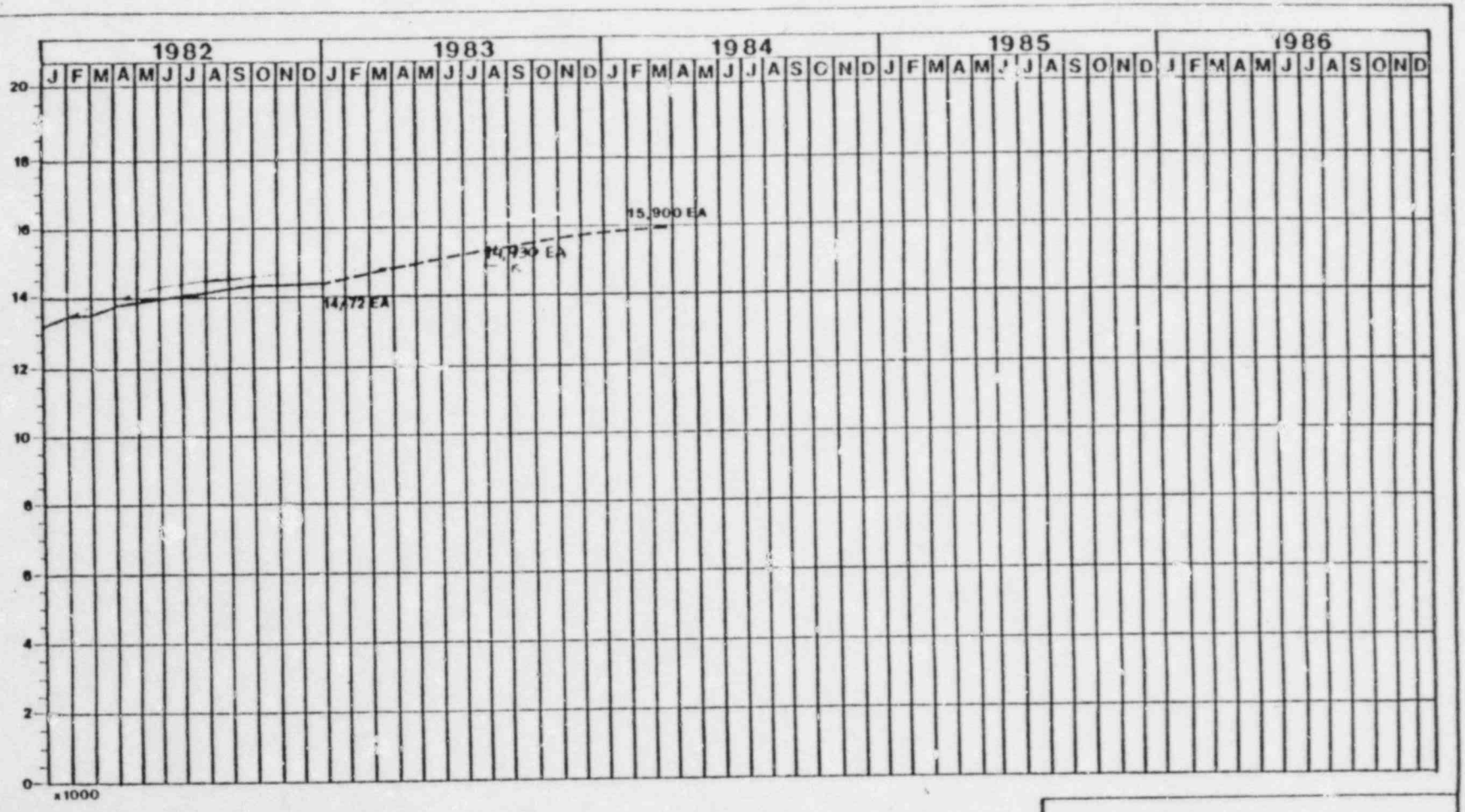
SCHEDULED: - - - - - - - - -

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP.44/45 UNIT 1 & COMMON

LARGE BORE PIPE



ACTUAL : ————————

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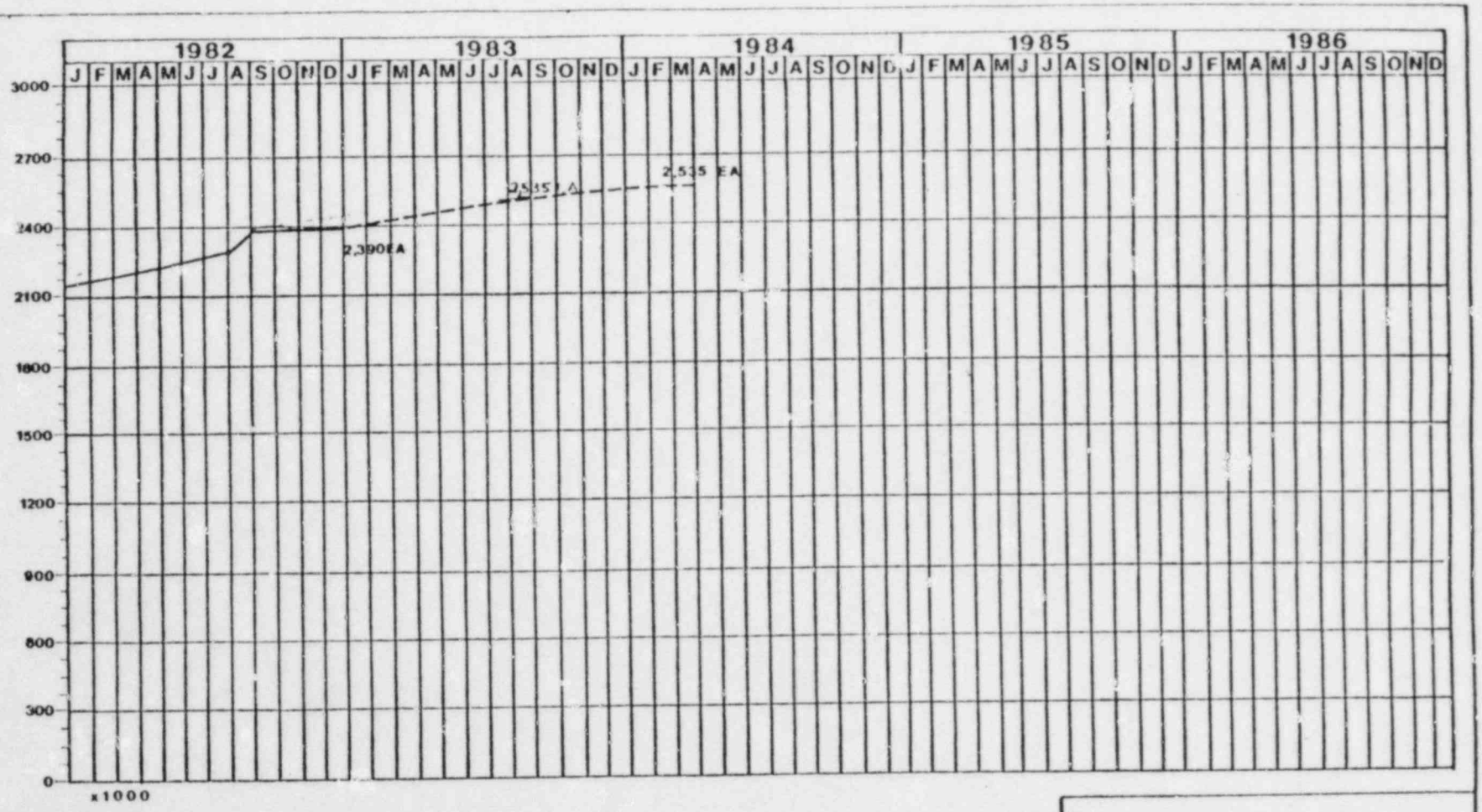
NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP. 44/45 UNIT 1 & COMMON

LARGE BORE WELDS



ACTUAL : ————

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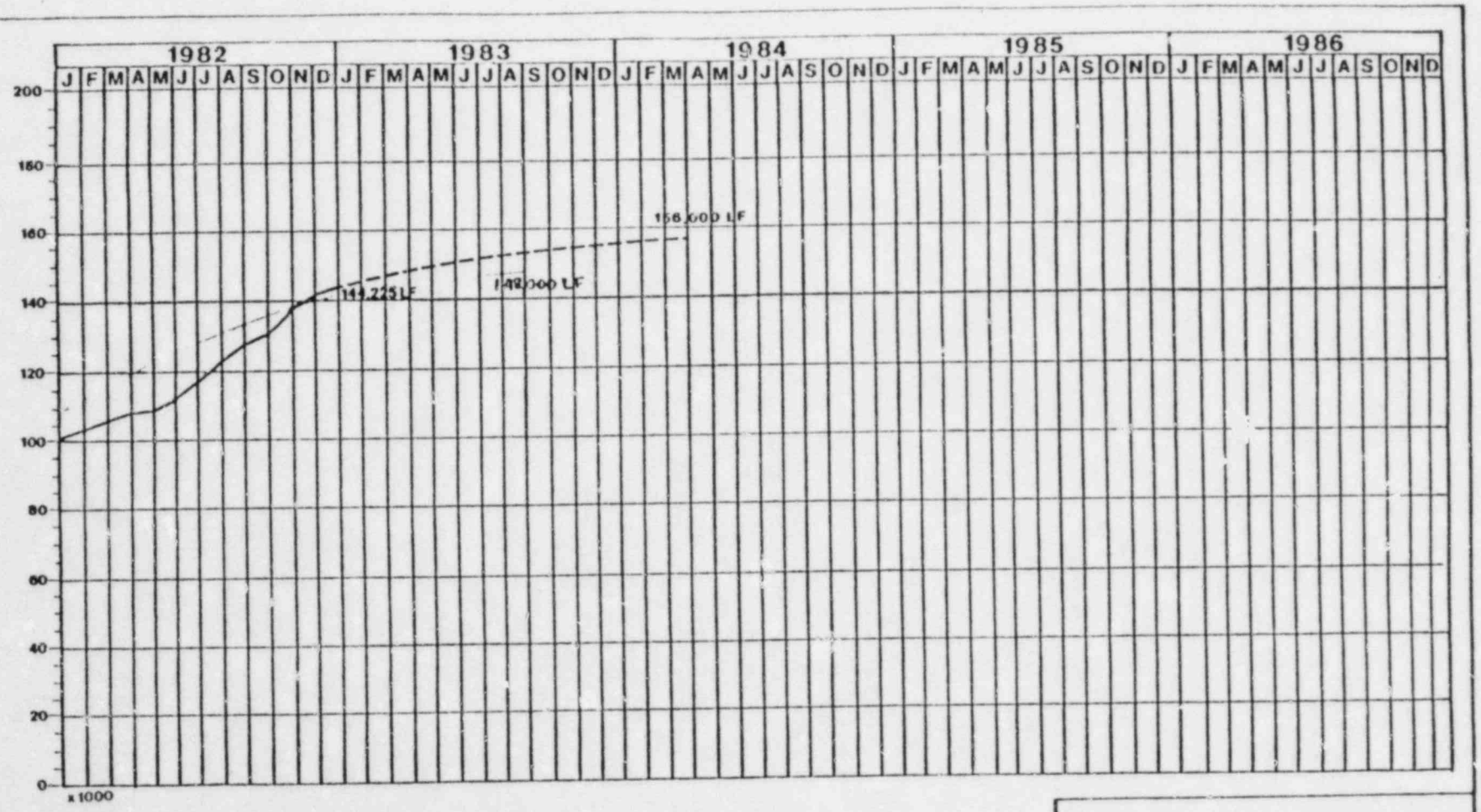
NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP 44/45 UNIT 1 & COMMON

LARGE BORE VALVES



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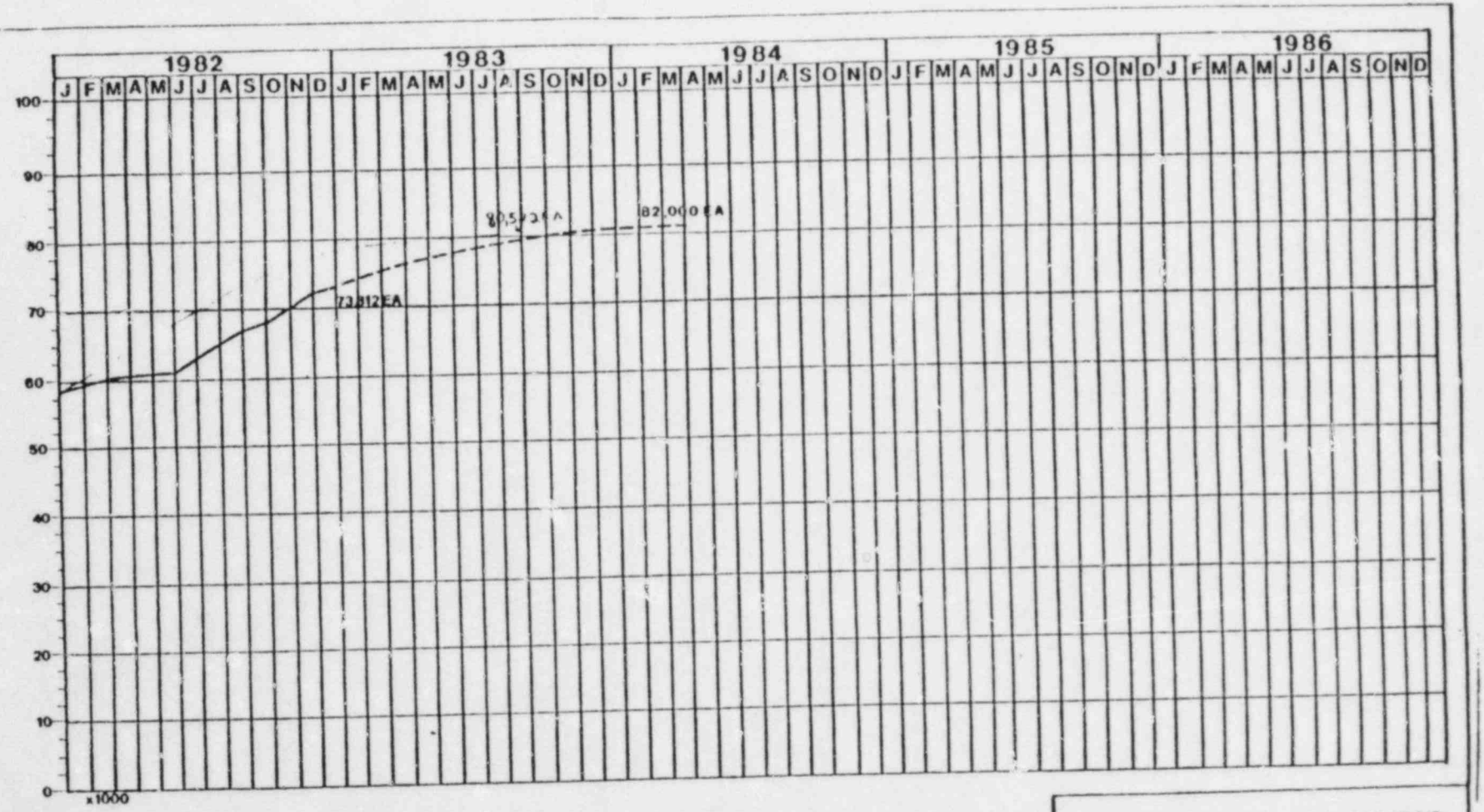
NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP44/45 UNIT 1 & COMMON

SMALL BORE PIPE



ACTUAL : ————

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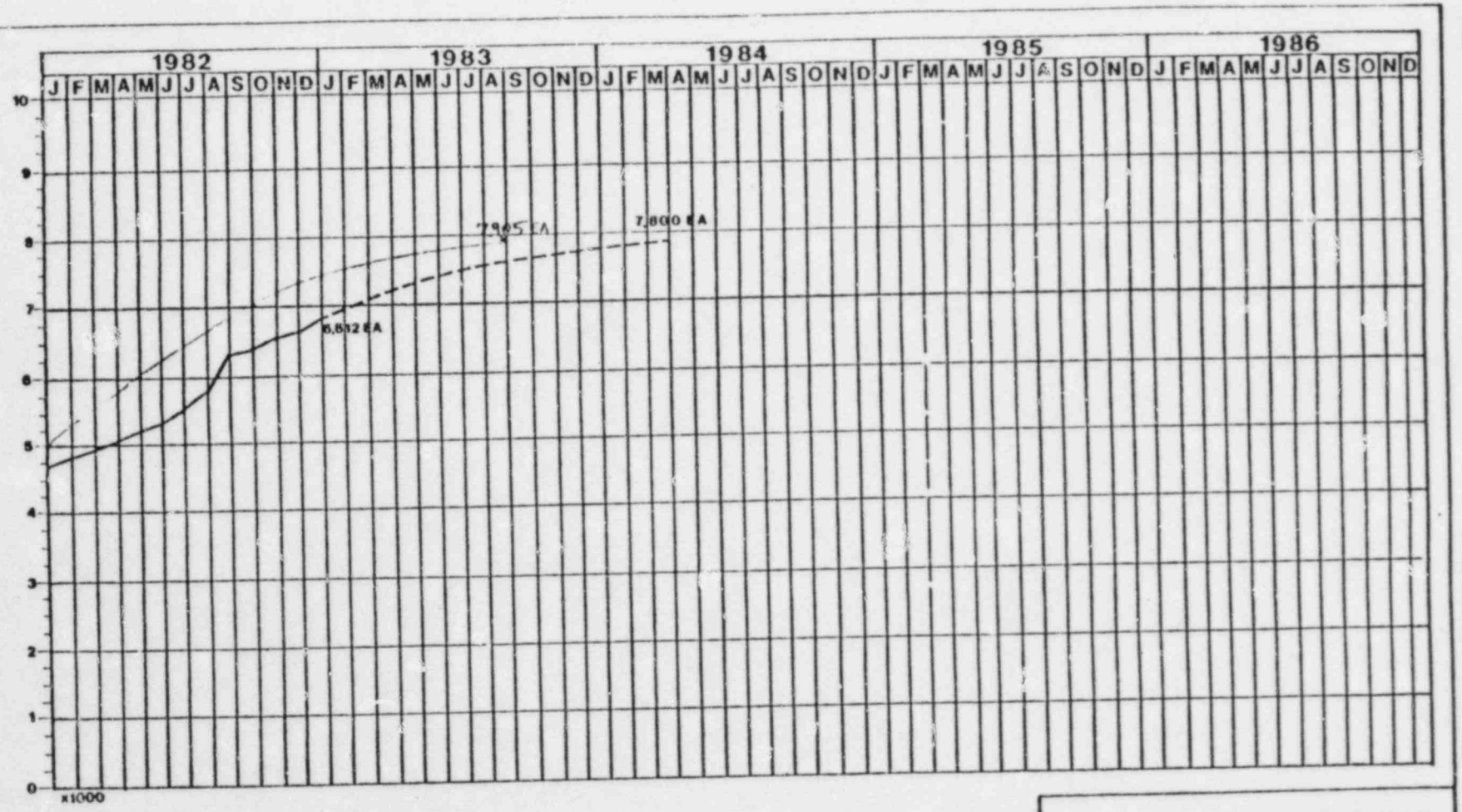
NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP.44/45 UNIT 1 & COMMON
SMALL BORE WELDS



ACTUAL : ————

SCHEDULED : - - - - - - - -

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP.44/45 UNIT 1 & COMMON
SMALL BORE VALVES

AREA 2
FACILITY 08
ZONE

	JAN					FEB				MAR				AP	
	3	10	17	24	31	7	14	21	28	7	14	21	28	4	11
NNI 17 53 96															
PATCH BIOSHIELD															
DICK CORP 19															
FILL BIOSHIELD VOIDS															
GE 38 39															
ISI TRACK & REFLECTIVE INSUL.															

PNPP

CLEVELAND ELECTRIC

ILLUMINATING CO.

REV	PLAN	SCHED	DATE

LEGEND:

SCHEDULE .....

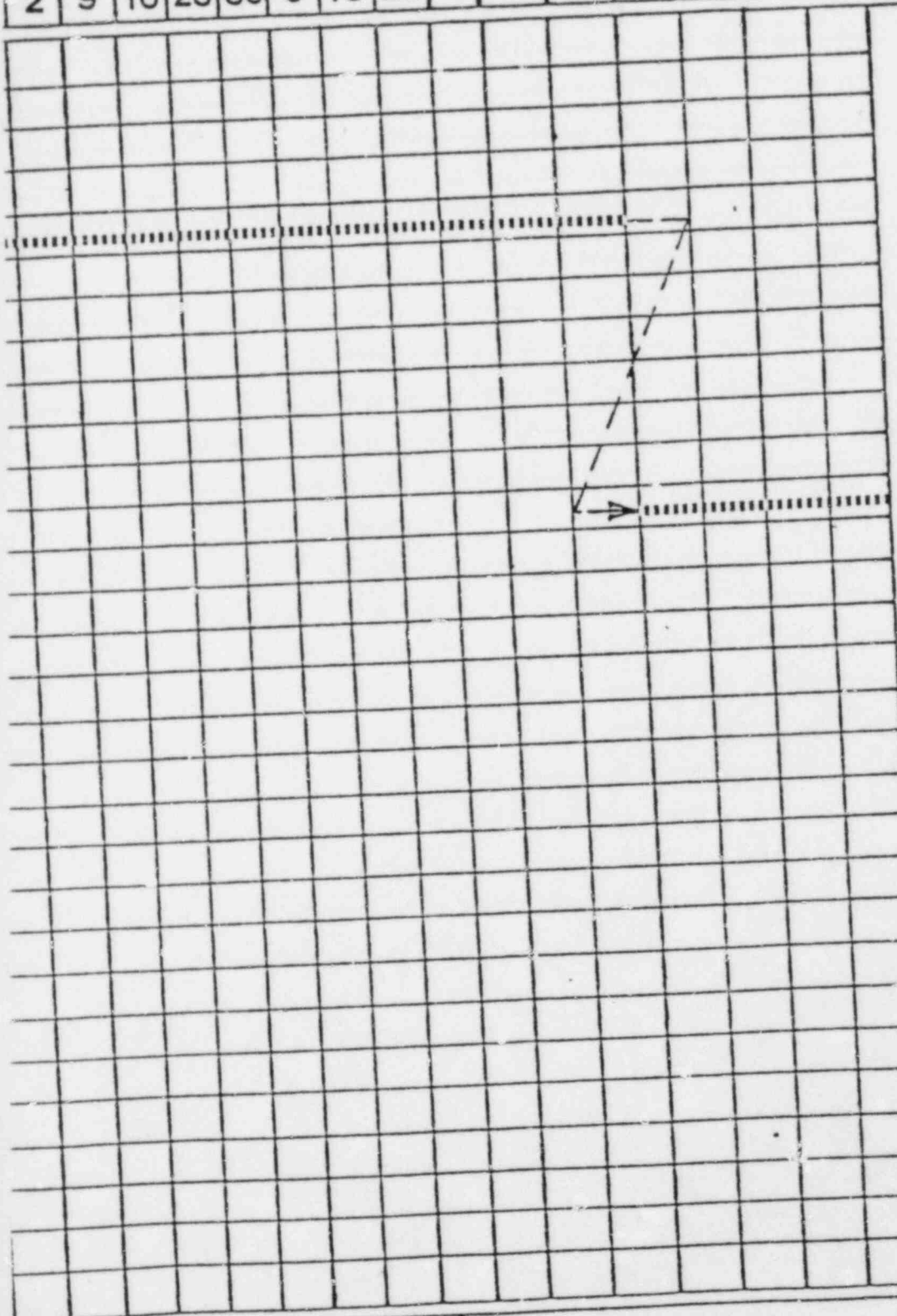
ACTUAL ———

CRIT. PATH ———

STATUS DATE

83

MAY					JUN				JU	AU	SE	OC	NO	DE
2	9	16	23	30	6	13	20	27						



NOTES:

URCE:

EA TEAM & COMPOSITE SCHEDULE GROUP

TITLE:

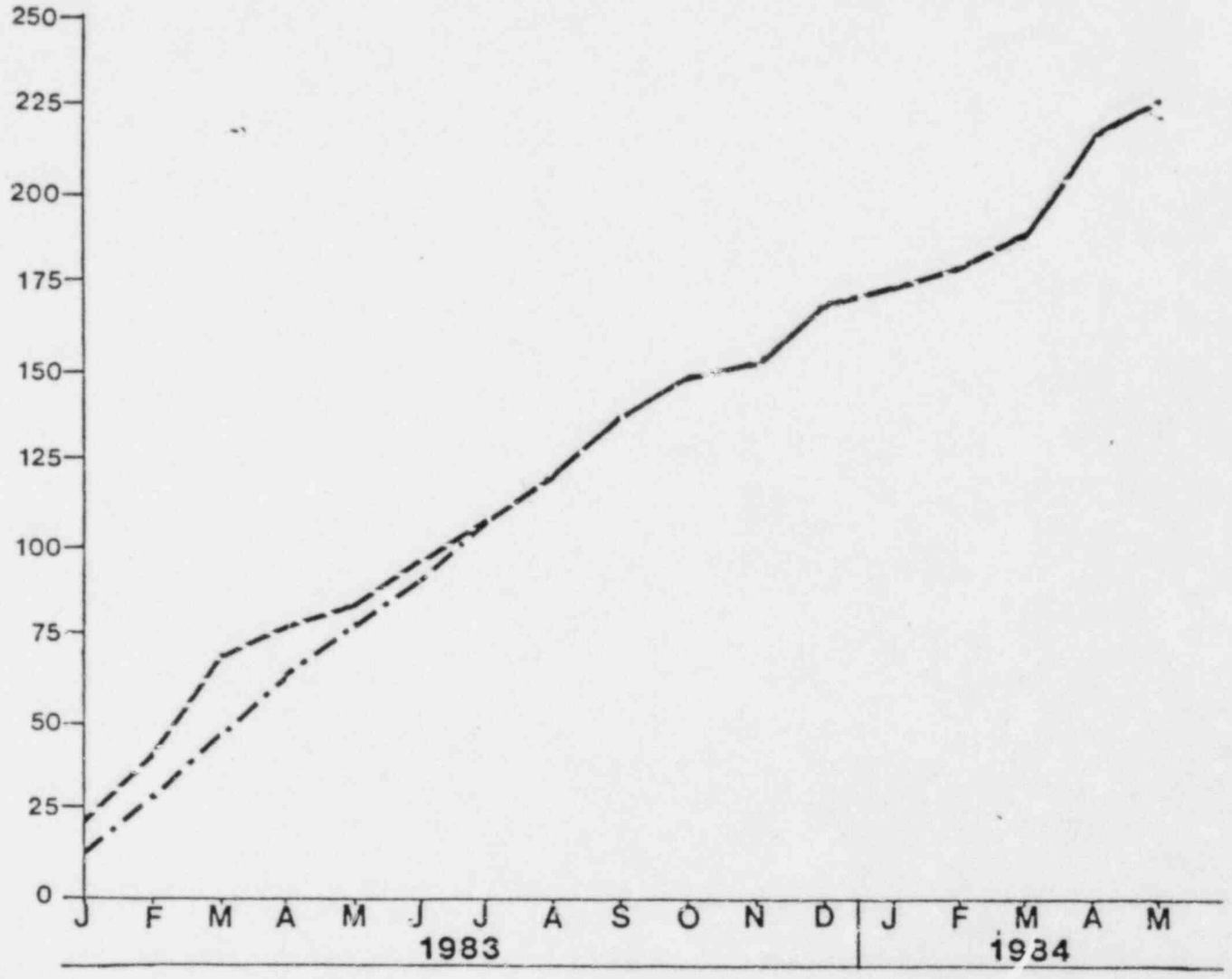
REACTOR BUILDING #1
EL. 599' IDW
BIOSHIELD FIX

SCHEDULE NO.

SHEET 42 OF

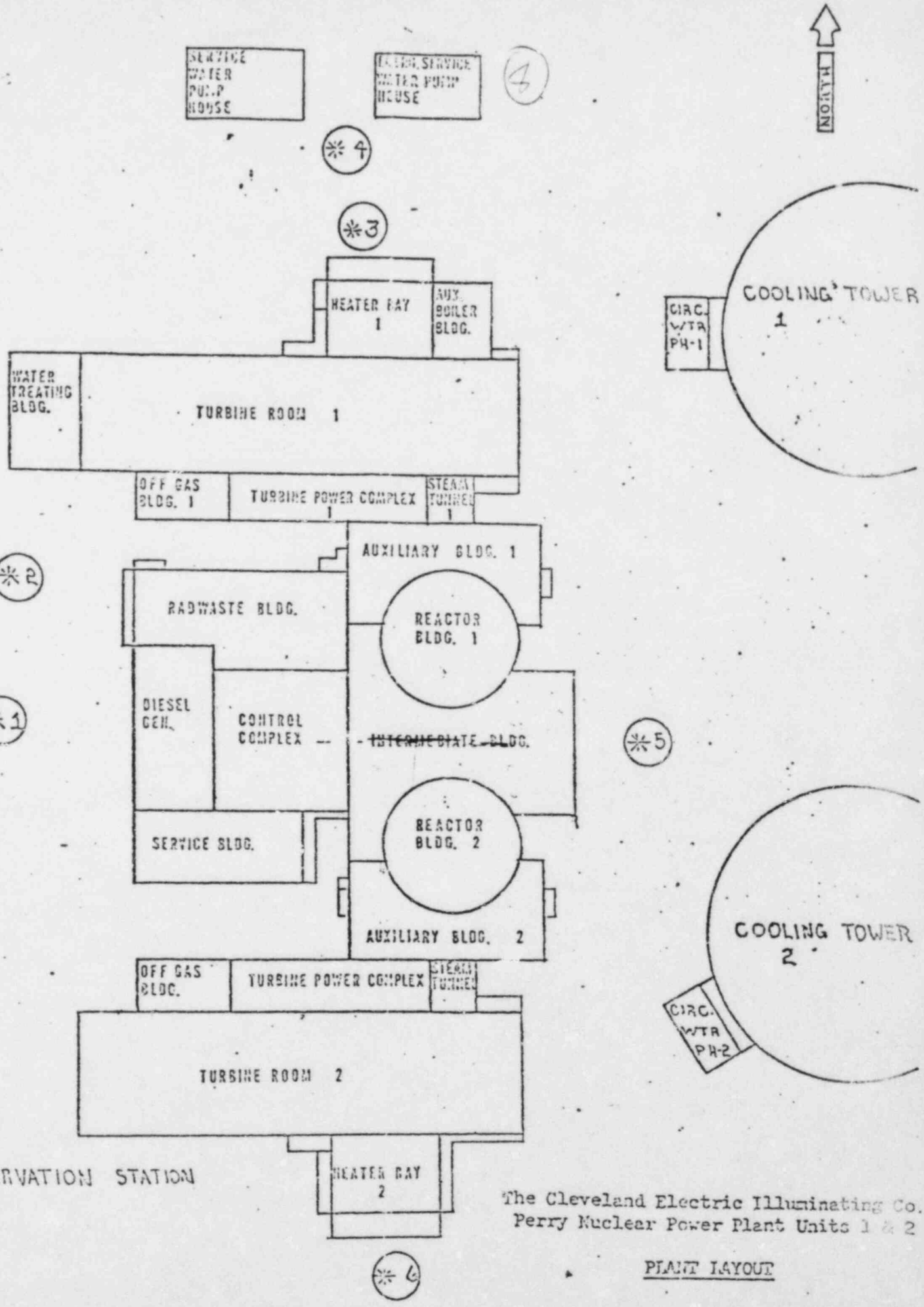
S-091

REMAINING SYSTEM TURNOVERS



		SCHEDULED	FORECAST
1983	JAN	21	14
	FEB	18	16
	MAR	30	16
	APR	8	17
	MAY	6	16
	JUN	13	13
	JUL	11	15
	AUG	13	13
	SEP	16	16
	OCT	12	12
	NOV	4	4
	DEC	15	15
1984	JAN	6	6
	FEB	6	6
	MAR	9	9
	APR	*29 [19 D17]	29
	MAY	9	9
		266	

* INCLUDES 19 SUBSCOPES OF SYST D17 (RADIATION MONITORING)



* = OBSERVATION STATION

The Cleveland Electric Illuminating Co.
Perry Nuclear Power Plant Units 1 & 2

PLANT LAYOUT

MEETING NOTICE

Document Control (50-440/441) DEC 15 1982
NRC PDR
L PDR
PRC System
NSIC

LB#1 Rdg.
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H. Denton/E. Case
D. Eisenhut/R. Purple
A. Schwencer
G. Knighton
E. Adensam
G. Lainas
F. Miraglia
F. Schroeder
M. Ernst
J. Knight
W. Johnston
D. Muller
T. Speis
L. Rubenstein
W. Houston
E. Jordan, DEQA:IE
J. Taylor, DRP:IE
Attorney, OELD
ACRS (16)

cc: Service List

NRC PARTICIPANTS:
W. Lovelace
J. Konklin
P. Pelke
M. Gildner
J. Stefano
J. Youngblood

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DEC 15 1982

Docket Nos.: 50-440
and 50-441

MEMORANDUM FOR: B. J. Youngblood, Chief, Licensing Branch No. 1, DL

FROM: J. J. Stefano, Project Manager, Licensing Branch No. 1, DL

SUBJECT: FORTHCOMING NRC CASELOAD FORECAST PANEL VISIT TO PERRY SITE

DATE & TIME: January 11, 12 & 13, 1983
9 am - 4 pm

LOCATION: Perry Plant Site
Lake County, Ohio

PURPOSE: Assess status of construction and completion schedules for Perry Units 1 & 2 (Meeting Agenda enclosed)

PARTICIPANTS:

NRC Staff

W. Lovelace, J. Konklin, P. Pelke, M. Gildner, J. Stefano, J. Youngblood

CEI Staff

W. Coleman, et. al.

OTHER

Meeting between CEI and the NRC staff on the first day is open for interested members of the public, petitioners, intervenors, or other parties to attend as observers pursuant to "Open Meeting and Statement of NRC Staff Policy," 43 FR 28058, June 28, 1978.

John J. Stefano, Project Manager
Licensing Branch No. 1
Division of Licensing

Enclosure:
Meeting Agenda

cc w/encl.: See next page

8212200077

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Vice President, Nuclear Group
The Cleveland Electric Illuminating Company
P. O. Box 5000
Cleveland, Ohio 44101

DEC 1 5 1982

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Resident Inspector's Office
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Parmly at Center Road
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Cleveland, Ohio 44108

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Mentor, Ohio 44060

Terry Lodge, Esq.
915 Spitzer Building
Toledo, Ohio 43604

John G. Cardinal, Esq.
Prosecuting Attorney
Ashtabula County Courthouse
Jefferson, Ohio 44047

CASELOAD FORECAST PANEL SITE VISIT
MEETING AGENDA

NOTE: Emphasis will be on Unit 1 construction including facilities common to Units 1 and 2 which are needed for Unit 1 completion and operation

1. Overview of project construction schedule including progress and major milestones completed, current problems and any anticipated problem areas that may impact the current projected fuel load date.

2. Detailed review and current status of design and engineering effort (by major discipline) including any potential problems that may arise from necessary rework.

3. Detailed review and current status of procurement activities including valves, pipe, instruments, cable, major components, etc.

4. Actual and proposed craft work force (by major craft), craft availability, productivity, potential labor negotiations and problems.

5. Detailed review and current status of all large and small bore pipe hangers, restraints, snubbers, etc., including design, rework, procurement, fabrication, delivery and installation.

6. Detailed review of project schedule identifying critical path items, near critical items, amount of float for various activities, the current critical path to fuel loading, methods of implementation of corrective action for any activities with negative float, and provisions for contingencies. The estimated project percent complete as of December 31, 1982.

7. Detailed review and current status of bulk quantities including current estimated quantities, quantities installed to date, quantities scheduled to date, current percent complete for each, actual versus forecast installation rates, in cubic yards/mo., linear feet/mo., or number/mo., and basis for figures.

   (a) Concrete (CY)

   (b) Process Pipe (LF)

   - Large Bore Pipe (2½" and larger)
   - Small Bore Pipe (2" and smaller)

   (c) Yard Pipe (LF)

   (d) Large Bore Pipe Hangers, Restraints, Snubbers (ea)

   (e) Small Bore Pipe Hangers, Restraints (ea)

   (f) Cable Tray (LF)

   (g) Total Conduit (LF)

   (h) Total Exposed Metal Conduit (LF)

   (i) Cable (LF)

   - Power
   - Control
   - Security
   - Instrumentation
   - Plant Lighting

(j) Terminations (ea)

- Power
- Control
- Security
- Instrumentation
- Plant Lighting

(k) Electrical Circuits (ea)

- Power
- Control
- Security

(l) Instrumentation (ea)

8. Detailed review and current status of preparation of preop and acceptance test procedures, integration of preop and acceptance test activities with construction schedule, system turnover schedule, preop and acceptance tests schedule, current and proposed preop and acceptance tests program manpower.

(a) Total number of procedures required for fuel load.
(b) Number of draft procedures not started.
(c) Number of draft procedures being written.
(d) Number of procedures approved.
(e) Number of procedures in review.
(f) Total number of preop and acceptance tests required for fuel load.
(g) Number of preop and acceptance tests completed.
(h) Number of preop and acceptance tests currently in progress.
(i) Number of systems turned over to start-up.

9. Detailed discussion of potential schedular influence due to changes attributed to NUREG-0737 and other recent licensing requirements.

10. Discussion of schedular impact, if any, regarding potential deficiencies reported in accordance with 10 CFR 50.55(e).

11. Overview of current construction and startup management organization showing interfaces between the two.

12. Site tour and observation of construction activities.

UPDATE 1/13/83

PROJECT PROGRESS SUMMARY

89.1% UNIT#1 & COMMON

99.4%	CIVIL STRUCTURAL
93.3%	LB PIPE
92.4%	SE PIPE
77.9%	LB HANGERS
87.3%	CABLE TRAY
77.0%	CONDUIT
69.0%	CABLE

PERRY NUCLEAR POWER PLANT

AREA PROGRESS

UNIT #1 & COMMON

AREA	% COMPLETE
NUCLEAR ISLAND	88.6
REACTOR BUILDING	78.5
TURBINE BUILDING	96.2
CONTROL COMPLEX	94.6
YARD	95.5

CASELOAD FORECAST PANEL SITE VISIT

NRC AGENDA ITEM NUMBER 2
Detailed review and current status of design and engineering effort (by major discipline) including any potential problems that may arise from necessary Rework.

Engineering Status

1. Engineering General - Engineering Progress as of November 1 is 96.5% for the basic plant design. All new engineering tasks are identified and scheduled as New Work or Rework. New activities are added to these categories as they are defined. Presently, 52% of the identified New Work tasks are complete and 79% of the identified Rework tasks are complete. Overall engineering progress is 92%.

2. Civil/Structural - All Unit 1 and Common structural steel erection and concrete construction drawings have been completed and issued. The current efforts are final evaluation of support attachments to the containment as a result of the final new loads and finalizing designs for pipe rupture restraints and jet shields. Penetration seal design is 90% complete.

3. Mechanical - All Unit 1 and Common piping installation drawings have been completed and issued. Major New Work, including ATWS is complete. Current efforts include minor equipment relocations, and valve changes. Agenda Item No. 5 discusses pipe supports in greater detail.

4. I&C - All Unit 1 and common design instrument and control routing drawings have been issued to the site. The current effort is development of detailed Installation/Fabrication drawings by Johnson Controls Engineering for construction; this is 64% complete. New Work is dominated by R.G. 1.97 implementation at 95% ERIS (NUREG 0696) at 70% complete and ATWS at 75% complete, and Post Accident Radiation Monitoring at 60% complete.

5. Electrical - All Unit 1 and Common base design electrical drawings and cable pull slips have been issued to the site. The current efforts are development of detailed conduit drawings by the site conduit design team; this is 70% complete.

   New Work is dominated by ERIS (NUREG 0696) at 60% complete, ATWS at 95% complete, Hydrogen igniters at 95% complete and Fire Barrier design which is 75% complete.

   Equipment Qualification documentation is being assembled to support a March 1983 NRC audit. This effort is on schedule.

NRC AGENDA ITEM NUMBER 5
Detailed review and current status of all large and small bore pipe hangers, restraints, snubbers, etc., including design, rework, procurement, fabrication, delivery and installation.

The status of piping supports for Perry Unit 1 and Common facilities as of January 1, 1983 was as follows:

	Large Bore	Small Bore
Required	13,500	22,141
Designed	13,134	3,570 (S.R. only)
Delivered	11,872	N/A
Installed	10,514	18,865

The above totals include all supports - safety and non-safety class. However, they include possible new designs that may be required as a result of the IE Bulletin 79-14 evaluation and vibration problems discovered during preoperational testing. These are discussed below under Rework.

Safety Class Large Bore

Included in the above totals are 5304 large bore safety class supports. Only 11 of these remain to be issued. Approximately 1250 snubbers are required and these have been planned for through bulk orders. Currently 25% of the required snubbers have been received on site.

Safety Class Small Bore

Included in the above totals are 3886 safety class small bore supports. To date 3570 of these have been designed and issued. The remainder will be completed during the first quarter of 1983.

Rework

During the past year reanalysis for New Loads, design verification and redefinition of class breaks resulted in the issue of 449 new supports and 2297 revisions. Current efforts are aimed at confirming assumptions, which is expected to result in no more than 50 new supports. We expect this effort to be completed by April 1983. Additionally, we now anticipate no more than 100 new supports to result from the I.E. Bulletin 79-14 evaluation. Finally, we estimate that 100 new supports may be required to resolve vibration problems discovered during preoperational testing.

ENGINEERING STATUS NOVEMBER 1, 1982

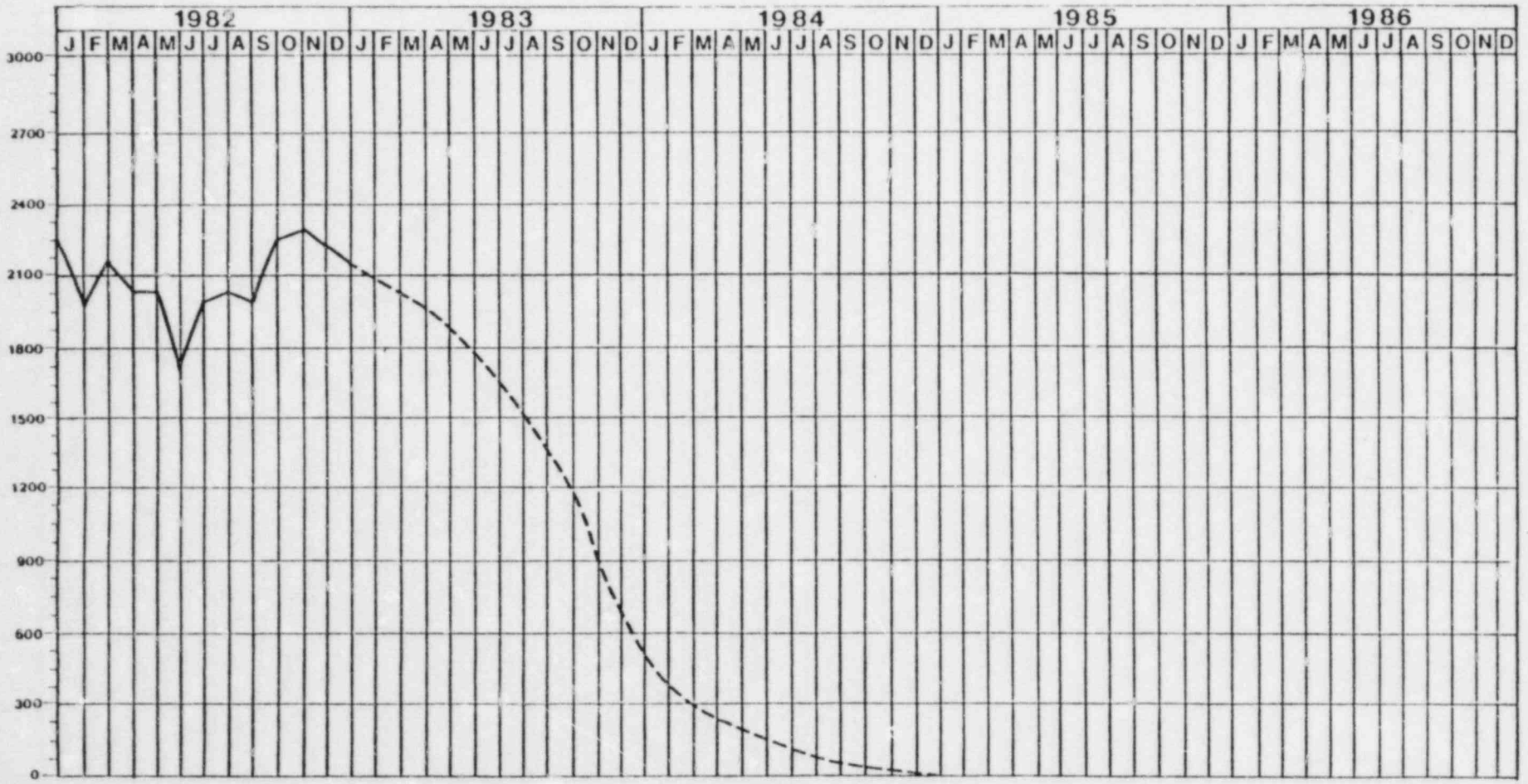
	NUMBER OF SCHEDULE ACTIVITIES	% COMPLETE
DESIGN	28,592	96.5
NEW WORK	2,484	52
REWORK	803	79
TOTAL	31,879	92

EQUIPMENT RECEIVED

ITEM	RECEIVED	% TOTAL REQUIRED
VALVES	9,517	99%
INSTRUMENTATION	4,289	93%
MAJOR EQUIPMENT	105 Orders	98%
CABLE	5,559,457	89%
REBAR	23,100 Tons	100%
STRUCTURAL	9,197 Tons	100%
EMBEDMENTS	1,900 Tons	100%
SPOOLS (2 1/2" LARGER)	12,708	99%
HANGERS (INCLUDES RESTRAINTS)	11,872	89%

FINAL DELIVERY DATES

ITEM	REMAINING	DELIVERY DATE
VALVES	44	11/83
INSTRUMENTATION	311	5/83
MAJOR EQUIPMENT	3 Orders 14 Pieces	8/83
CABLE	706,543	5/83
REBAR	0	-
STRUCTURAL	0	-
EMBEDMENTS	0	-
SPOOLS	50	1/83
HANGERS (INCLUDES RESTRAINTS)	1,628	4/83



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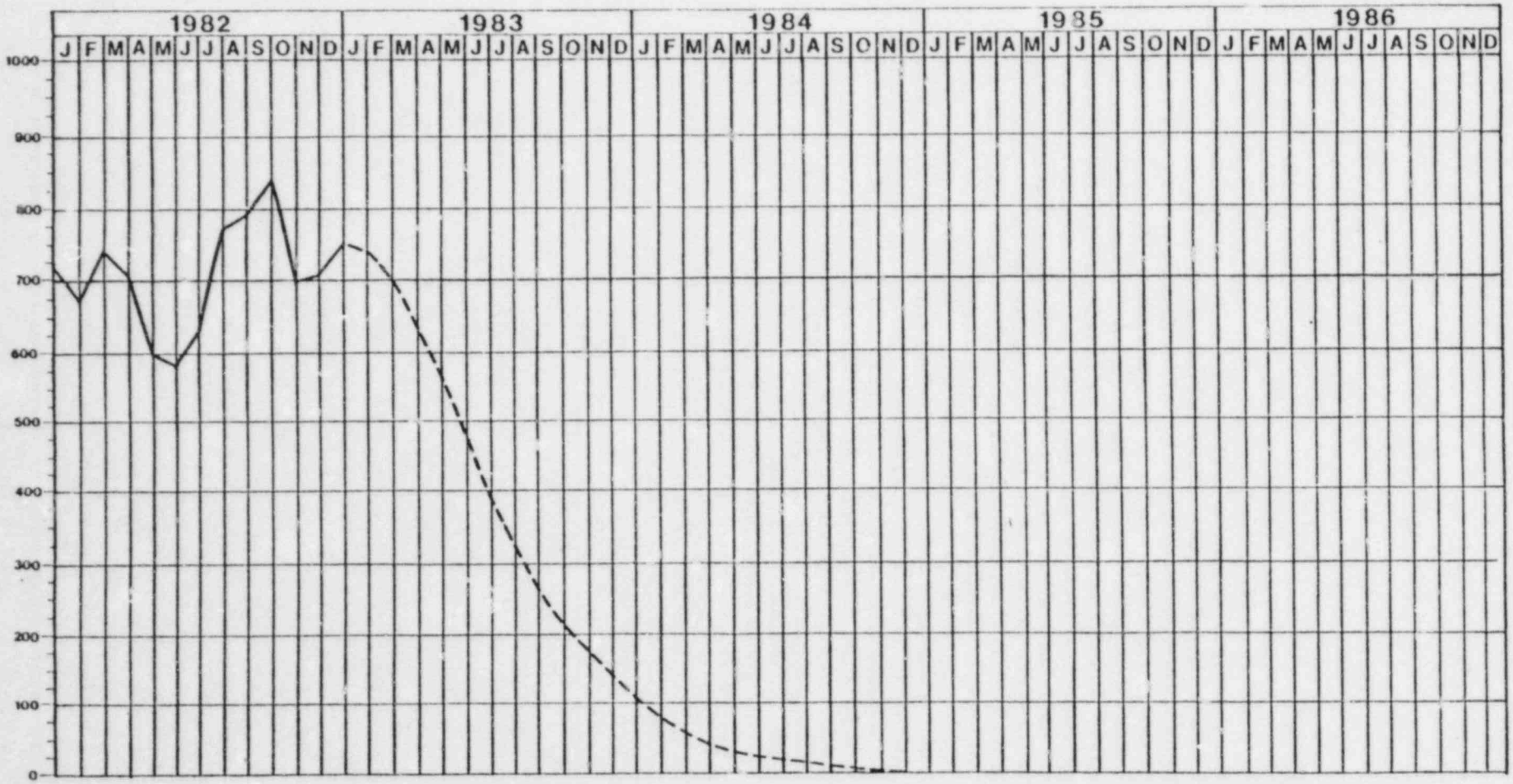
NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

CRAFT MANPOWER

UNIT 0+1



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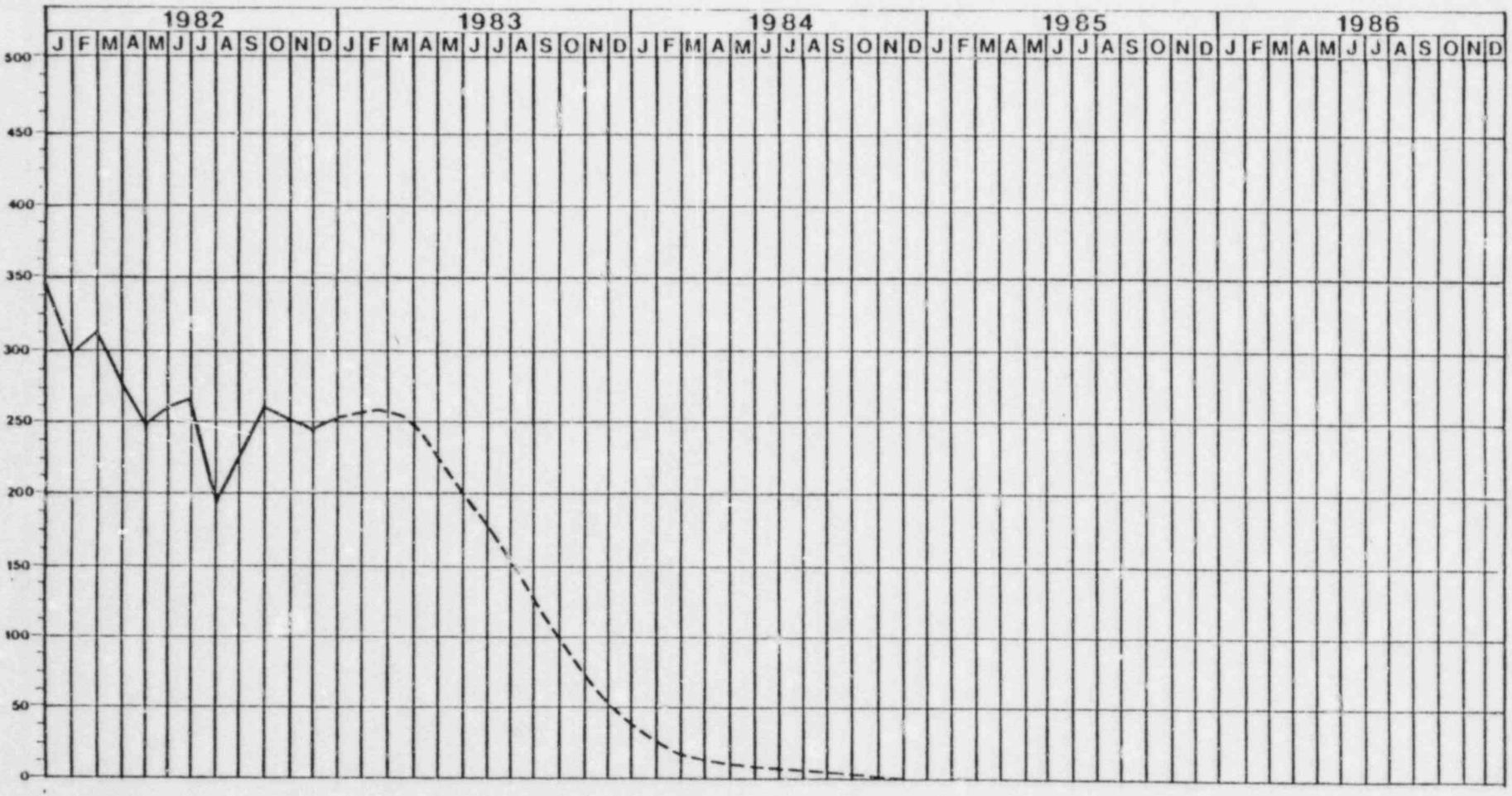
NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

PIPEFITTERS

UNIT 0+1



ACTUAL: _____

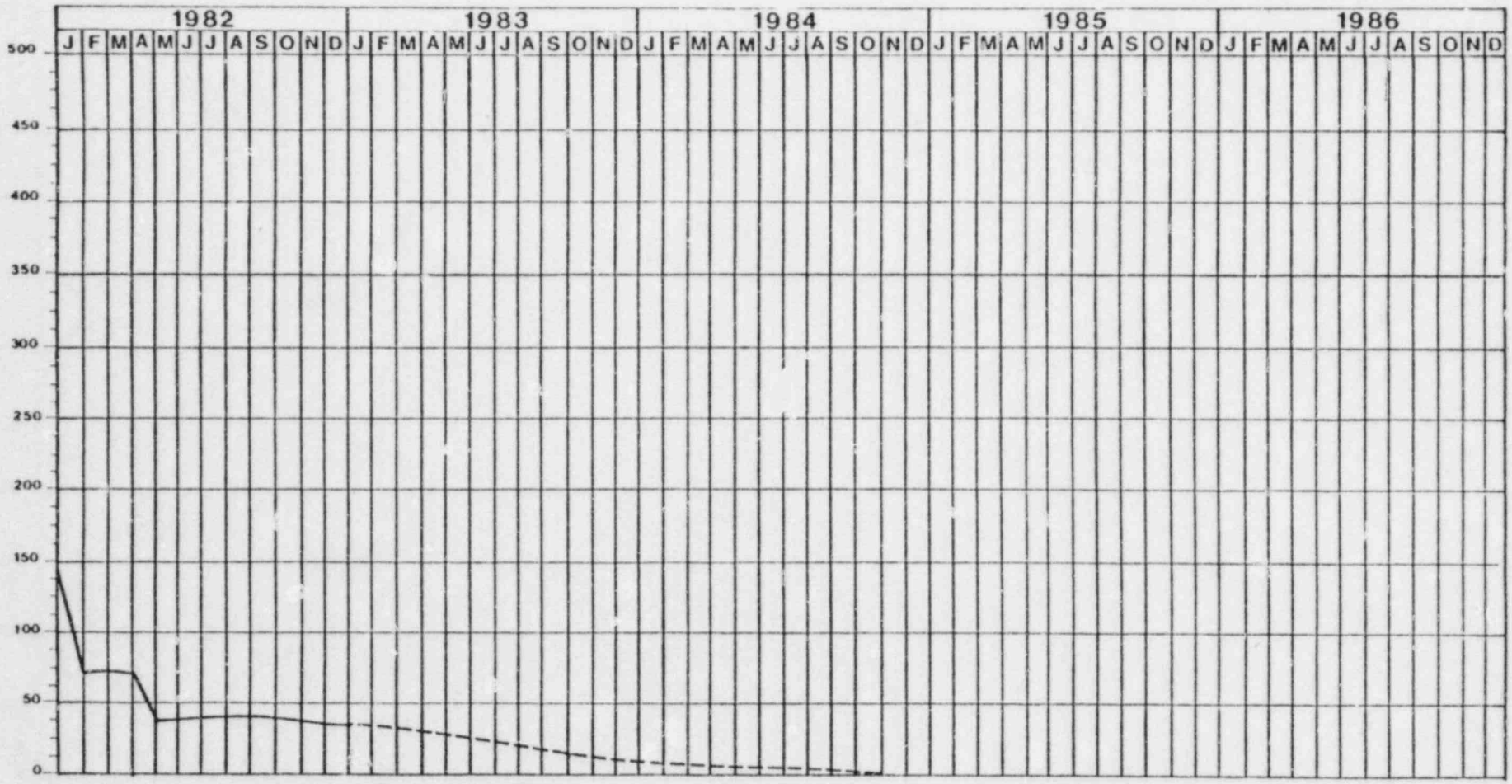
SCHEDULED: - - - - - -

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

ELECTRICIANS

UNIT 0+1



ACTUAL:

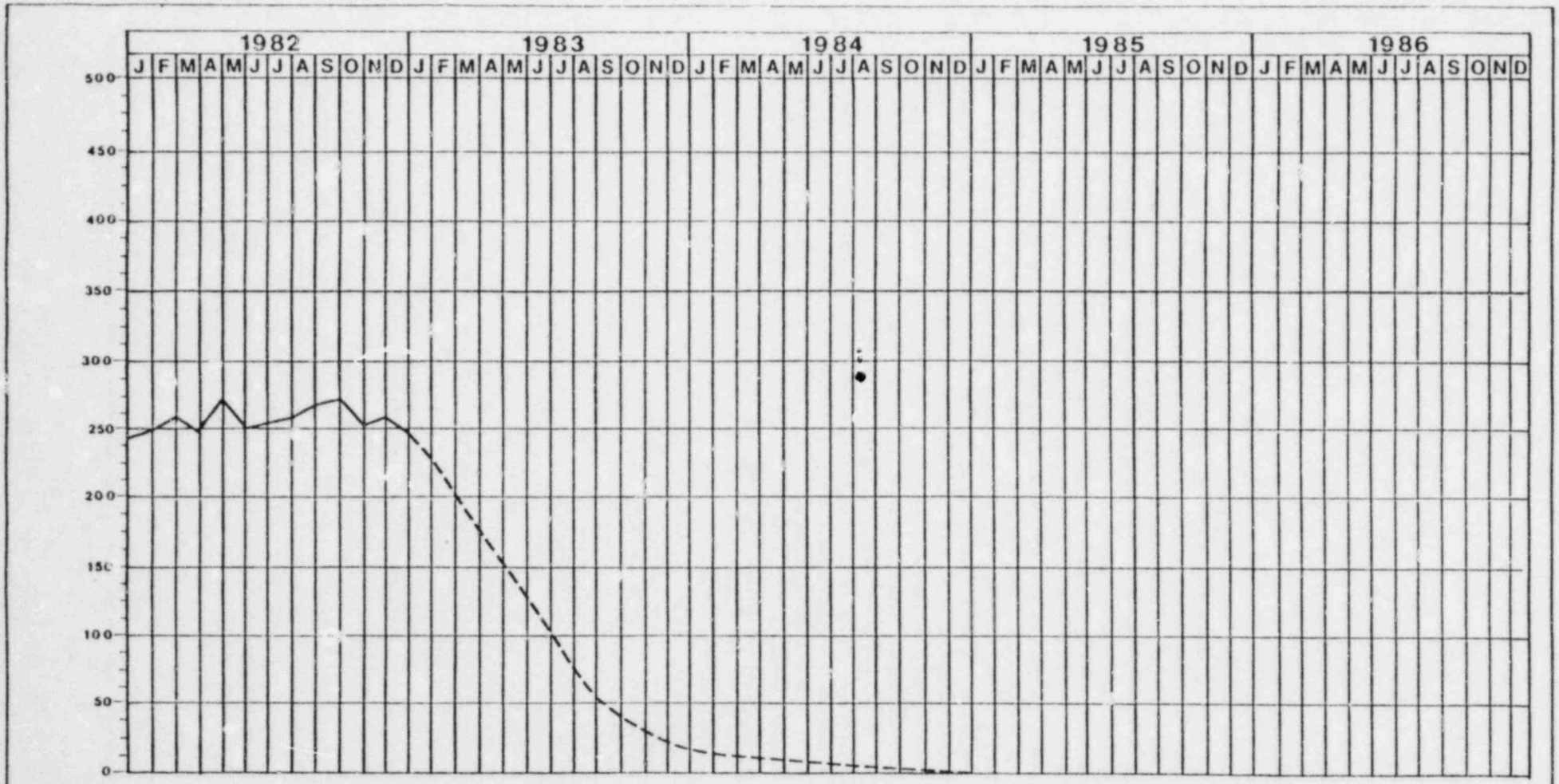
SCHEDULED: _____

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

BOILERMAKERS

UNIT 0+1



ACTUAL:

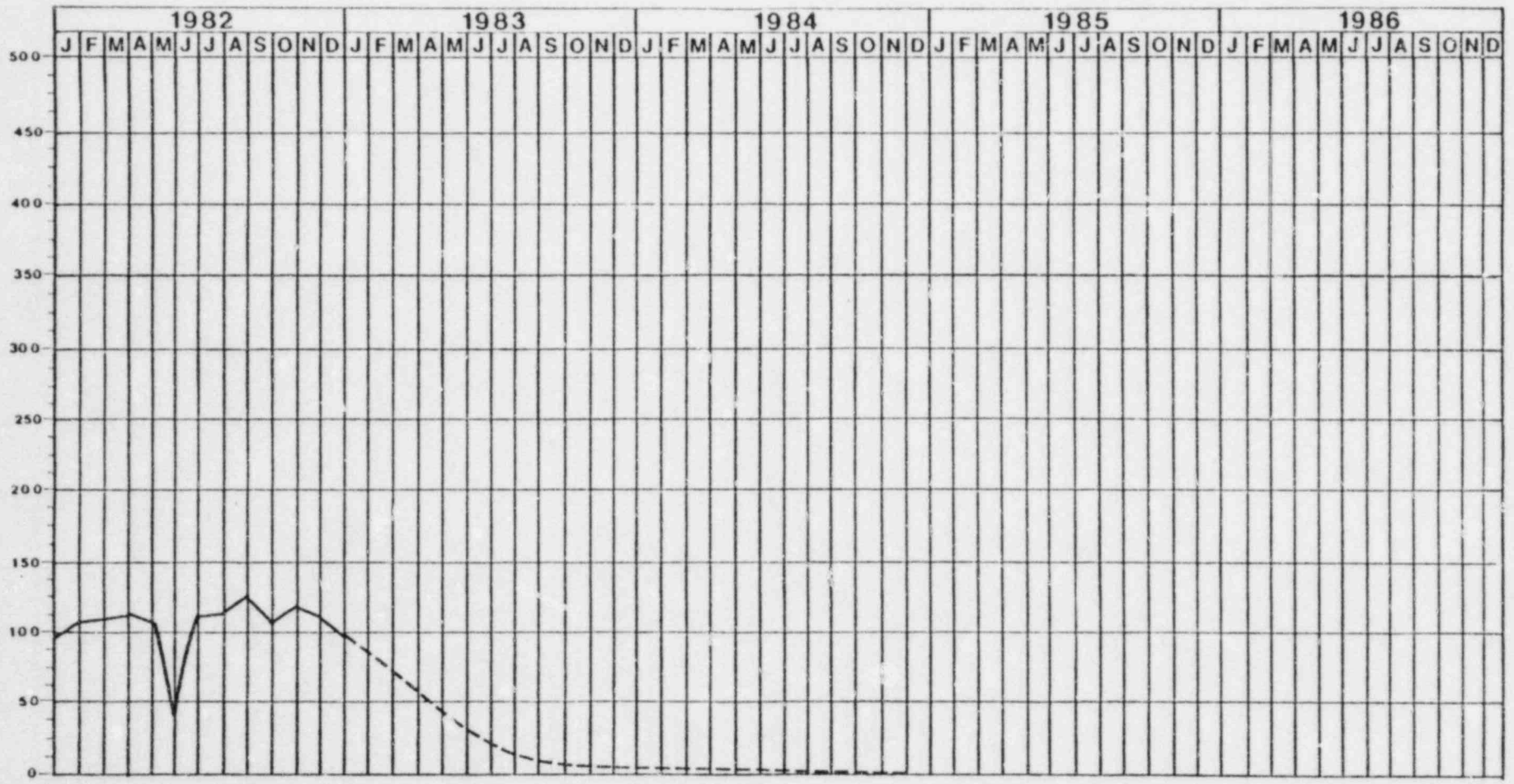
SCHEDULED: _____

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

LABORERS

UNIT 0+1



ACTUAL: _____

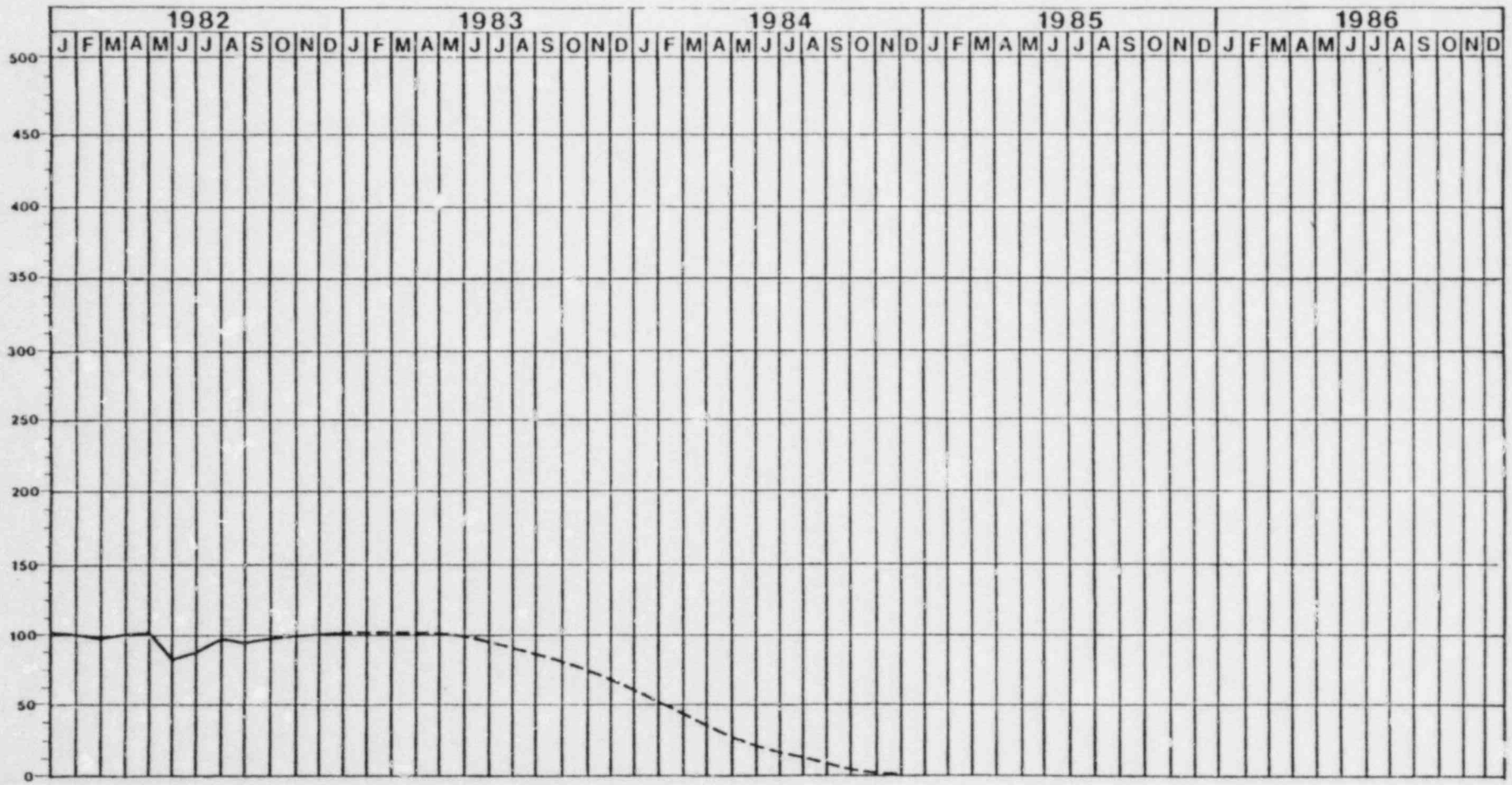
SCHEDULED: - - - - - -

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

IRONWORKERS

UNIT 0+1



ACTUAL: ———

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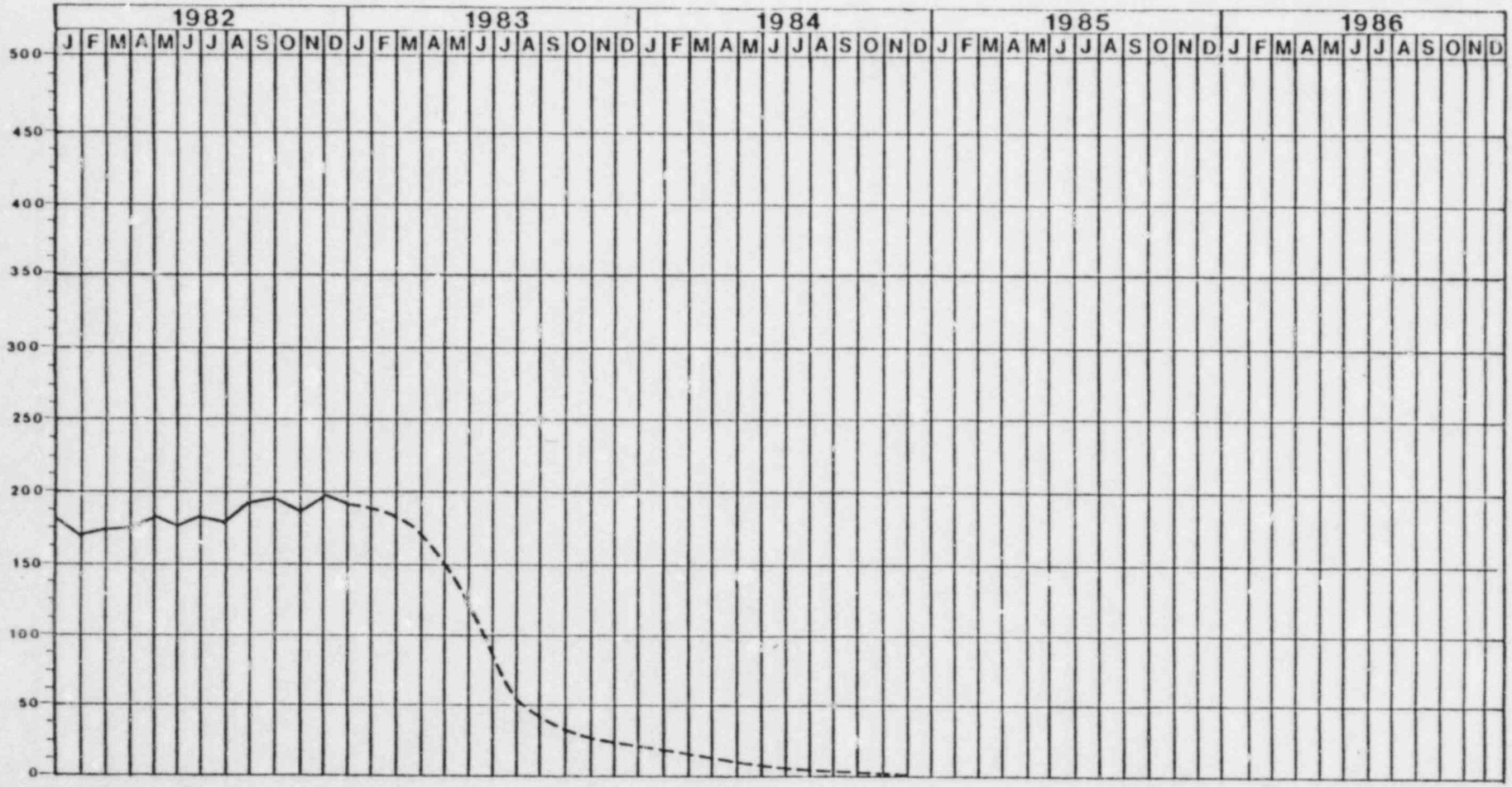
NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

PAINTERS

UNIT 0+1



ACTUAL: _____

SCHEDULED: _ _ _ _ _ _

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

CARPENTERS

UNIT 0 + 1

UNIT#1 & COMMON PIPING SUPPORTS

STATUS AS OF JANUARY 1, 1983

	LARGE BORE	SMALL BORE
REQUIRED	13,500	22,500
DESIGNED	13,134	3,570 (S.R.only)
DELIVERED	11,872	N/A
INSTALLED	10,514	19,000

UNIT#1 & COMMON SAFETY-RELATED PIPING SUPPORTS STATUS AS OF JANUARY 1, 1983

	LARGE BORE SAFETY	SMALL BORE SAFETY
REQUIRED	5304	3886
DESIGNED	5293 (99.8%)	3570 (92%)

PROJECT SCHEDULE
CRITICAL PATH UNIT #1

A. REACTOR BUILDING

1. PIPING

- REACTOR RECIRCULATION SYSTEM (B33)
- STANDBY LIQUID CONTROL SYSTEM (C41)
- LOW PRESSURE CORE SPRAY SYSTEM (E21)
- HIGH PRESSURE CORE SPRAY SYSTEM (E22)
- RESIDUAL HEAT REMOVAL SYSTEM (E12)

2. ELECTRICAL

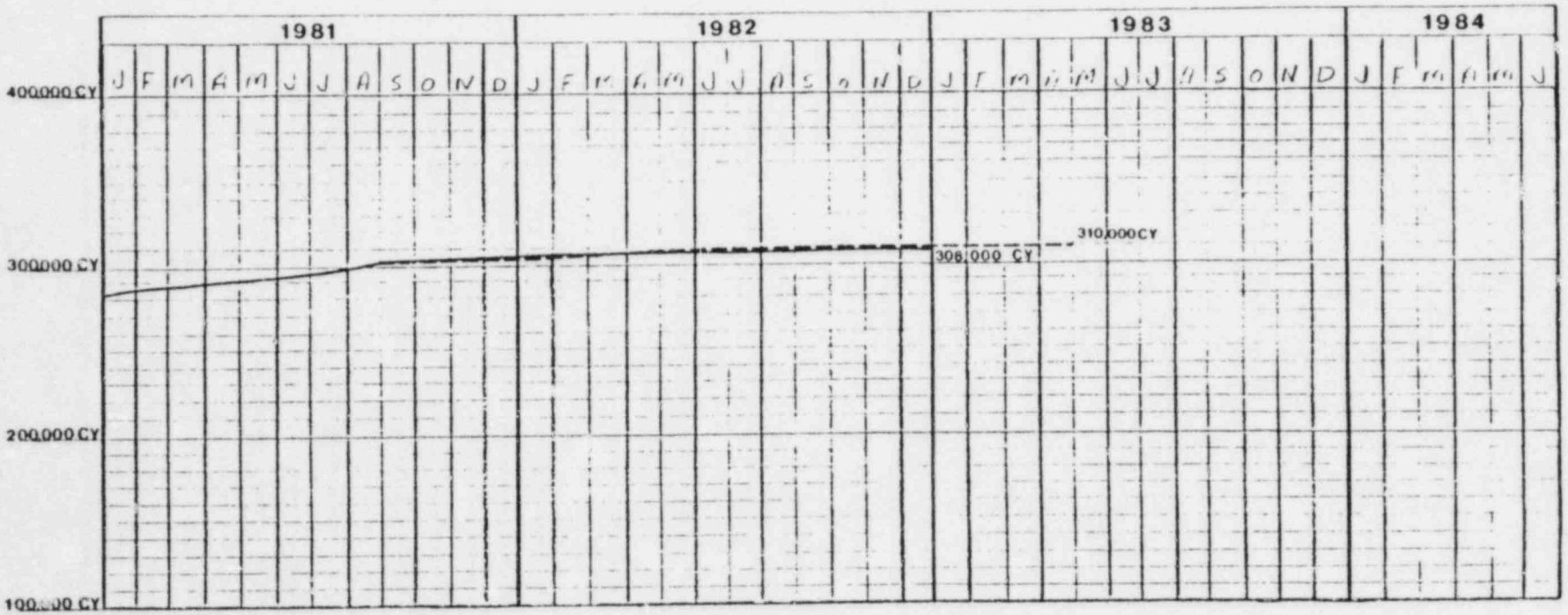
- CONDUIT INSTALLATION TO SUSTAIN BULK CABLE PULLING & TERMINATIONS IN SUPPORT OF SYSTEM TURNOVERS

3. INSTRUMENTATION & CONTROLS

- SAME AS ABOVE PIPING SYSTEMS

B. OTHER ITEMS OF CONCERN

1. PENETRATION SEALING
2. EMERGENCY RESPONSE INFORMATION SYSTEM (ERIS)
3. ANTICIPATED TRANSIENTS WITHOUT SCRAM (ATWS)



ACTUAL ———

SCHEDULED - - - - - -

NO.	REVISION	DATE		DATE
			SCHEDULED BY:	
			DRAWN BY:	
			CHECKED BY:	
			APPROVED BY:	
			APPROVED BY:	

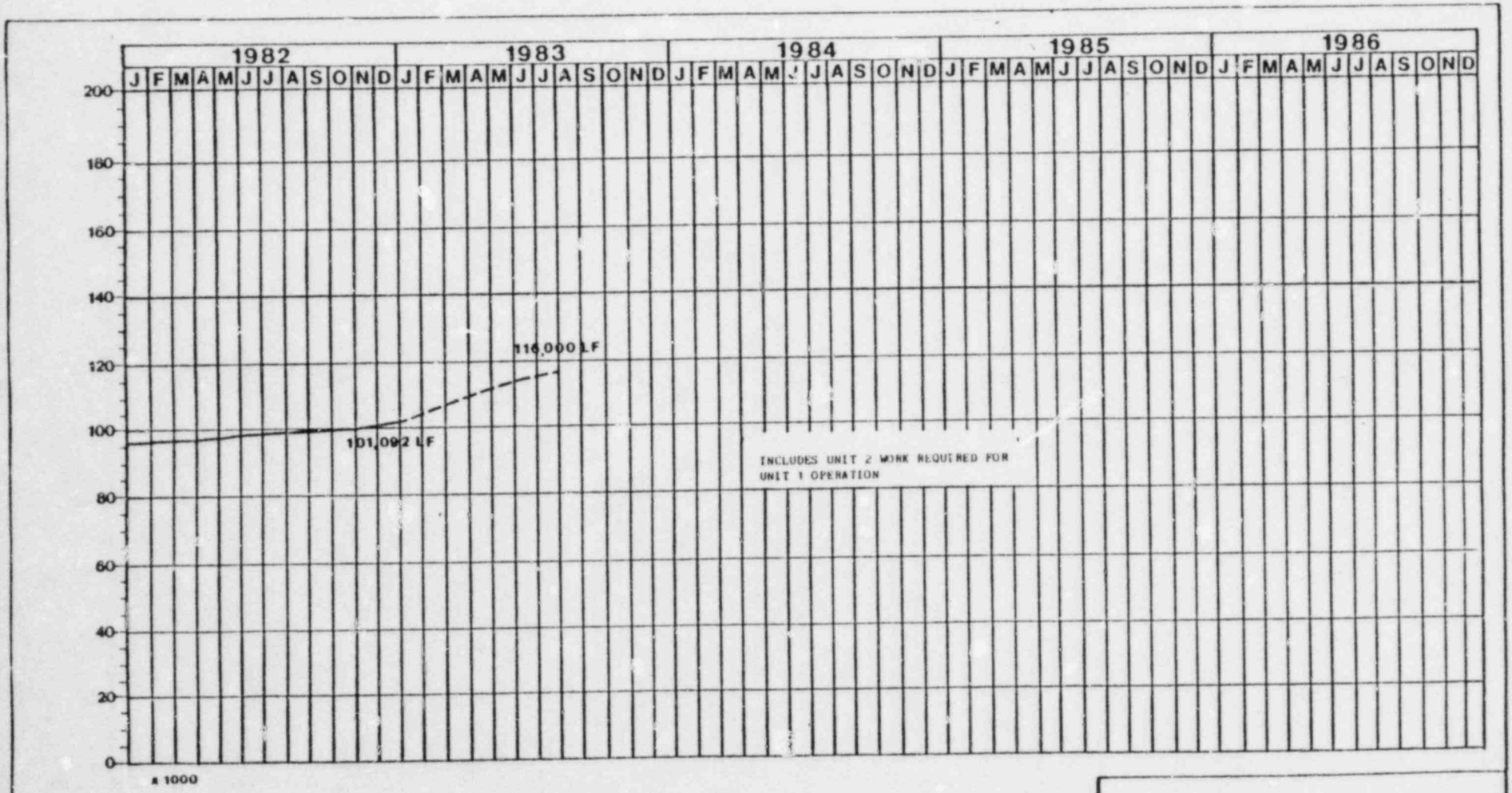
THE CLEVELAND ELECTRIC ILLUMINATING CO.

PERRY NUCLEAR POWER PLANT

PROJECT SCHEDULING

TITLE: CONCRETE 1 & COMMON

Sheet Of | DWG. No. | R-



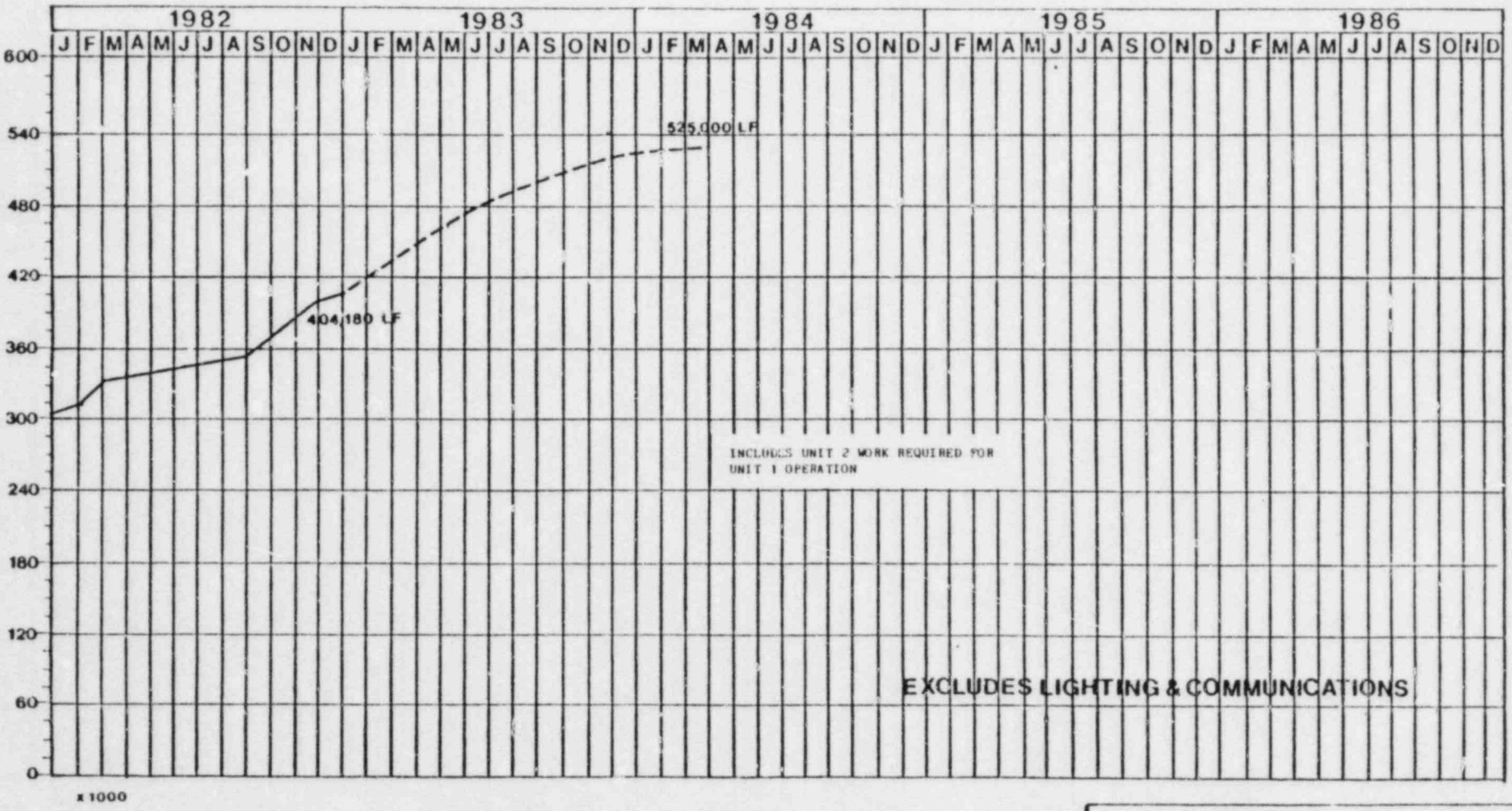
ACTUAL: _____

SCHEDULED: _____

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP. 33/34 CABLE TRAY
For UNIT 1 OPERATION



ACTUAL: _____

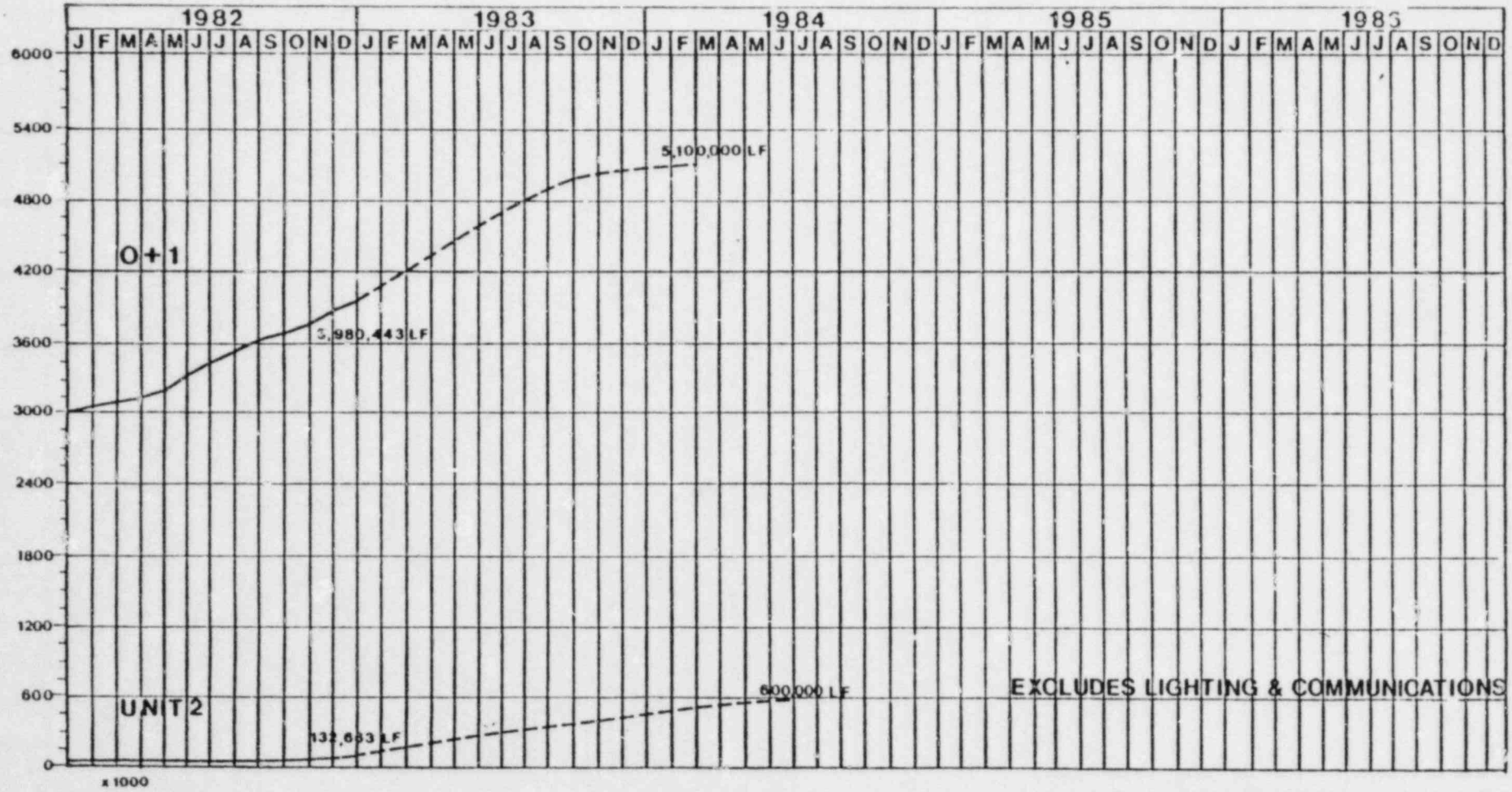
SCHEDULED: _ _ _ _ _ _ _ _ _

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP.33/34 CONDUIT

For UNIT 1 OPERATION



ACTUAL: _____

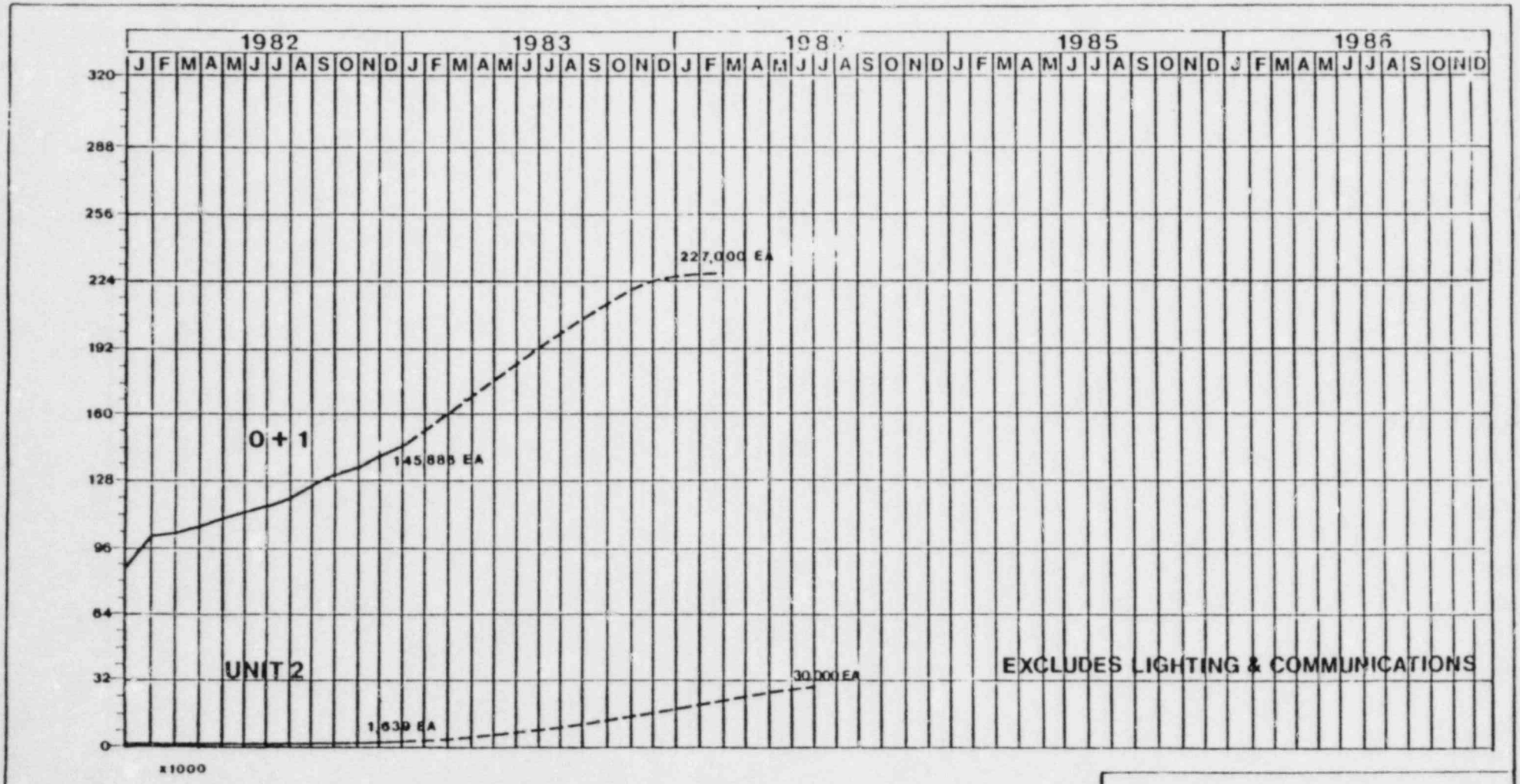
SCHEDULED: _ _ _ _ _ _ _ _ _

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP. 33/34 CABLE

For UNIT 1 OPERATION



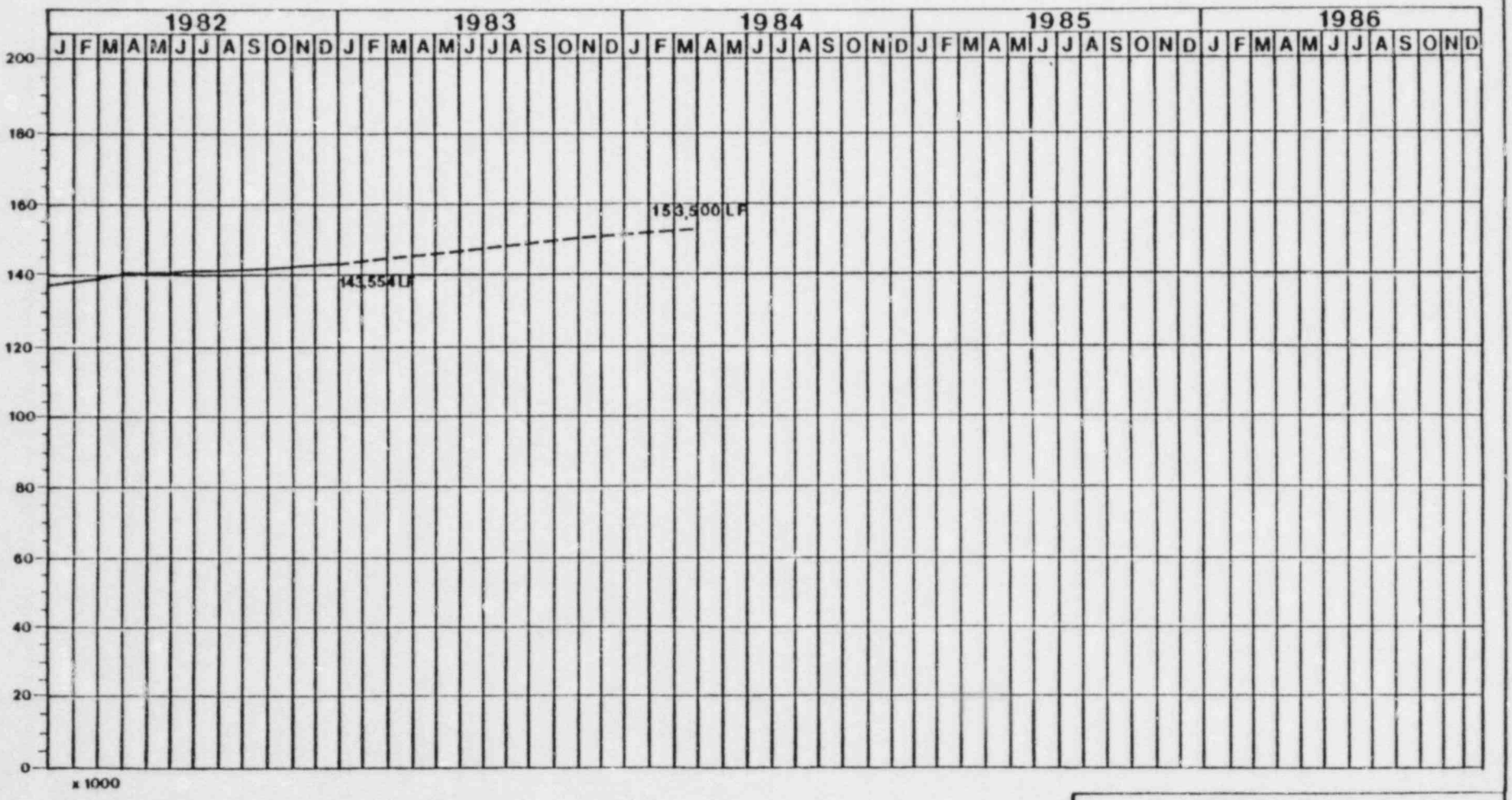
ACTUAL: _____

SCHEDULED: - - - - - - - - - -

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP. 33/34 TERMINATIONS
For UNIT 1 OPERATION



ACTUAL : ————————

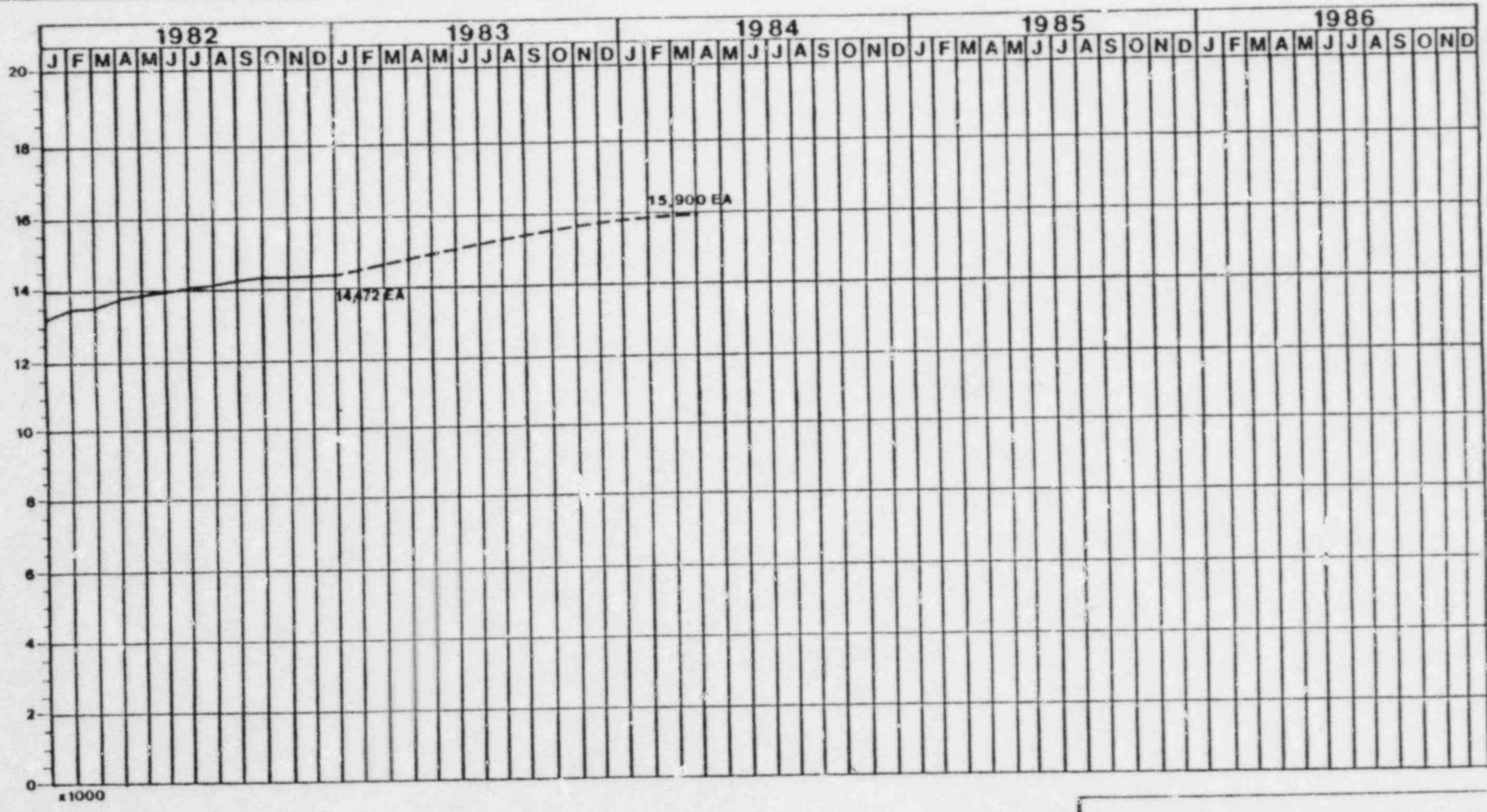
SCHEDULED: - - - - - - - - -

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP.44/45 UNIT 1 & COMMON

LARGE BORE PIPE



ACTUAL : ————

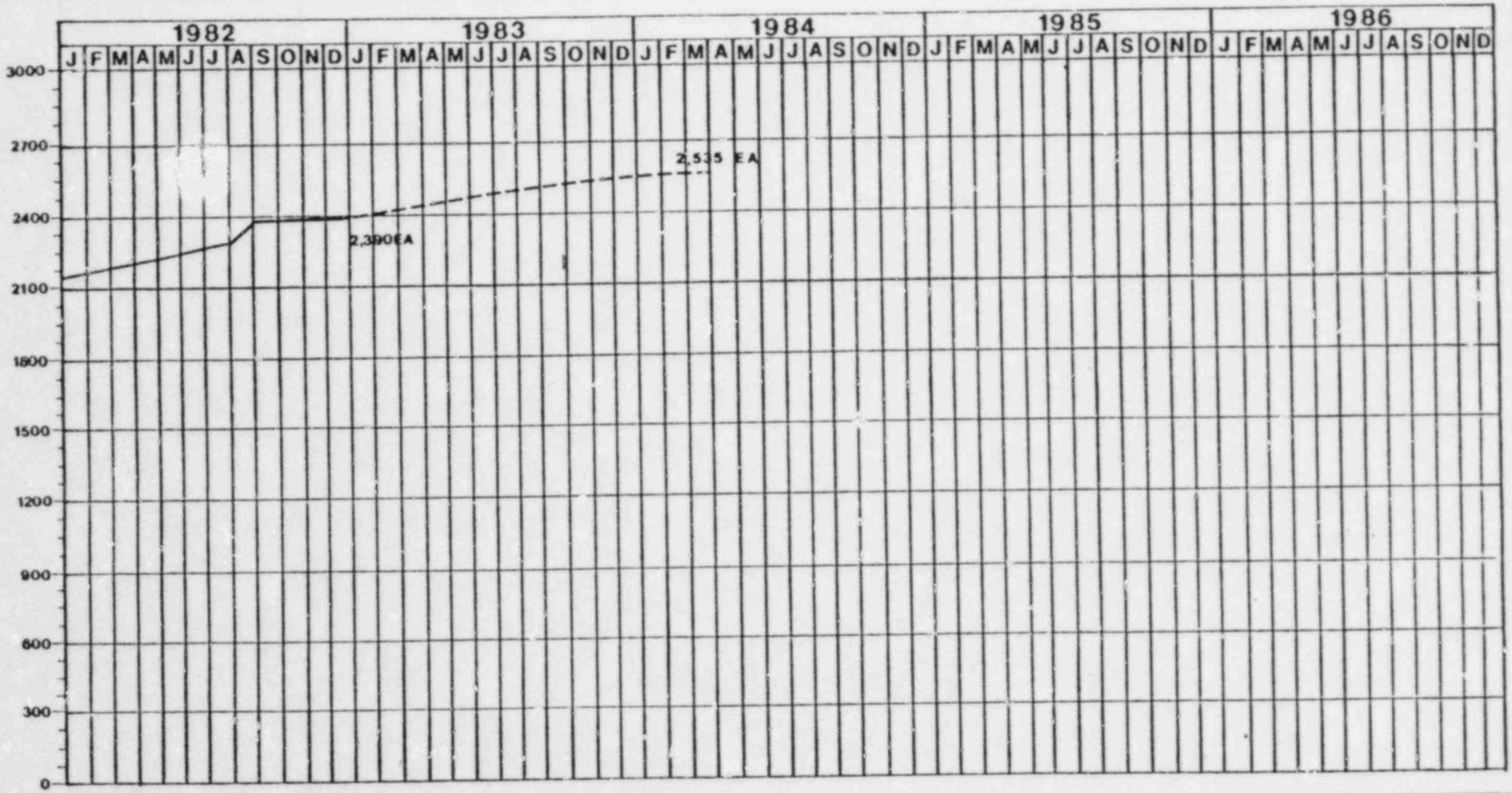
SCHEDULED : - - - - - - - -

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP. 44/45 UNIT 1 & COMMON

LARGE BORE WELDS



ACTUAL : ————————

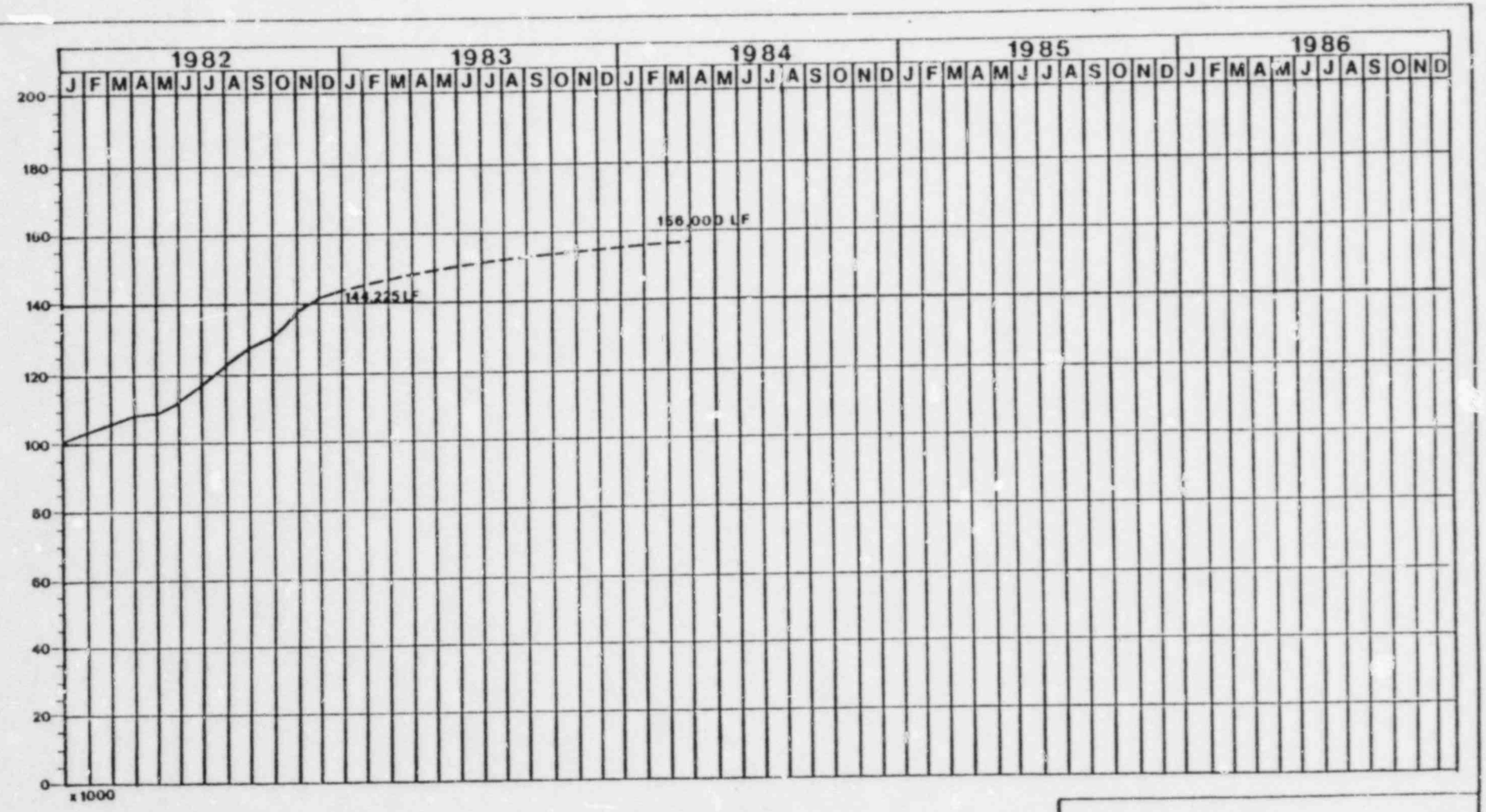
SCHEDULED : - - - - - - - -

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP.44/45 UNIT 1 & COMMON

LARGE BORE VALVES



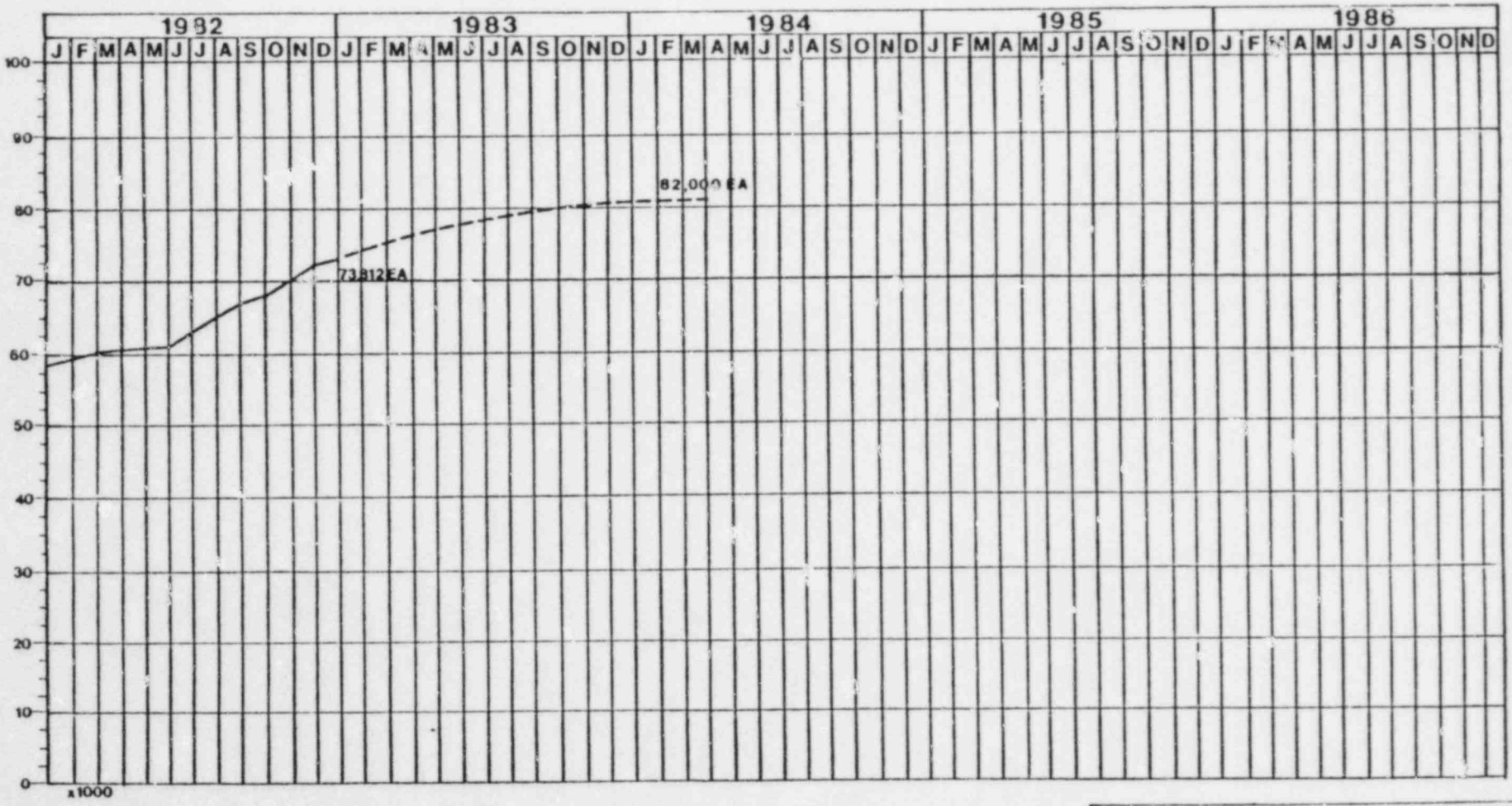
ACTUAL : ————————

SCHEDULED : - - - - - - - - -

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP.44/45 UNIT 1 & COMMON
SMALL BORE PIPE



ACTUAL : ————

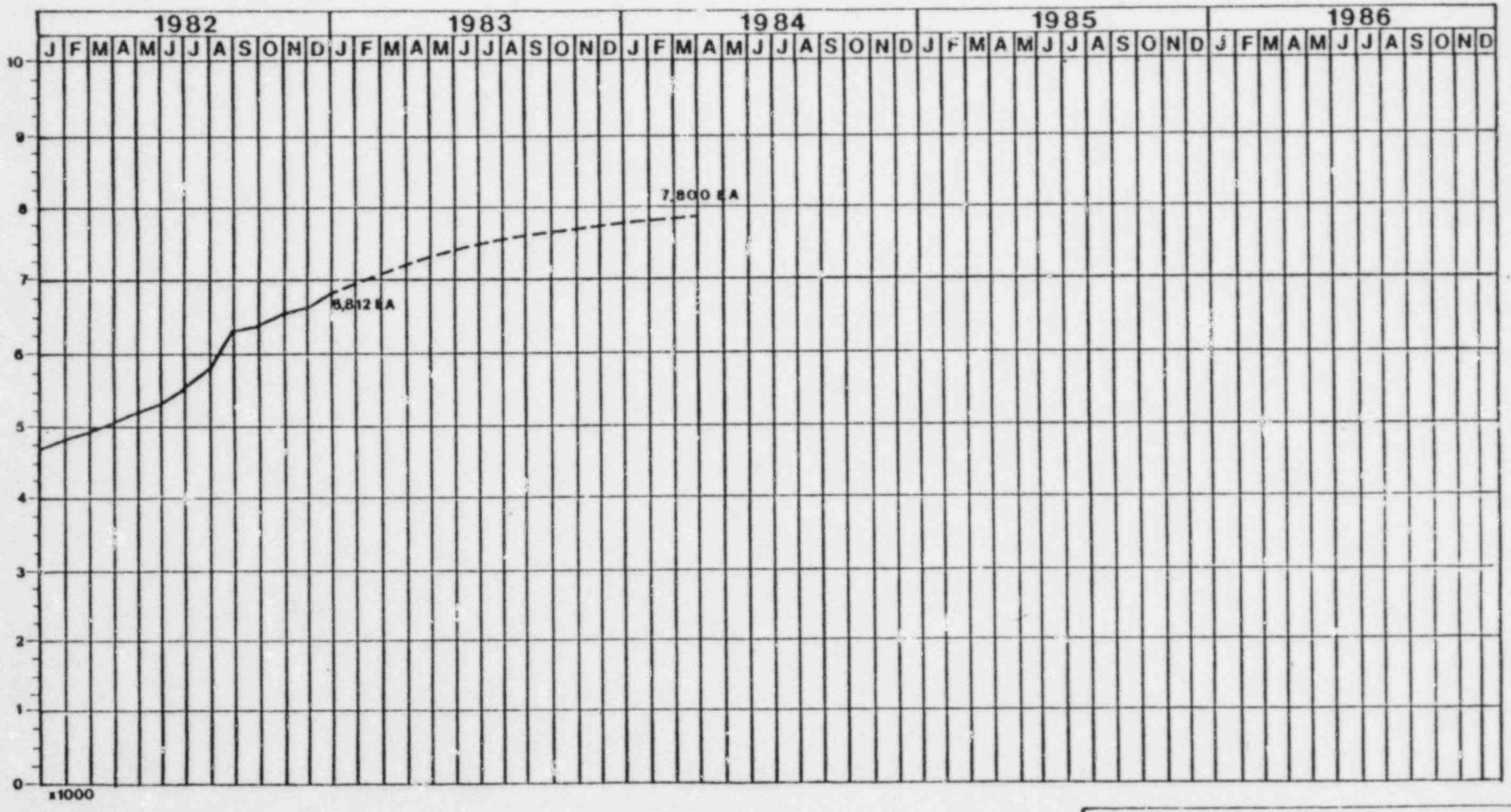
SCHEDULED : - - - - - - -

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP.44/45 UNIT 1 & COMMON

SMALL BORE WELDS



ACTUAL : ————————

SCHEDULED : - - - - - - - -

NO.	REVISION	DATE		DATE

PROJECT SCHEDULING

SP.44/45 UNIT 1 & COMMON
SMALL BORE VALVES

By: William Crawford
12/28/82

PERRY PROJECT
SIGNIFICANT QUANTITIES

Used for NRC 1/12/83

	Unit 1 & Common EAC		Unit 1 & Common Installed	
CONCRETE	310,000	CY	308,000	CY
PIPING				
Large Bore	160,623	LF	149,944	LF
Small Bore	156,128	LF	144,225	LF
Total	316,751	LF	294,169	LF
LB Hangers (Includes Restraints)	13,500	EA	10,514	EA
SB Hangers (Includes Restraints)	22,500	EA	19,000	EA
Yard	38,000	LF	38,000	LF
ELECTRICAL CABLE				
Power	217,460	LF	184,990	LF
Control	3,926,380	LF	2,774,866	LF
Security	396,000	LF	323,733	LF
Instrumentation	2,116,160	LF	1,341,180	LF
Total	6,656,000	LF	4,624,769	LF
ELECTRICAL CONDUIT				
Exposed Metal	525,156	LF	404,180	LF
Cable Tray	115,825	LF	110,000	LF
ELECTRICAL TERMINATIONS				
Power	6,320	EA	4,633	EA
Control	153,071	EA	86,482	EA
Security	13,001	EA	7,722	EA
Instrumentation	102,608	EA	55,595	EA
Total	275,000	EA	154,432	EA
ELECTRICAL CIRCUITS				
Power	502	EA	315	EA
Control	16,833	EA	10,553	EA
Security	7,788	EA	4,882	EA
Total	25,123	EA	15,750	EA
INSTRUMENTATION				
Tubing	318,600	LF	172,106	LF
Piping	38,600	LF	6,438	LF
Valves	5,400	EA	1,845	EA
Instruments	4,600	EA	1,352	EA
Panels-Racks	800	EA	360	EA
PAINTING				
Arch. Painting	916,700	SF	797,529	SF
Nuclear Coating	1,370,100	SF	808,359	SF
Valves	2,550	EA	N/A	
Piping	30,000	LF	17,700	LF
Hangers	3,900	EA	N/A	

12/29/82/jms

* Includes expected future new and revised hangers coming out of final analysis and verification effort.

Nuclear Test Section

Detailed review and current status of preparation of preop and acceptance test procedures, integration and preop and acceptance test activities with construction schedule, system turnover schedule, preop and acceptance test schedule, current and proposed preop and acceptance tests program manpower.

A. Total number of procedures required for fuel load. - 737

This consists of the total number of:

1. Generic Test Procedures - 436
2. Flush Instructions - 75
3. Test Procedures (Preop & Acceptance) - 226

B. Number of draft procedures not started. - 207

Determined by: #required - #started

1. Generic Test 436 - 323 = 113
2. Flush Inst. 75 - 56 = 19
3. Test Procedure 226 - 151 - 75

C. Number of draft procedures being written - 69

Determined by: # Started - #completed

1. Generic Test 323 - 314 = 9
2. Flush Inst. 56 - 50 = 6
3. Test Procedure 151 - 97 = 54

D. Number of procedures approved - 461

Consisting of:

1. Generic Test - 314
2. Flush Inst. - 50
3. Test Procedures - 97

E. Number of procedures in review - 69

(same as C above)

F. Total number of preop and acceptance tests required for fuel load. - 485

The 485 number came from the total test activities that exist in our Premise schedule. There are a total of 226 preop and acceptance tests to be written and performed. The 485 is larger than 226 because our schedule counts all activities associated with preop and acceptance testing as preop and acceptance related activities. These related activities are primarily that of preparing for the preop or acceptance test in the form of a dry run. These dry runs are necessary to identify problems that would otherwise disrupt the formal preop test. The dry runs are often done in checking out portions of the preop test off the critical path because only a portion of the system is available at the time.

G. Number of preop and acceptance tests completed. - 35

This number comes right from the attached summary.

H. Number of preop and acceptance test currently in progress. - 6

This is the number of preop and acceptance tests started (41) minus those completed (35).

I. Number of systems turned over to start-up. - 114 of 333

This number is right from the attached summary.

NOTE 1:

Number of Turnovers from NCS to NTS 333 is different from the number of turnovers from NTS to PPD 181 because generally entire systems will be turned over to PPD.

NOTE 2:

The number of turnovers NCS/NTS, 333, is different than the number of System Scoping Packages 314. This difference is expected since we have turnovers of less than full scoping packages. In these cases the turnover boundary is easily defined without creating additional formal subscoping packages. To maintain the schedule accurately, those additional activities were addressed in the schedule.

NUCLEAR TEST SECTION

TEST PROGRESS SUMMARIES

MONTH OF NOVEMBER 1982

UNIT 1 & COMMON

Total Completion - Weighted Percent	37.3
Total Test Activities Completion - Weighted Percent	13.6
Total Software Support Completion - Weighted Percent	23.7

ITEMS	TOTAL ACTIVITIES (WTD. VALUE)	DEV. FROM PREV. MONTH	THIS PERIOD				TO DATE				% COMP.	WTD % COMP.
			SCHEDULED		ACTUAL		SCHEDULED		ACTUAL			
			START	COMP.	START	COMP.	START	COMP.	START	COMP.		
TEST ACTIVITIES												
TURNOVER-NCS/NTS	333 (2.5)	+ 3	57	53	7	7	242	232	122	114	34.2%	.8%
IC & R TESTING	672 (35.0)	+ 9	71	46	26	6	422	223	280	131	19.5%	6.8%
SYSTEM FLUSH/RUN IN	321 (15.0)	+11	28	21	11	19	141	112	88	93	29.0%	4.3%
PRE-OP ACCEPTANCE TESTING	485 (15.0)	+ 4	4	3	2	2	48	35	41	35	7.2%	1.1%
TURNOVER-NTS/PPD	181 (2.5)	+ 3	3	3	0	0	31	31	16	16	8.8%	.2%
TOTAL TEST ACTIVITIES	1992 (70.0)	+30	163	126	46	34	884	633	547	389	19.5%	13.6%
SOFTWARE SUPPORT												
ADMINISTRATIVE PROCEDURES	57 (2.5)		N/A	N/A	0	0	N/A	N/A	57	57	100.0%	2.5%
SYSTEM SCOPING PKGS.	314 (5.0)		N/A	N/A	0	64	N/A	N/A	314	314	100.0%	5.0%
GEN. PROCEDURES (ECP,GEN,ICP)	436 (9.0)		N/A	N/A	-	-	N/A	N/A	323	314	73.0%	6.6%
TEST SPECIFICATIONS	169 (4.0)		N/A	N/A	15	3	N/A	N/A	167	154	96.1%	3.8%
FLUSH INSTRUCTIONS	75 (3.0)		N/A	N/A	-	5	N/A	N/A	56	50	71.7%	2.1%
TEST PROCEDURES	226 (5.5)		N/A	N/A	33	10	N/A	N/A	151	97	56.9%	3.1%
TWP's	41 (1.0)		N/A	N/A	-	-	N/A	N/A	23	22	54.7%	.5%
TOTAL SOFTWARE SUPPORT	1318 (30.0)		N/A	N/A	-	-	N/A	N/A	1091	1008	80.5%	23.7%

Software Figure adjustments are result of updated projection.

NOTE: N/A means Not Applicable to this category.

CEI SCHEDULE FOR PERRY SER CONFIRMATORY INFORMATION

Issue No.	Responsible Individual	Subject	Status	Target Completion Date
(1)	RAP	Final piping stress analyses to determine pipe break locations, pipe whip restraint locations, and the effect of jet impingement loads (3.6.2)	Awaiting CEI Information	6/83
(3)	TPK/EMB	Containment ultimate capacity analysis (3.8.2)	Resolved (Additional CEI Info. required)	SSER #1
(6)	RAP	The applicant must reconcile the final Mark III hydrodynamic loads with the loads used in plant design (3.9.3.1)	Same as Outstanding Issue #9	1/1/83
(7)	--	Performance testing of BWR relief and safety valves to TMI Action Plan Item II.D.1 (3.9.3.2.1)	Under Staff Review	Letter Sent 10/8/81
(8)	--	IE Bulletin 79-02 with respect to pipe support baseplate flexibility and its effects on anchor bolt loads (3.9.3.3)	Under Staff Review	Letters Sent 7/6/79, 1/11/80 12/19/80
(10)	RAP/JPE	Control rod drive system on HCU floor and effects of hydrodynamic loads (3.9.4)	Awaiting CEI Information	1/7/83
(11)	--	Fuel and mechanical fracturing (4.2.1.2, 4.2.3.2)	Under Staff Review	Letter Sent 9/9/82
(12)	--	Fuel assembly structural damage from external forces (4.2.1.3, 4.2.3.3)	Under Staff Review	Letter Sent 9/9/82
(13)	--	Fuel rod bowing (4.2.3.1)	Under Staff Review	Letter Sent 9/9/82
(14)	--	Overheating of gadolinia fuel pellets (4.2.3.2)	Under Staff Review	Letter Sent 9/9/82
(15)	HW/RVT	Preservice and inservice inspection programs (5.2.5.2 and 5.2.5.3)	Awaiting CEI Information	4/1/83
(18) RA	HLH/RVT	HPCI and RCIC initiation levels to TMI Action Plan Item II.K.3.13 (5.4.1)	Awaiting CEI Information	10/82 8/83 Audit
(19) RA	--	Isolation of HPCI and RCIC per TMI Action Plan Item II.K.3.15 (5.4.1)	Awaiting NRC Audit	8/83 Audit
(20)	RAP	Subcompartment pressure analyses (6.2.1.6)	Under Staff Review	Letter Sent 12/2/82

RA - Resolved with Audit

Issue No.	Responsible Individual	Subject	Status	Target Completion Date
(21)	KMW/RAP	Suppression pool temperature limits (6.2.1.8)	Awaiting CEI Information	1/15/83
(25)	AGM	ADS actuation logic modification to TMI Action Plan Item II.K.3.18 (6.3.2.3)	Awaiting CEI Information	Owners Group Submittal
(26)	EMB/AGM	A complete design description of the ATWS recirculating pump trip (7.2.2.3)	Awaiting CEI Information	12/15/82
(27)	--	A complete description of the modified scram discharge volume level monitoring system (7.2.2.4) (FSAR documentation)	Awaiting CEI Information	12/15/82
(28)	--	HPCS system initiation circuitry final design (7.3.2.2)	Under Staff Review	Letter Sent 10/14/82
(30)	--	RCIC testing procedures (7.4.2.4)	Under Staff Review	Letter Sent 10/14/82
(31) RA	--	Installation and calibration of pressure switches used for relief/safety valve position indication to TMI Action Plan Item II.D.3 (7.[redacted]2.1)	Tentatively Resolved	5/83 Audit
(32)	--	Additional accident monitoring instrumentation to TMI Action Plan Items II.F.1.4, II.F.1.5, and II.F.1.6 (7.5.2.5)	Under Staff Review	Letter Sent 10/14/82
(33)	--	Failures in vessel level-sensing lines common to control and protection systems and transfer of the recirculation pump to the low-frequency M/G sets on trip and level 2 (7.7.2.3)	Under Staff Review	Letter Sent 10/14/82
(35) RA	AGM	Arrangement and physical separation and identification of redundant safety-related electrical systems (8.4.4)	Awaiting Staff Audit	Audit 5/83
(36)	RAP	Test documentation of 3-hour fire-rated penetration (9.5.1.4.1)	Under Staff Review - Additional Information Required	Letter Sent 8/31/82
(40)	RAP	Provisions for watertight curbs at all entrances into switchgear and diesel generator rooms (9.5.1.6.4, 9.5.1.6.6)	Awaiting CEI Information	12/82
(41)	RVT	Design for noble gas effluent monitor to TMI Action Plan Item II.F.1.1 (11.5)	Under Staff Review	Letter Sent 12/21/82
(42)	RVT	Design for sampling and analysis of plant effluents to TMI Action Plan Item II.F.1.2 (11.5)	Under Staff Review	Letter sent 12/21/82

RA - Resolved with Audit

Issue No.	Responsible Individual	Subject	Status	Target Completion Date
(44)	SJW/RAP	Radiation and shielding design of IFTS tube (12.3.2)	Under Staff Review	Letter Sent 12/21/82
(51) RA	--	NSSS Vendor Review at low power testing, ascension and emergency operating procedures per TMI Item I.C.7 (13.5.2.2)	Awaiting NRC Audit	Audit
(52)	RAS/RAP	Pilot monitoring of selected emergency operating procedures per TMI Item I.C.9 (13.5.2.2)	Under Staff Review	Letter Sent 11/16/82
(53)	HAP/RVT	Reactor Internals Vibration Prototype (BWR/6 - 238 in.) Program -- The applicant must provide analytical predictions of reactor vessel internal vibration levels and resolve past BWR problems (3.9.2.3)	Under Staff Review Changed from OI No. 3 per SSER #2	Letter Sent 9/9/82 Proprietary Info. Sent 10/8/82

RA - Resolved with Audit

DW19/G/3/sa

CEI SCHEDULE FOR PERRY SER LICENSE CONDITIONS (LC) INFORMATION

Perry Ser. No.	Responsible Individual	Subject	Status	Target Completion Date
(1)*	TPK	Implementation of protective measures when the Lake Erie shoreline recedes to 250 ft. from the emergency service water pumphouse (2.5.5).	Under Staff Review	Amendment 6
(2)*	--	Periodic measurement of channel box deflections must be resolved before start-up of the second cycle of operation (4.2.3.1).	Under Staff Review	LRG II Position Submitted 5/17/82
(3)*	MHM/RAP	Operation beyond Cycle 1 is not permitted until stability analyses are provided for approval (4.4.4)	Awaiting CEI Information	11/83
(4)	RVT	A final report analyzing inadequate core cooling instrumentation requirements for TMI Action Plan Item II.F.2 should be submitted by July 1982 for staff approval (4.4.7).	Awaiting CEI Information	12/15/82
(5)	EMB/GJP/RAP	Hydrogen control for degraded core accidents to TMI Action Plan Item II.B.8 subject to completion of staff generic evaluations (6.2.7 and Task A-48 of Appendix C).	Awaiting CEI Information	12/15/82
(6)	--	IE Bulletin 80-06, engineered safety feature reset control (7.3.2.5).	Under Staff Review	LRG II Position Submitted 3/12/82 Audit on Test
(7)	SJW/RAP	Postaccident sampling system to TMI Action Plan Item II.B.3 (9.3.2).	Awaiting CEI Information	3/83
(9)*	DJT	Test data to demonstrate that the HPCS diesel generator will not experience undue wear at low room temperatures is to be submitted 24 months after fuel load (9.6.4).	Awaiting CEI Information	11/85
(10)*	JJW	Each operating shift shall be assigned a person with commercial BWR start-up/ operating experience for a period of 1 year from fuel load, or the attainment of a nominal 100% power, whichever occurs later (13.1.2.3).	Awaiting CEI Information	3/83
(11)	RJT	Test and maintenance procedures associated with engineered safety features to TMI Action Plan Item II.K.1.5 (13.5.2.3).	Under Staff Review	Audit
(12)	RJT	Procedures for removing safety-related systems from service to TMI Action Plan Item II.K.1.10 (13.5.2.4).	Under Staff Review	Audit
(13)*	TEM	Complete implementation and maintenance of staff-approved physical security, guard training and qualification, and safeguards contingency plans (13.6).	Under Staff Review	Audit
(14)	--	Initial test program per TMI I.G.1 (14).	Awaiting CEI Information	6/83
(15)*	MHM/RAP	Prohibition of extended cycle operation with partial feedwater heating (15.1).	Awaiting CEI Information	1/84
(16)	RJT	Leakage surveillance preventative maintenance program to TMI Action Plan Item III.D.1.1 (11.5).	Changed from Confirmatory Issue No. 43 per SSER #1	6/15/83

*Post OL License Condition

DW19/C/4/sa

PNPP OUTSTANDING ISSUES SCHEDULE FOR COMPLETION

Issue No.	Responsible Individual	Subject	Status	Target Completion Date
(1)	EJT/RAP	Turbine Missile Protection--Additional information from the applicant is currently under review (3.5.1.3).	Under Staff Review	--
(4)	KAM/AGM	Environmental and Seismic and Dynamic Qualification of Seismic Category I Mechanical and Electric Equipment--85% to 90% of this equipment needs to be installed with documentation on site before an SQRT and EQ audit can be scheduled and performed (3.9.3.2.1, 3.10.3.11 and Task A-46, Appendix C).	Under Staff Review	3/83 Audit Scheduled
(5)	TMJ/KMW/RVT	Inservice Testing of Pumps and Valves--The applicant must provide a program for inservice testing of pumps and valves; and a program for leak tests of valves that form interface between reactor coolant pressure boundary and low-pressure systems (3.9.6).	Awaiting CEI Information	1/30/83
(7)	AGM	Control Room Design--The applicant must provide a preliminary design assessment needed to perform human engineering evaluation/audit of the Control Room design. The applicant must also adopt a common reference level for readout vessel instrumentation per TMI Action Plant Item II.K.3.27 by June 1982 (4.47 and 18).	Partially Resolved	8/82 Audit
(8)	RAP	Containment Systems--Several new issues concerning the design of Mark III containment systems (6.2).	Awaiting CEI Information	1/15/83 Action Plan Sent 9/10/82
(9)	RAP	Pool Dynamic Loads--Awaiting applicant's response to generic loads definition provided by the staff (6.2.1.8).	Awaiting CEI Information	1/1/83
(10)	RAP/EMB	Containment Purge--The applicant must show that operation of the purge system is kept to a minimum (6.2.4).	Under Staff Review	Letter Sent 12/2/82
(12)	WEC/AGM	Manual Initiation/Termination of ESF Systems--Information is required to ensure that ESF systems can be manually initiated and terminated in the event that an accident proceeds in a manner different than assumed in the accident analyses for the design to conform with the intent of IEEE-279, Section 4.17 (7.3.2.7).	Awaiting CEI Information	1/15/83
(13)	WEC/LPL	IE Bulletin 79-27, "Loss of Non-Class IE Instrumentation and Control Power System Bus During Operation"--Design changes and procedures are required as necessary to aid the operator to cope with the potential loss of a Class IE or non-Class IE instrument bus (7.5.2.4).	Awaiting CEI Information	12/15/82
(14)	WEC/LPL	Control System Failure--The applicant must provide the results of analyses or procedural changes to convince the staff that harsh environments associated with high-energy line breaks and multiple control system failures will not cause control system malfunctions resulting in consequences more severe than those analyzed in Section 15, or beyond the capability of operators or safety systems (7.7.2.1).	Awaiting CEI Information	12/15/82

Issue No.	Responsible Individual	Subject	Status	Target Completion Date
(18)	JJW	Interim Shift Staffing (Unit 2 Only)--The applicant takes exception to having four ROs on shift to two-unit operation (13.1.2).	Deferred (Unit 2)	--
(19)	RBC/AGM	Emergency Plans--The applicant's emergency plans are currently under review; the results will be addressed in a supplement to this report (13.3).	Awaiting CEI Information	Rev. 1 Scheduled 1/15/83
(20)	HLH/AGM	Standby Liquid Control System--Details of the modified system design are required.	Awaiting CEI Information	12/15/82
(21)	RAS/RAP	Re-Analysis of Transients and Accidents--Development of emergency operating procedures, I.C.1(1) and I.C.1(2) (13.5.2.2). Staff review required.	Under Staff Review - Additional Information Required	Letter Sent 11/16/82

DAI9/C/6/sa

PERFORMANCE ANALYSIS REPORT
DECEMBER, 1982
APPENDIX G

DEVIATION ANALYSIS REPORT STATUS

DAR No.	DATE INITIATED	DESCRIPTION	SYSTEM	CONTRACTOR/ VENDOR (SP)	COMMENT	COGNIZANT QUALITY ENGINEER/RESPONSIBLE ENGINEER
6	10-6-77	GE Safety Relief Valve design weakness	B21	GE	Completion committed 5/1/83.	R. G. Solt/P. A. Nichols
20	12-4-79	Omission of Double Class "B" Waterstops	N/A	GLC (SP-93)	Waiting for close-out of NR CQA 227.	G. Daderko/K. White
27	4-28-80	Rosemount Model 510 DV Trip Calibration Units Model 1152 Pressure	Misc.	GE (SP-301)	Completion committed 1/1/81. Waiting for closeout of NR Nos. CQC 1677, RECI 055, RECI 056.***	R. G. Solt/E. Willman
29 Rev 1	5-15-80	Class 1E Motor Control Centers	R24	Cutler-Hammer (SP-557)	Completion commitment revised to 9-15-82 (extended again). Revision to Final Report pending.***	W. J. Boyd/R. M. Bonner
30	6-4-80	Failure of Water Soluble Purge Dam to dissolve after being heated	Misc.	PPP (SP-44/45/47)	NR PPP 912 closed out. QA input for revision of Final Report pending.*** Completion Unit 1, by 9-15-82. Completion Unit 2, by 7-1-85.	B. Walrath/R. Crofton/ E. Parker/J. Eppich
37	10-5-80	Units 1 & 2 Suppression Pools' Stainless Steel Liner	G41 G42 G43	NNIC (SP-660)	NR CQC 2575 pending.	G. Tilisky/K. Webb/ W. T. Mella
38	10-7-80	Standby Diesel Generator Model DSRV 16: Potential Link Rod Deficiency	R43	Transam DeLaval (SP-562)	Final Report mailed 12-10-82. Close-out of NR CQC 1965.	W. Boyd/A. Pusateri
39	10-9-80	Hilti-Kwik Bolts	Misc.	Hilti, Inc. (SP-208)	Ready for NRC review.	M. R. Kritzer/W. T. Mella
41	11-3-80	G-41 System Fuel Pool Penetrating Piping	G41	NNIC (SP-53)	Ready for NRC review.	C. Bubbuch/K. Webb

DAR NO.	DATE INITIATED	DESCRIPTION	SYSTEM	CONTRACTOR/ VENDOR (SP)	COMMENT	COGNIZANT QUALITY ENGINEER/RESPONSIBLE ENGINEER
43	12-18-80	PCCC Flexible Conduit Grounding	H13	GE (SP-591)	Close-out of FDI's WNOJ by 6-1-82 and WRKV by 12-1-82.*	R. Solt/E. Willman
44	1-2-81	Standby Diesel Generators Lubricating Oil System Defect	R47	Transam. DeLaval (SP-562)	Completion committed for December 1982. Close-out of NR CQC 1966.	W. Boyd/A. Pusatert
46 Rev. 1	2-3-81	Limit Switches	Misc.	NAMCO Controls	Completion committed for 9-30-83. NR No. ?	D. Grow/E. Thomas
52	5-22-81	Concrete Cracks and spalls in Unit #1 Fuel Transfer Area of Fuel Handling Building	N/A	NECC (SP-20)	Ready for NRC review.	M. Kritzer/A. McCoy
56	6-1-81	Single Failure Criterion/Receiver Tank Sensing	R44	CAI	Ready for NRC review.	T. Swanniger/P. A. Nichols/ W. Coleman
57	6-3-81	No Axial Gap in Control Rod Drive Piping Socket Welds	C11	PPP (SP527)	Close-out of NR CQC 2244.*** Closed by NRC.	G. Tilisky/J. Wilcox
59	6-22-81	Axial-Flow Fans, Housing thickness	M32 M43	Buffalo Forge (SP648)	Ready for NRC review.	G. Tilisky/H. Dieckmann
60	6-25-81	Pushbuttons for Bailey 720 Utility Stations/ Units 1 & 2, and Common - BOP Panels/PCCC	H13 H51	GE/NSSS	Final Report due 5-1-83. Close-out of NR OQC 043.	R. Solt/E. Willman
61	6-25-81	CR2940 Tandem Block Switches/Units 1 & 2 PCCC		GE (SP301)	Final Report due 5-1-83. FDDR's KL1-572, KL2-586.	R. Solt/E. Willman

DEVIATION ANALYSIS REPORT STATUS
DECEMBER, 1982 PAGE 3

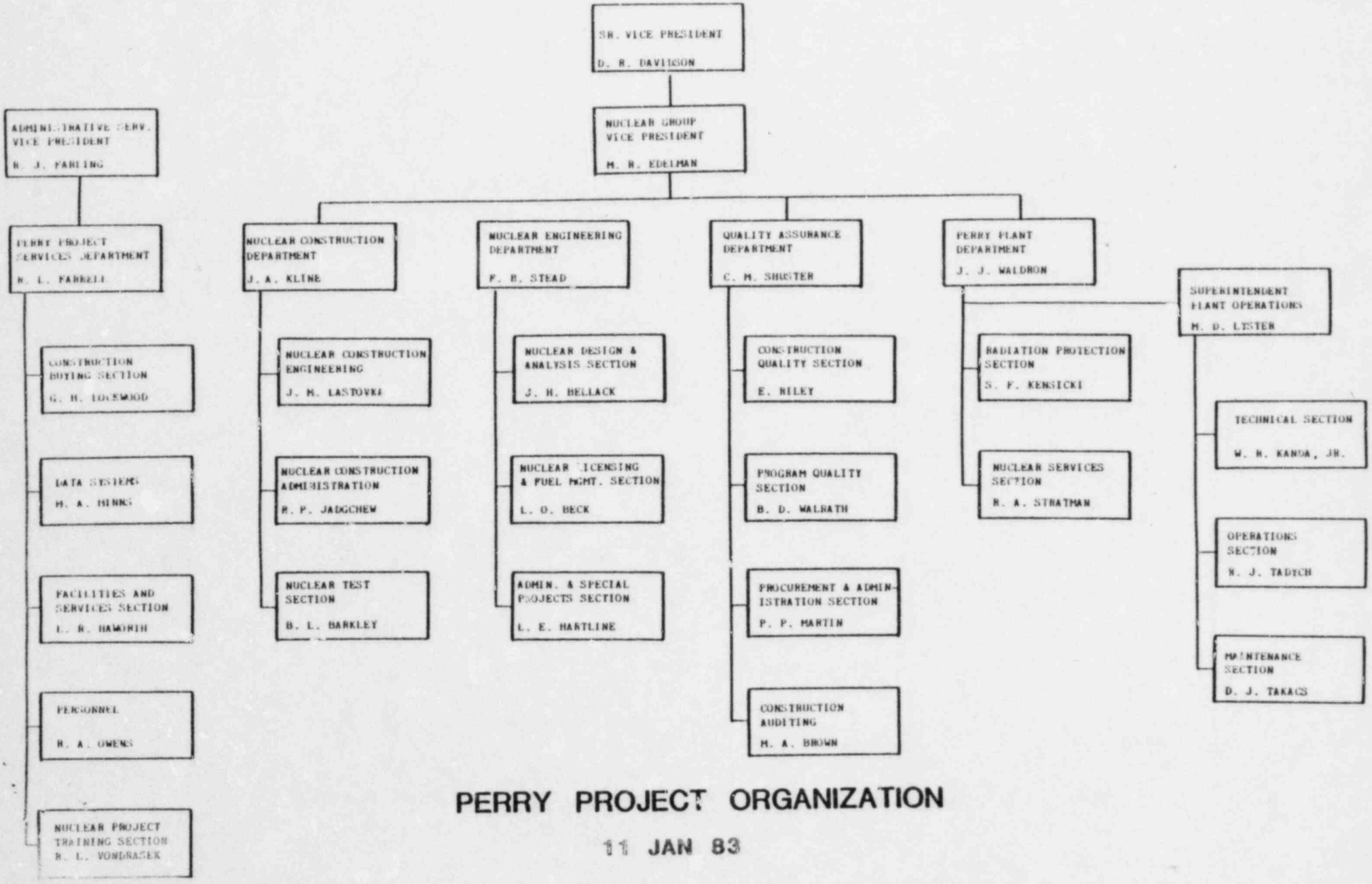
DAR NO.	DATE INITIATED	DESCRIPTION	SYSTEM	CONTRACTOR/ VENDOR (SP)	COMMENT	COGNIZANT QUALITY ENGINEER/RESPONSIBLE ENGINEER
62	7-10-81	Heavy Weight Concrete/ Units 1 and 2 Bioshield Walls	N/A	NECC (SP20)	Extension letter mailed 12-16-82. Close-out of NR CQC 2314, commitments: Completion Unit 1, 5-1-82.* Completion Unit 2, 7-1-83.	M. Kritzer/A. McCoy
63	8-17-81	Rockbestos Coaxial Cable		Rockbestos (SP793-01)	Ready for NRC review.	W. J. Boyd/E. Willman
64	8-31-81	Pipe Spool Sandblasting	Various	Pullman Power (SP44/47)	Ready for NRC review.	C. Fennell/L Wheeler
68	9-14-81	Cable Tray Splice Bolts	Various	L.K. Comstock (SP33)	Ready for NRC review.	J. Furness/T. Stear
71	10-12-81	Unacceptable Indications in Polar Crane Girder, Unit II	2L51	NNIC (SP660)	Ready for NRC review.	G. Tillisky/K. Webb
72	10-29-81	22 Schedule 40 four inch elbows with questionable material content. 2P11	1E12 2E12 1E32	PPP (SP527)	Ready for NRC review.	G. Tillisky/J. Wilcox
73	11-12-81	NNICO Unit 1 Containment floor plate welding activity		NNICO (SP17)	Ready for NRC review.	C. Hubbuch/K. Webb
74	11-17-81	2 voids in Biological Shield concrete in Reactor Bld. #2		NECC (SP20)	Extension letter mailed 12-10-82. Close-out of NR P020-0258, commitments: Completion Unit 1, 5-1-83.* Completion Unit 2, 7-1-83.	M. Kritzer/A. McCoy
78	12-10-81	Seismic Clearance for Emergency Service Water Pumps	P49 1P45 2P45	Gould (SP501)	Waiting for Gould Seismic Reports through CAI.	T. Swansiger/K. Pech

DAR NO.	DATE INITIATED	DESCRIPTION	SYSTEM	CONTRACTOR/ VENDOR (SP)	COMMENT	COGNIZANT QUALITY ENGINEER/RESPONSIBLE ENGINEER
79	12-10-81	Starting Air System Check Valve/Delaval Model DSRV16	1R44 2R44	Transamerica Delaval (SP562)	Final Report mailed 12-15-82. NR PQS 0001	W. Boyd/A. Pusateri
81	1-7-82	Governor Lube Oil Cooler (Heat exchanger, Standby Diesel Generator System)	1R43 2R43	Transamerica Delaval (SP562)	Waiting for close-out of NR PQS-0002, commitment extended to 1-1-83.	W. Boyd/A. Pusateri
82	1-28-82	Stress Analysis for CRD System Piping	C11	GE/GAI	Final Report due 1-7-83.	G. Tilisky/J. Eppich/ H. Putre
84	2-22-82	Valve Identification and Traceability	Various	PPP (SP44)	Close out of OQC-108. Completion committed for 12-17-82.	P. Martin/J. Eppich/ L. Wynn/G. Parker
86	3-3-82	Reactor Vessel Water Level Transmitters (B21-N080D)	B21	GE (SP301)	Final Report due 5-.-83. FDI's issued, WNOM and WRLD.	R. Solt/E. Willman
89	3-5-82	Diesel Generator Piping Welds	1R46 1R47	Transamerica Delaval (SP562)	Close-out of NR P039-0477. Completion committed for 4-1-83.	W. Boyd/J. Gilstrap/ A. Pusateri
90	3-9-82	Unit 1 Suppression Pool Floor Plate Welds/(Ref.: NR 17-334)		NNICO (SP17)	Final Report due 1-14-83. NR closed.	C. Hubbuch/K. Webb
91	3-18-82	Bottoming-Out of Socket Welds with fit-up gap of 1/16" in Control Rod Drive Piping System	1C11	PPP (SP44)	Close-out of NR NDS 006.*** Closed by NRC.	G. Parker/J. Wilcox
92	3-22-82	Review of Radiographs for welds in the containment vessels (Units 1 & 2)		NNICO (SP17)	Next report due 3-31-83.	A. Bradshaw/H. Walls/ W. T. Helis
94	4-20-82	Welding/Cable Tray and Conduit Hangers	Various	LKC (SP33)	Final due 3-31-83. Reference NR's CQC 2443 and 2444.	J. Furness/T. Stear/ V. Higaki
95	4-19-82	M-Relay Contacts/Class 1E Motor Control Centers	R24	Cutler-Hammer (SP557)	Ready for NRC review.	W. J. Boyd/R. Bonner

DAR NO.	DATE INITIATED	DESCRIPTION	SYSTEM	CONTRACTOR/ VENDOR (SP)	COMMENT	COGNIZANT QUALITY ENGINEER/RESPONSIBLE ENGINEER
96	4-22-82	Nut/Gland Assembly for 912 DC Contactor found not to be Seismically Qualified/Class 1E Motor Control Center	2R42	Cutler-Hammer (SP553)	Ready for NRC review.	W. J. Boyd/R. Bonner
99	6-8-82	Potential defect in starting air valve assembly/Standby Diesel Generators	R44	Transamerica Delaval (SP562)	Completion committed by 4-1-83. NR number PQS 10.	W. Boyd/A. Pusateri
100	6-23-82	Valve actuator yokes		G. H. Bettis Co. (SP 641)	Completion committed for 11-29-82. Close-out of NR OPQC 258. Extension Letter pending.**	T. Swansiger/D. Brockett
101	7-16-82	Governer Drive Coupling		Transamerica Delaval (SP562)	Completion committed for 6-15-83. Close-out of NR PQS 0011.	W. Boyd/A. Pusateri
103	7-29-82	Stauff tubing clamps found to be undersized		Johnson Controls (SP-090)	Ready for NRC review.	J. Furness/D. Lockwood
105	8-11-82	GE HMA relays may not be fully insulated		General Electric (SP-301)	Final report due 10-31-83. Related NRs are closed.	R. Solt/E. Willman
106	8-11-82	Incorrect "wipe setting" on some converted HFA relays		General Electric (SP-301)	NR Nos. PQS-0012, PQS-0014. Next report due 10-31-83 (extended).	R. Solt/E. Willman
109	11-15-82	Commercial grade wire used in certain engine and panel circuits for IE Cable has failed IEEE 383 Flame Test.		Transamerica Delaval (SP562)	Interim Report mailed 12-23-82. Final Report due 3-30-83. NR TAS 0022.	W. Boyd/A. Pusateri

DAR NO.	DATE INITIATED	DESCRIPTION	SYSTEM	CONTRACTOR/ VENDOR (SP)	COMMENT	COGNIZANT QUALITY ENGINEER/RESPONSIBLE ENGINEER
110	12-10-82	Two limitorque motor operators are of commercial grade, not intended for Class 1E Nuclear Service.	P45	Overly Mfgr. (SP-530)	Determine not to be reportable.	M. Plesa/A. Widmer/ G. Tilinsky
*111	12-21-82	GE encountered problems with welds for main steam whip restraints.	B21/ B33	CQS/PQS	NRC notified 12-22-82. Interim report due 1-27-83.	J. Gilstrap/R. Solt/ P. Nichols
112	12-23-82	Drilco cove bore type bits were used for drilling hilti bolts, which is in violation of Hilti's spec.		PPP (SP-44)	NRC notified 1-4-83. Interim report due 2-3-83.	P. Matthys/J. Wilcox

*could possibly impact schedule



PERRY PROJECT ORGANIZATION

11 JAN 83

Lovelace

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SEP 2 8 1981

Docket Nos. 50-440
and 50-441

MEMORANDUM FOR: A. Schwencer, Chief,
Licensing Branch No. 2

FROM: M. D. Houston, Project Manager
Licensing Branch No. 2

SUBJECT: FORTHCOMING FORECAST PANEL VISIT TO PERRY SITE

DATE & TIME: October 7, 8 and 9, 1981

LOCATION: Perry Site, Lake County, Ohio

PURPOSE: To discuss status of construction

PARTICIPANTS: [1]

NRC

W. Lovelace, R. Gilbert and Region III

CEICO

B. Coleman, et al

M. D. Houston, Project Manager
Licensing Branch No. 2
Division of Licensing

cc:
See next page

1 Meetings between NRC technical staff and applicants for licenses are open for interested members of the public, petitioners, intervenors, or other parties to attend as observers pursuant to "Open Meeting and Statement of NRC Staff Policy", 43 Federal Register 28058, 6/28/78.

Pg-ct

8110010054 XA

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Vice President, Engineering
The Cleveland Electric Illuminating Company
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Cleveland, Ohio 44101

cc: Gerald Charnoff, Esq.
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CASELOAD FORECAST PANEL SITE VISIT
MEETING AGENDA

1. Overview of project construction schedule including progress and major milestones completed, current problems and any anticipated problem areas that may impact the current projected fuel load date.

2. Detailed review and current status of design and engineering effort (by major discipline) including any potential problems that may arise from necessary rework.

3. Detailed review and current status of procurement activities including valves, pipe, instruments, cable, major components, etc.

4. Actual and proposed craft work force (by major craft), craft availability, productivity, potential labor negotiations and problems.

5. Detailed review and current status of all large and small bore pipe hangers, restraints, snubbers, etc., including design, rework, procurement, fabrication, delivery and installation.

6. Detailed review of project schedule identifying critical path items, near critical items, amount of float for various activities, the current critical path to fuel loading, methods of implementation of corrective action for any activities with negative float, and provisions for contingencies. The estimated project percent complete as of ~~November 30, 1980~~.

7. Detailed review and current status of bulk quantities including current estimated quantities, quantities installed to date, quantities scheduled to date, current percent complete for each, actual versus forecast installation rates, and basis for figures.

   (a) Concrete (CY)

   (b) Process Pipe (LF)

   - Large Bore Pipe (2 1/2" and larger)
   - Small Bore Pipe (2" and smaller)

   (c) Yard Pipe (LF)

   (d) Large Bore Pipe Hangers, Restraints, Snubbers (ea)

(e) Small Bore Pipe Hangers, Restraints (ea)

(f) Cable Tray (LF)

(g) Total Conduit (LF)

(h) Total Exposed Metal Conduit (LF)

(i) Cable (LF)

- Power
- Control
- Security
- Instrumentation
- Plant Lighting

(j) Terminations (ea)

- Power
- Control
- Security
- Instrumentation
- Plant Lighting

(k) Electrical Circuits (ea)

- Power
- Control
- Security

(l) Instrumentation (ea)

8. Detailed review and current status of preparation of preop and acceptance test procedures, integration of preop and acceptance test activities with construction schedule, system turnover schedule, preop and acceptance tests schedule, current and proposed preop and acceptance tests program manpower.

(a) Total number of procedures required for fuel load.
(b) Number of draft procedures not started.
(c) Number of draft procedures being written.
(d) Number of procedures approved.
(e) Number of procedures in review.
(f) Total number of preop and acceptance tests required for fuel load.
(g) Number of preop and acceptance tests completed.
(h) Number of preop and acceptance tests currently in progress.
(i) Number of systems turned over to start-up.

9. Detailed discussion of potential schedular influence due to changes attributed to NUREG-0737 and other recent licensing requirements.

10. Discussion of schedular impact, if any, regarding potential deficiencies reported in accordance with 10 CFR 50.55(e). 28 open items.

11. Financial commitments to complete the plant.

12. Overview of current construction management organization and activities.

13. Site tour and observation of construction activities.

Impact Potential
- tracking problems on cable tray
- Bus-Shield Concrete - possible additional shielding
- piping (pump damage)

November 3, 1981

PERRY UNIT 1 AND NEEDED COMMON FACILITIES

A detailed review was made of the agenda material discussed during the October 7, 1981 site meeting. A site tour to observe the construction status and ongoing construction activities was made on October 8, 1981. The applicant's target construction completion date is May 1, 1983, however, the current, in house, forecasted construction completion date is November 1, 1983.

In view of the foregoing and based on the following:

(a) The construction work remaining in the reactor building including piping, hangers, electrical, coating, bio shield, and new loads modifications.

(b) The construction work remaining on small bore piping and in particular small bore hangers.

(c) The remaining cable installation and terminations.

(d) The status of the pre op testing program.

(e) Observations of construction work remaining during the site tour.

(f) The construction status of this project compared with other projects in similar stages of construction.

It was concluded that a realistic construction completion date would be the first quarter of 1984, with a nominal date of February 1984.

September 29, 1981

PERRY PROJECT
SIGNIFICANT QUANTITIES

	Unit 1 & Common E.A.C.	Unit 1 & Common Installed	Unit 2 Total
CONCRETE	310,000 C.Y.	302,000 C.Y.	
PIPING:			
Large Bore	149,000 L.F.	131,689 L.F.	239,700
Small Bore	148,000 L.F.	91,222 L.F.	256,300
Total	297,000 L.F.	222,911 L.F.	496,000
LB Hangers, Includes (Restraints)	12,858 EA.	8,700 EA.	
SB Hangers, Includes (Restraints)	20,600 EA.	3,390 EA.	
Yard	38,000 L.F.	35,000 L.F.	38,000
ELECTRICAL CABLE			
Power	210,260 L.F.	60,352 L.F.	382,300
Control	3,416,380 L.F.	1,352,767 L.F.	6,211,600
Security	396,000 L.F.	---	730,000
Instrumentation	1,766,160 L.F.	683,997 L.F.	2,456,100
Total	5,788,800 L.F.	2,097,116 L.F.	9,800,000
ELECTRICAL CONDUIT			
Exposed Metal	455,000 L.F.	337,000 L.F.	650,000
Cable Tray	98,000 L.F.	96,000 L.F.	140,000
ELECTRICAL TERMINATIONS			
Power	4,000 EA.	1,028 EA.	8,000
Control	91,000 EA.	37,927 EA.	175,000
Security	8,000 EA.	----	15,000
Instrumentation	59,000 EA.	14,393 EA.	107,000
Total	162,000 EA.	53,348 EA.	305,000
ELECTRICAL CIRCUITS			
Power	400 EA.	147 EA.	
Control	14,000 EA.	5,418 EA.	
Security	6,600 EA.	3,000 EA.	
Total	21,000 EA.	8,565 EA.	42,000
INSTRUMENTATION			
Tubing	328,560 L.F.	153,000 L.F.	
Piping	21,200 L.F.	3,100 L.F.	
Valves	3,900 EA.	1,275 EA.	
Instruments	3,780 EA.	1,150 EA.	
Panels-Racks	700 EA.	270 EA.	
PAINTING			
Arch. Painting	916,700 S.F.	701,628 S.F.	
Nuclear Coating	1,370,100 S.F.	434,319 S.F.	
Valves	2,550 EA.		
Piping	30,000 L.F.	3,000 L.F.	
Hangers	3,900 EA.		

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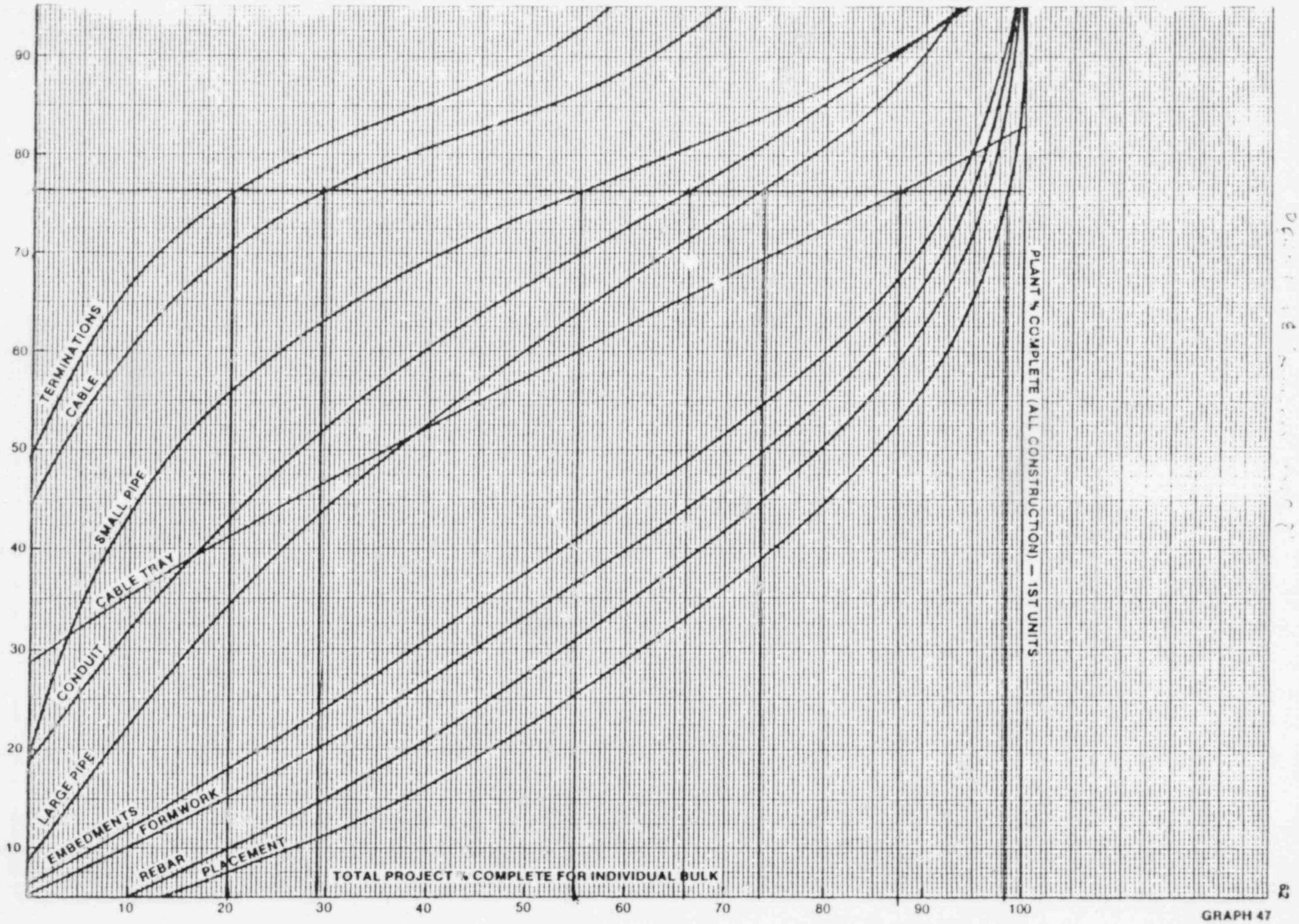
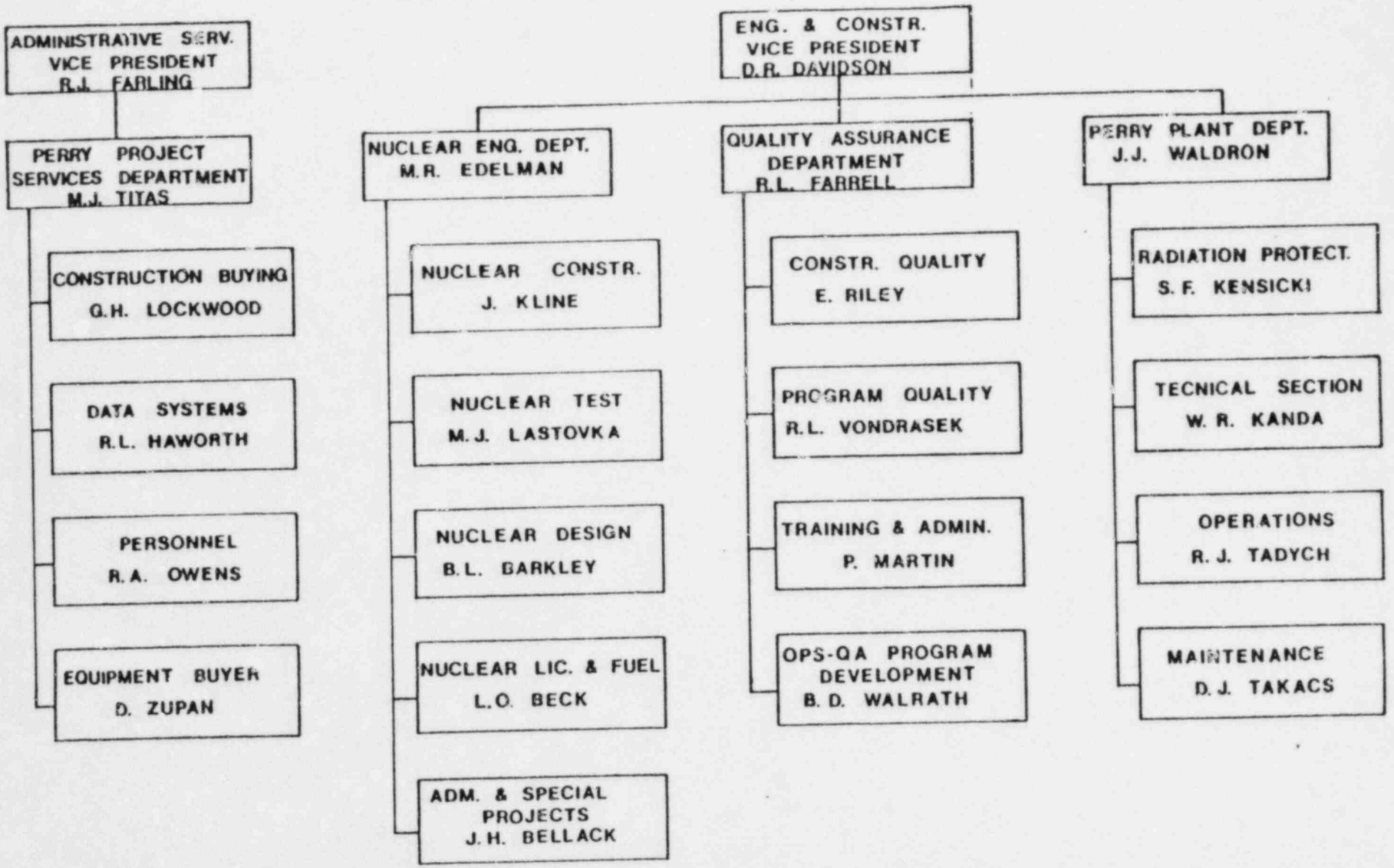

TERMINATIONS
CABLE
SMALL PIPE
CABLE TRAY
CONDUIT
LARGE PIPE
EMBEDMENTS
FORMWORK
REBAR
PLACEMENT
TOTAL PROJECT % COMPLETE FOR INDIVIDUAL BULK
PLANT % COMPLETE (ALL CONSTRUCTION) — 1ST UNITS
10
20
30
40
50
60
70
80
90
100

GRAPH 47

10-1-31

PERRY PROJECT ORGANIZATION



#1

as of 9-1-81

PROJECT PROGRESS SUMMARY

77.3% UNIT #1 & COMMON

98% CIVIL STRUCTURAL

88% LB PIPE

62% SB PIPE

67% LB HANGERS

80% ELECTRICAL RACEWAY

36% CABLE

#1

PERRY NUCLEAR POWER PLANT

AREA PROGRESS

UNIT #1 & COMMON

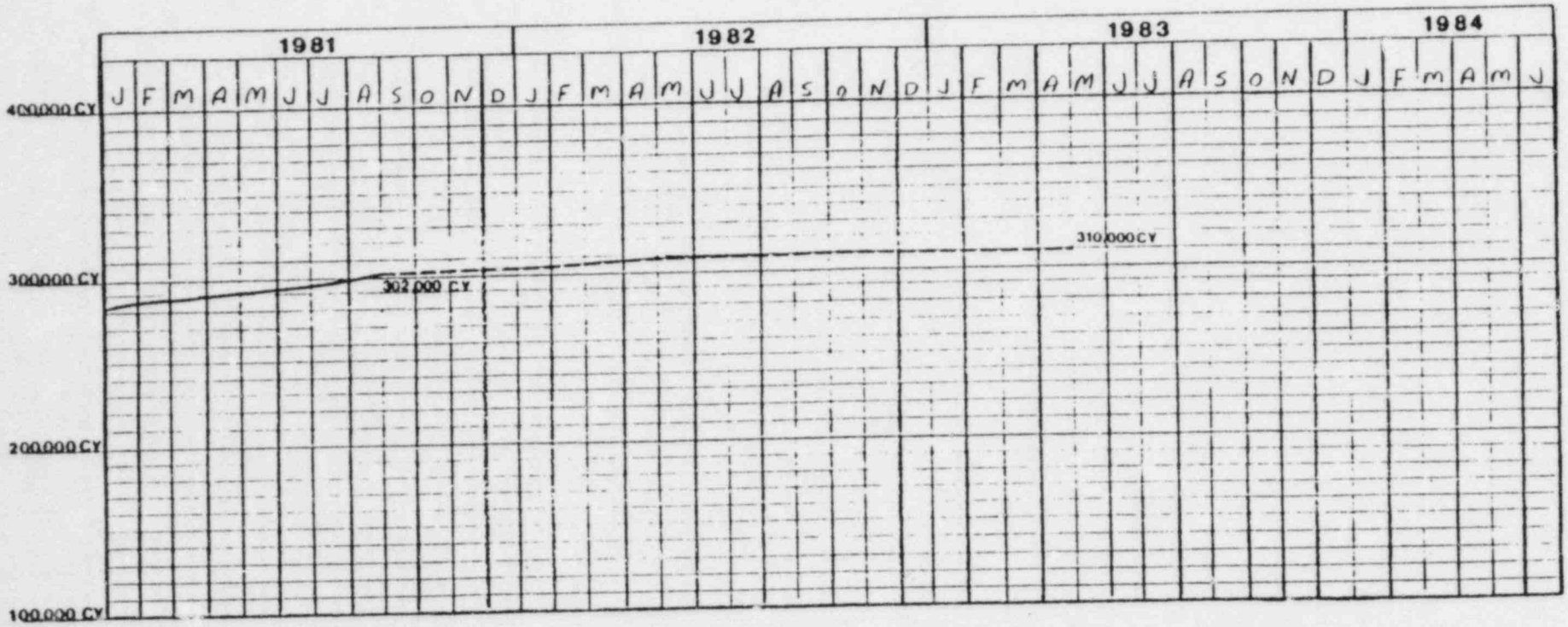
AREA	% COMPLETE
NUCLEAR ISLAND	78.4
REACTOR BUILDING (working 2 shifts moving to 3 shifts)	58.0
TURBINE BUILDING	88.0
CONTROL COMPLEX	81.6
YARD	90.4

#7

September 29, 1981

PERRY PROJECT
SIGNIFICANT QUANTITIES

	Unit 1 & Common E.A.C.	Unit 1 & Common Installed
CONCRETE	310,000 C.Y.	302,000 C.Y.
PIPING		
Large Bore	149,000 L.F.	131,689 L.F.
Small Bore	148,000 L.F.	91,222 L.F.
Total	297,000 L.F.	222,911 L.F.
LB Hangers (Includes Restraints)	12,858 EA	8,700 EA.
SB Hangers (Includes Restraints)	20,600 EA.	3,390 EA.
Yard	36,000 L.F.	35,000 L.F.
ELECTRICAL CABLE		
Power	210,260 L.F.	60,252 L.F.
Control	3,416,780 L.F.	1,352,767 L.F.
Security	396,000 L.F.	---
Instrumentation	1,756,160 L.F.	683,997 L.F.
Total	5,780,000 L.F.	2,097,116 L.F.
ELECTRICAL CONDUIT		
Exposed Metal	455,000 L.F.	137,000 L.F.
Cable Tray	96,000 L.F.	96,000 L.F.
ELECTRICAL TERMINATIONS		
Power	4,000 EA.	1,209 EA.
Control	91,000 EA.	37,927 EA.
Security	9,000 EA.	---
Instrumentation	99,000 EA.	14,393 EA.
Total	203,000 EA.	53,529 EA.
ELECTRICAL CIRCUITS		
Power	400 EA.	147 EA.
Control	14,000 EA.	5,418 EA.
Security	6,600 EA.	-- 3,000 EA. -?
Total	21,000 EA.	8,565 EA.
INSTRUMENTATION		
Tubing	328,560 L.F.	153,000 L.F.
Piping	21,200 L.F.	3,100 L.F.
Valves	3,900 EA.	1,275 EA.
Instruments	3,780 EA.	1,150 EA.
Panels-Racks	700 EA.	270 EA.
PAINTING		
Arch. Painting	916,700 S.F.	701,628 S.F.
Nuclear Coating	1,370,100 S.F.	434,319 S.F.
Valves	2,550 EA.	
Piping	30,000 L.F.	3,000 L.F.
Hangers	3,900 EA.	



ACTUAL ———

SCHEDULED - - - - - -

NO.	REVISION	DATE		DATE

THE CLEVELAND ELECTRIC ILLUMINATING CO.

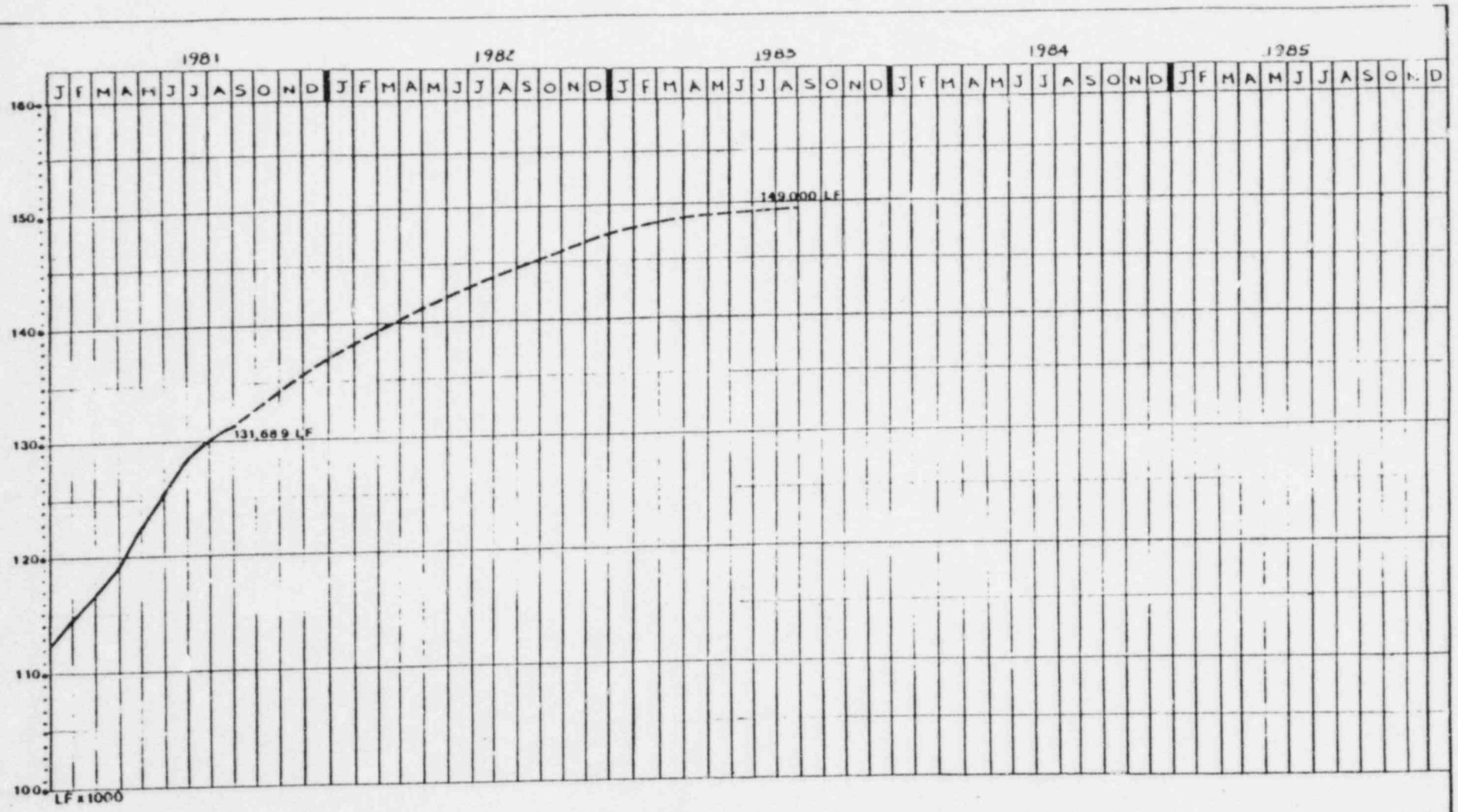
PERRY NUCLEAR POWER PLANT

PROJECT SCHEDULING

CONCRETE 1 & COMMON

Sheet Of | DWG. No. | R-

#7



ACTUAL:———
SCHEDULED:- - - -

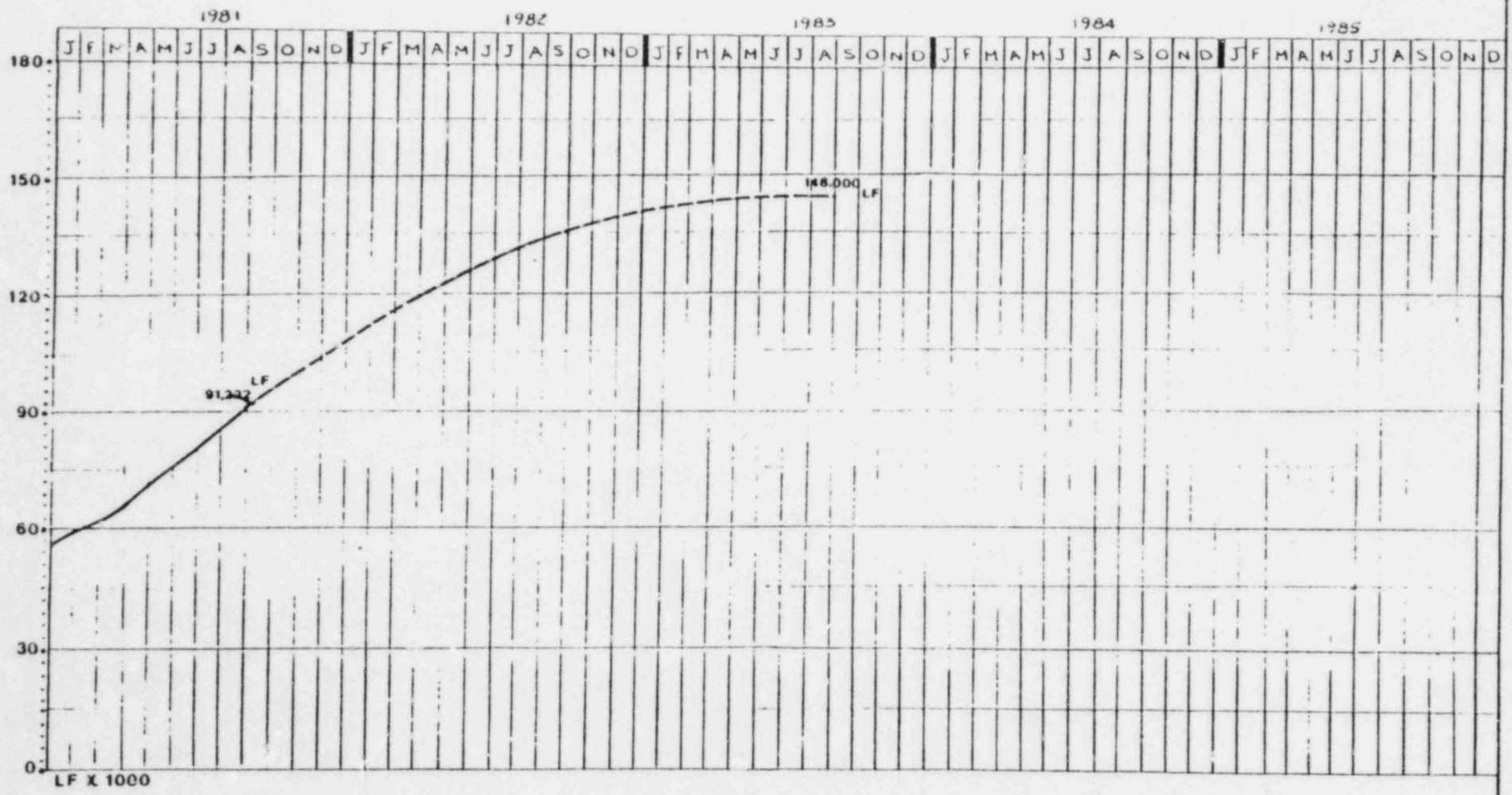
NO.	REVISION	DATE		DATE

THE CLEVELAND ELECTRIC ILLUMINATING CO.
PERRY NUCLEAR POWER PLANT
PROJECT SCHEDULING
LARGE BORE PIPE 1&COMMON
Sheet Of DWG. No. R-

~~13,184~~

131,689
112,500
13,189 in 8 mos = ~1649 LF mo

#1



ACTUAL ----------

SCHEDULED ——————

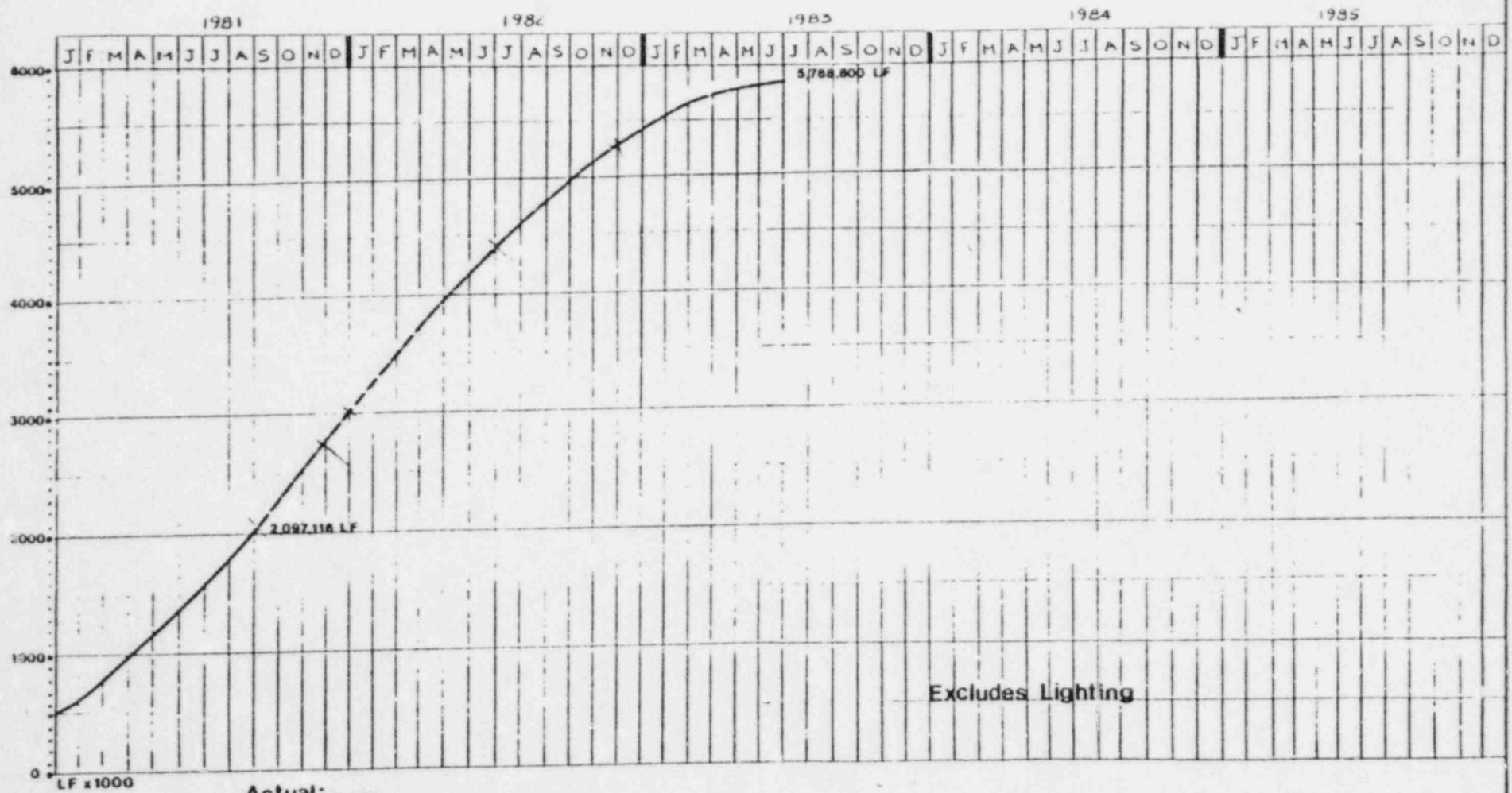
NO.	REVISION	DATE		DATE

THE CLEVELAND ELECTRIC ILLUMINATING CO.
PERRY NUCLEAR POWER PLANT
PROJECT SCHEDULING
TITLE
SMALL BORE PIPE 1& COMMON
Sheet Of | DWG. No. | R-

91,222
57,000
34,222 LF/mo last 8 mos = 4278 LF/mo

2,000,000 LF/mo

#7

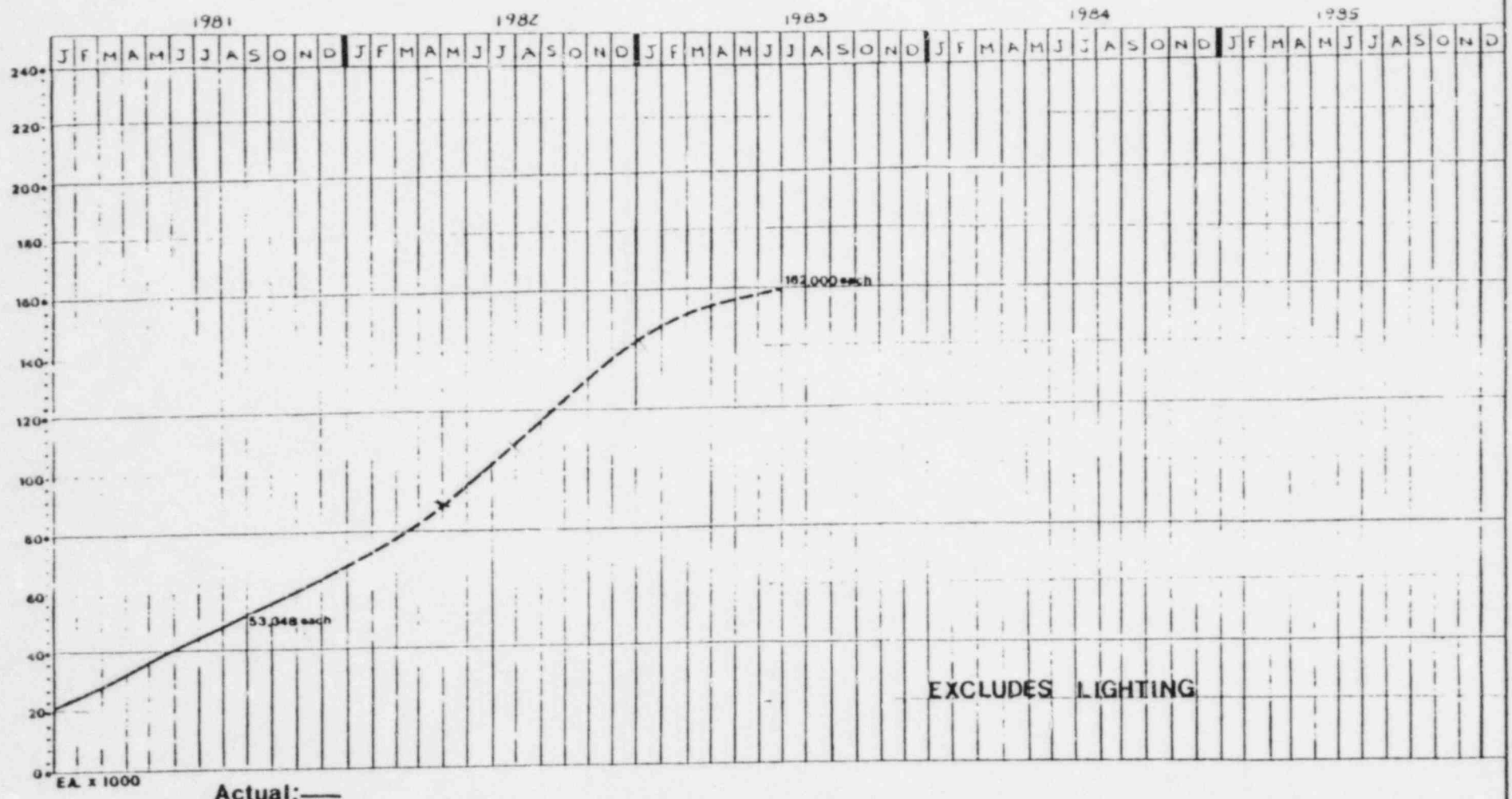


NO.	REVISION	DATE		DATE

THE CLEVELAND ELECTRIC ILLUMINATING CO.
PERRY NUCLEAR POWER PLANT UNITS
PROJECT SCHEDULING
CABLE UNITS 1&COMMON
Sheet of DWG. No.

2,097,116 / 15 = 139,807.7 ÷ 8 = 17,475.96 LF/mo

2,097,116 / 15 = 139,807.7 ÷ 8 = 17,475.96 LF/mo



NO.	REVISION	DATE		DATE

THE CLEVELAND ELECTRIC ILLUMINATING CO.
PERRY NUCLEAR POWER PLANT
PROJECT SCHEDULING
TITLE
TERMINATIONS & COMMON
Sheet Of DWG. No. A-

53,348
20,000
33,348 ÷ 8 mos = 4169 ea/mo.

PERRY NUCLEAR POWER PLANT

MAJOR PROJECT MILESTONES (UNIT#1)

MILESTONES	SCHEDULED	ACTUAL
START CONSTRUCTION (LWA)	N.A.	OCT. 21, 1974
CONSTRUCTION PERMIT ISSUED	N.A.	MAY 3, 1977
SET REACTOR PRESSURE VESSEL	SEPT. 11, 1978 (T-4)	AUG. 13, 1978
SET GENERATOR STATOR	DEC. 1979-JUN. 1981 (T-5)	MAY 15, 1980
SET CONTAINMENT DOME	MAY 12, 1981 (T-6)	MAY 2, 1981

MILESTONES	SCHEDULED
TURBINE ON TURNING GEAR	OCTOBER 15, 1981
SUPPRESSION POOL TURNOVER	MAY 31, 1982
COMPLETE RPV INTEGRATED FLUSH	SEPTEMBER 16, 1982
COMPLETE CONTAINMENT I.L.R.T.	FEBRUARY 13, 1983
OPERATING LICENSE	MAY 1, 1083
START FUEL LOAD	MAY 1, 1983
INITIAL CRITICALITY	JUNE 5, 1983
INITIAL TURBINE ROLL	AUGUST 3, 1983
SYNCHRONIZE GENERATOR	OCTOBER 1, 1983
100% POWER OPERATION	MARCH 29, 1984
COMMERCIAL OPERATION DATE	MAY 1, 1984

SCHEDULE VERIFICATION PROGRAM

OBJECTIVE: ASSURE PLANS & SCHEDULES ARE REALISTIC TO FINISH

- REVIEWED & UPGRADED CONSTRUCTION SPECS TO REFLECT SITE CONDITIONS & PRODUCTIVITIES
- REVIEWED & UPGRADED "QUANTITY" INFORMATION
- CORRECTED "WEIGHTING FACTORS" FOR WORK ELEMENTS
- ROLLED IN KNOWN CONTINGENCY ITEMS
- MOVED TO DYNAMIC SCHEDULE MODE
- EAC "BASE CONTRACT" UP 22%

CRITICAL PATH

REACTOR BUILDING

- PAINT
- PIPING (CRDM)
- I&C
- ELECTRICAL (CRD-202) -202 days plant

OTHER

- PLANT SECURITY (-123)

SCHEDULE

TARGET VS. FORECASTED

	TARGET	FORECASTED
INTEGRATED FLUSH	9/16/82	3/30/83
FUEL LOAD	5/01/83	11/01/83
COMMERCIAL OPERATIONS	5/01/84	5/01/84

CRAFT LABOR

- 1982 LAST "BULK" CONSTRUCTION YEAR
- 1982 SLOW IN SURROUNDING COUNTIES
- BASIC CRAFTS HAVE HIGH UNEMPLOYMENT
- LARGE NUMBER OF TRAVELERS
- MOST CONTRACTS "UP" SPRING 82
- PERRY MANPOWER UP ≃ 10% IN 1982
- HOLDING OUT OF UNIT #2
  - FORCE FINISH #1
  - CASH

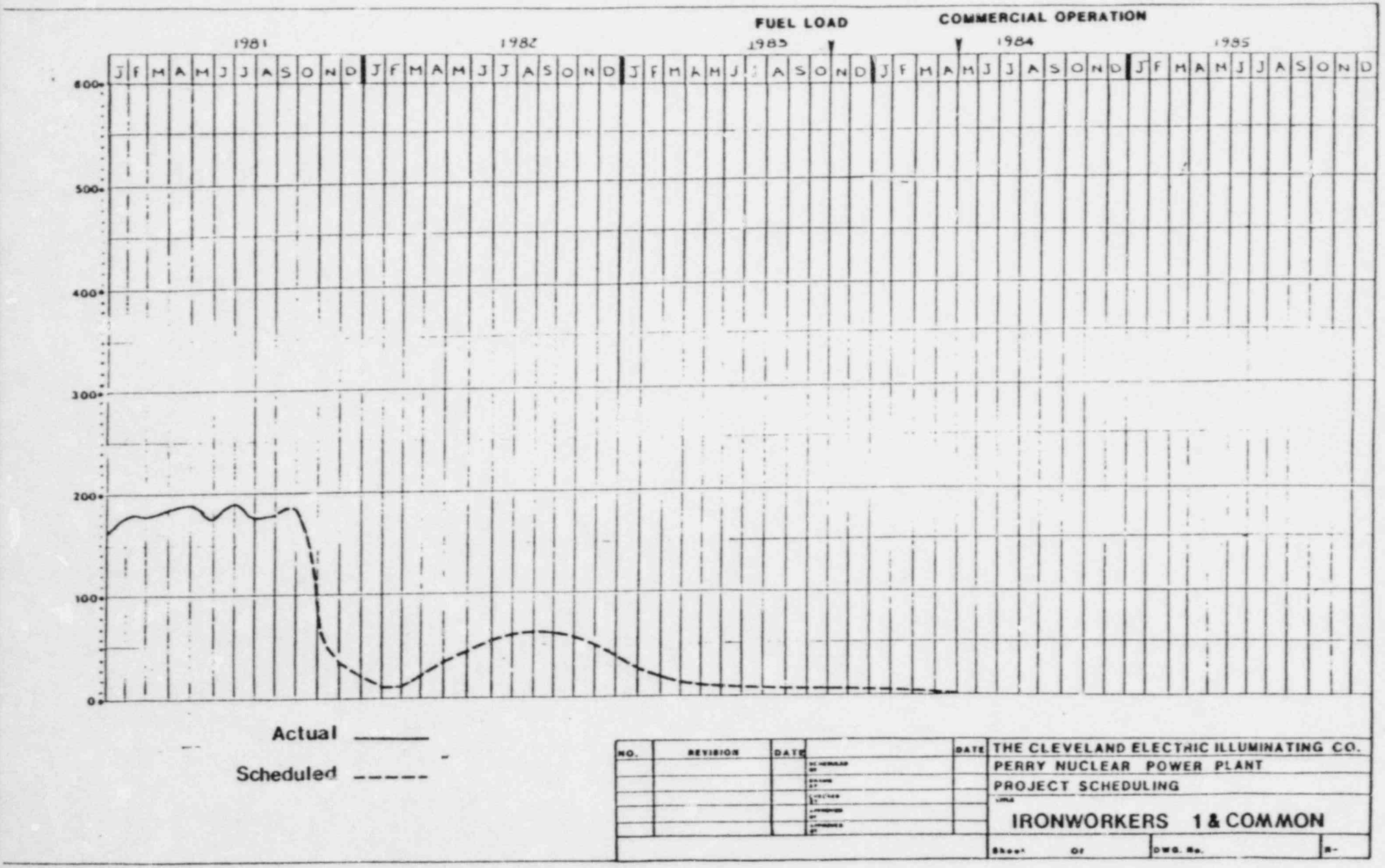
PERRY NUCLEAR POWER PLANT

MAJOR CONTRACTORS

PERFORMANCE INDICATORS

SPECIFICATION	DISCIPLINE	TO DATE
44/45	PIPING	0.73
33/34	ELECTRICAL	0.99
48/90	I & C	0.74
49/91	HVAC	1.15
38/39	EQUIPMENT	0.63
20	NUC. ISLAND CONCRETE	1.09
24	B.O.P. CONCRETE	2.00

NOTE: PERFORMANCE INDICATOR OF ONE OR MORE IS ACCEPTABLE PERFORMANCE.


FUEL LOAD
COMMERCIAL OPERATION
1981
1982
1983
1984
1985
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
800
500
400
300
200
100
0
Actual
Scheduled
NO.
REVISION
DATE
DATE
THE CLEVELAND ELECTRIC ILLUMINATING CO.
PERRY NUCLEAR POWER PLANT
PROJECT SCHEDULING
IRONWORKERS 1 & COMMON
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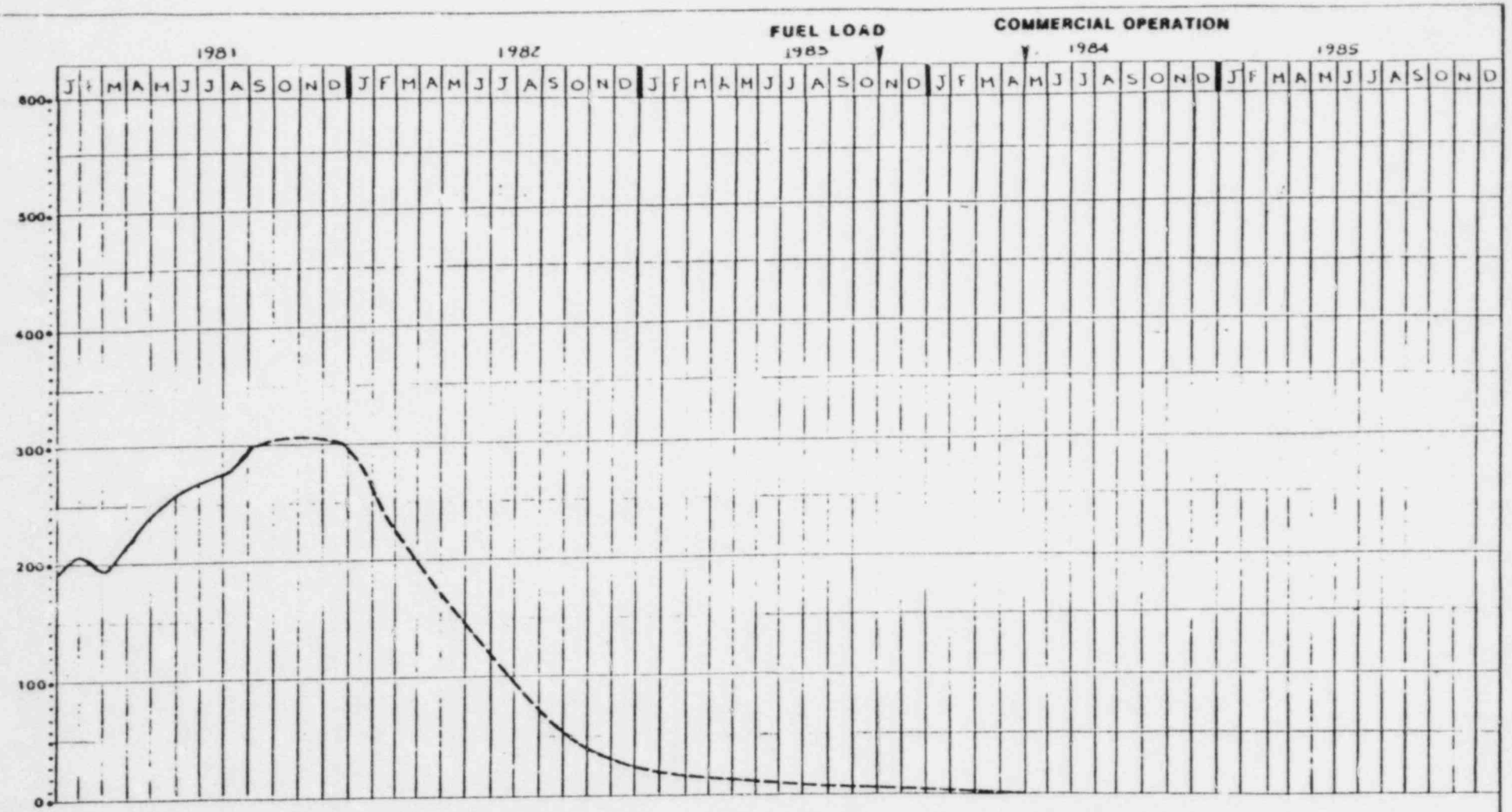
OF
DWG. No.



NO.	REVISION	DATE		DATE

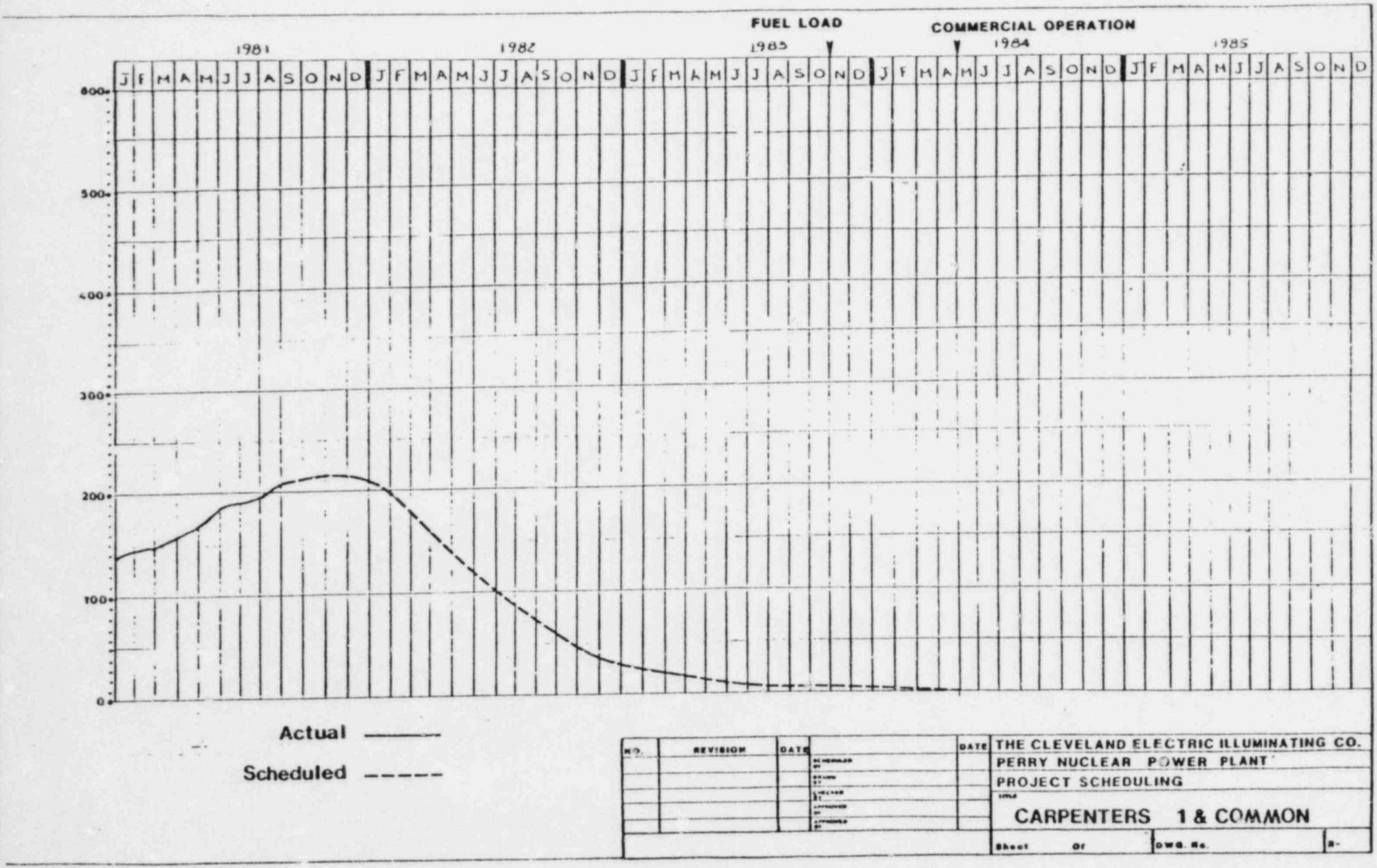
THE CLEVELAND ELECTRIC ILLUMINATING CO.

PERRY NUCLEAR POWER PLANT

PROJECT SCHEDULING

LABORERS 1& COMMON

Sheet Of Dwg. No. R-


FUEL LOAD
COMMERCIAL OPERATION
1981
1982
1983
1984
1985
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
800
500
400
300
200
100
0
Actual
Scheduled
NO.
REVISION
DATE
DATE
THE CLEVELAND ELECTRIC ILLUMINATING CO.
PERRY NUCLEAR POWER PLANT
PROJECT SCHEDULING
CARPENTERS 1 & COMMON
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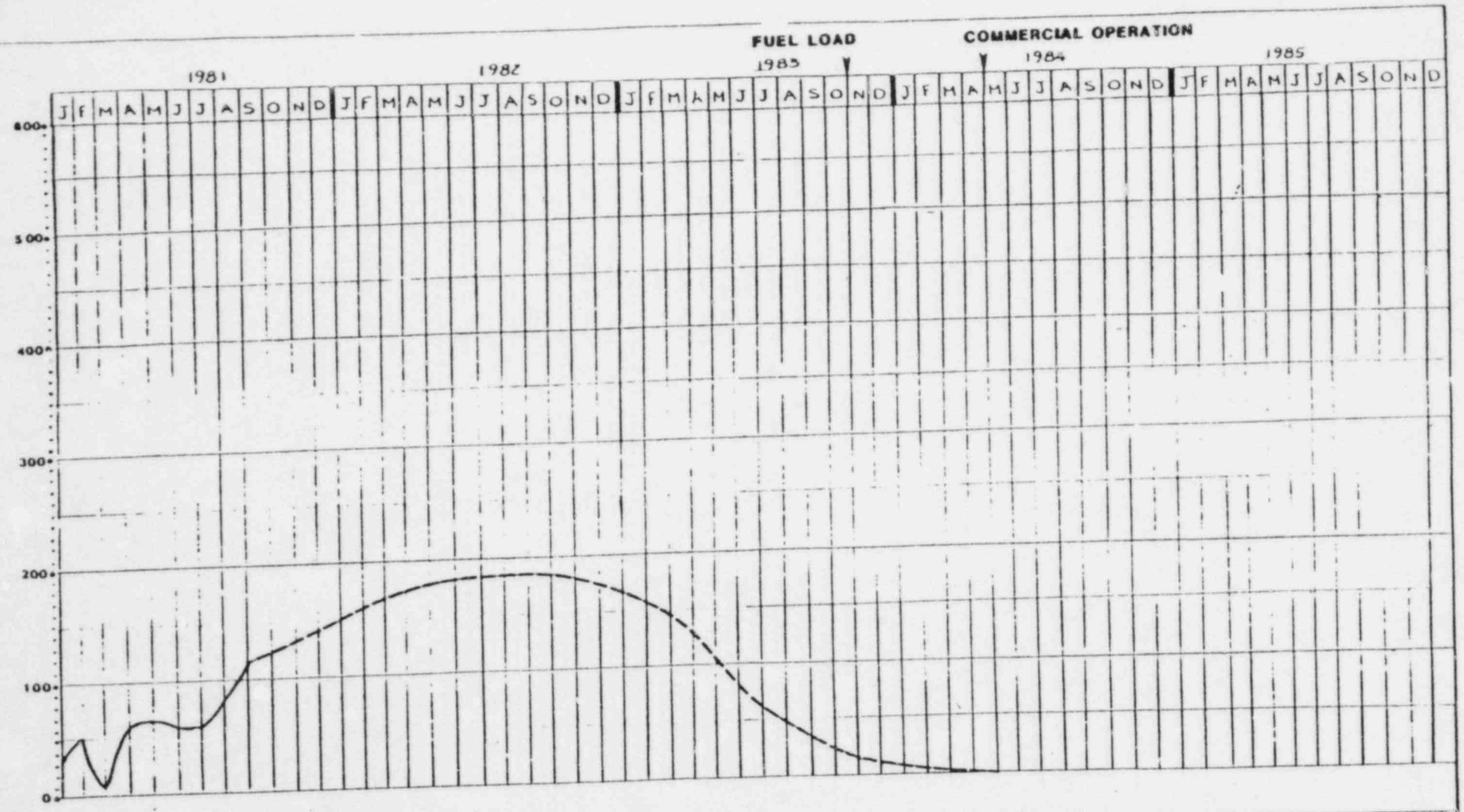
Of
DWG. No.



NO.	REVISION	DATE		DATE
			SCHEDULED BY	
			DRAWN BY	
			CHECKED BY	
			APPROVED BY	
			APPROVED BY	

THE CLEVELAND ELECTRIC ILLUMINATING CO.

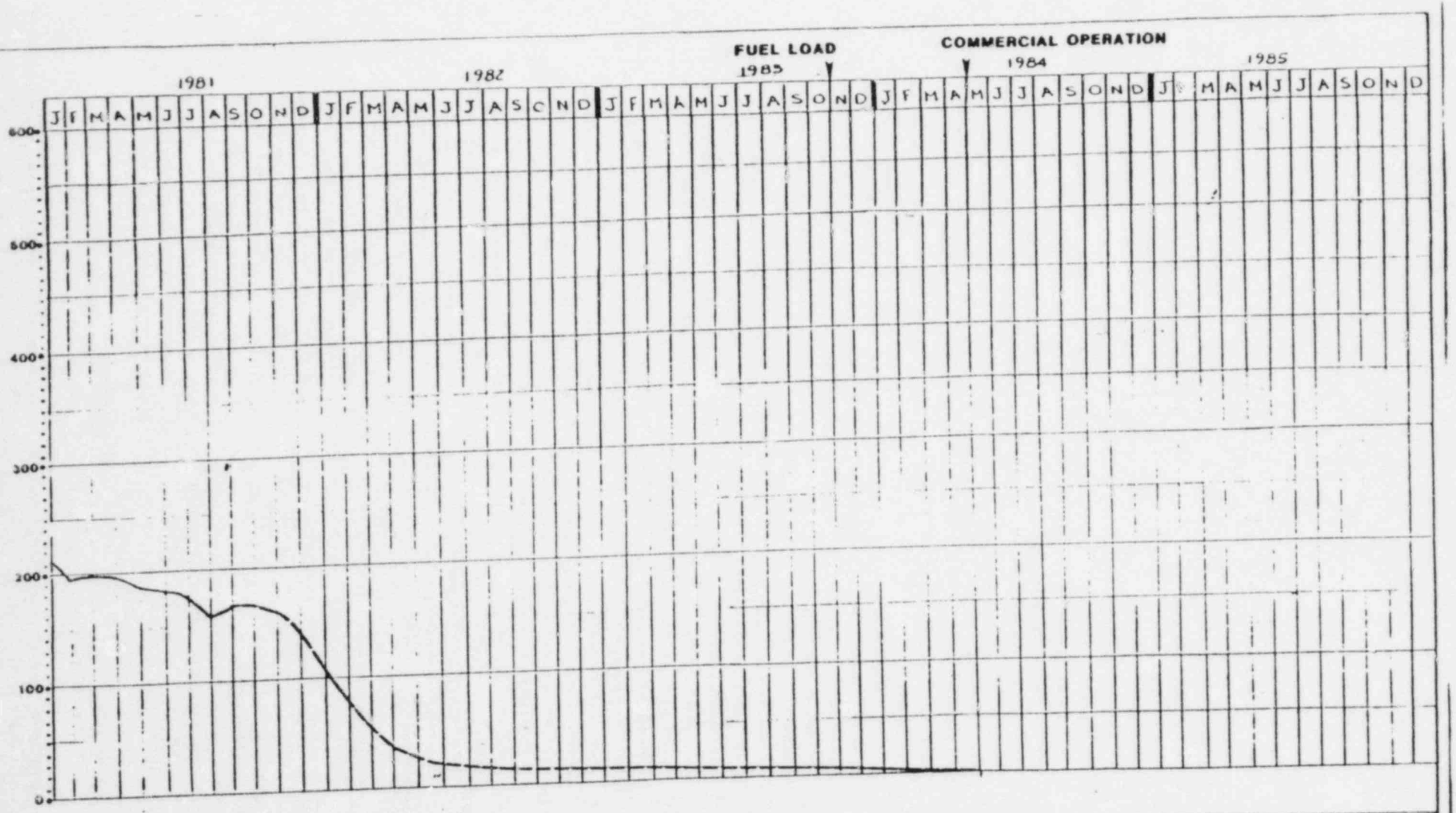
PERRY NUCLEAR POWER PLANT

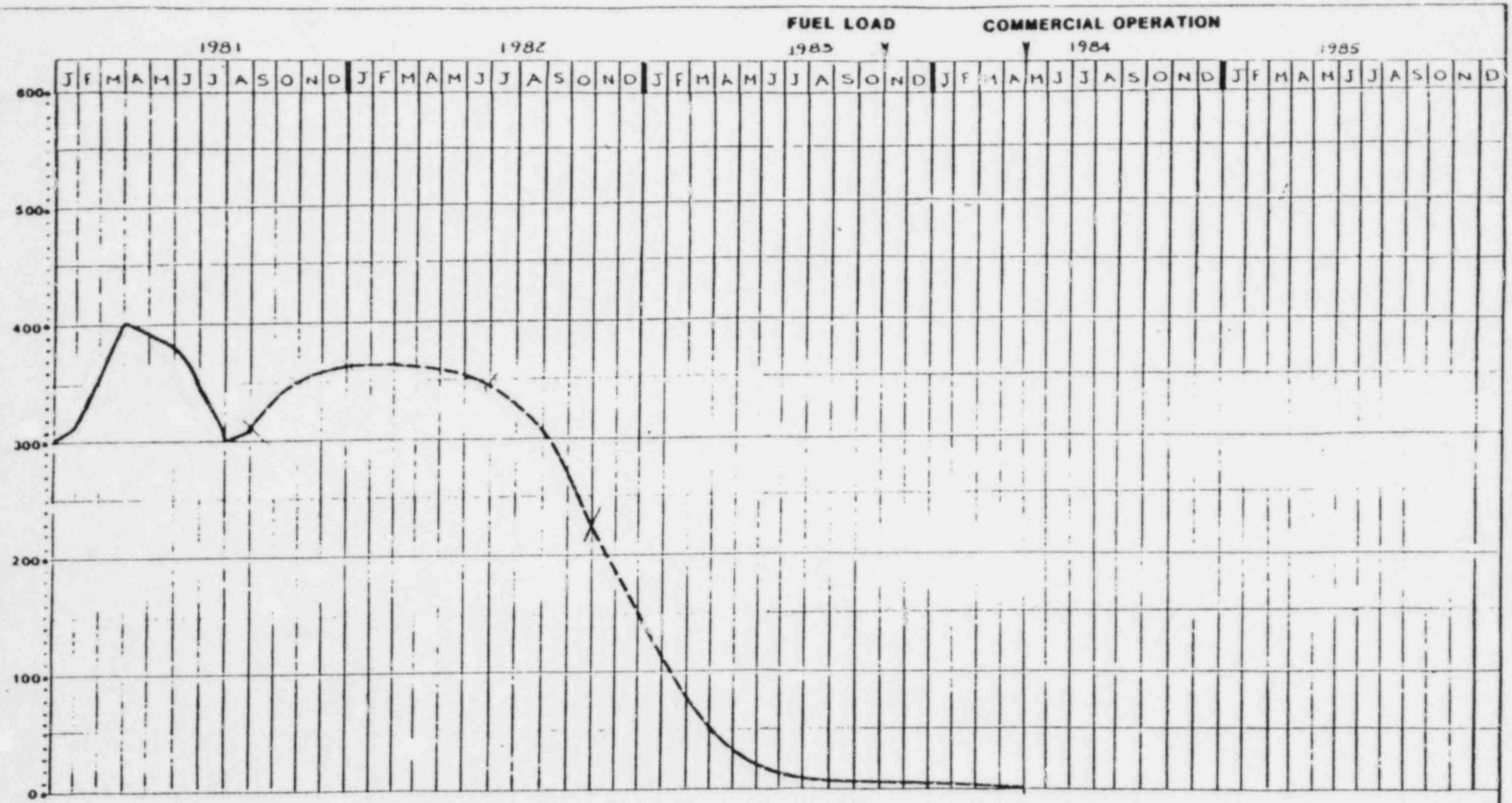
PROJECT SCHEDULING

TITLE

PAINTERS 1 & COMMON

Sheet Of | DWG. No. | R-


FUEL LOAD
COMMERCIAL OPERATION
1981
1982
1983
1984
1985
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
600
500
400
300
200
100
0
Actual
Scheduled
NO.
REVISION
DATE
DATE
THE CLEVELAND ELECTRIC ILLUMINATING CO.
PERRY NUCLEAR POWER PLANT
PROJECT SCHEDULING
BOILERMAKERS 1&COMMON
Sheet of
DWG. No.



Actual _____

Scheduled ------.

NO.	REVISION	DATE		DATE

THE CLEVELAND ELECTRIC ILLUMINATING CO.

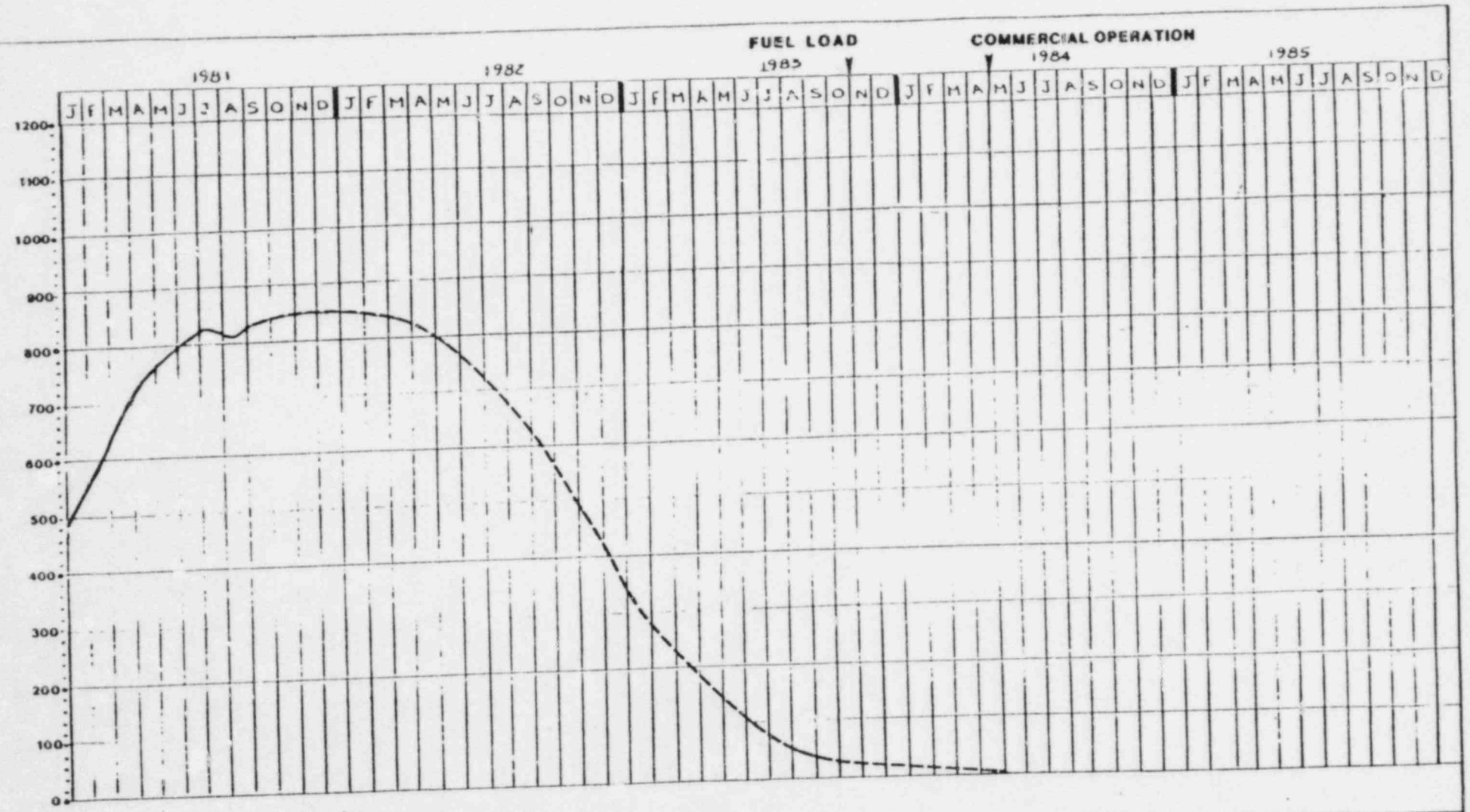
PERRY NUCLEAR POWER PLANT

PROJECT SCHEDULING

TITLE

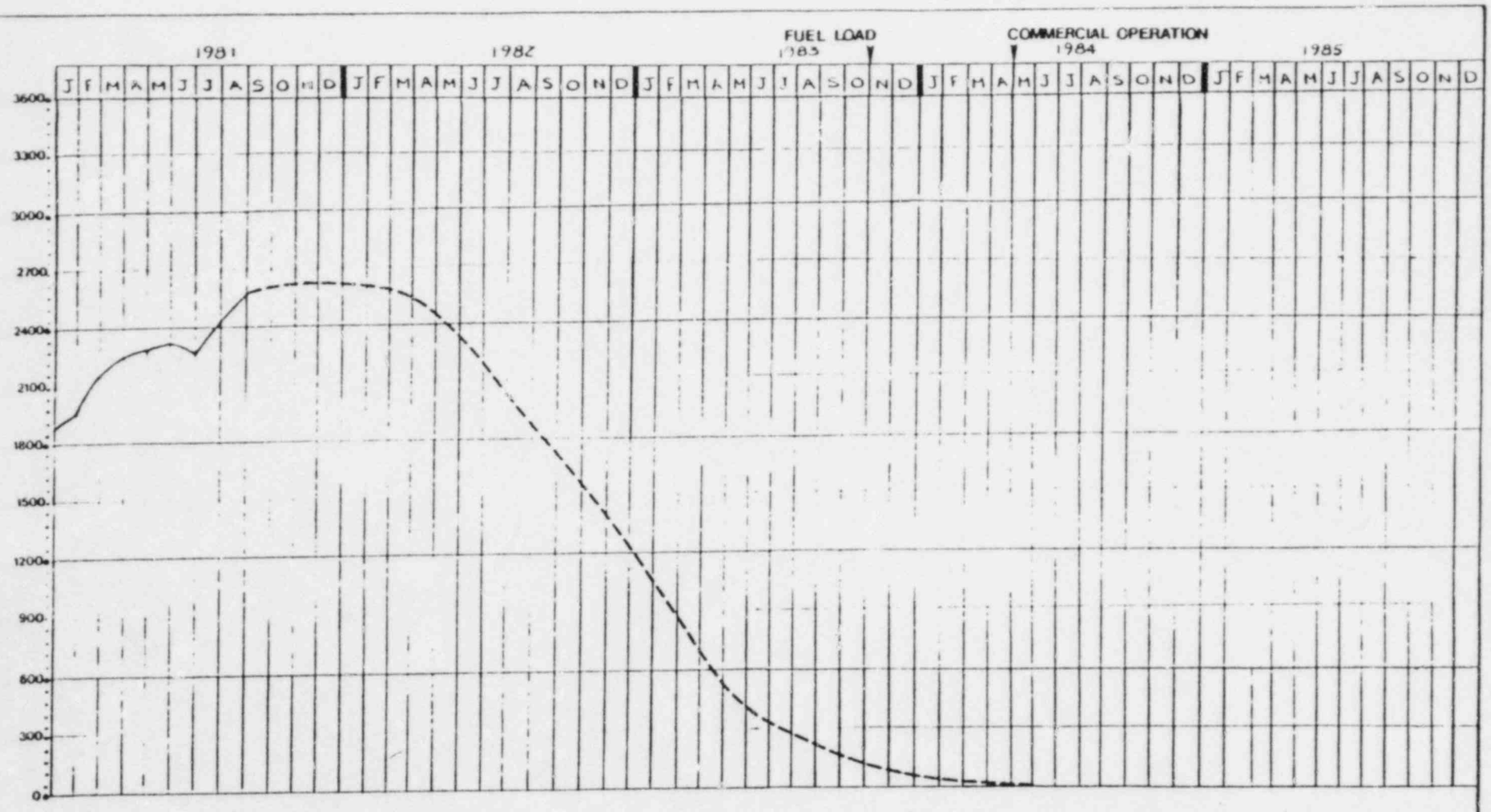
ELECTRICIANS 1& COMMON

Sheet Of | DWG. No. | R-



NO.	REVISION	DATE		DATE

THE CLEVELAND ELECTRIC ILLUMINATING CO.
PERRY NUCLEAR POWER PLANT
PROJECT SCHEDULING
TITLE
PIPEFITTERS 1& COMMON
Sheet Of DWG. No. R-



ACTUAL: ———

SCHEDULED: – – – –

NO.	REVISION	DATE		DATE

THE CLEVELAND ELECTRIC ILLUMINATING CO.

PERRY NUCLEAR POWER PLANT

PROJECT SCHEDULING

CRAFT MANPOWER UNIT 1 & COMMON

Sheet of | Dwg. No. | R-

#2

ENGINEERING STATUS SEPTEMBER 1, 1981

	NUMBER OF SCHEDULE ACTIVITIES	PERCENT COMPLETE
DESIGN	28,615	92 %
NEW WORK	1,488	52%
REWORK	581	33%
TOTAL	30,684	90%

SUMMARY:

- NO ENGINEERING ACTIVITIES WILL HEAVILY IMPACT OUR SCHEDULED FUEL LOAD DATE
- NEW WORK AND REWORK ENGINEERING IS DOMINANT
- ENGINEERING OF PIPE SUPPORTS IN CONTAINMENT IS MOST CRITICAL

NEW WORK ENGINEERING

- TECHNICAL SUPPORT CENTER
- EMERGENCY OPERATION'S FACILITY
- EMERGENCY RESPONSE INFORMATION SYSTEM (ERIS-NUREG 0696)
- OTHER TMI REQUIREMENTS
- I.E. BULLETIN 79-14
- ANTICIPATED TRANSIENTS WITHOUT SCRAM (ATWS)

PIPE SUPPORT REWORK

	REVISIONS	NEW DESIGNS
PIPING REANALYSIS WITH FINAL "NEW LOADS"	500	200
AS-BUILT VS. AS-DESIGNED	?	400
PRE-OPERATIONAL PIPE VIBRATION TESTING	–	100

UNIT#1 & COMMON PIPING SUPPORTS
STATUS AS OF SEPTEMBER 1, 1981

	LARGE BORE	SMALL BORE
REQUIRED	12,858 10,885 1,973	20,600
DESIGNED	12,396 (96%)	4,700 (23%)
DELIVERED	10,885 (85%)	N/A
INSTALLED	8,700 (68%)	3,390 (16%)

UNIT#1 & COMMON SAFETY-RELATED PIPING SUPPORTS STATUS AS OF SEPTEMBER 1, 1981

	LARGE BORE SAFETY	SMALL BORE SAFETY
REQUIRED	4423 2433 1990 ~ 500 Snubbers	2412
DESIGNED	3961 (90%) (462 REMAIN)	1126 (47%)
DELIVERED	2433 (55%)	N/A
INSTALLED	700 (16%) 4423 700 3723	400 (14%)

CASELOAD FORECAST PANEL SITE VISIT

NRC AGENDA ITEM NUMBER 2
Detailed review and current status of design and engineering effort (by major discipline) including any potential problems that may arise from necessary Rework.

Engineering Status

1. Engineering General - Engineering Progress as of September 1st is as follows: Basic plant design is 92%. All new engineering tasks are identified and scheduled as New Work and Rework. Our last engineering schedule revision in late 1980 defined the basic design activities which have been static. New activities are added to New Work and Rework as they are defined. Presently 52% of the identified New Work tasks are complete and 33% of the identified Rework tasks are complete. Total engineering progress is 90%. No engineering activities will heavily impact our scheduled fuel load date.

2. Structural - All Unit 1 and Common structural steel erection and concrete construction drawings for the main plant have been completed and issued. Remaining structural work affecting Unit 1 is limited to the Service Building, Guardhouse, and Emergency Operations Facility; plus evaluation of final new loads impact on the structures and accomodation of changes arising from the TMI and ATWS studies.

3. Mechanical - All but about a dozen Unit 1 and Common piping installation drawings have been completed and issued. Approximately 90% of the piping hanger drawings for Unit 1 and Common have been issued. In this discipline, remaining work includes the finalization of the pipe break, whip, and jet studies, completion of the remaining hanger designs, design of the ATWS system, and evaluation of the affect of new loads on the pipe hanger designs. Engineering effort of pipe supports in the containment due to these topics is the most critical engineering effort that we are closely monitoring so that it does not impact construction. Agenda Item No. 5 will discuss pipe supports in greater detail.

4. I&C - All Unit 1 and Common design instrument and control drawings have been released for installation. Current effort is limited to cleanup items: ATWS and NUREG 0696 (ERIS) design, and the IEEE Qualification Program. Johnson Engineering - Approximately 50% of the Johnson Controls Installation/Fabrication drawings for Unit 1 and Common are complete and approved for construction.

5. Electrical - Approximately 95% of Unit 1 and Common electrical drawings have been completed and released for installation. Current effort consists of system close-out activities, ATWS and ERIS design, modifications arising from TMI studies.

6. Site Design - GAI is designing safety-related small bore pipe supports and Reactor Building instrument and control line supports on site. Presently, the small bore safety-related effort for Unit 1 and Common is 47% complete while the I&C support effort is just getting underway. We anticipate having both efforts complete by the Fall of 1982. Pullman Power Products is designing non-safety small bore pipe supports and is 18% complete on Unit 1 and Common.

New Work and Rework Engineering

1. The Technical Support Center (TSC) and the Emergency Operations Facility (EOF) are two building additions to the Plant which are spin-offs of the TMI incident. The civil/structural engineering effort on these facilities is summarized below.

   a) TSC - Drawings were prepared in November of 1980 to define excavation limits and the additional foundation pile work for the L-shaped basement addition to the Service Building. The design construction effort is complete and concrete work for the TSC is essentially complete. Plumbing, electrical and lighting drawings have been issued to the installation contractors and this work is presently underway.

   b) EOF- The Site selection has been made and the preliminary specification for this facility has been developed. The procurement specification and drawings will be ready for bid by November 1, 1981.

2. ERIS (NUREG 0696) - CEI has contracted with General Electric Nuclear Power Systems Division and we have started an ERIS Plant Assessment Survey on September 22, 1981. This approach was initiated to develop the information needed for ERIS early and the full engineering. It is the intent of the survey to address the guidelines provided in NUREG 0696 as well as to incorporate important consideration for diverse sources elsewhere in the nuclear industry. The implementation schedule goal is as follows:

Application Engineering Complete	11/81
Complete ERIS hardware and software options/ contract agreement	12/81
Functional diagrams, equipment locations, modifications, schematic diagrams to Perry Architect/Engineer	2/82
Deliver hardware and software to Perry	11/82
Complete testing and put in service the basic system	4/83

3. TMI Requirements Program Summary - We have addressed the TMI Requirements in the Perry FSAR Table 1A-1. The status of our implementation is given in the right hand side of the table and will be discussed later by Licensing. We are actively doing evaluation and design work with GE, Gilbert Associates, and the BWR Owner Group on these items, and making the necessary procedural changes. In addition, we are doing the modification work or have completed a significant number of TMI items. The TMI requirements and their status can be categorized as follows:

No. of Items	Status
4	Completed, no further action required
6	Modification work in process
7	Doing evaluation or design work
12	BWR Owners Group doing evaluation
23	Program or Procedure changes being written
52	Total

4. I. E. Bulletin 79-14 - We have identified and are proceeding with a team of GAI site personnel to address the requirements of I.E. Bulletin 79-14. Procedures have developed and contractor as-builts are being reviewed in preparation for taking field measurements. Our assumption is that the survey will necessitate 25% reanalysis and 10% redesign. As we obtain results from the measurement effort, we will be reassessing this estimate and applying resources to the reanalysis and redesign as appropriate. We are scheduling the engineering and construction effort for this redesign so it does not impact our fuel load date.

5. ATWS Program Summary - The Perry Project position on ATWS is that we are awaiting the results of rulemaking. However, we are evaluating Alternative 3A of NUREG-0460. If rulemaking requires this fix we will be in a position to install it before fuel load.

NRC AGENDA ITEM NUMBER 5
Detailed review and current status of all large and small bore pipe hangers, restraints, snubbers, etc., including design, rework, procurement, fabrication, delivery and installation.

The status of piping supports for Perry Unit 1 and Common facilities as of September 1, 1981, was as follows:

	Large Bore	Small Bore
Required	12.858	20,600
Designed	12,396 (96%)	4,700 (23%)
Delivered	10,885 (85%)	N/A
Installed	8,700 (68%)	3,390 (16%)

The above totals include all supports - safety and non/safety class restrainsts, deadweights and anchors. They do not include any new designs resulting from reanalysis required by "new loads", preoperational vibration, or differences between as-built and as-designed installations. These supports fall under the classification of rework and will be discussed later.

Large Bore

Included in the totals above are 4423 large bore safety class supports. The total that remains to be designed are 462. Of the 462, 420 are safety class and 42 are non-safety deadweights. Of the 420 safety class supports, 300 are restraints, nearly 200 of which are snubbers. Overall 75% of snubber designs are complete.

Fifty five percent (55%) of the required safety class supports are delivered. The vast majority of these are other than snubbers. Only 16% of the required snubbers have been delivered. Snubber requirements, which number about 800, have been anticipated by bulk orders. Snubbers units (minus wall and pipe attachments) have been ordered bulk for well over a year. Presently, 400 of these units have been fabricated and await assembly with wall and pipe attachment hardware.

To date, just over 700 safety class supports have been installed or about 16%. No snubbers have been installed. It should be noted that it is the Project's intention to install snubbers at the latest practical time to minimize damage.

Small Bore

The totals for small bore supports are only estimates because the non-safety portion is only approximately known at this time. Of the totals, just under 2412 are safety class. Of these, 1126 have been designed and nearly 400 (14%) have been installed. The "delivered" status is insignificant since these supports have fabricated on site from bulk supplies of standard component parts.

Rework

As previously stated, none of the totals include rework items. It is presently estimated that 200 new designs and about 500 revisions will result from reanalysis of "new loads". However, a significant portion of the revisions will consist only of updating load criteria and will not result in hardware changes. All new designs and revisions will be the restraint type with the vast majority of these being snubbers.

An additional quantity of supports will require design or revision for differences as-built and as-designed installation. At this point, an estimate of four hundred (400) supports affected appears conservative.

In addition to "new loads" items, new or revised support designs will be required for vibration detected during pre-operational testing. About 100 supports are estimated.

These activities are already going into our cost predictions and when hardened up will be factored in the engineering and construction schedules and added to the construction manhours.

These pipe support efforts are a major project concern and will be given a heavy priority and emphasis so that the fuel load date will not be impacted.

#3

EQUIPMENT RECEIVED

ITEM	RECEIVED	% TOTAL REQUIRED
VALVES	8,543	92%
INSTRUMENTATION	3,320	88%
MAJOR EQUIPMENT	104 ORDERS	96%
CABLE	4,315,300	90%
REBAR	23,100 TONS	100%
STRUCTURAL	9,017 TONS	98%
EMBEDMENTS	1,900 TONS	100%
SPOOLS (2 1/2" LARGER)	11,658	99%
HANGERS (INCLUDES RESTRAINTS)	10,885 1973 2258	85%

FINAL DELIVERY DATES

ITEM	REMAINING	DELIVERY DATE
VALVES	780	9/82
INSTRUMENTATION	460	10/82
MAJOR EQUIPMENT	4 ORDERS 20 PIECES	6/82
CABLE	1,463,500'	7/82
REBAR	0	-
STRUCTURAL	180 TONS	2/82
EMBEDMENTS	0	-
SPOOLS	142	6/82
HANGERS (INCLUDES RESTRAINTS)	1,973	12/82

PROBLEMS

1. KNOWN REQUIREMENTS

2. VENDOR PERFORMANCE

ACTIVITIES

1. EXPEDITING

2. CONTRACT AMENDMENTS

3. ALTERNATE SUPPLIERS

NUCLEAR TEST SECTION

Detailed review and current status of preparation of preop and acceptance test procedures, integration of preop and acceptance test activities with construction schedule, system turnover schedule, preop and acceptance test schedule, current and proposed preop and acceptance tests program manpower.

a. Total number of procedures required for fuel load. - 564

b. Number of draft procedures not started. - 29

c. Number of draft procedures being written. - 8

d. Number of procedures approved. - 335

e. Number of procedures in review. - 42

f. Total number of preop and acceptance tests required for fuel load. - 191

g. Number of preop and acceptance tests completed. - 7

h. Number of preop and acceptance tests currently in progress. - 1

i. Number of pwb systems turned over to start-up. - 59 of 262

One Hundred Eighteen (118) people to date (50 CEI/68 consultants).

PERFORMANCE ANALYSIS REPORT
SEPTEMBER, 1981
APPENDIX I

ND 3-81

DEVIATION ANALYSIS REPORT STATUS

DAR NO.	DATE INITIATED	DESCRIPTION	SYSTEM	CONTRACTOR/ VENDOR (SP)	COMMENT
6	10-6-77	GE Safety Relief Valve design weakness	B21	GE	Completion committed 5/1 83.
20	12-4-79	Omission of Double Class "B" Waterstops	N/A	GLC (SP-93)	Waiting for close out of NR No. GLC 526.
27	4-28-80	Rosemount Model 510 DV Trip Calibration Units Model 1152 Pressure Transmitters	Misc.	GE (SP-301)	Completion committed 1/1 81. Waiting for closeout of NR Nos. CQC 1677, RECI 055, RECI 056 and FDI Nos. WNHW Rev. 0 & I; WREC, Rev. 0 & I; WNHX, Rev. 0 & I.
28	4-28-80	Radiographs for Dikkers Safety Relief Valves	B21	GE (SP-301)	GE report draft received; DAR in NDS, and closeout of NR No. CQC 1622.
29 Rev. 1	5-15-80	Class 1E Motor Control Centers	R24	Cutler-Hammer (SP-557)	Completion commitment revised to 12-1-81 (extended).
30	6-4-80	Failure of Water Soluble Purge Dam to dissolve after being heated	Misc.	PPP (SP-44/45/47)	Final Report mailed 8-3-81.
37	10-6-80	Units 1 & 2 Suppression Pools' Stainless Steel Liner	G41 G42 G43	NNIC (SP-17)	Final Report due 12-15-81 (extended a second time).
38	10-7-80	Standby Diesel Generator Model DSRV 16	R43	Transam. DeLaval (SP-562)	Final Report due 12-1-81.
39	10-9-80	Hilti-Kwik Bolts	Misc.	Hilti, Inc. (SP-208)	Ready for NRC review.

DAR NO.	DATE INITIATED	DESCRIPTION	SYSTEM	CONTRACTOR/ VENDOR (SP)	COMMENT
41	11-3-80	G-41 System Fuel Pool Penetrating Piping	G41	NNIC (SP-53)	Closeout of NR No. CQA-178.
43	12-18-80	PGCC Flexible Conduit Grounding	H13	GE (SP-591)	Final Report due 10-30-81 (extended). Close-out of FDI's WNOJ and WR[illegible].
44	1-2-81	Standby Diesel Generators Lubricating Oil System Defect	R47	Transam. DeLaval (SP-562)	Final Report tentatively scheduled for October, 1981.
46 Rev. 1	2-3-81	Limit Switches	Misc.	NAMCO Controls	Final Report due 10-29-82.
47	4-8-81	Penetration Anchor and Barrier Plate Material	Misc.	GAI/PPP (SP-527)	Repair completion committed August, 1981.
52	5-22-81	Concrete Cracks and spalls in Unit #1 Fuel Transfer Area of Fuel Handling Building	N/A	NECC (SP-20)	Final Report mailed 10-1-81. Ready for NRC review.
56	6-1-81	Single Failure Criterion/Receiver Tank Sensing	R44	GAI/General Atomics	Waiting for revision of drawings D302-351 and D352-351.
57	6-3-81	No Axial Gap in Control Rod Drive Piping Socket Welds	C11	PPP (SP527)	Final Report due 12-7-81 (extended).
59	6-22-81	Axial-Flow Fans, Housing thickness	M32 M43	Buffalo Forge (SP648)	Final Report due 10-31-81.
60	6-25-81	Pushbuttons for Bailey 720 Utility Stations/ Units 1 & 2, and Common - BOP Panels/PGCC	H13 M51	GE/NSSS	Final Report due 5-1-83.

DAR NO.	DATE INITIATED	DESCRIPTION	SYSTEM	CONTRACTOR/ VENDOR (SP)	COMMENT
61	6-25-81	CR2940 Tandem Block Switches/Units 1 & 2 PGCC		GE (SP301)	Final Report due 8-1-83.
62	7-10-81	Heavy Weight Concrete/ Units 1 and 2 Bioshield Walls	N/A	NECC (SP20)	Final Report due 12-18-81.
63	8-17-81	Rockbestos Coaxial Cable		Rockbestos (SP793-01)	Interim Report mailed 9-18-81. Final Report due 1-22-82.
64	8-31-81	Pipe Spool Sandblasting	Various	Pullman Power (SP44/47)	Interim Report mailed 9-30-81. Final Report due 1 -11-82.
65	9-4-81	Diesel Generator Engines/Intake and Exhaust Valve Springs	R43	Transam. Delaval (SP562)	Determined not to be reportable.
66	9-10-81	Spool Pieces	1G41	PPP (SP527)	NRC notified 9-24-81. Report due 10-23-81.
67	9-11-81	Limitorque Operator SMB-3, SMB-4, or SMB-5 Motor Pinion Key			NRC notified 9-22-81. Report due 10-22-81.
68	9-14-81	Cable Tray Splice Bolts	Various	L.K. Comstock (SP33)	NRC notified 9-18-81. Report due 10-16-81.
69	9-17-81	RWCU Heat Exchangers Weld Documentation	1G33	GE	NRC notified 10-1-81. Report due 10-30-81.

10-8-81

Conduit Installation Rate

Average per month for 1981 through August 17000'/mo

Remaining footage ≅ 118,000'

During the most recent months the installation rate has averaged ≅ 12,000'/mo

PERRY NUCLEAR POWER PLANT PROJECT ORGANIZATION

☐ I no longer wish to receive this material.

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

AND KAISER ENGINEERS, INC.

PN-6 (REV. 6-80)

MEMORANDUM

PAGE

TO R. Jadgchew ROOM W140 FROM R. Conran DATE Oct. 7, [illegible]

PHONE 331 ROOM W140

SUBJECT Piping Weighting (General)
Spools

A

1. Off Loading	3%	Was in
2. Carry-In	33%	Effect to
3. Installed	29%	July 1981
4. Hangers	30%	
5. Hydro	5%	

B

1. Off Loading	3%	Now in
2. Carry-In	33%	Effect
3. Installed	59%	
4. Hydro	5%	

Note: Hanger's included in "A" are not included in "B"

85% partial
100% ~~total~~

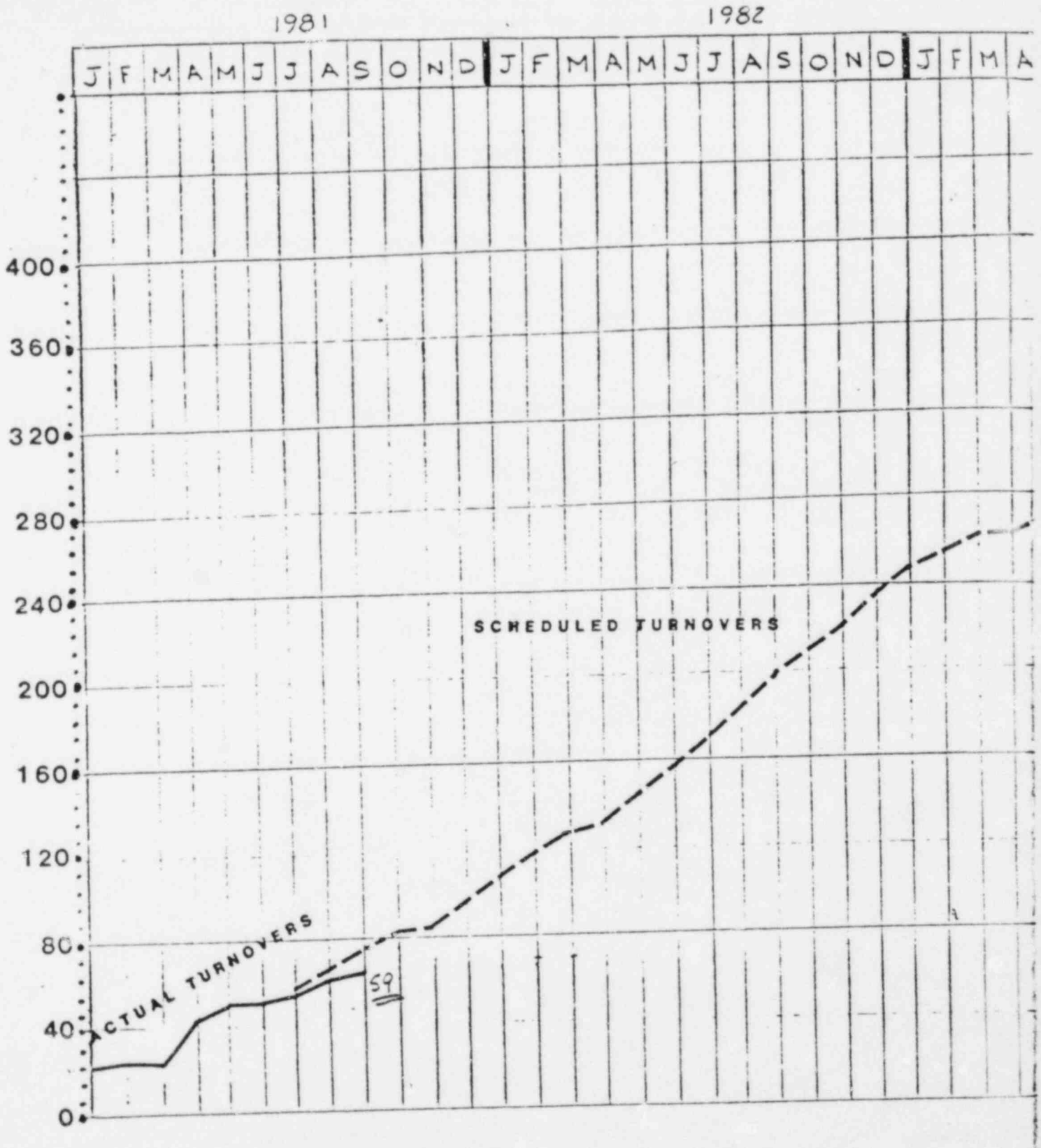
RC/fb

cc: H. Scull W140
D. Younkin W210
L. Wynn W210

- PF TURNOVER 7-10%/mo

- TOTAL AMOUNT SECURITY complete 6 mos PRIOR SINCE SPOOLS DOWN

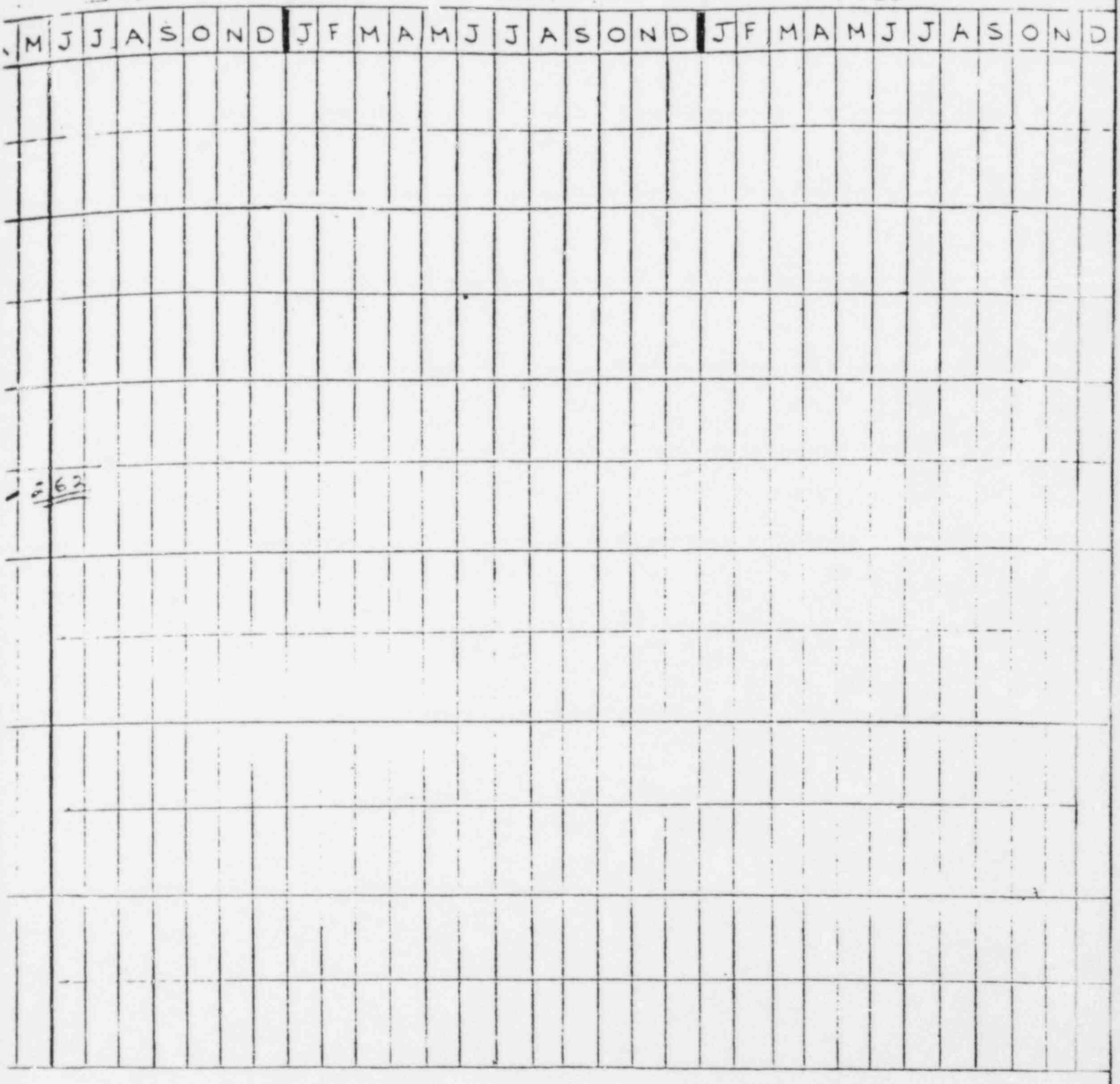
TERM & CABLE [illegible]



SUBSCOPED SYSTEM TURNOVER TO NTS

TO SUPPORT UNIT 1 FUEL LOAD

NO.	



REVISION	DATE		DATE	THE CLEVELAND ELECTRIC ILLUMINATING CO.
		SCHEDULED BY		PERRY NUCLEAR POWER PLANT UNITS 1&2
		DRAWN BY		PROJECT SCHEDULING
		CHECKED BY		TITLE
		APPROVED BY		
		APPROVED BY		
				Sheet Of DWG. No.

Received 10-8-81

10 7-81

CASE LOAD

FORECAST PANEL

LICENSING

1. NUREG 0737

OPERATIONS

TRAINING

PROCEDURES

MANNING

II. B-2 SHIELDING

I.D.I. - C. R. SURVEY

Control Room

ENGINEERING

II.K.3.13 -	AUTO RCIC RESET
II.K.3.28 -	ADS ACCUMULATORS
II.B.3 -	POST ACCIDENT SAMPLING
III.D.1.1 -	LEAKAGE PATHS OUTSIDE CONTAINMENT
III.K.3.15 -	RCIC TIME DELAY
III.K.3.18 -	ADS ACTUATION LOGIC
III.K.3.21 -	HPCS AUTO RESET
III.K.3.27 -	COMMON REF. LEVEL
III.A.1.2 & III.I.D.2 -	ERIS/SPDS/EOF/TSC hardware not ordered but basis del date estimate 12/82 from G.E.
III.E.4.2 -	CONTAINMENT ISOLATION

~~[illegible]~~

2. LICENSING PROBLEMS

RG - 1.97 - CORE EXIT TCs

NEUTRON FLUX

MONITORING

EQUIPMENT QUALIFICATION

NEW LOADS

H_2 CONTROL

ASLB

CASE LOAD FORECAST MEETING
ATTENDANCE

NAME	ORG.	title
Bill Coleman	NL&F	Senior Licensing Engineer.
Barry Barkley	NDS	Gen Supv Engr
Larry Beck	NL&F	Gen Supv Engr
Ronald L Fanell	NQA	Manager, Nuclear Quality Assurance
J.M. LASTOVKA	NTS	GEN. SUPV. ENG.
R.A. Gilbert	NRC	Project Manager
W H. LOVELACE	NRC	ENGINEER
E. R. SCHWEIBINZ	USNRC	REACTOR INSPECTOR
M.J. TITAS	PPSD	MANAGER
G. H. LOCKWOOD	PPSD	GEN SUPV. CONST. BUYING
J.A. KLINE	NED	GEN SUPV NUC. CONST
MURRAY EDELMAN	NED	MGR
[illegible]	[illegible]	General Supervising Engineer

10-9-81

Tim Matheny	Scheduling Supervisor
Jeff Porterfield	Project Controls Mgr.
M. J. TITAS	MANAGER - PERRY PROJECT SERVICES
Larry Beck	CEI Licensing
J. M. LASTOVKA	GEN. SUPV. ENG. - NTS
Murray Edelman	Mgr - NED
G. H. LOCKWOOD	GEN. SUPV. CONST BUYING