

MONTHLY PROJECT REPORT
NINE MILE POINT-UNIT 2

APRIL, 1984

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R PDR



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I. EXECUTIVE SUMMARY

The 13 Milestone Schedules were issued by April 30th and they forecast a target fuel loading date of October 1985. This is later than the directed target date of August 1985, but four months ahead of our official fuel loading date. The major critical path identified involves resolving the complexities of installing whip restraints, small bore piping, conduit and electrical work in the restricted areas of the reactor and containment buildings. This problem is receiving management priority.

With the issue of the Milestone Schedules, we can now say that this Project is on schedule for an October 1986 commercial operation.

The Project is preliminarily assessed at 73.09% complete. Unlike previously reported Construction percent complete, this figure is representative of overall Project completion including testing, records and quality assurance.

Our Phase I Work Force Reduction Plan is proceeding on schedule toward a May 15 reduction of the overall manual and non-manual work force by 1000, without significant change to productivity.

The overall performance of contractors is nearly acceptable. However, major shortcomings yet to be thoroughly addressed by this organization are as follows:

- . Housekeeping - Housecleaning
- . Improvement of supervision of work force
- . Improved management of work areas
- . Adherence to schedule

Intensive management efforts are being directed into these areas.

Future reports will carry a section entitled "Quality Performance Management Program" (QPMP). This will provide quality production and trending information for key indicators; together with related management actions.

The cleanup of the NRC - Cat Audit Action Plan continues essentially on schedule. No major rework (other than PGCC) has been required. Independent QA verification of actions is underway. Our response to the NRC enforcement letter has caused some modifications to our action plans in the area of preventive action.

I. EXECUTIVE SUMMARY (Cont.)

Through April, \$228.5 million has been expended, which is \$5.9 million under the Cash Forecast of \$234.3 million as defined in the \$615 million Cash Plan. During April, \$63.6 million was expended, versus the \$59.5 million planned.

Development of the cost control plan is not moving forward sufficiently due to heavy commitments to the NMPC Cost staff. This will lighten up in May and improvements are expected.

In April we welcomed, Mr. Jim Anderson, Start-up Manager to the site. He is responsible for construction and pre-operational testing and start-up. Mr. Anderson is from Management Analysis Company and brings with him extensive managerial experience in BWR Start-up.

NINE MILE POINT NUCLEAR STATION - UNIT 2 **TOTAL PROJECT PERCENT COMPLETE**

I MILESTONES

1. ENERGIZATION 4160 V
2. CONDENSATE DEMINERALIZER
3. SERVICE WATER
4. STANDBY DIESEL
5. INTEGRATED FLUSH
6. FLOW INDUCED VIBRATION
7. TURBINE GENERATOR
8. VENTILATION
9. INTEGRATED LEAK RATE
10. RADWASTE SYSTEM
11. FUEL RECEIPT
12. LOSS OF POWER/ECCS
13. FUEL LOAD
14. FUEL LOAD TO C.O.

SUBTOTAL

II CONSTRUCTION COMMODITIES

1. PIPING
2. ELECTRICAL
3. I & C
4. HVAC
5. CIVIL

SUBTOTAL

III STARTUP & TEST COMMODITIES

1. HYDROS
2. LOOP CALIBRATIONS
3. CONTROL CIRCUIT VERIFICATIONS
4. INITIAL EQUIPMENT OPERATION
5. FLUSHES
6. PENETRATION LEAK RATE TESTS

SUBTOTAL

IV ENGINEERING

1. STRESS RECONCILIATION
2. EQUIPMENT QUALIFICATION
3. LICENSING
4. SPARE PARTS
5. BALANCE OF ENGINEERING

SUBTOTAL

V MISCELLANEOUS

1. QUALITY ASSURANCE
2. RECORDS TURNOVER TO PPF

SUBTOTAL

TOTAL

STATUS AS OF 5/1/84

PERCENT OF TOTAL PROJECT	ITEM PERCENT COMPLETE	WEIGHTED PERCENT COMPLETE		1984												1985												1986																	
		CUM	INC	J	F	M	A	M	J	J	A	S	O	N	O	J	F	M	A	M	J	J	A	S	O	N	O	J	F	M	A	M	J	J	A	S	O	N	O						
2.49	98.1	2.39	.022																																										
2.98	86.7	2.58	.063																																										
6.06	86.6	5.25	.061																																										
.53	61.8	0.33	.017																																										
13.09	74.0	9.69	.314																																										
0.09	68.8	0.06	.002																																										
2.70	75.2	2.03	.051																																										
4.45	67.5	3.00	.093																																										
1.14	46.4	0.53	.039																																										
1.34	63.0	0.84	.044																																										
.75	47.9	0.36	.029																																										
.81	42.5	0.34	.024																																										
.47	55.5	0.26	.011																																										
1.10	0.0	0.0	.0																																										
38.0%	72.9%	27.66%	.770%																																										
				* TARGET FUEL LOAD DATE IS 10/31/86																																									
9.45	77.8	7.35	.353																																										
6.63	58.6	3.89	.246																																										
0.99	36.6	0.36	.026																																										
0.83	68.0	0.56	.119																																										
13.10	100.0	13.10	—																																										
31.0%	81.48%	25.26%	.744%																																										
1.0	6.4	.064	.013																																										
1.0	2.7	.027	.027																																										
1.0	1.1	.011	.011																																										
1.0	1.5	.015	.015																																										
.75	0.9	.007	.007																																										
.25	0	0	0																																										
5.0%	2.48%	.124%	.073%																																										
.542	10.02	.0543	.0257																																										
.254	62.64	.1591	.0065																																										
.560	63.16	.3537	.0080																																										
.310	41.93	.1300	.0100																																										
18.334	90.76	16.64	.0500																																										
20.0%	86.70%	17.35%	.101%																																										
5.0	50.0	2.50	.025																																										
1.0	21.0	0.21	.030																																										
6.0%	45.2%	2.71%	.055%																																										
100.0%	—	73.09%	1.76%																																										

NOTE: This table is preliminary and reflects project data available as of 5/1/84. Revised data from the Project Control Program will be included as it is developed.

Revised Percent Complete Explanation

General

The revised Nine Mile II Project Percent Complete calculation basis is designed to provide a progress measurement tool which is comprehensive and broad based.

It includes input from milestone schedules, Construction commodities, Startup and Test commodities, Engineering, Quality Assurance and Records Management. This broad spectrum of inputs provides a balance between bulk project completion and schedule achievement, with a prioritization of work items.

The following is an overview for each category of the calculation basis.

Milestones

This category includes the 13 milestones recently established along with a milestone for fuel load to commercial operation. Progress will be based upon time earned on critical paths.

Construction Commodities

This category includes the major construction groupings of piping, electrical, instrumentation and control, heating and ventilation and civil. Each major grouping is progressed based on installation of various commodities included within the group.

Startup and Test Commodities

This category includes key production based testing tasks (test commodities), piping hydros, loop calibrations, control circuit verifications, initial equipment operation, flushes and penetration leak rate tests. Progress will be based upon tasks completed.

Engineering

This category includes a miscellaneous item which reflects past Engineering tasks completed, along with essentially non-production related work to complete. In addition, significant production related tasks for stress reconciliation, equipment qualification, licensing and spare parts are included. This category will earn progress based upon work completion as delineated on the Engineering Summary Schedule Chart.

Miscellaneous

This category is comprised of Quality Assurance and Records Management/Permanent Plant File related tasks. Quality Assurance tasks will be measured by inspections completed on key commodities. Records Management/Permanent Plant File tasks will be measured by documents entered into the Permanent Plant File.

Each month, the Total Project Percent Complete table will be updated, as well as an overall Percent Complete Curve showing the increment for that month and the cumulative amount through that period.

II. ENGINEERING

Overall Engineering and design efforts continue on schedule. The most notable areas include cable routing, cable ticketing, set point development, responses to NRC FSAR questions, Appendix R efforts, Category II and III stress data packages, ALARA shielding, the main plant computer, emergency response facility computer, and radiation monitoring computer efforts.

Areas requiring attention relative to schedule impact include: Of the 129 drawings reported late last month, only 110 remain to be issued. Of the 110 drawings remaining, only 69 are required for construction and will be issued as follows:

- . . . Electrical - 32 drawings missing vendor information - June
- . . . Structural - 4 drawings scheduling requirements - May
- . . . Neutron monitoring support - 4 drawings - May
- . . . Instrumentation - 4 drawings on hold - June
- . . . Power Engineering - 12 drawings on hold - July
- . . . Berm Drawings - 13 drawings - September

The As-Built stress effort remains behind schedule. A comprehensive integrated schedule is being developed to plan the completion of piping and hanger work and the engineering stress reconciliation effort. The completion of this work will support the Milestone Schedule target dates and includes the incorporation of the mirror insulation installation and Inservice Inspection requirements. This is expected to be available by June 1.

The total Spare Parts Procurement Effort has been reassessed and a recovery plan schedule developed. The new schedule will have all spare parts procured by October 1984. At this stage, the procurement effort is approximately 50% complete. One Power specification, Penetration Seal Assemblies, has fallen behind schedule. A recovery plan is being developed to shorten specification preparation and bid evaluation time durations.

Significant actions have been taken in order to accomplish Headquarters' destaffing. In April, overtime levels were reduced to a 6% average and approximately 162 individuals have been removed from Headquarters' staff. Approximately 25 of these individuals were assigned to the Site Engineering Group. The most significant area of destaffing has occurred in the Engineering Mechanics Division.

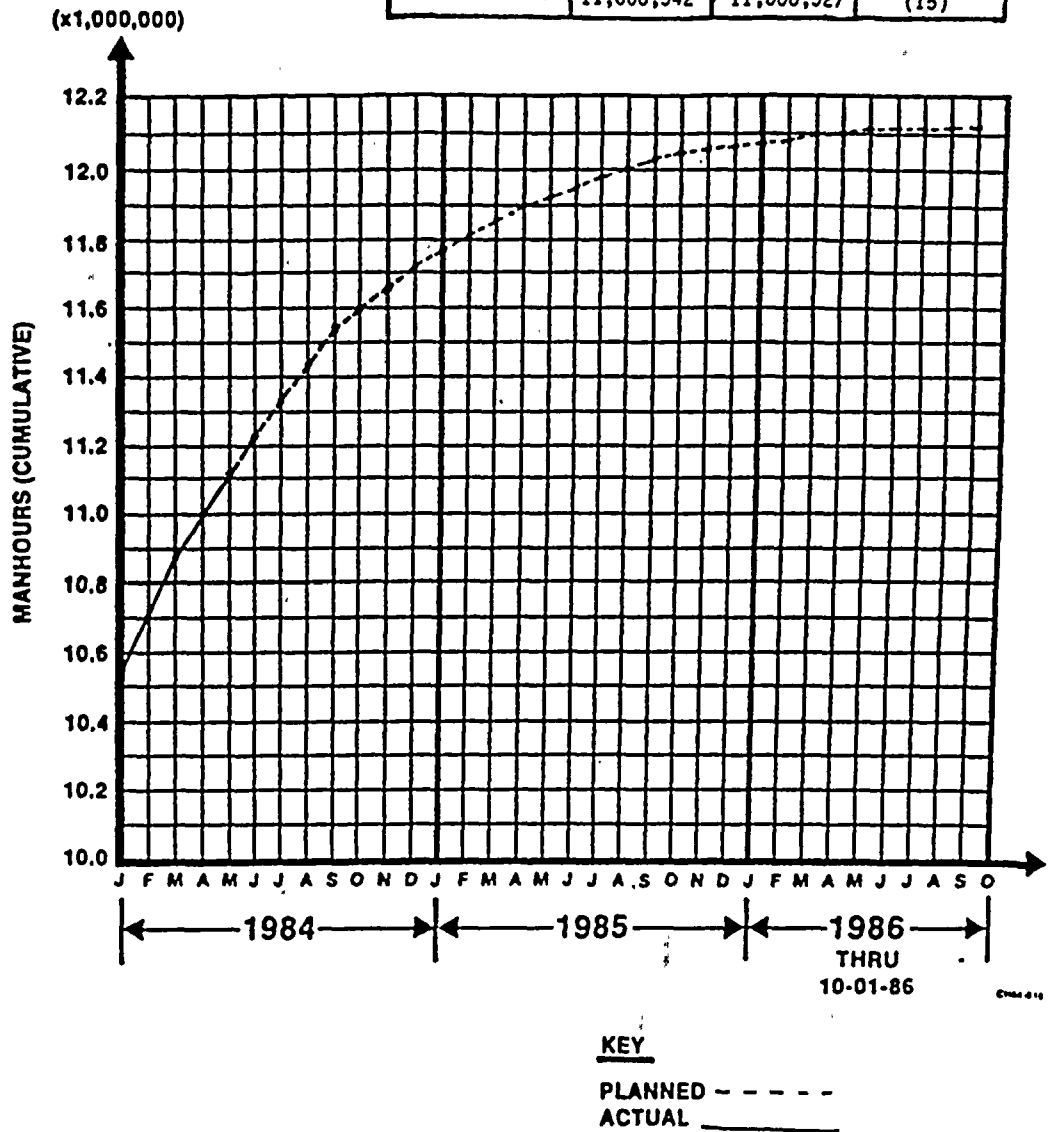
Fire detection panels will be delivered on site during the month of July as noted in last month's report.

In an effort to reduce Project Engineering and Design costs, SWEC is implementing the following actions:

- a. Eliminating the incorporation of ACNs, E&DCRs, N&Ds, and red line pipe support markups into Category II and III nonseismic drawings and Category II and III seismic pipe support drawings and continuing the incorporation of ACNs and red line drawings into Category II and III seismic pipe support calculations.
- b. Significantly reducing model maintenance to one equivalent man by July 1984 and relocating the model to the site by mid-June to assist SEG and Construction in problem resolution.
- c. Use of Record of Change in drawings will cease.
- d. Revising the change Exception Restraint List update from weekly to monthly.
- e. Reducing the level of documentation of how NMP2 specifically complies with NRC Standard Review Plans. This effort is already partially complete and will be completed by January 1, 1985.

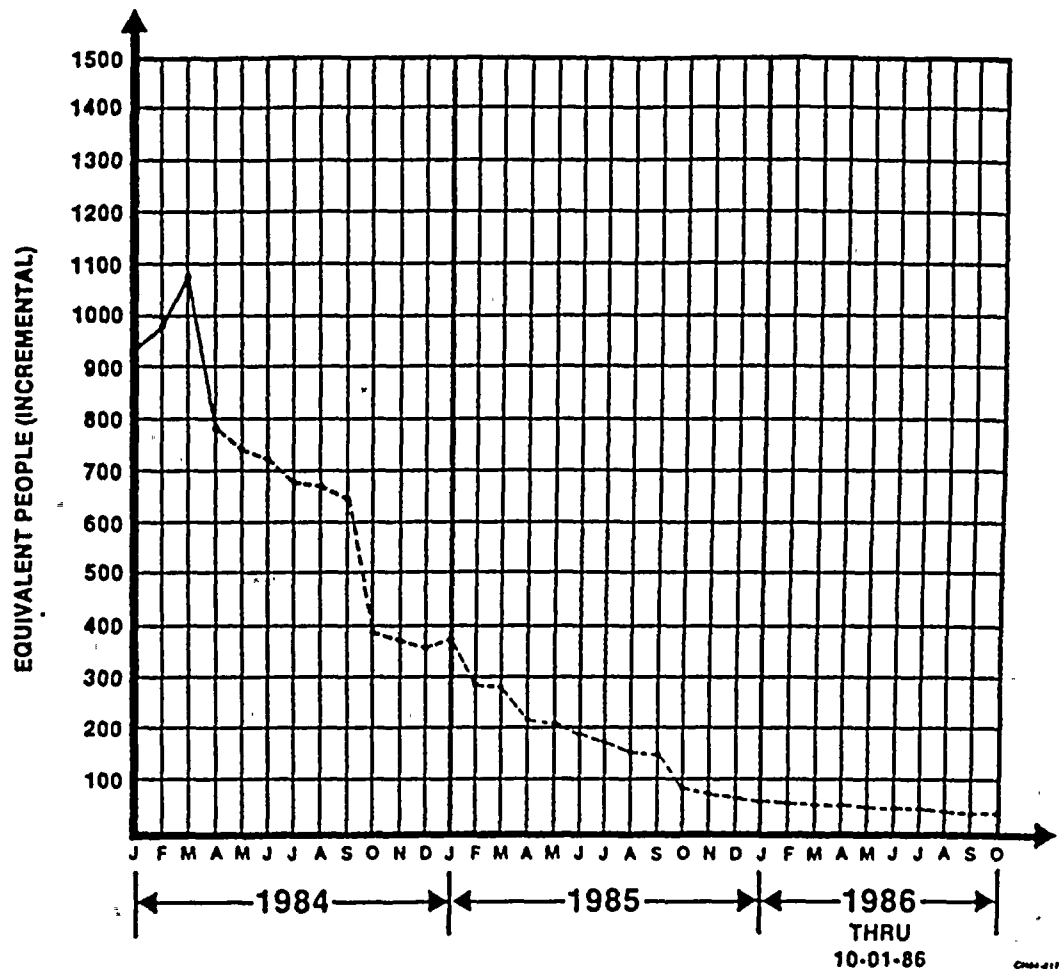
SWEC ENGINEERING AND DESIGN MANHOURS (CHERRY HILL)

	PLANNED	ACTUAL	VARIANCE
APRIL	130,000	122,000	(8,000)
CUMULATIVE	11,000,542	11,000,527	(15)



SWEC ENGINEERING AND DESIGN PERSONNEL (CHERRY HILL)

	PLANNED	ACTUAL	VARIANCE
APRIL	787	787	0



NOTE: AN EQUIVALENT PERSON EQUALS
155 MANHOURS PER MONTH

KEY
PLANNED - - - - -
ACTUAL - - - - -

III. CONSTRUCTION

General

Action programs have been initiated by NMPC Construction to address housekeeping, housecleaning, material control, unit rate performance, and adherence to scheduled activities.

Construction completion for turnover schedules is being reviewed to provide a plan for recovery of late BIP's.

SWEC has submitted revised Construction organization charts for NMPC approval. NMPC's Construction staff will be structured to complement the SWEC organization. Revised Contractor organization charts are due by May 11, 1984.

ITT-Grinnell

Commodity performance continued to improve slightly during April. Grinnell continues to demonstrate improved cooperation in support of the milestone schedules. They are making considerable progress in closure of NRC CAT audit findings. Remaining deviation reports are now prioritized by BIP's and will be completed at a rate supporting the turnover schedule. Major action items are being assigned to relieve procedural problems and material constraints. Commodity completion dates will be rescheduled to reflect production improvements.

The loss of 21 QC personnel during this period forced the redeployment of available inspectors onto critical path activities. Efforts are underway to obtain replacement QC personnel. Nevertheless, a recovery plan has been agreed to by ITT-G, and Cat. I commodities in the Containment Building are scheduled for essential completion over the next five months.

Plans are underway to transfer completion of Cat. II large bore hangers from 4x to 5x, to SWEC from ITT-Grinnell. This will permit SWEC Engineering to evaluate hangers in the 4x condition, and should reduce rework.

A two-week freeze on taking pre-March '83 large bore Cat. I hangers from 4 x to 5x has been made while SEG conducted an engineering survey of hangers in this category. They will make recommendations as to the most efficient method of cleaning up these hangers.

SWEC Force Account

Small bore hanger installations were well ahead of planned quantities and Cat. 2 and 3 large bore hangers were slightly ahead of planned quantities..

Specific actions have been assigned to recover what is envisioned as a temporary downturn in small bore piping performance. It should be noted that the small departure is, in part, due to the 1984 work plan targets which specified a more aggressive quantity installation target for this period. Performance requirements are currently being reconciled.

L. K. Comstock

Cable pulling performance and conduit installations improved during April while termination quantities were below planned quantities. The linear feet available for cable installation (clean work available) diminished at the end of the month. Terminations will improve significantly as cable pull tickets are released. SWEC Engineering is currently expediting ticket releases.

Management action items addressed during the month included commitments to increase cable pulling backlog, improve commodity performances through preplanning work activities, addition of planning engineers within LKC's staff, and identified concerns requiring engineering resolution of constraints by providing specification relief where possible, along with necessary clarifications/interpretations.

GE PGCC

Corrective resolutions for sub-divisional separation deficiencies are proceeding favorably. A scheduled completion forecast has been established as May 16. Of significant note is the fact that out of 42 panels, only 4 remain on hold as of this writing. These are scheduled for May 29. Two additional panels were added (in terms of scope growth) to original subdivisional involvement. Estimated completion is slated for June 10. These were added the first week in May.

The criteria provided for divisional separation are being implemented, and approximately 75% are resolved which will allow activities to conclude on May 16. The integrated (NMPC/SWEC/GE) team continues to drive toward resolution: grounding concerns, separation issues, timely disposition of N&D's, and clean work availability.

Johnson Controls, Inc.

Instrument tubing and seismic tube support installations continued to fall short of planned quantities. However, management actions taken yielded improvements at the end of April. Management action items under consideration during the month included instrumentation scope definition, material requirements, Quality Control inspection procedures and interface with related construction activities performed by others.

Particular effort has been made to establish a clear definition of JCI's scope of work for planning and scheduling activities. JCI has established more aggressive supervision against a tight weekly commodity performance program. These efforts have formed the basis for a joint SWEC/JCI/NMPC recovery plan which will improve the installation rates to a satisfactory level in the near term.

Schneider Power Corp. (HVAC)

During April, fire damper concerns were resolved and orders were placed to supply necessary replacements. Discussions continue on leak test requirements.

Construction Completion and Release for Preliminary Tests

The status of the Boundary Identification Package (BIP) Construction Completion Program as of April 19, 1984 is:

<u>ITEM</u>	<u>SCHEDULED</u>	<u>ACTUAL</u>
Sub BIP's Issued	329	329
Equipment Release Reports		
(ERR'S) Issued by Construction	92	36
Sub BIP's Accepted by SWEC AOD	92	28

During April, one (1) BIP (91.001 PROCESS COMPUTER) was accepted by SWEC AOD for preliminary test.

It should be noted that changes in SWEC's allocation of personnel to the Construction Completion Program, institution of revised schedules, and adjustments to manual staffing will support future construction completion goals and significant improvement is anticipated by June 1984.

Future status will be reported against the new milestone plan.

Other Contractors To Be Noted:

<u>Contractor</u>	<u>Remarks</u>
Zurn Industries (Cooling Tower)	Remobilized for punchlist and general cleanup.
Tuscarora Const. (Revetment Ditch)	Mobilized this month and began excavation activities.
John P. Bell & Sons, Inc. (Sewage Plant)	Mobilized for construction of Sewage Treatment Plant.
Pullman Power Products Corp. (Main Stack)	Mobilized and had their 1st concrete placement the week of April 24.

Unit Rate Improvement Program

A procedure for improving construction unit rates has been drafted and implementation is currently in progress. Thirteen basic key commodities (i.e. SB pipe, LB pipe, etc.) and eight non-unit rate activities (i.e. scaffolding, general clean-up, etc.) have been selected for routine monthly review. Target unit rates and manhours are being set up and progress will be monitored against these targets. The targets will be established as a joint effort by SWEC, Contractors, and NMPC. Corrective action requirements will be periodically assigned in an effort to bring actual unit rates down to the target levels. Future monthly reports will address (at a summary level) the progress being made in this area.

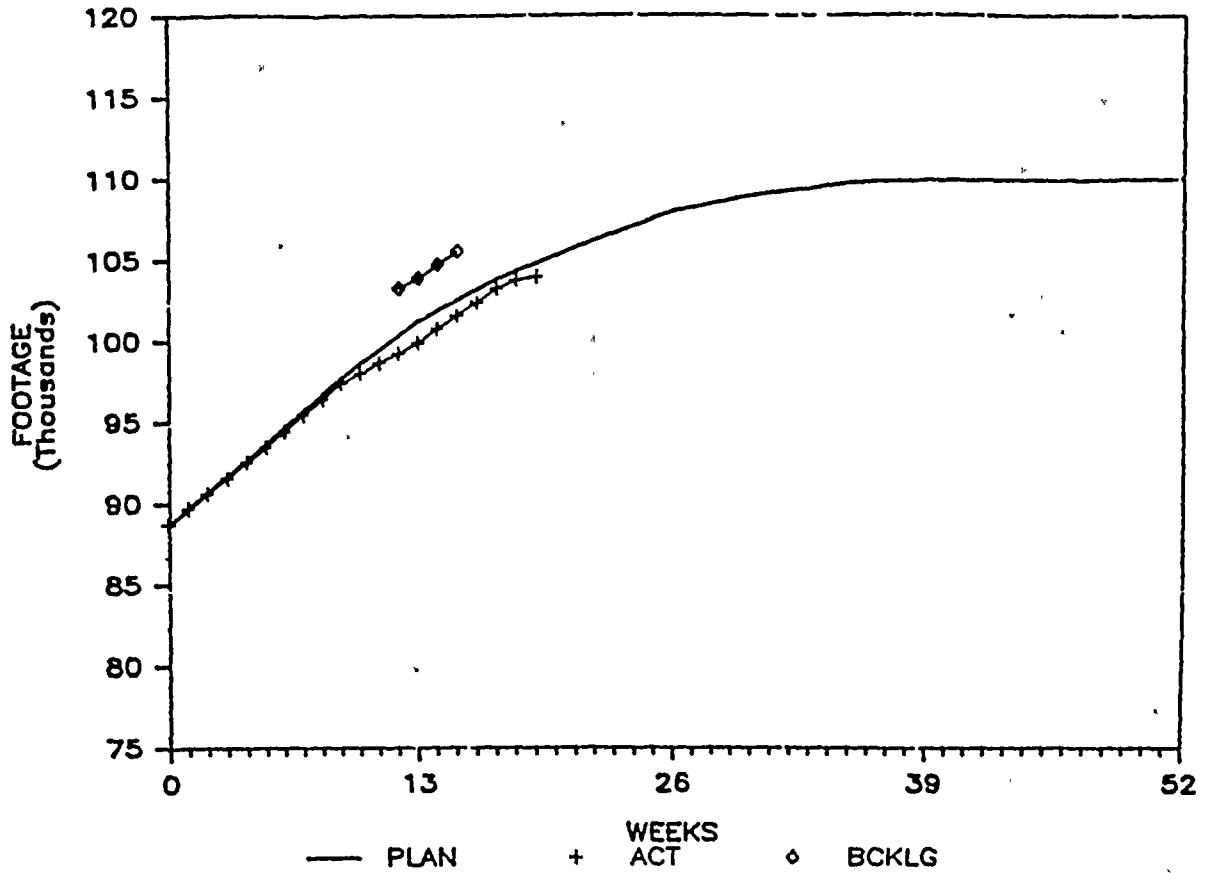
SITE STAFFING
(As of April 27, 1984)

	<u>MANUAL</u>	<u>NON-MANUAL</u>	<u>TOTAL</u>
Stone & Webster	1286	1392	2650
Walsh	835	41	876
L.K. Comstock	840	99	939
ITT Grinnell	1151	437	1588
Pullman Power	11	3	14
S/M/S	125	5	130
Zurn	23	3	26
Cives	15	3	18
Grinnell Fire Prot.	16	2	18
Reactor Controls	63	12	75
Castaldo	9	1	10
Schneider	154	15	169
G.E. Multicraft	69	10	79
Plimouth Mgmt.	12	1	13
Johnson Controls	183	85	268
Central City Roofing	4	0	4
R.A. Keasby	5	0	5
Viking Fire Prot.	4	0	4
Randall Electric	5	0	5
H.H. Robertson	5	0	5
Metal Cladding	3	1	4
NMPC Staff	0	382	382*
 TOTAL MANUAL	 4831		
TOTAL NON-MANUAL	2579		
TOTAL SITE STAFFING	7410		

*Includes MAC, NYSEG & RG&E

1984 ITT PLAN VS ACT

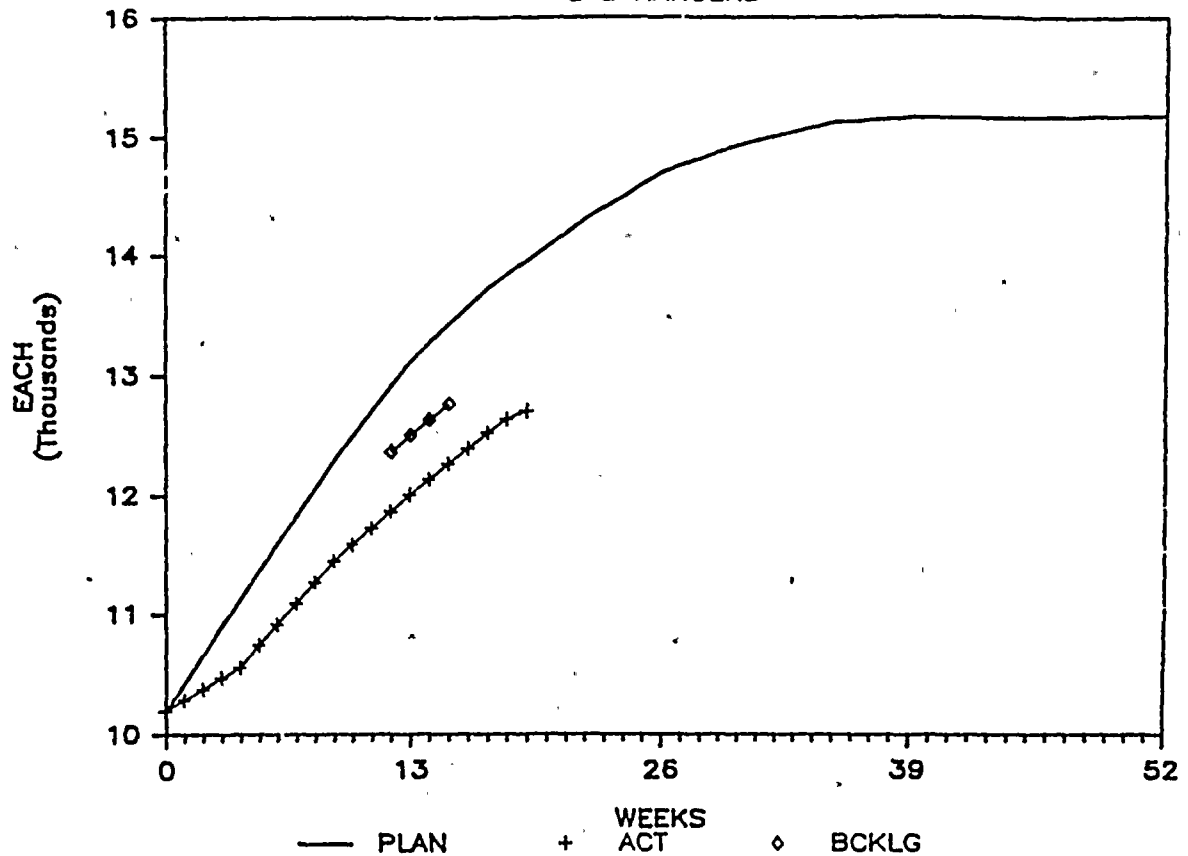
S B PIPE



- . Production has been trending well.
- . No major actions required. Commodity essentially on track.

1984 ITT PLAN VS ACT

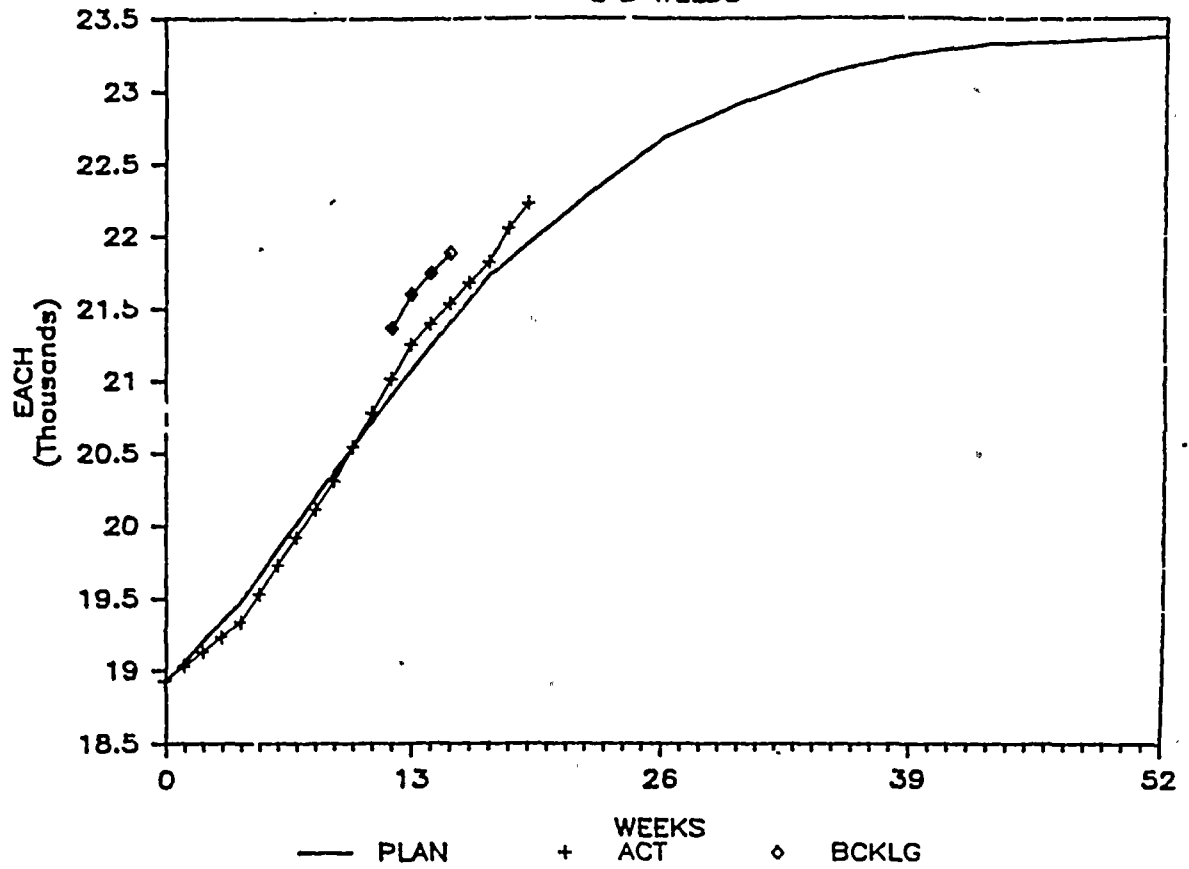
S B HANGERS



- . The installation rate is below plan.
- . Actions have been assigned to SWEC Engineering, Construction and ITT Grinnell to generate recovery dates.
- . Planned targets reflect the 1984 work plan and require adjustments consistent with Milestone Schedule quantity requirements.

1984 ITT PLAN VS ACT

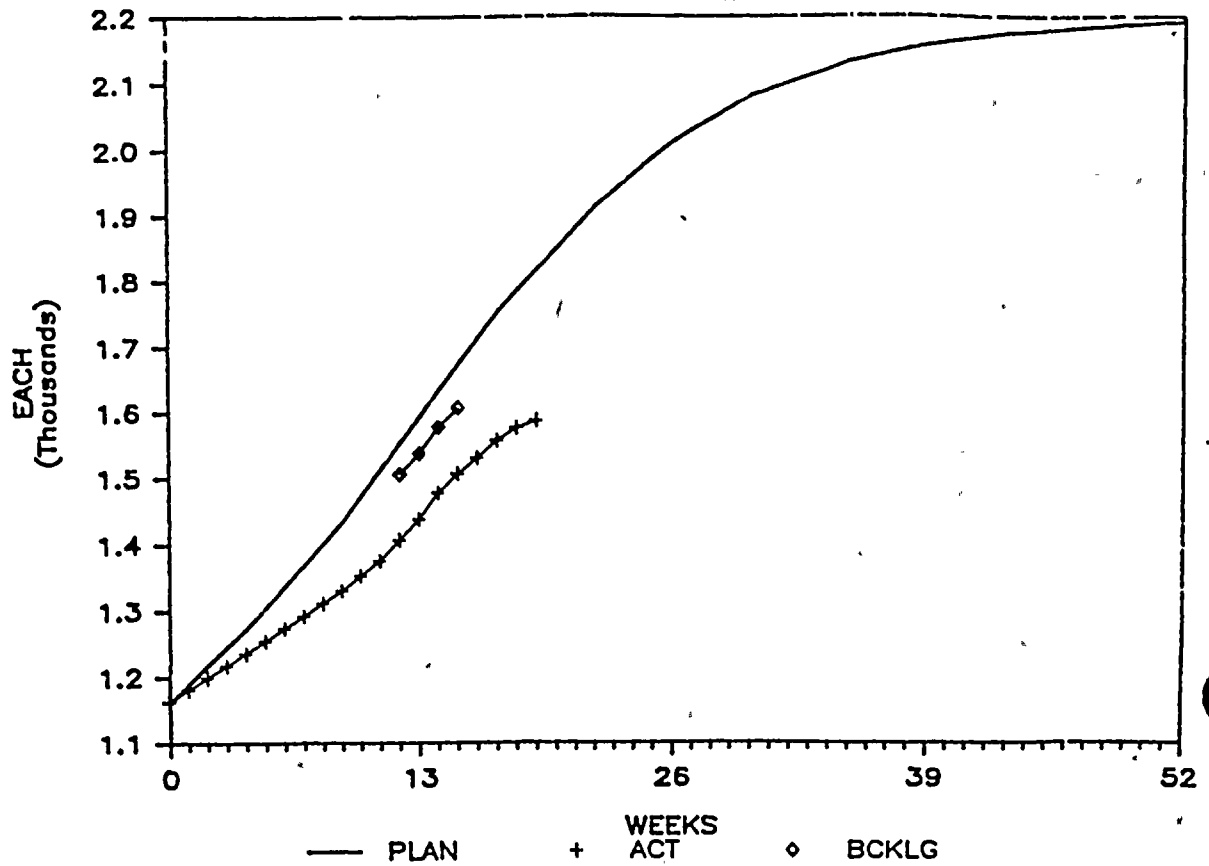
L B WELDS



. Installation ahead of plan. An action plan is in place for Cat. I welds on the critical path.

1984 ITT. PLAN VS ACT

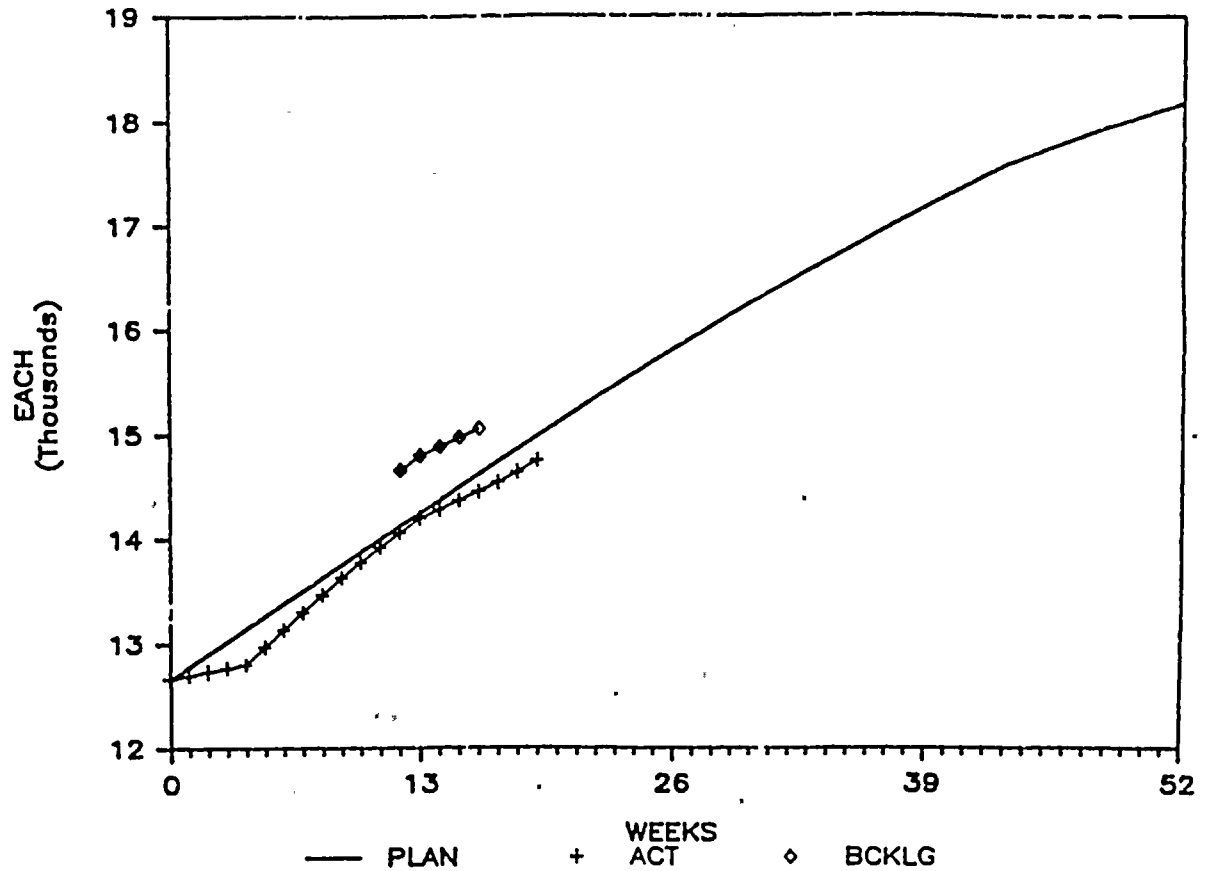
L B VALVES



Production will improve as a result of valve releases from the warehouse which required clearing of UNSATS. Action in progress.

1984 ITT PLAN VS ACT

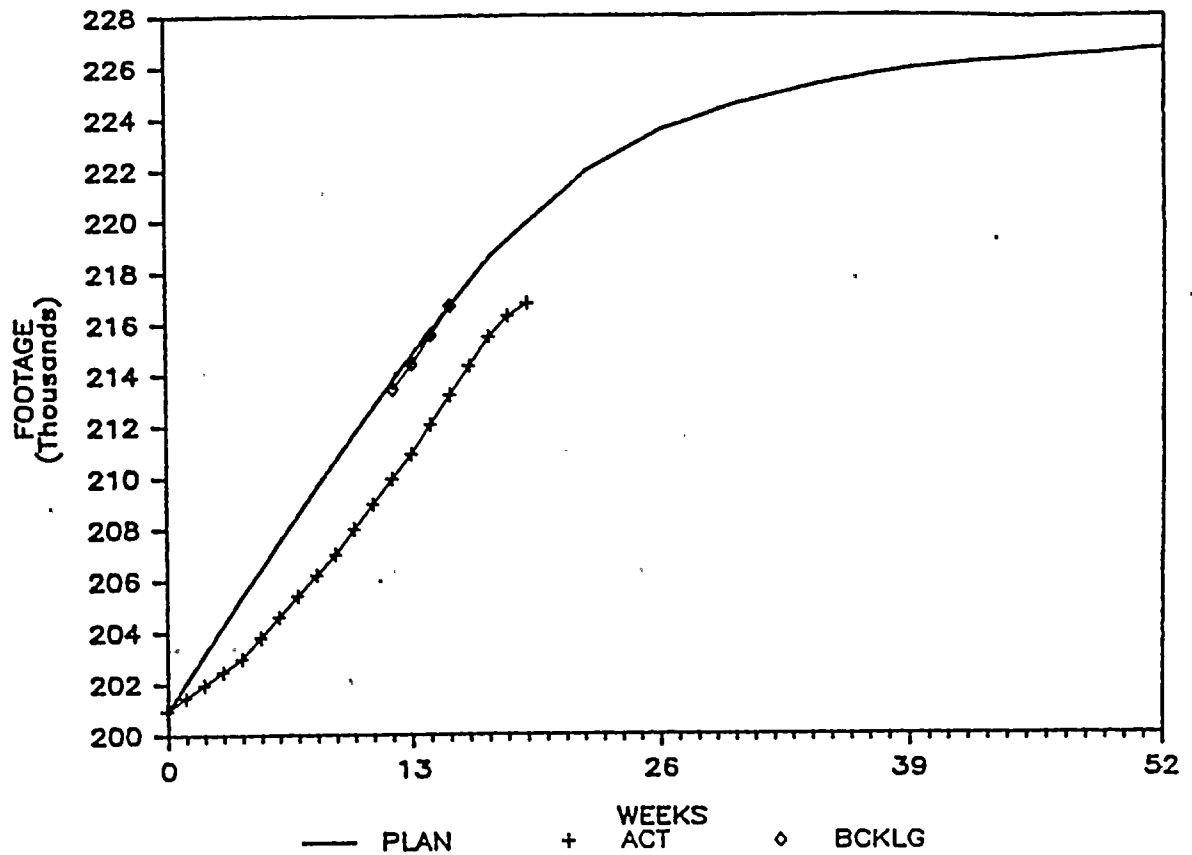
L B HANGERS



- . Construction commodity installation essentially on target.
- . Cat. I hanger recovery plan is in effect for critical path hangers.

1984 ITT PLAN VS ACT

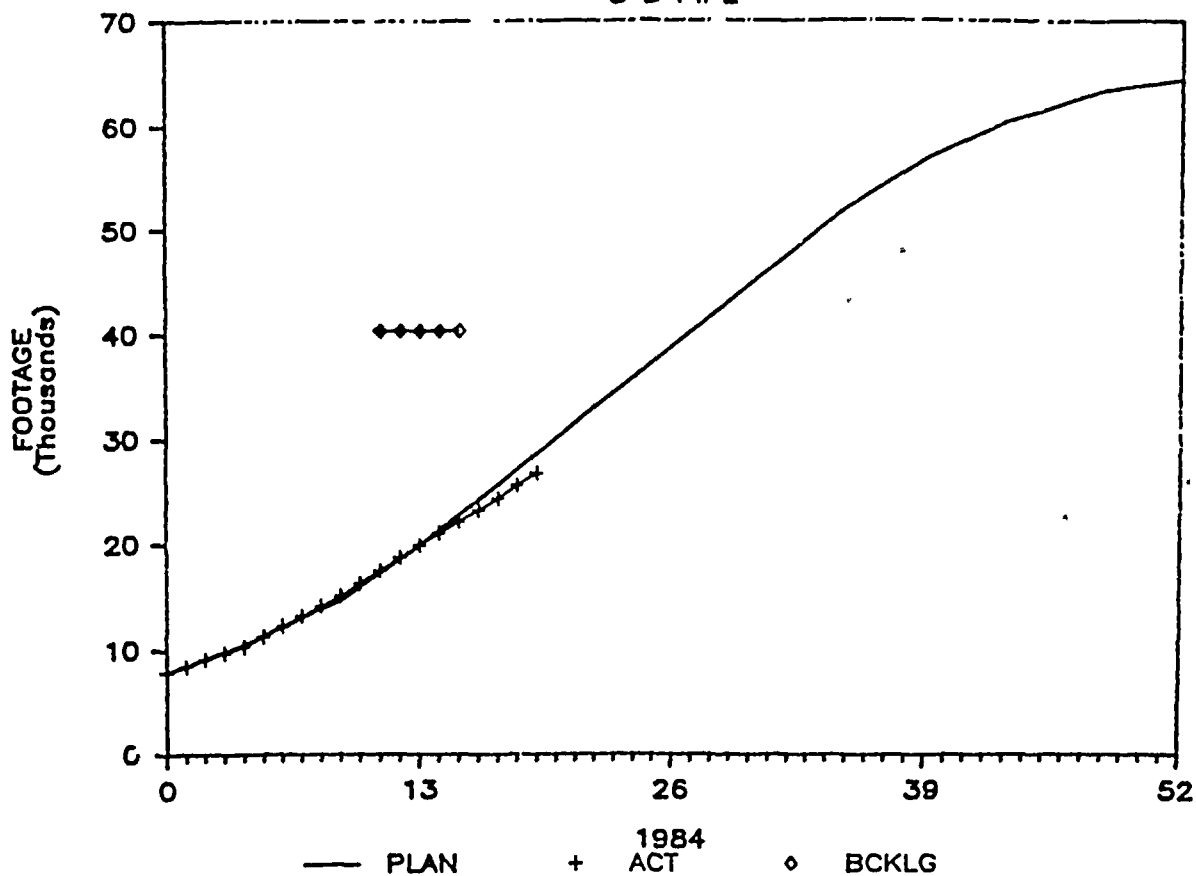
L B PIPE



- . Production reflects Easter week's high absenteeism.
- . No major actions identified or required except for Cat. I pipe - Action plan in place.

SWEC PLAN VS ACT

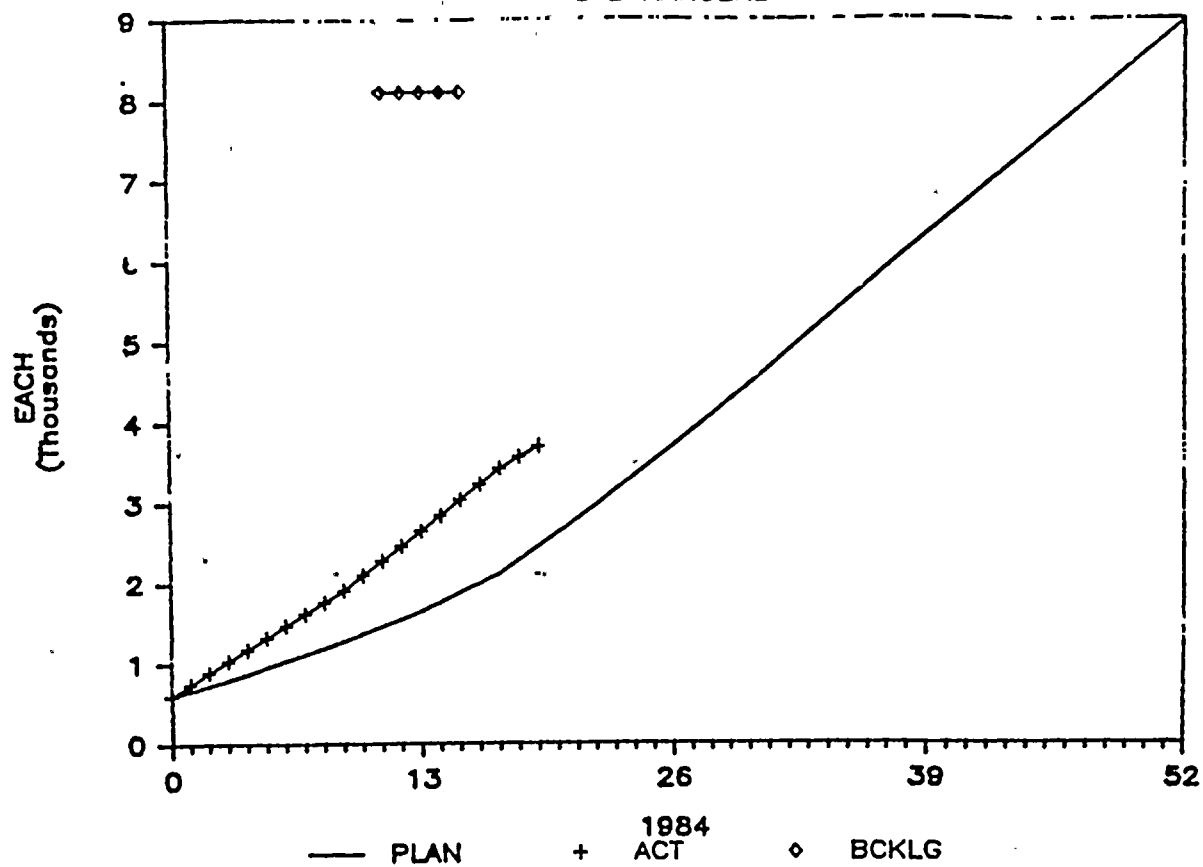
S B PIPE



- . Slight downturn in production.
- . Plan based on 1984 work plan shows aggressive installation targets for this period and may be more than milestone schedule requires. Curves to be reconciled by SWEC.
- . SWEC obtaining additional field engineering support.

SWEC PLAN VS ACT

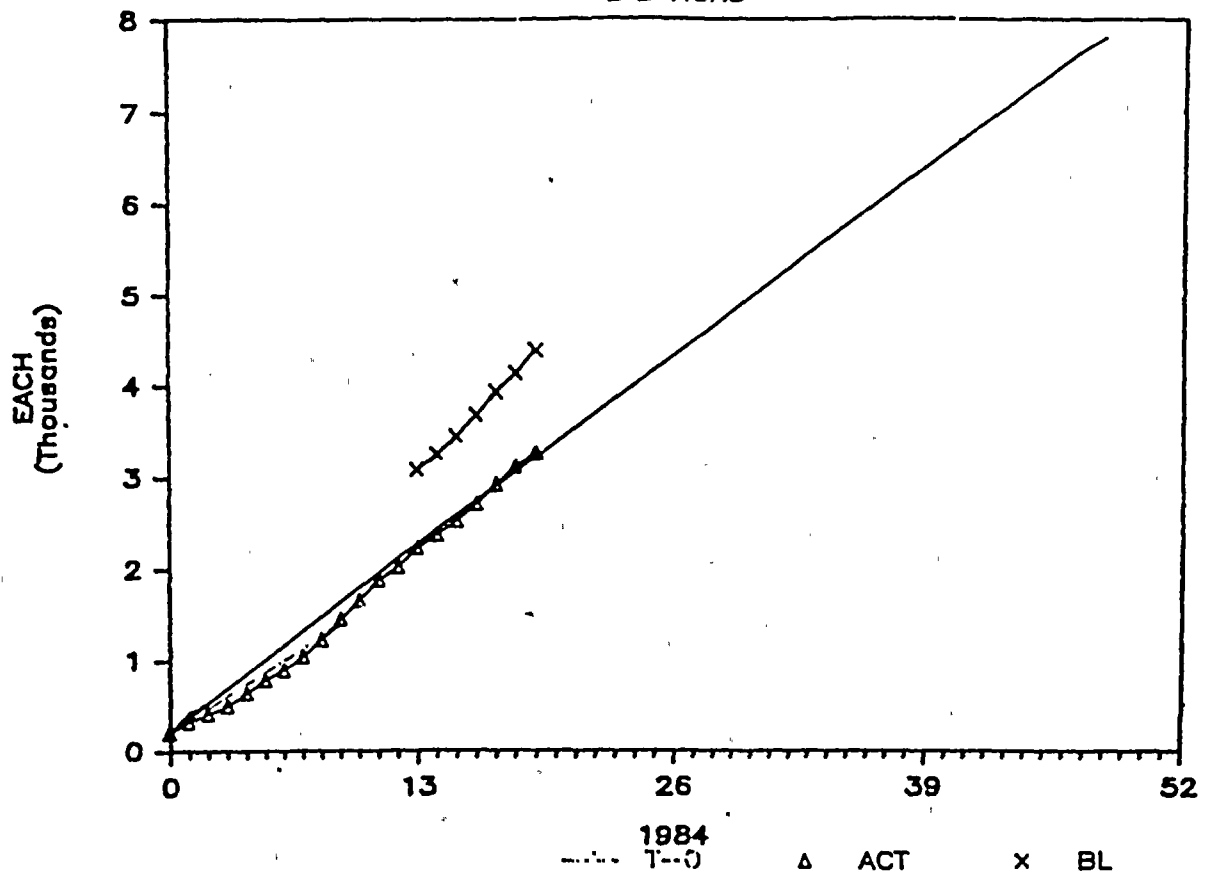
S B HANGERS



. Tracking well above plan.

SWEC CAT 2 & 3

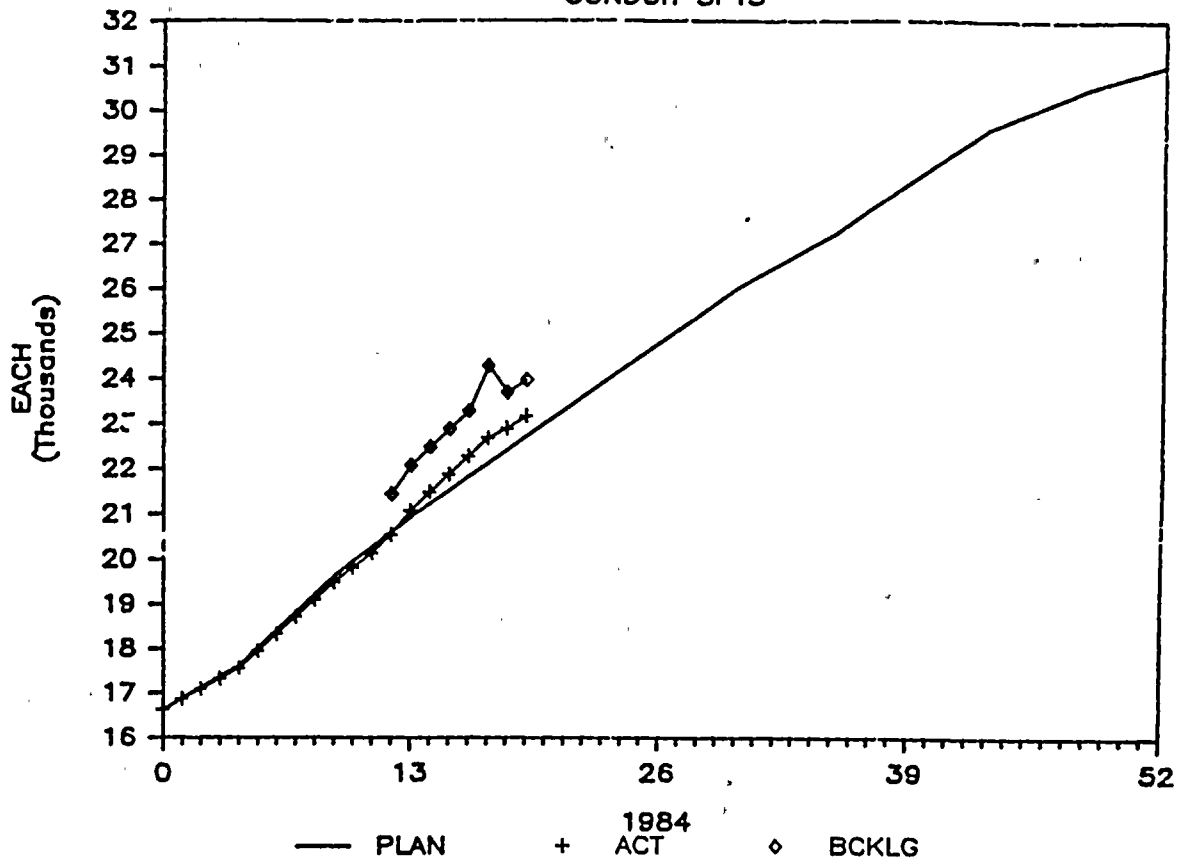
L B HGRS



LB Hangers (Cat. 2 and 3) on target.

LKC PLAN VS ACT

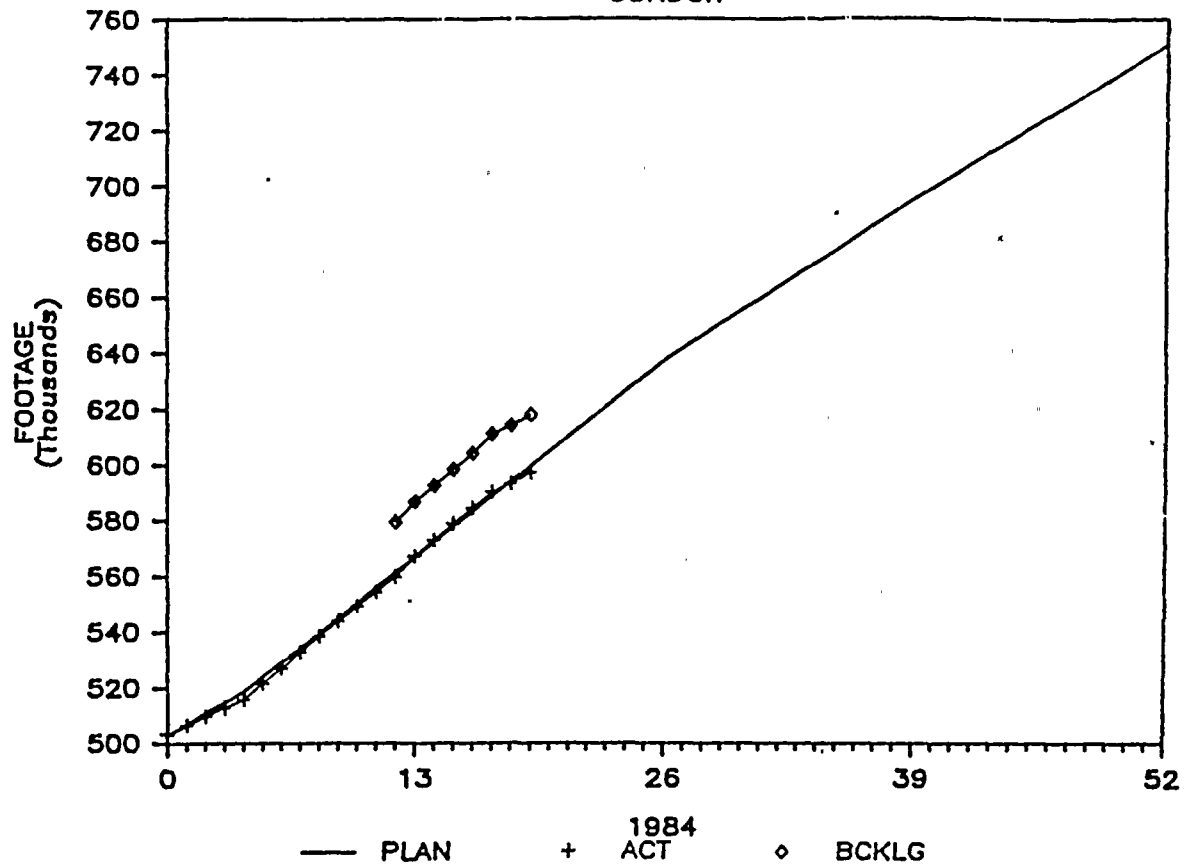
CONDUIT SPTS



- . Tracking above plan.
- . Work underway to open up clean work available (CWA).

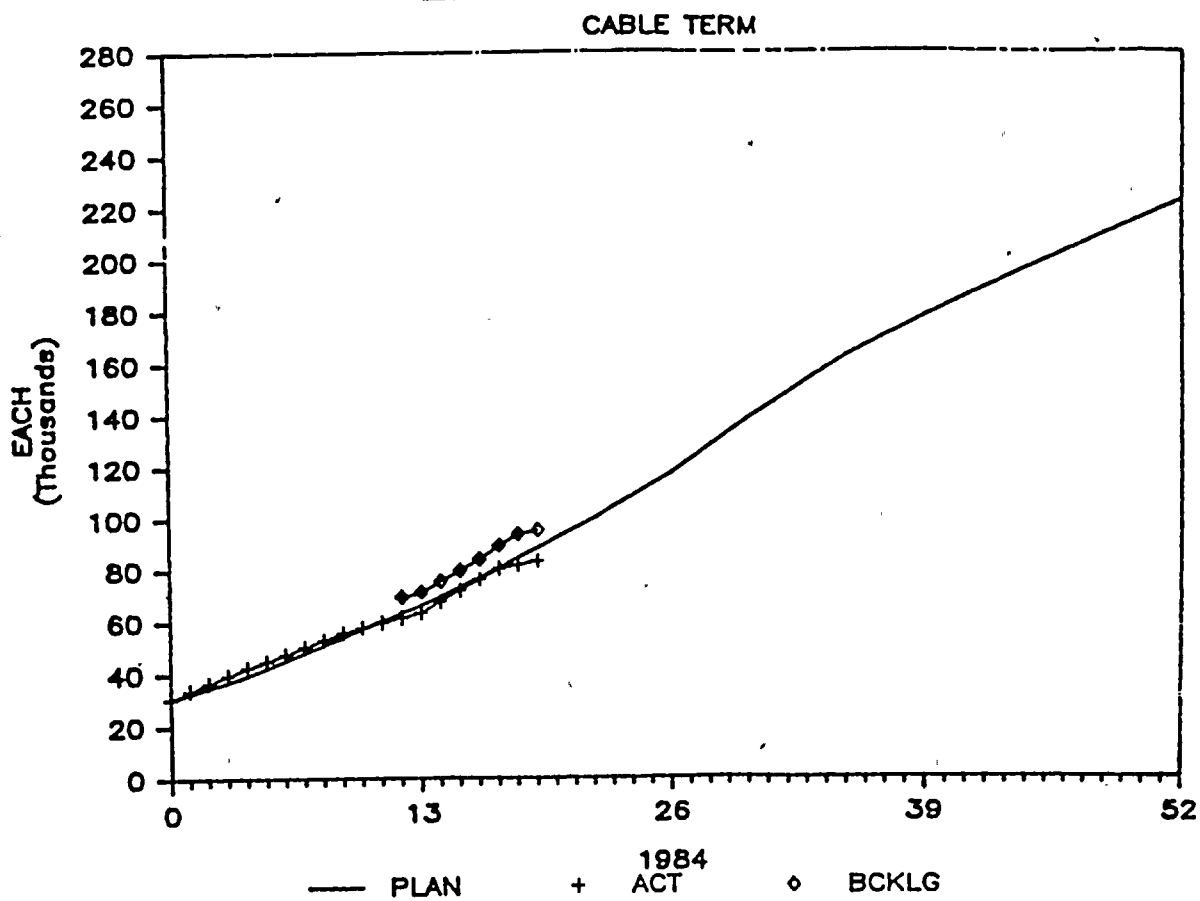
LKC PLAN VS ACT

CONDUIT



- . Conduit installation essentially on track.
- . No significant management action required.

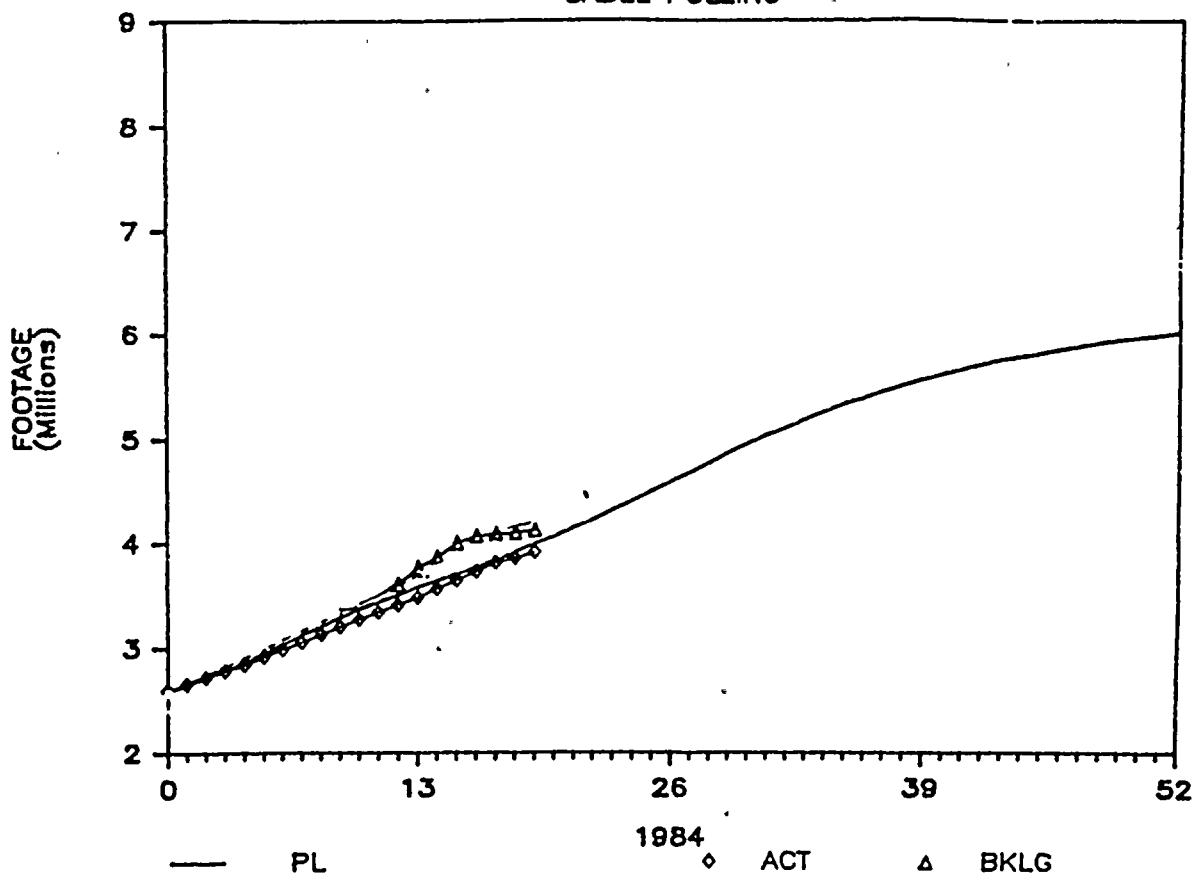
LKC PLAN VS ACT



- Cable terminations are under management review.
- Problems with backlog (CWA) - JCI interface problem yet to be solved and implemented.

LKC PLAN VS ACT

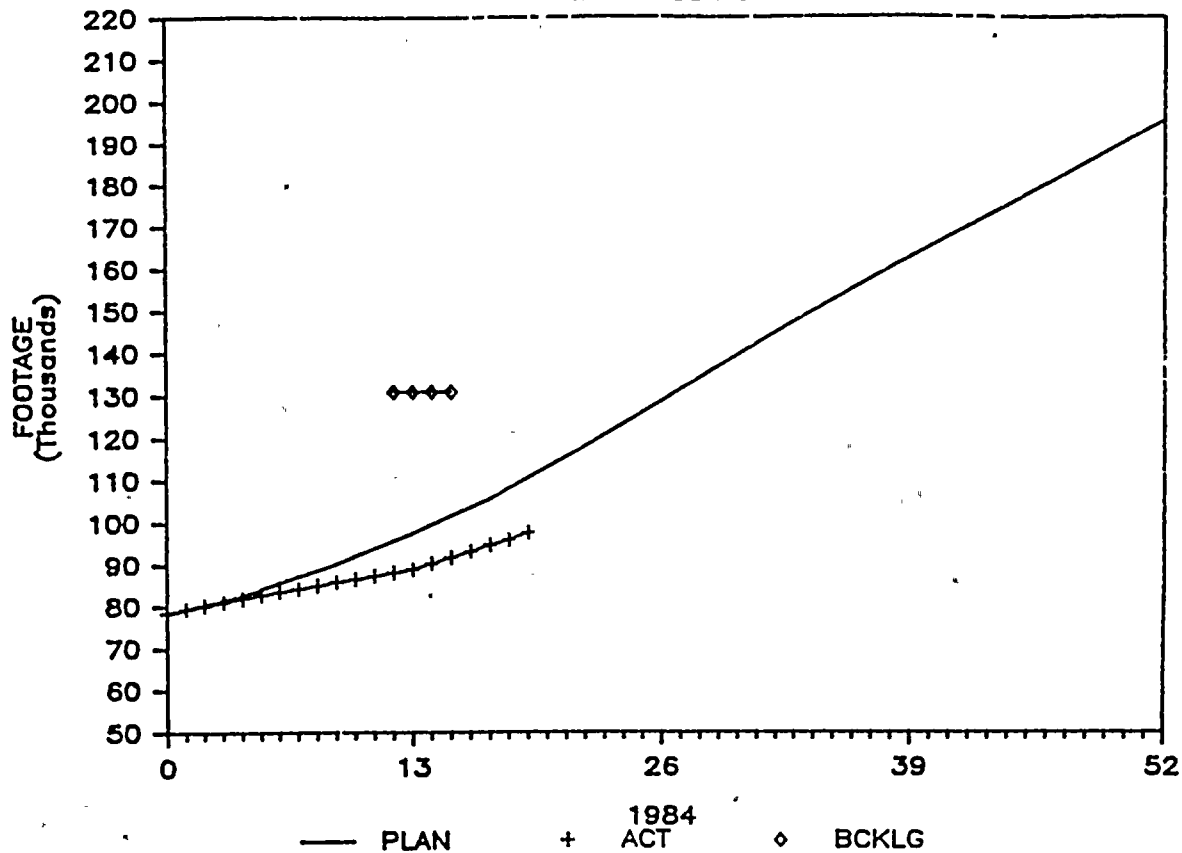
CABLE PULLING



- . Essentially on plan, but available work is very low.
- . Thirteen Point Action Plan in progress to strengthen clean work available (CWA).
- . Relief has been provided by SWEC Engineering in permitting "pulling thru" junction boxes.

JCI PLAN VS ACT

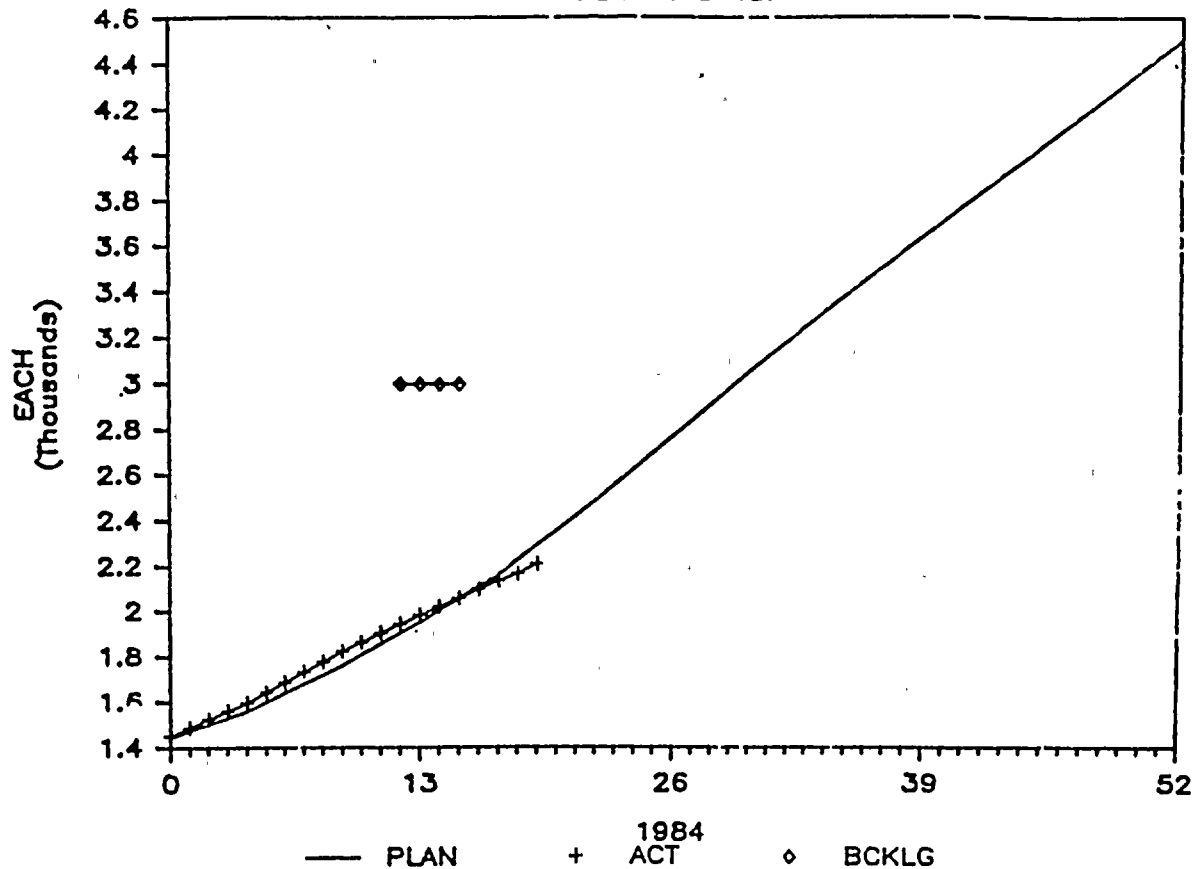
INST. TUBING



- . Tubing performance is paced by tube support installation. As this improves, tubing will improve.
- . See text for management actions.
- . Layout team will facilitate instrument locations.

JCI PLAN VS ACT

SEISMIC SPTS.



- Major management action to reconcile SWEC/JCI recovery forecast (see text).
- Action assigned to expedite material constraints, engineering restrictions, improve planning efforts.
- Layout team (interdiscipline) for instrument location will improve production.

IV. QUALITY ASSURANCE

- 1) NMPC responded to the Notice of Violation, Enclosure 2, of NRC letter dated March 20, 1984, (Enclosure 2 cited NMPC for eight [8] alleged violations of 10 CFR 50 Appendix B). The response was submitted to the NRC on May 4, 1984. Presently, a response is being drafted for the requirements outlined in Section IV A&B of the NRC order, Enclosure 4 (March 20, 1984).

Briefly, Section IV A requires NMPC to submit a plan for the review of (1) the CAT inspection findings, (2) the recent SALP report and (3) licensee identified deficiencies. The review is to include a thorough re-inspection of identified deficiencies. Section IV B requires submittal of a list of performance indicators to be used for measuring and monitoring construction performance of future work.

The final Section, IV C, requires a plan to be developed for an independent third party appraisal of organizational responsibilities, management control, staffing levels, communication and operating practices. The response to this item is still under evaluation, but will be issued in the near future.

- 2) Implementation of the new on-site audit program (QAP 19.05) began April 16, 1984, with an audit of ITT Grinnell. As a result, 16 audit findings were issued, summarizing that there are program implementation and application problems within ITT Grinnell. Further audits will commence as scheduled.
- 3) The Surveillance Program indicates that the overall construction activities at the site are being performed in compliance with the Quality Assurance requirements and commitments. Identified deficiencies are being correctly documented and dispositioned.
- 4) The Construction QA Department is presently at an effective level (45 personnel), with the possible need of an additional three to six people.
- 5) Future reports will include information on the "Quality Performance Management Program". It will provide quality production and trending information for key indicators.

V. CONTRACT ADMINISTRATION

1. ITT Grinnell, Large Bore Pipe (P301B)

ITT Grinnell shipped fourteen priority spools that construction needed by April 30. There currently are thirty spools outstanding with anticipated site delivery of May 30. Grinnell threatened to stop shipments because of a SWEC inventory audit and recommendation to deduct funds. Grinnell is reviewing all backcharge claims and will consult NMPC/SWEC Management regarding the claims.

2. Atwood and Morrill (P304K)

Ongoing and engineering problems, relating to unacceptable seismic performance of fifteen priority service water valves, has restrained their projected mid-April delivery. Some of the seismic problems have been resolved and SWEC engineering has scheduled another meeting with A&M for May 4 to resolve the balance of the seismic problems.

3. Spare Parts - CHOC Orders

Approximately 200 CHOC-issued spare parts purchase orders remain to be issued. SWEC is behind schedule and a recovery plan to support system turnover has been developed. SWEC's current schedule indicates completion by the end of October 1984. Monthly meetings have been scheduled to ensure support of field activities.

4. ITT Grinnell, Pipe Hangers (P301M)

Grinnell stopped shipment of pipe hangers from April 21 through May 2 because funds were being withheld under the engineering rate claim. Grinnell agreed to release the material that was ready for shipment providing that SWEC would work toward expediting resolution of the claim. SWEC plans resolution by May 25, pending timely response from Grinnell of justification of charges.

VI. STARTUP & TEST

The Milestone Schedules were issued by April 30 as scheduled. They are under detailed review, but are now being used as the preliminary Project Schedule. To aid in accomplishing construction turn-over commitments for these schedules, a new Construction Completion Turnover Group has been formed to dynamically co-ordinate and push construction to on-time systems turn-over.

Preliminary Test Status

Initial energization of the 115KV yard was completed April 29th. Major emphasis continues on electrical systems.

Mechanical system testing is in progress on the Water Treatment System. Approximately 99% of the flushing has been completed. Initial operation of equipment is in progress. Field I&C work is approximately 75% complete. Safe fluid operations, loading of resins, and acid and caustic is expected to take place in May. The system is expected to be operable by the end of May.

The following systems are expected to be released to NMPC in early May:

- 115KV yard drains
- 115KV yard (BIP 70.001)
- 115KV yard ground grid

No major items are expected to be open against the turnover.

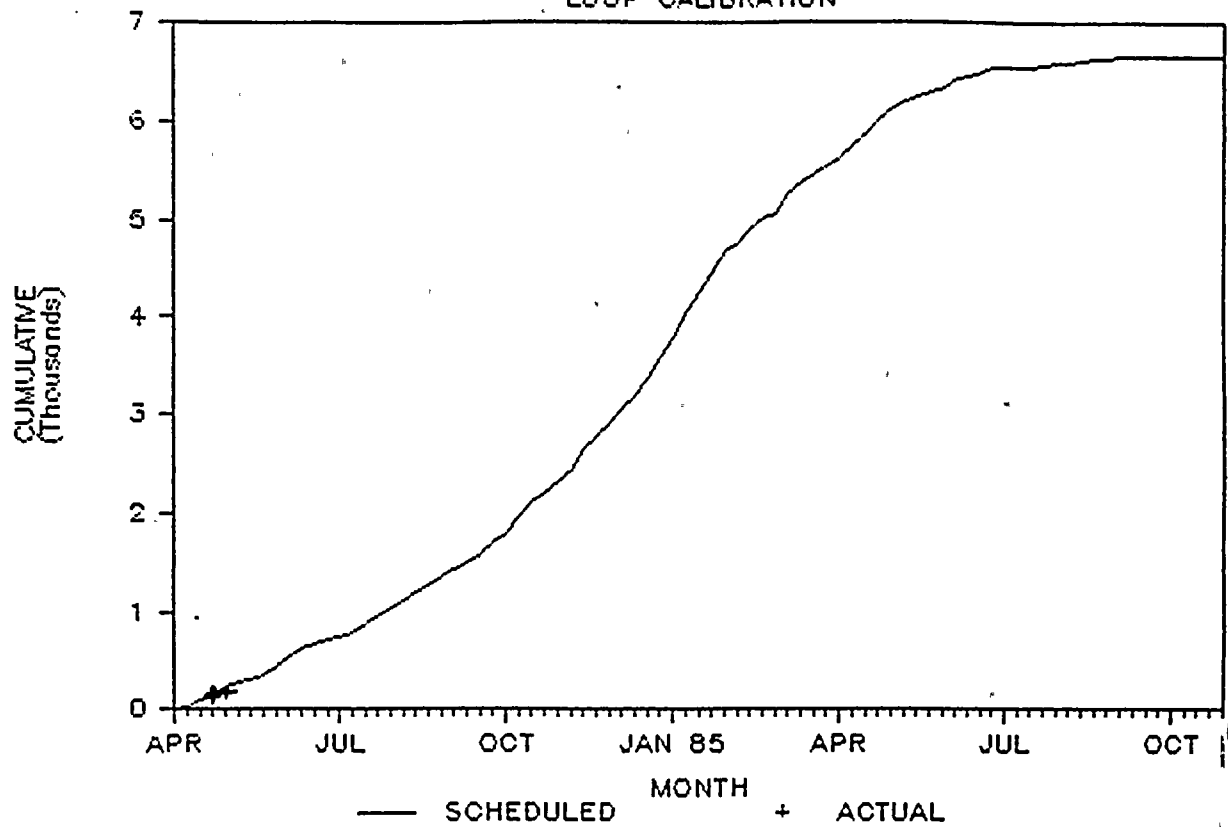
Major Problems

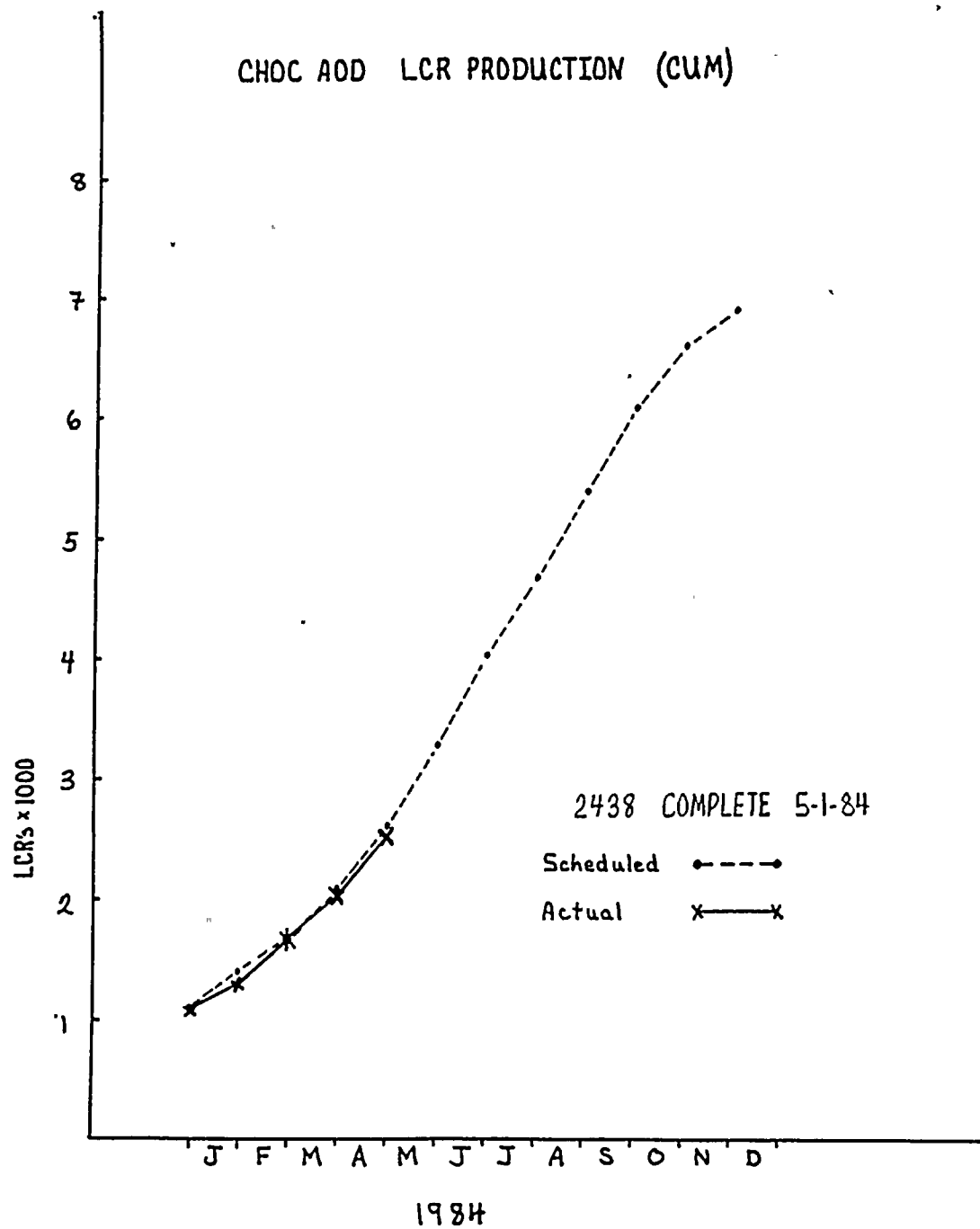
1. Replacement parts: Lack of replacement parts continues to affect the test effort. Lead times of up to 24 weeks have been quoted by some electrical vendors.
 - Preliminary meetings were held in CHOC with Plant Service Division personnel responsible for the effort. A tentative plan has been developed to get back on schedule.
2. Late release of systems from construction: Efforts continue on the development of milestone plans and work around in various areas to support the overall Project Schedule.

3. Design changes: Late design changes and modifications continue to impact the overall schedule and test program. Late modifications to the 115KV yard precipitated a major retest effort. Electrical modifications are expected to affect 13.8, 4160, 600 volt switchgear and load centers and 125VDC Systems. Work around plans will be developed as the engineering for the modifications are developed and the test schedule modified to integrate this work into the program.
4. GE Data Base: The review of the overall GE data base associated with NSSS equipment is scheduled to start in May. This review should alleviate problems being encountered during preparation of the Loop Calibration Reports and field testing of electrical and control equipment. This effort is scheduled for completion by October.

STARTUP & TEST

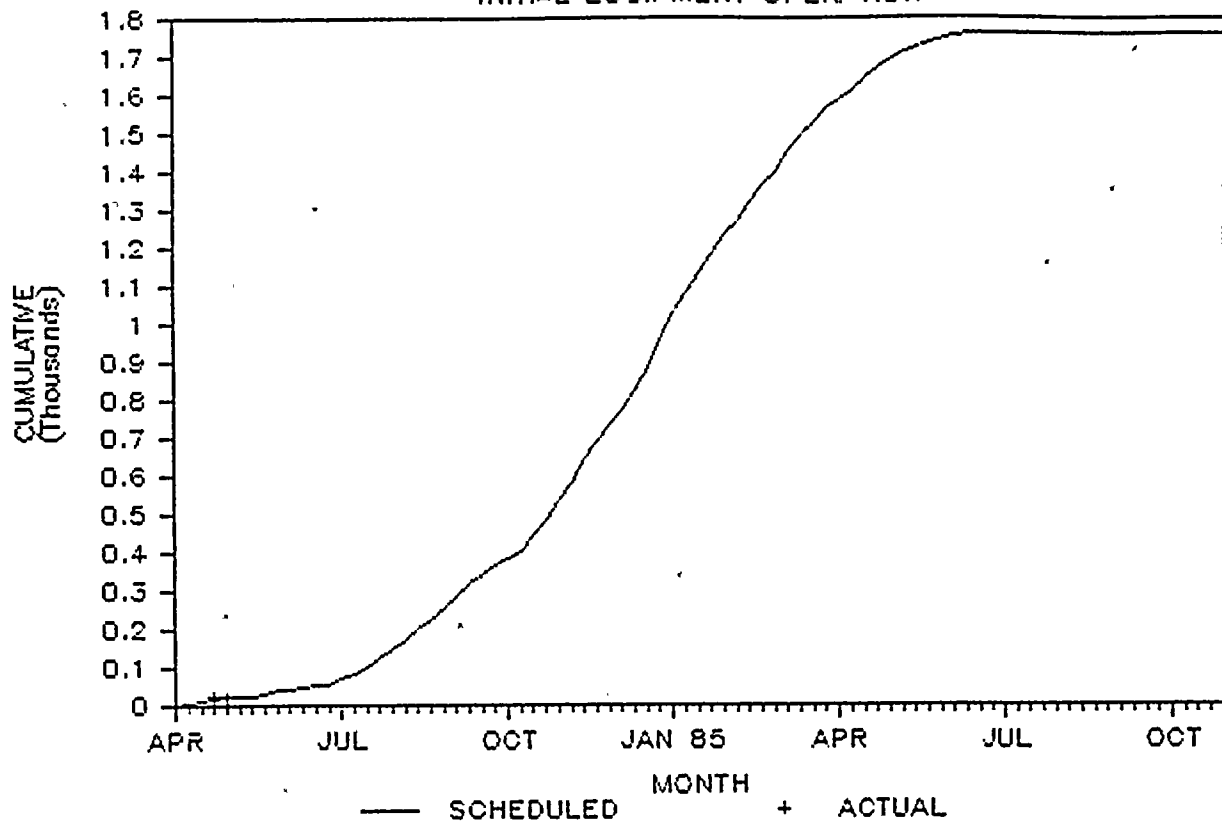
LOOP CALIBRATION





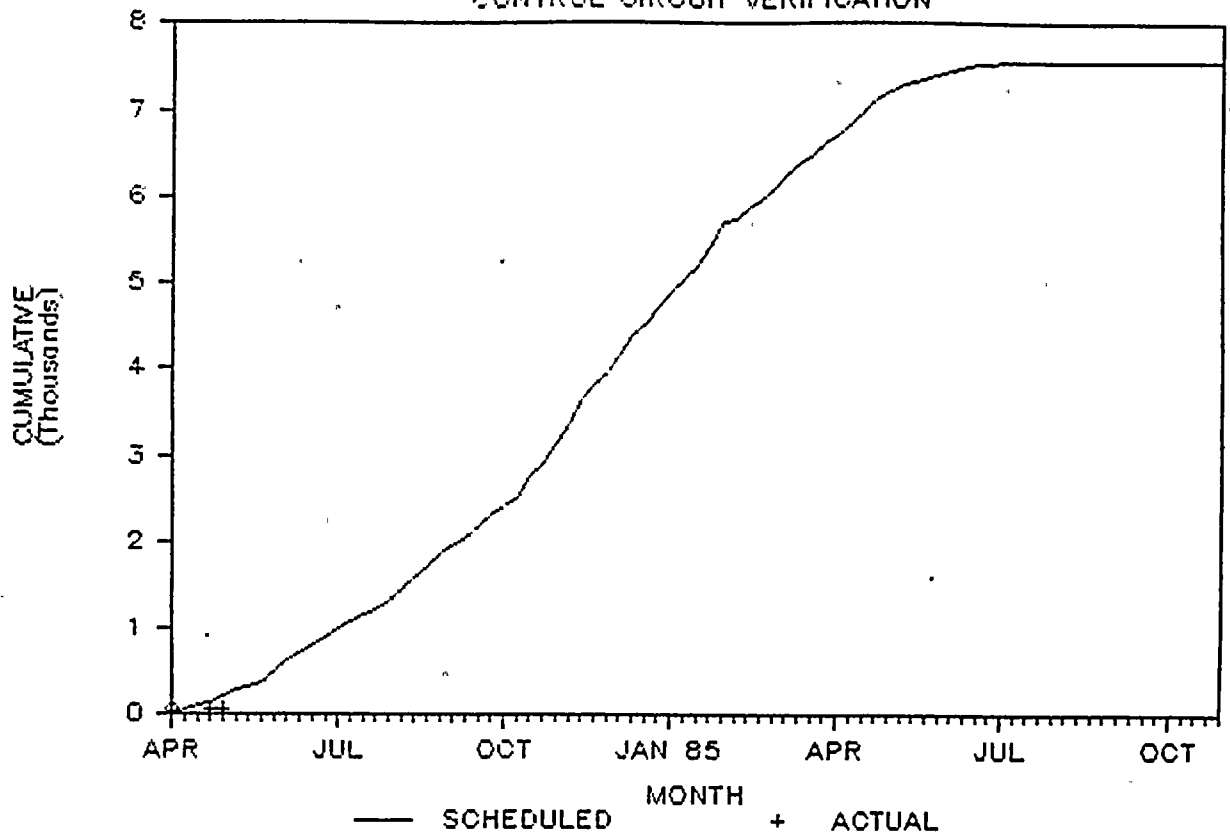
STARTUP & TEST

INITIAL EQUIPMENT OPERATION

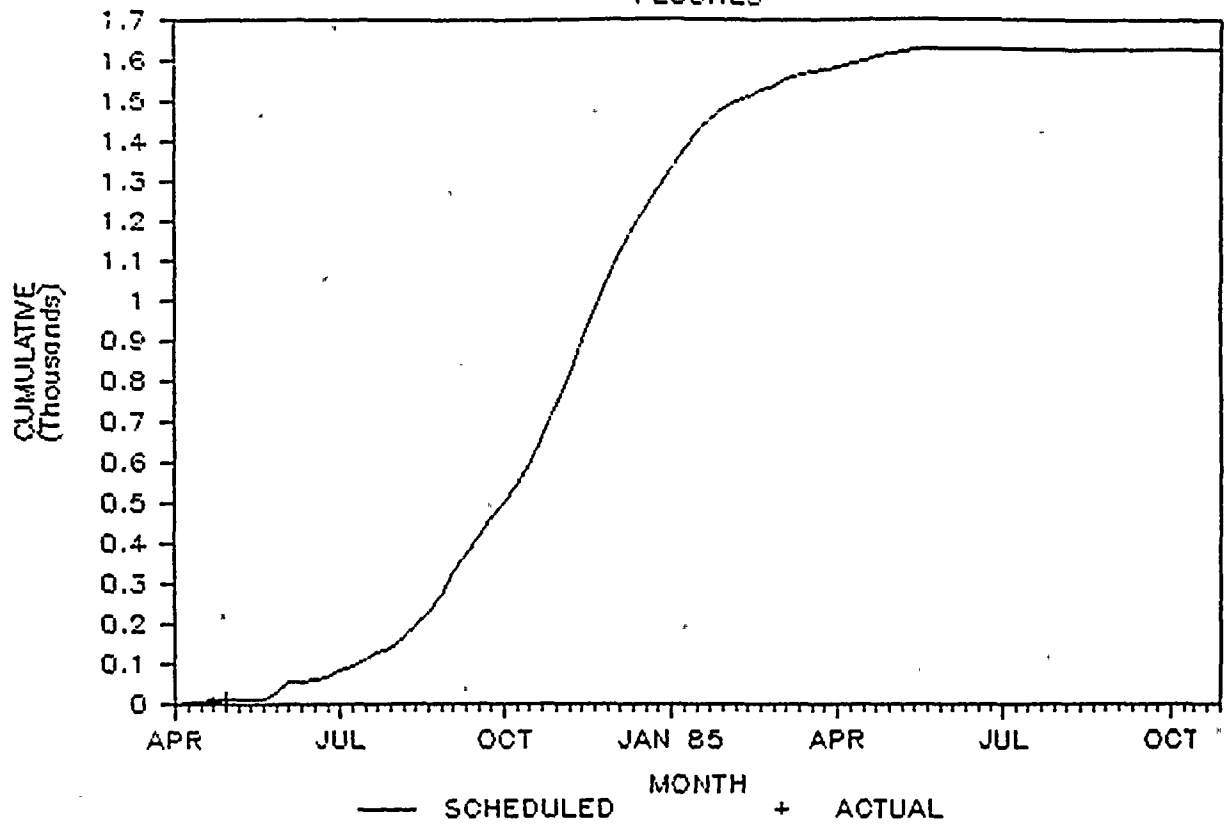


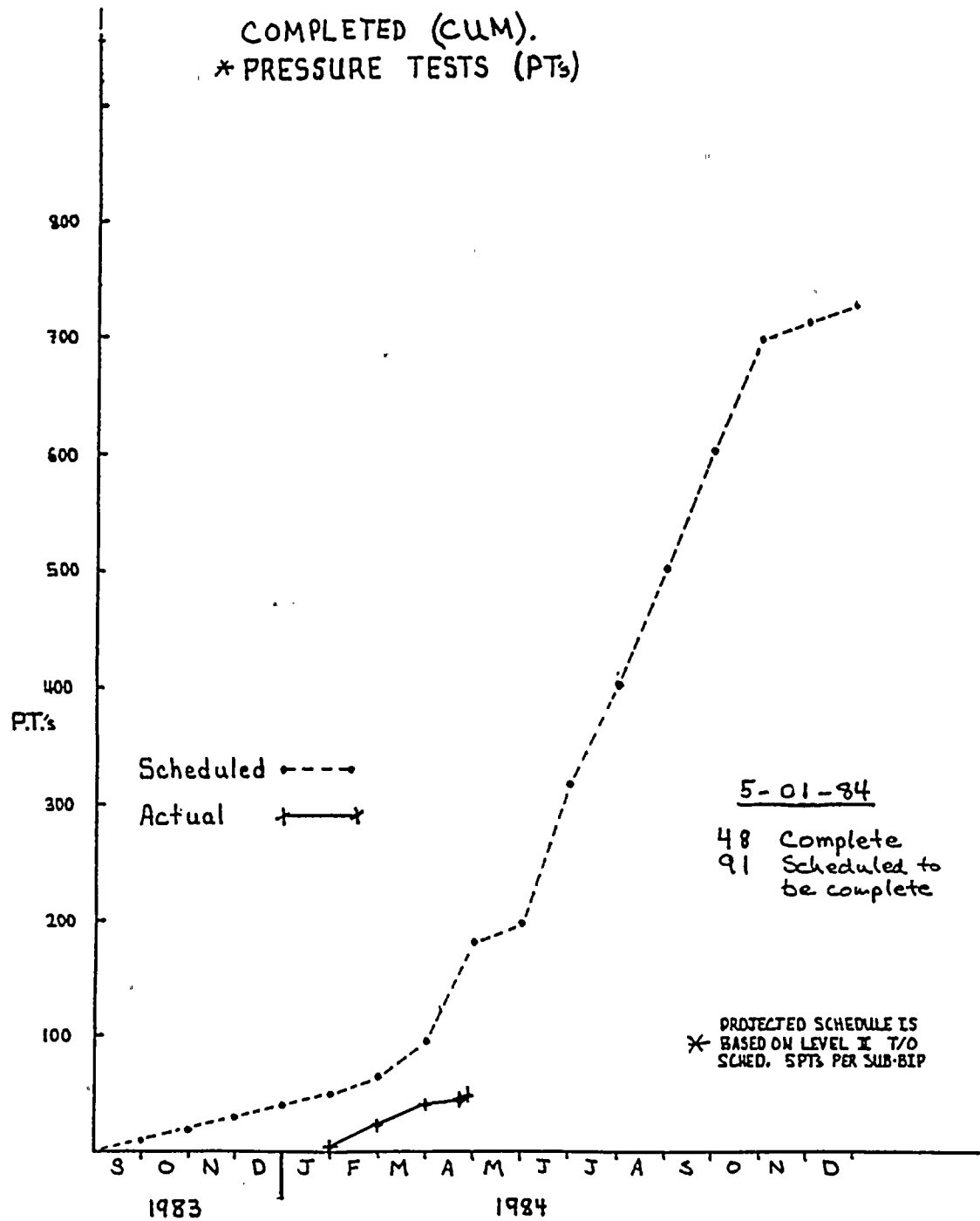
STARTUP & TEST

CONTROL CIRCUIT VERIFICATION



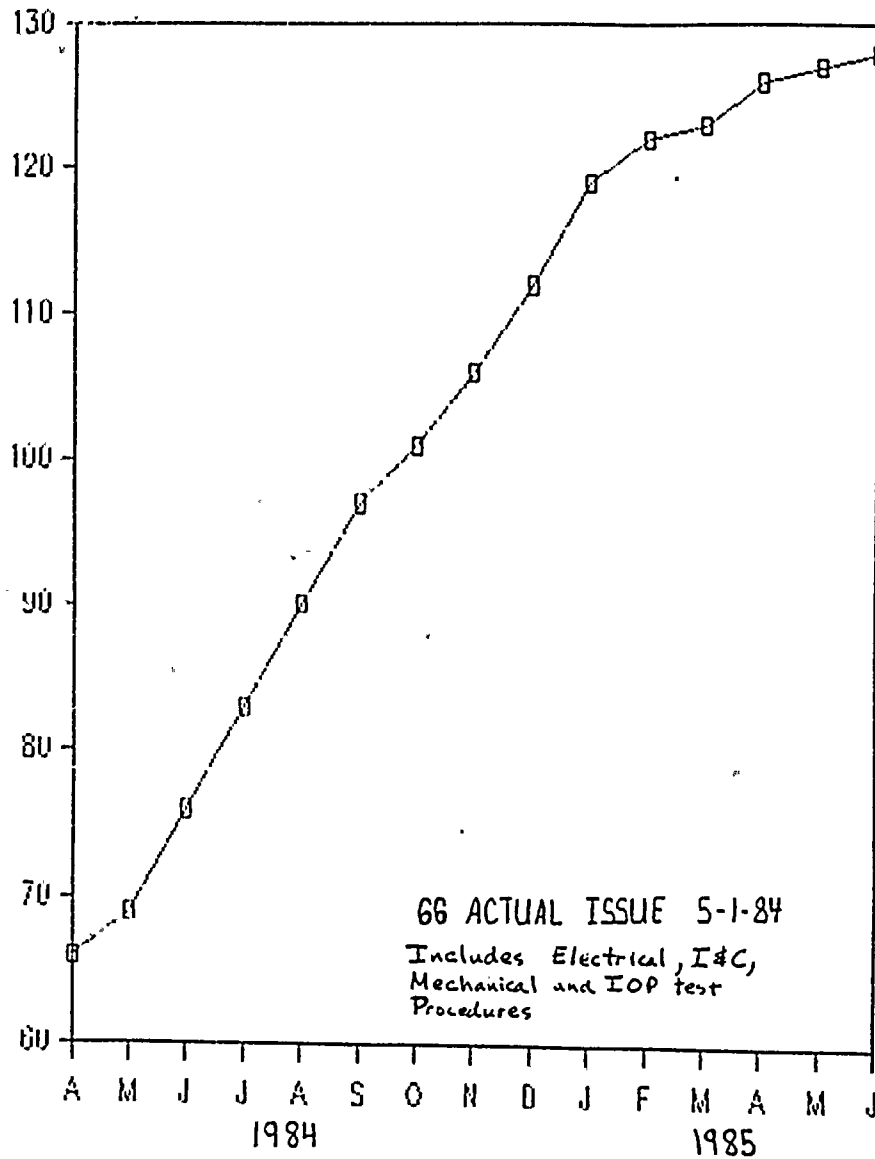
STARTUP & TEST FLUSHES





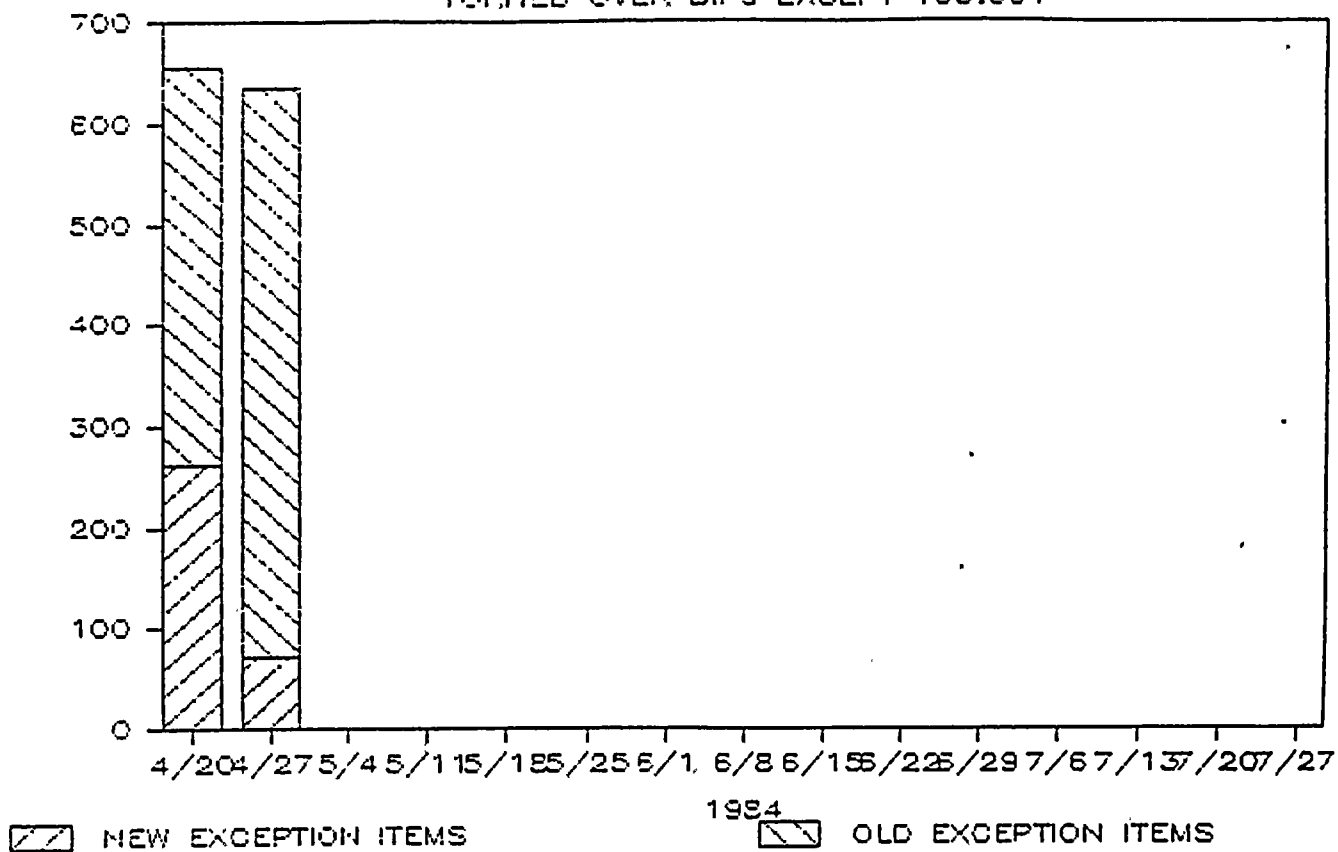
PROCEDURES ISSUED

(Cumulative Projection)



APPROVED EXCEPTION ITEMS

TURNED OVER BIPs EXCEPT 103.001



VII. SCHEDULE

PROGRAM DEVELOPMENT

Work proceeded on development and initial issue of the Milestone Schedules. The 13 schedules were completed as planned on April 30, and are now under detailed review by Contractors and Project Management. The balance of the schedule program development on the area system, thirteen-week system completion and weekly work schedules proceeded as planned. An integrated staff of approximately 60 NMPC, SWEC and contractor planning engineers have supported this intensive effort over the past four weeks.

SCHEDULE COMPLIANCE

Through April, work proceeded essentially in accordance with the first five milestone schedules issued for use. The Service Water milestone fell one week behind schedule due to delays on water hammer modifications. This problem has been addressed and work around planning has been initiated by the system completion and thirteen-week look ahead planning group.

Intensive detailed workshops have been established to assure that Milestone 1, 4160 V Energization, is met. Detailed planning has been initiated for the Primary Containment and Secondary Containment to provide clearer focus on congestion problems identified during the development of the Integrated Flush Milestone Schedule.

VIII. COST

Variance Analysis

Approximately \$2,210 million * has been charged on the Total Project to date. Through April 1984, \$228.5 million has been expended, which is \$5.9 million under the cash forecast of \$234.3 million as defined in the \$615 million Cash Plan. During April, \$63.6 million was expended, versus the \$59.5 million planned.

The \$4.1 million overrun for April is broken down as follows:

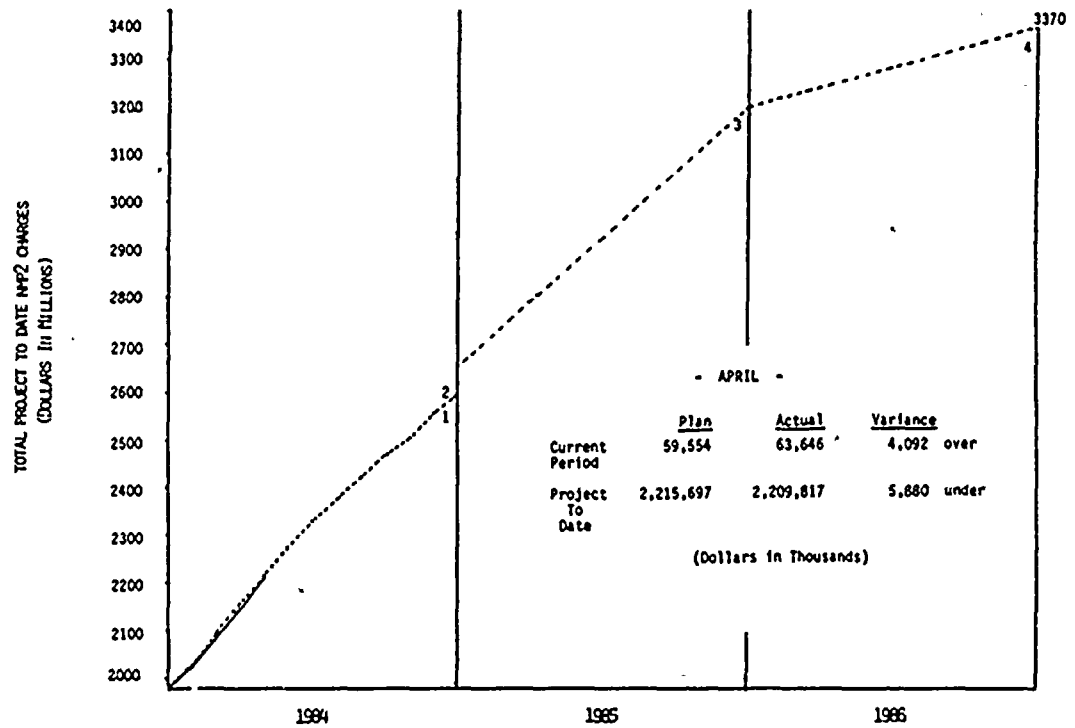
	<u>VARIANCE</u>	<u>REMARKS</u>
SWEC Non-Manual	\$5.8 million over	Due to the SWEC contract renegotiation, the elimination of the two month billing lag resulted in \$2.7 million of this overrun. The manpower was 12 men over plan. Overtime was excessive (24% actual vs. 10.5% planned).
Cives	\$1.0 million over	Due to payment of \$1.4 million as a result of negotiated settlement of Cives contracts.
L. K. Comstock	\$.8 million over	Manual headcount was 45 men over plan, plus extensive overtime (19% planned vs. 32 actual).
ITT Grinnell	\$.2 million over	Due to lack of April invoice payments, the 316 manual headcount overrun, and 93 non-manual headcount overrun is not represented in this month's expenditures.

Total Construction \$6.4 million over

	<u>VARIANCE</u>	<u>REMARKS</u>
Headqtrs. Labor	\$9.9 million over	Due to the SWEC contract renegotiation, the elimination of the 60 day billing lag to 30 days resulted in the payment of two bills (Jan. and Feb.) scheduled to be paid in April and May.
Headqtrs. Material	\$11.5 million under	Lag in invoicing and delivery.
<hr/>		
Total Headqtrs.	\$1.6 million under	
<hr/>		
Client Cost	\$1.7 million under	
<hr/>		
Total Project	\$4.1 million over	

* This figure excludes \$2.6 million in Administration Building Expenditures chargeable to NMPI and \$5.2 million in AFUDC payments made in 1972, 1973 and 1975.

TOTAL PROJECT TO DATE
(CONSTRUCTION AND HEADQUARTERS)
CASH FLOW



- 1 1984 approved \$615 million cash forecast
- 2 1984 \$60 million contingency (Thus \$675 million 1984 cash forecast)
- 3 1985 \$547 million cash forecast
- 4 1986 \$167 million cash forecast

Budget Status and Expenditure

The current MOD 1 cost file is not yet loaded to reflect the April 1, 1984 reestimate. The MOD 1 file is due to be loaded by July 1, 1984. Hence, the MOD 1 drawdown exposure of the reestimate will not be available until July.

NOTE: The Progress Adjusted Cash Flow was not included due to the development of the new Project Milestone Schedule, Percent Complete Tracking System, and the ongoing revisions to the Cost Control Program.

IX. RECORDS MANAGEMENT

Significant Activities

- The revised NMP2 Records Management plan was completed and approved by the Project.
- As a result of this effort, Records Management has developed the NMP2 Records Management Concern Status Report to identify and track all open Records Management concerns for timely closure.
- Also, a record traceability matrix is in the hands of all Project participants that generate records. This matrix, when completed, will identify the level of traceability of required records to component, system, etc. Projected completion will be established shortly.

Actions in the near term are planned as follows:

1. Develop and issue a Project position on record review, including a policy on CAT II and III records.
2. Issue the revised Records Management plan and conduct training sessions for Project participants.
3. Review Project participants' records procedures to ensure compliance to revised Records Management plan.
4. Complete the record identification Project and modify NMP2 required records list as required.
5. Develop and issue a project Guideline for the control of the required records list.

Permanent Plant File Effort

The following table summarizes the production levels of records receipt, preparation, filming and indexing into the Permanent Plant File.

<u>Activity</u>	<u>March</u>	<u>April</u>	<u>Total To Date</u>	<u>Percent Complete</u>
Record Receipt and Preparation (Includes Aperture Cards)	68,907 Pages	80,178 Pages	1,909,461 Pages	24%
Record Microfilming And Verification (Includes Aperture Cards)	42,438 Pages	104,573 Pages	1,524,012 Pages	19%
Computer Indexed Entries	20,304 Entries	22,554 Entries	246,858 Entries	38%
Records Indexing And Computer Entry	25,152 Documents	24,881 Documents	393,909 Documents	16%

Percent complete is based on an estimated 2,400,000 documents comprising 8,000,000 pages and 650,000 computer index entries required for permanent plant file entry by fuel load.

The following three pages are planning curves for record production (documents, pages and index entries).

Record Turnover

The following are estimated percent completes of SWEC turnover of documentation to the NMPC Permanent Plant File.

Total Turnover of CHOC Documents	<u>87%</u> Complete
Total Turnover of SWEC Site Documents	<u>6%</u> Complete
Total Turnover of All SWEC Documents Complete	<u>17%</u>

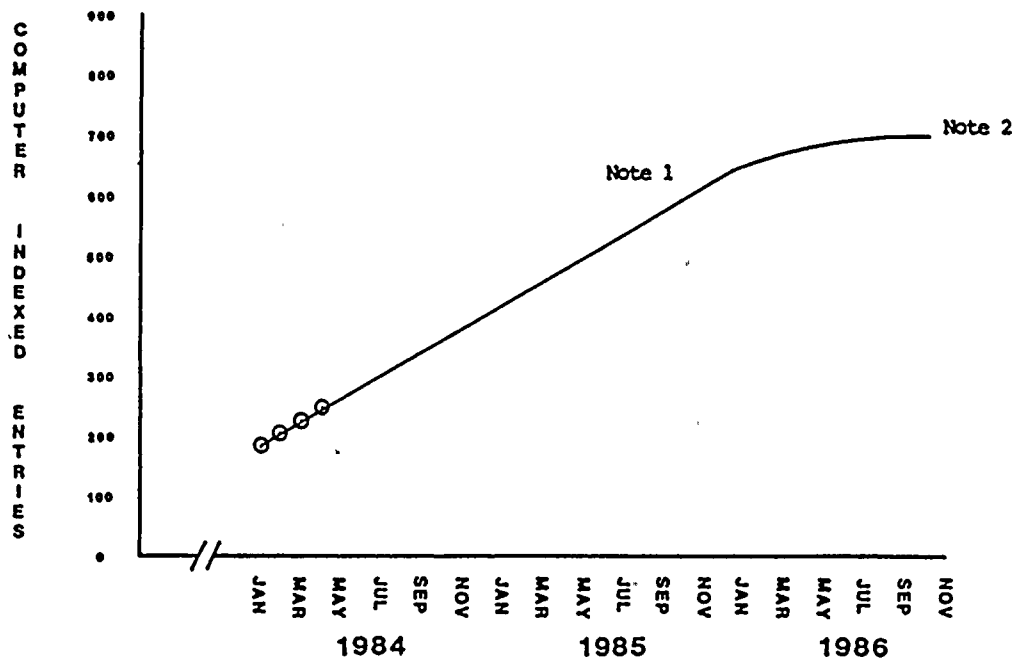
The following are estimated percent completes of NMPC Syracuse turnover of documentation to the Permanent Plant File.

Total Turnover of NMPC Syracuse Documents	<u>70%</u> Complete
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The total estimated percent complete of turnover documentation to the PPF 19% Complete.

NMP2 PERMANENT PLANT FILE
 COMPUTER INDEXED ENTRIES
 PLANNED VS. ACTUAL
 (IN THOUSANDS)

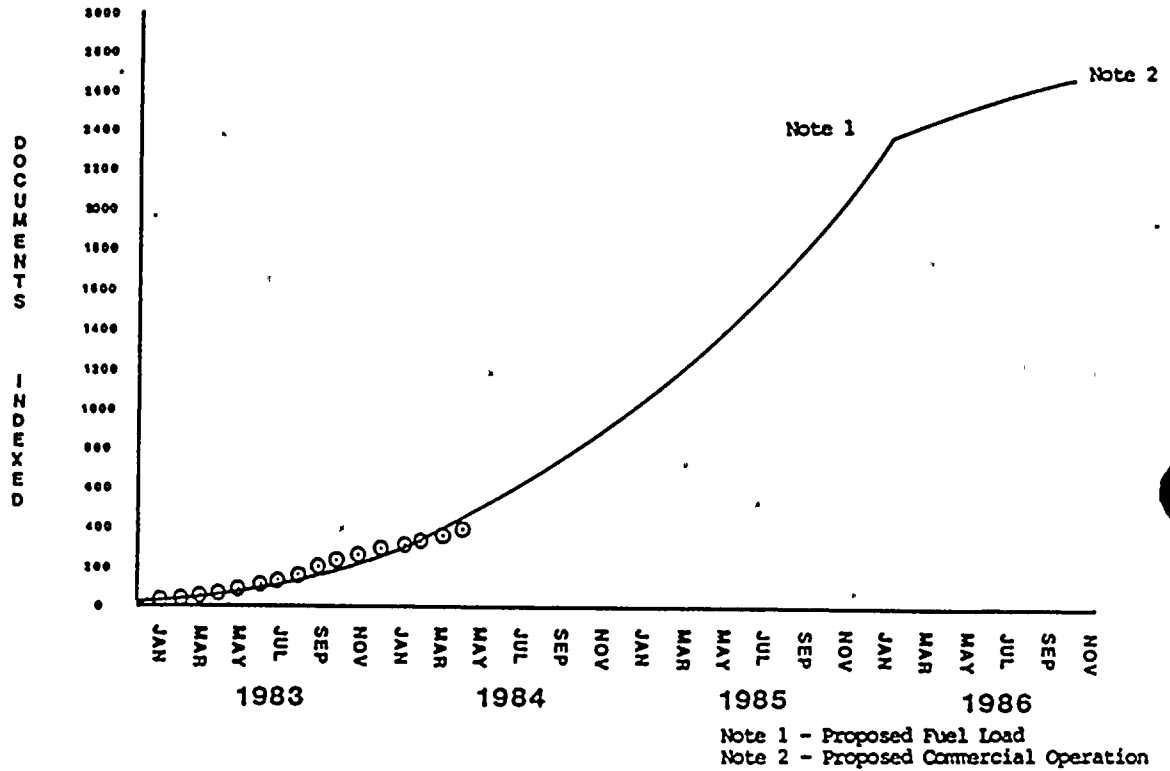
PLANNED ———
 ACTUAL ○



Note 1 - Proposed Fuel Load
 Note 2 - Proposed Commercial Operation

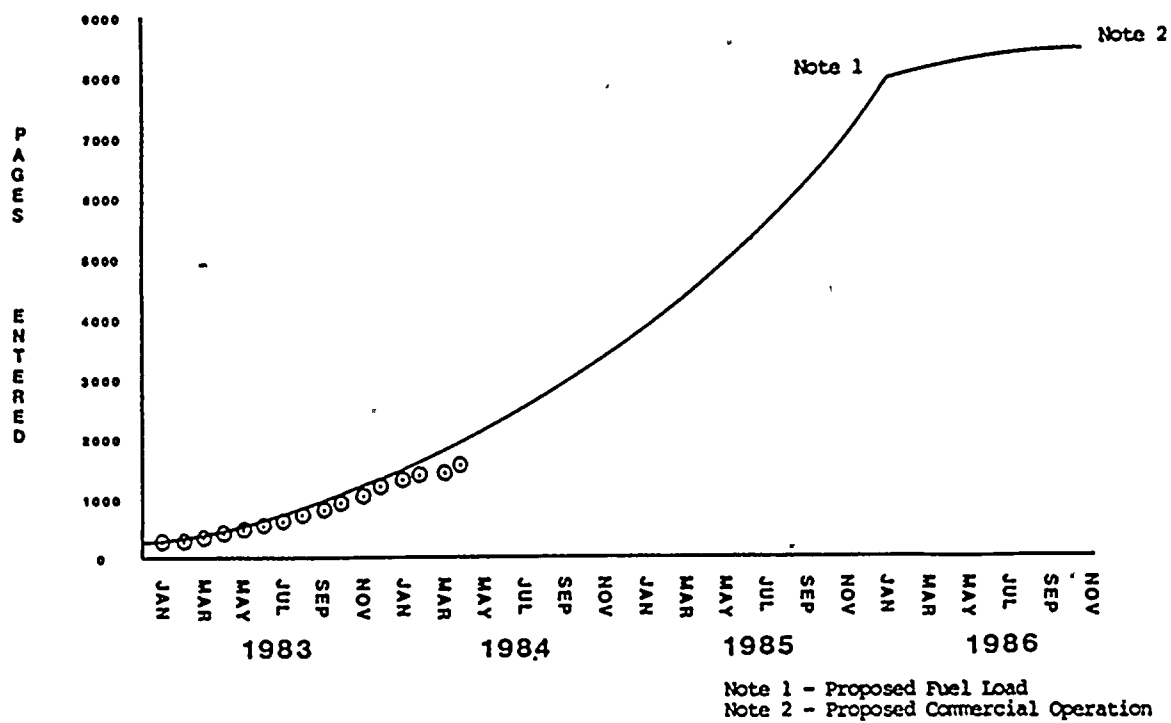
NMP2 PERMANENT PLANT FILE
DOCUMENTS INDEXED
PLANNED VS. ACTUAL
(IN THOUSANDS)

PLANNED —
ACTUAL ○



NMP2 PERMANENT PLANT FILE
 PAGES ENTERED
 PLANNED VS. ACTUAL
 (IN THOUSANDS)

PLANNED —
 ACTUAL ○



X. LICENSING

FSAR Status

A total of 787 questions relative to the FSAR and ER-OLS have been received from the NRC. As of this period, 639 responses are completed. Of the responses yet to be completed, 16 involved Instrument/Control questions. Reference the table on the following page for additional information. Amendment 10 to the FSAR was sent to the NRC on April 31.

Safety Evaluation Report

NMPC received the partial draft NRC Safety Evaluation Report. It contains 172 open items out of an expected 450. Twenty-seven of these items were closed during April.

50.55(e) REPORTS

Three 50.55(e) Reports were sent to the NRC.

- 1) Foxboro Panel Filler Assemblies
55(e) 84-12, Interim 30-day Report
- 2) Single Girder Cranes
55(e) 84-13, Interim 30-day Report
- 3) PGCC Separation Criteria
55(e) 84-14, Interim 30-day Report

Inspection Reports

- 1) I.E. Inspection Report Response
84-02 was sent to the NRC

One item was reported to the NRC as a potential deficiency under 10CFR 50.55(e).

- 1) RCIC Turbine Exhaust Check Valve - 55(e) 84-15

STATUS OF RESPONSES TO BRANCH TECHNICAL QUESTIONS

Technical Question Areas	NUMBER OF RESPONSES			SCHEDULE FOR RESPONSE COMPLETION					
	Questions Received	Completed	Outstanding	May	June	1984 September	Dec	1985	
ER-OLS	51	49	2	2					
INSTRUMENT AND CONTROLS* 421	46	30	16						
RADIOLOGIC 470, 471 EFFLUENT 460	52	40	12	2	6	3	1	1	
PIPING 210 STRUCTURE/220 SEISMIC-230 GEOLOGY-231 HYDROLOGY-240 GEOTECH-241	150	92	53		52			1	
EQUIPMENT QUAL. 270 271	14	10	4			3		1	
QA 260	51	51							
FIRE PROTECTION 280	33	29	4			3		1	
POWER SYSTEM 430	118	105	13	8	2	3			
CONTAINMENT REACTOR PHYSICS CORE PERFORM 480, 491, 492	66	57	9	3	6				
REACTOR SYSTEM 440	49	43	6		4		1	1	
AUXILIARY SYSTEM 410	51	43	8	1	6	1			

Technical Question Areas	NUMBER OF RESPONSES			SCHEDULE FOR RESPONSE COMPLETION				
	Questions Received	Completed	Outstanding	May	June	1984 September	Dec	1985
Other	106	85	21	5	6	9		1
100, 250, 251								
252, 281, 311								
450, 451, 620								
630, 640, 730								
TOTALS	787	639	148	20	91	23	2	6

* Five questions have been schedule for closure, the remaining 36 are being discussed in scheule meetings with the commission.

OPEN SAFETY EVALUATION REPORT ITEMS

NUMBER OF OPEN ITEMS AS OF	4-1-84	162
NUMBER OF ITEMS RECEIVED DURING	April	0
NUMBER OF ITEMS CLOSED DURING	April	27
NUMBER OF OPEN ITEMS AS OF	5-1-84	135

