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

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DOCKET NO. 50-395

APPLICANTS: SOUTH CAROLINA ELECTRIC AND GAS COMPANY
SOUTH CAROLINA PUBLIC SERVICE AUTHORITY

FACILITY: VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1

SUBJECT: SUMMARY OF MEETING HELD ON OCTOBER 15-16, 1979 REGARDING THE FORECASTED FUEL LOAD FOR THE SUMMER FACILITY

On October 15-16, 1979 we met with representatives of the South Carolina Electric and Gas Company (SCE&G) and South Carolina Public Service Authority (Santee Cooper) at the site of the Virgil C. Summer, Unit No. 1 (Summer facility). The purpose of the meeting and subsequent tour of the Summer facility was to gather information for an independent assessment of when the Summer facility would be ready for fuel loading. The persons attending the meeting are listed in Enclosure 1.

In the applicants' presentations, a large number of overhead slides were used, copies of the slides can be obtained from the project manager, After the initial presentations, the caseload/forecast panel toured the facility; caucussed with the IE resident inspector and the IE principal construction inspector; and discussed our conclusions with the applicants. In brief, we were in agreement with the applicants that the Summer facility was approximately 90 percent complete. However, the Caseload Forecast Panel (CFP) concluded that the applicants' fuel load date of July 1980 was too optimistic. We estimated that the plant would be ready for fuel loading between November 1980 and be February 1981. We also discussed the significance of this conclusion on the priority given to the review of the Summer Final Safety Analysis Report (FSAR). A summary of the major points in the meeting and the bases for our conclusions are presented below.

Status of Engineering, Construction and Pre-operational Testing

The engineering for the facility is essentially complete. The only exception were the radwaste solidification system and design verification for Class 1 supports. This design verification revealed an error in the coordinate system used in the seismic analysis; the analysis effects 173 Class I hangers.

With regard to construction, the applicants estimated that the facility was 91 percent complete as of September 30, 1979. The next major milestone is the cold hydrostatic test of the primary system; it is scheduled for 11/18/79. The cold hydrostatic test for the secondary system was completed in September 1979.

The status of various bulk quantities are given below:

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Item	Percent
Process Pipe	
2 1/2 inches and larger	92.47
2 inches and smaller	87.5
Large Bore Hangers	78.4
Small Bore Hangers	63.4
Cable, linear feet	90.6
Terminations	74.8
Circuits	82.2
Instruments	80.3

Concrete, cable tray and conduit were over 98 percent.

The craft work force at the site was about 1500 workers, exclusive of subcontractors. In most areas, there was only a single shift, however, critical path items were being worked on a double shift.

The pipe hanger status varied from one area in the plant to another. Of particular interest to the CFP was the status in the reactor building. In the reactor building the larger hangers are 37 percent complete and 1057 out of 1514 remain to be completed; and the small hangers are 49 percent complete and 652 out of 1278 remain to be completed. The applicants stated that of the 1057 large hangers and 652 small hangers many were in various stages of completion; many would not be completed until after hot gap setting was done after hot functional testing.

With regard to the electrical area. The applicants stated that the bulk of the work remaining involved the containment electrical penetrations. Work on terminations at these penetrations did not begin until September 1979.

Construction personnel had identified 523 mechanical subsystems and 2737 electrical subsystem for the purpose of monitoring the status of subsystem turnover to operations personnel responsible for preoperational testing. The graphs of the turnover schedule indicated that construction was one to two months behind in the turnover of these subsystems.

With regard to the status of preoperational testing programs, the applicants provided progress/trend curves for the procedure approval and for the start of testing in various categories.

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The CFP was very interested in the progress/trend curve for the development and performance of startup pre-operational procedures. The curve is enclosed to this summary as Enclosure 3. The progress/trend indicated to the CFP that the applicants were about to fall behind in the starting of startup tests. Further, the applicants had not demonstrated that they could achieve the high number of test starts per week required by the schedule.

After the site tour, the CFP caucussed and presented its conclusion to the applicants. The CFP concluded that the plant would be ready for fuel load between November 1980 and February 1981. We based this conclusion on the following:

1. The installation of pipe hangers in the containment and electrical terminations at containment penetration would not occur as quickly as scheduled because of the nature of each task limited the manpower that could be used. The completion of these items would not delay cold hydro of the primary system, but would delay hot functional testing and fuel load.

2. The startup preoperational testing program appeared to be behind schedule. Although they had recently completed several long, time-consuming tasks, it was not evident that they could meet the high rate of test starts demanded by the startup schedule.

We then discussed the impact of this conclusion on the priority assigned to the review of the FSAR. We stated that previously the Summer FSAR had been given a relatively high priority when compared with other facilities previously expected to be ready for fuel loading in 1980. The rescheduling of non-Three Mile Island related activities indicated that with the exception of two review groups, reactor systems and geology/seismology, the Safety Evaluation Report could be issued in March 1980 and an operating license decision reached by late 1980. However, if the review schedules cannot be improved for these areas; the operating license decision date would be much later. Our reassessment of fuel load date from November 1980 to February 1981 would probably not affect the priorities already established because we anticipate that as we reassess the fuel load dates for the other facilities, we will find that their final load dates would also slip. In summary, we concluded that it was as toss up as to whether licensing or completion of construction and pre-operational testing be limiting for fuel load.

In the applicant's closing remarks, they stated that they would look at the problem areas that we had identified, but that they remained confident that a fuel load date of July 1980 was achievable.

Dean L. Tibbitts

Dean L. Tibbitts
Light Water Reactors Branch No. 2
Division of Project Management

Enclosures:
1. Attendance List
2. Agenda
3. Progress/Trend Curve For Startup Preoperational Procedures

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ccs w/enclosures:
See next pages

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1381 355

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ENCLOSURE 1

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ATTENDANCE LIST
MEETING WITH SCE&G AND SANTEE COOPER
OCTOBER 15-16, 1979

NRC - STAFF

W. Lovelace
R. Baer
D. Tibbitts
L. Abramson

NRC - REGION II

T. Burdett
J. Skolds

SCE&G

E. Crews
T. Nichols
O. Dixon
O. Bradham
J. Connelly
C. Price
J. LaBorde
C. Ligon
H. Babb
J. Bailey
B. Croley
J. Algar
M. Jones
A. Koon
R. Campbell
S. Scearce

SANTEE COOPER

W. Williams

DANIEL CONSTRUCTION COMPANY

C. Wagoner
J. Isaac

SYSTEMS COORDINATION, INC.

E. Porter

WESTINGHOUSE ELECTRIC COMPANY

D. Wieland

ENCLOSURE 2 NOV 07 1979

VIRGIL C. SUMMER NUCLEAR STATION

NRC CASELOAD FORECAST PANEL SITE VISIT

AGENDA

October 15, 1979

NRC Caseload Forecast Panel arrives on Site 12:30 - 1:00

Presentation commences 1:00 p.m. in large meeting room in Service Building.

FORMAL PRESENTATION

I. Engineering

A. Engineering organization and current status of design/engineering activities.

II. Construction

A. Overview of project construction schedule including construction progress, major milestones completed, current problems and anticipated problem areas and schedule for licensing.

B. Overview of construction management organization and activities.

C. Review and current status of bulk quantities for the facility including current total estimated quantities, quantities installed to date, quantities scheduled installed to date, current percent complete for each and average installation rates.

1. Concrete (CY)
2. Process Pipe (LF)
   - Large Bore Pipe 2-1/2" and larger
   - Small Bore Pipe 2" and smaller
3. Yard Pipe
4. Large Bore Hangers, Snubbers, etc. (ea)
5. Small Bore Hangers, Snubbers, etc. (ea)
6. Cable Tray (LF)
7. Conduit (LF)
8. Cable (LF)
9. Terminations (ea)
10. Circuits (ea)
11. Instrumentation

D. Detailed review and current status of pipe hangers, snubbers, restraints, etc., including design fabrication, delivery and installation.

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E. Estimated percent complete for the facility as of 10/1/79.

F. Actual and proposed craft work force, craft availability, productivity, potential labor negotiations and problems.

G. Construction scheduling staff:

1. Method of calculation of percent complete
2. Method of monitoring rate of completion, identifying critical path items and implementation of corrective actions.

III. Operations

A. Review of schedule identifying critical path items, amount of float for various sctivities, the current critical path to Fuel Loading and methods for implementation of corrective action for activities with negative float if any.

B. Critical path activities, logic network and computer printout of critical and/or near critical items.

C. Review and current status of preop tests procedure writing, integration of preop testing activities with construction schedule, system turnover schedule, preop testing and current preop test program manpower.

IV. Purchasing

A. Procurement management and current status of major components including hangers, snubbers, pipe whips, valves, piping and etc.

V. Licensing

A. Utility commitments on power.

B. Anticipated financial problems

C. Licensing

VI. Site Tour

A. Site tour and observation of construction activities.

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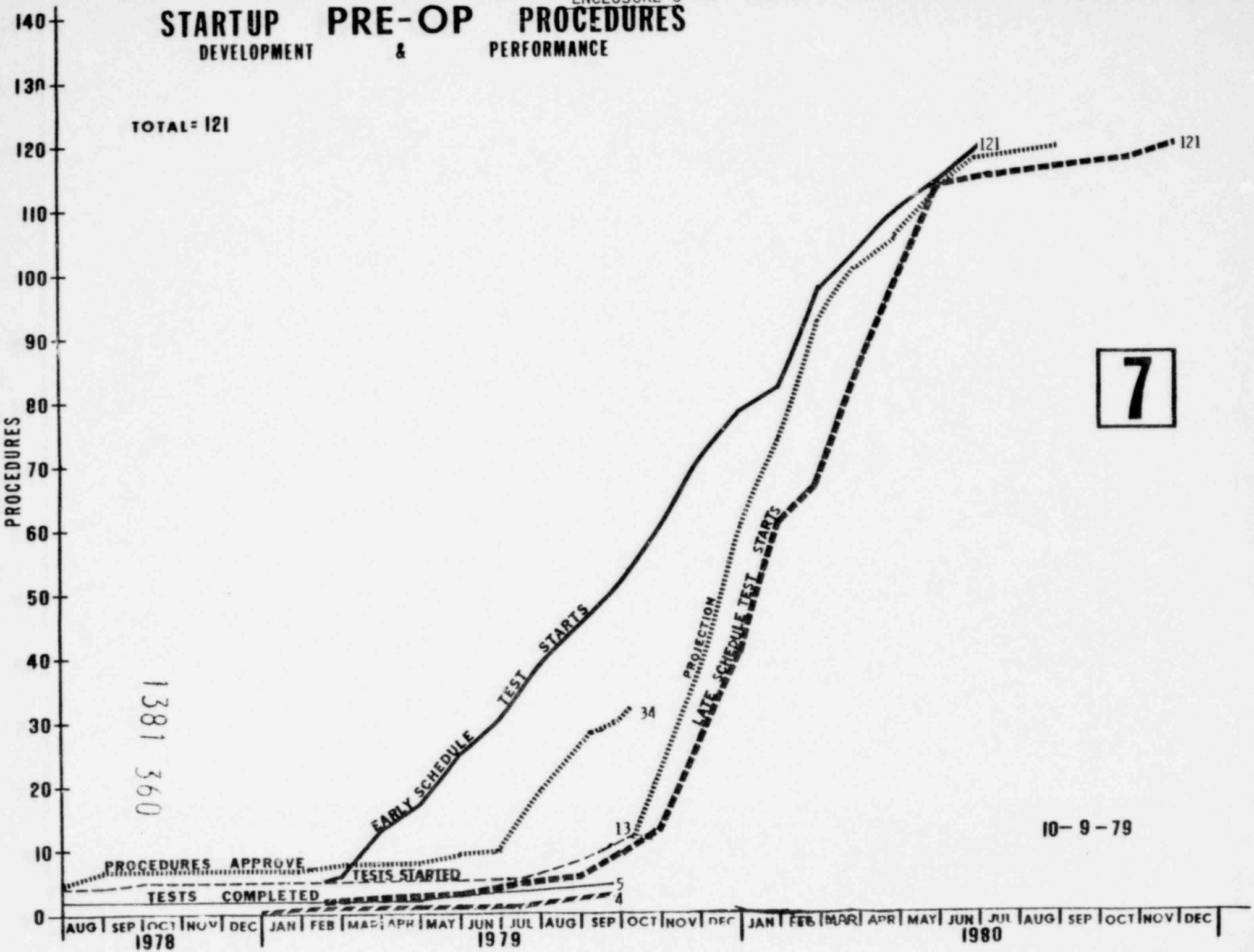
ENCLOSURE 3

STARTUP PRE-OP PROCEDURES

DEVELOPMENT & PERFORMANCE



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