

Quarterly
MONTHLY PROGRESS REPORT
POLK POWER STATION - UNIT 1

TE 504

M. R. K. O. C.
D. C. T.

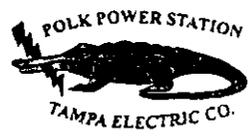
DRAFT

Bechtel Jobs 22269 & 22341

6th Oct 1995
S. J. J. J. J.



Oct → **December 1995**



Acceptable as a
quarterly Technical
Progress Report for
Oct-Dec 1995.

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I. EXECUTIVE SUMMARY

Construction progress through December is 77.1% complete compared to the Target Schedule (SCN-026) of 81.1% and a Revised Project Schedule (SCN-027) of 77.1%.

In December, the project issued Schedule Change Notice SCN-027 aligning the remaining Contractors Mechanical Completion Dates (mostly TIC's) System Turnover dates. The Revised Project Schedule reduces the Contractor's manpower peaks while meeting an Project Milestone Dates including the Turnover-for-Operation date of September 15, 1996.

Tampa Electric investigated Section 29 opportunities with two interested investment groups, but was unable to finalize an agreement prior to the end of the year time constraint.

General Electric met with Tampa Electric and Tampa Electric's insurers to address the insurers' concerns about the operating and maintenance history of the 7F/9F fleet. GE explained all of the significant problems experienced to date and how they might apply to the Project. The 2-3 spacer modification is planned to begin at the end of January.

Due to equipment problems at the HGCU pilot plant in Schenectady, the METC-10 sorbent test scheduled for early December, 1995 did not occur and will not occur until early spring.

Continued close monitoring and expediting of remaining material deliveries, including Rosemount electronic transmitters, Allen-Bradley motor control center components, valves, wire, and cable.

The Steinmüller equipment setting was completed and alignment has begun. TIC's large and small bore piping installation has fallen 2 weeks behind the plan. TIC is addressing the issues to recover in this critical area.

Rotor installation for the Steam Turbine started in December. Although Zachry is running about 2 weeks later than their target plan they are working to a recovery schedule to meet the Startup Turnover Date of February 13.

Nine pipe spools in the High Pressure Steam were found to have a minimum wall thickness problem. By the first week of January, 8 of the 9 had been sent back to and returned by B.F. Shaw.

Major construction activities accomplished this month include:

- Installed LP diaphragms and bearings in Steam Turbine.
- Completed erection of structural steel for the Brine area.
- Completed rough set of major HGCU equipment.

- Pre-qualified HGCU refractory installation sub-contractor to support starting work in January.
- Completed excavation for the Slag Storage area and commenced liner installation.
- Completed erection of Sulfuric Acid Plant.
- Montgomery Elevator mobilized for the gasifier structure elevator installation (T-008)

Startup completed joint walk downs with construction and received system turnovers for 19 systems including:

- ABM - Auxiliary Boiler
- FOG - Fuel Oil to Gas Turbine
- FP7 - Fire Protection for Transformers
- PAS - Plant Air
- ASU - Air Separation Unit
- GTG - Gas Turbine

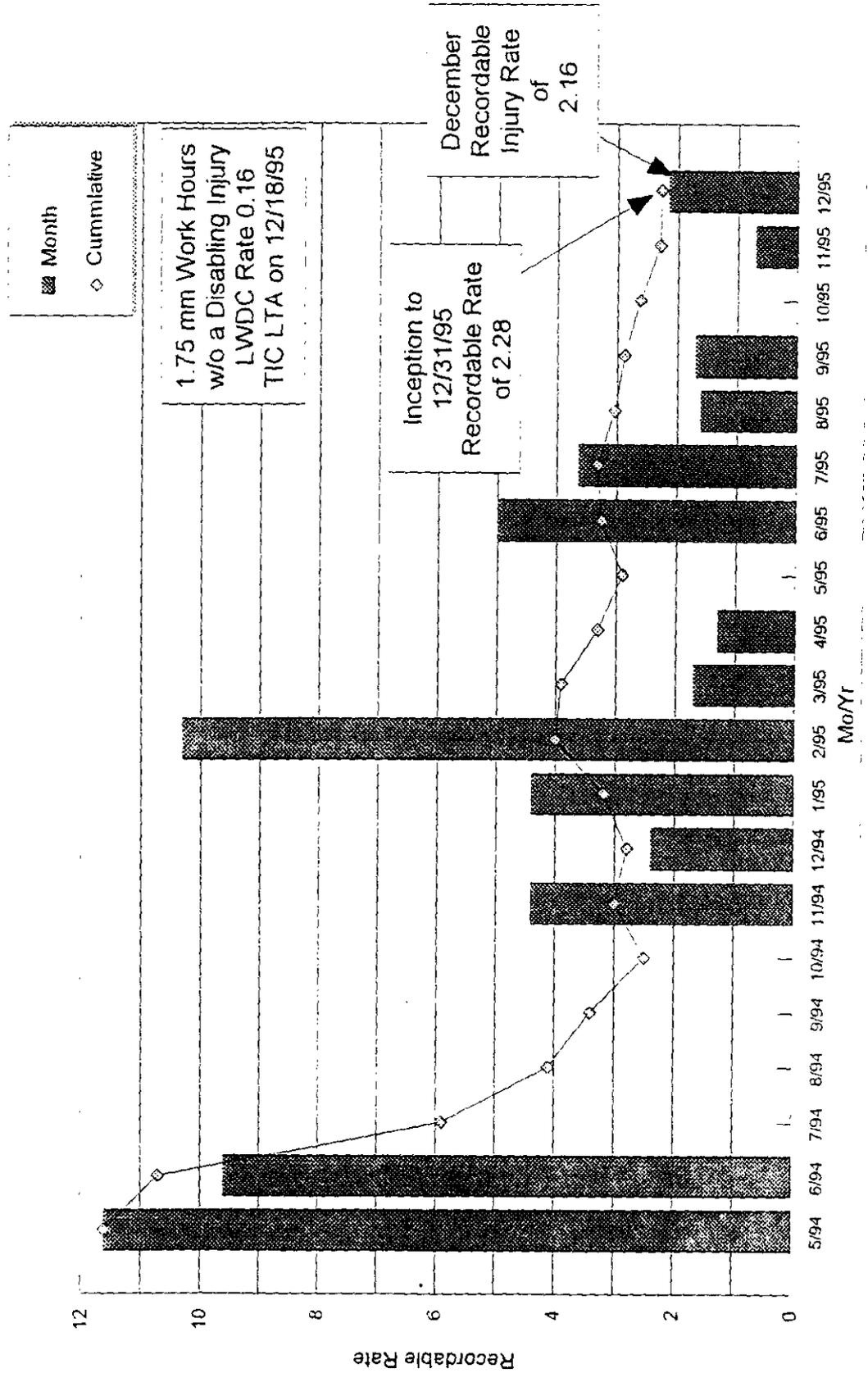
Air Products successfully ran the Main Air Compressor in the ASU at full load for approximately nine hours. They also successfully ran the ASU DGAN motor uncoupled.

Safety statistics for the month and project to-date are shown below:

Polk Power Site Total Safety Matrix	Number of First Aid Cases	Number of Doctor Cases	Number of OSHA Recordable Cases	Number of Loss Time Incidents	OSHA Recordable Rate
Current Month	52	16	3	1	0
To Date through December 31, 1995	615	123	29	2	2.28
To Date Hours: 2,541,597	---	---	---	---	---

Polk Power Station Unit #1 OSHA Recordable Rate

Job Inception to Date By Month and Cumulative



II. TAMPA ELECTRIC ACTIVITIES

Major Activities Accomplished this Month:

- Continued training of IGCC Process Specialists.
- Continued pursuit of approval of plan for area west of SR 37 and wetlands arrangement west of SR 37.
- Continued discussions with MAN GHH on finalization of outstanding technical and commercial issues.
- Determined GEESI and DOE will not be ready to conduct METC-10 sorbent test at the pilot plant till early spring.

Major Activities Planned for Next Month:

- Complete survey data for submittal to agencies for approval of area west of SR 37.
- Begin DOE Budget Period III Continuation Application

III. HOME OFFICE/RESIDENT ENGINEERING ACTIVITIES

The current staff level for Resident Engineering is 19 people. The Punch list Team consists of 7 people and the Design/Audit Group is at 12 people.

Summary of Engineering Activities for This Month

Project Engineering

- Continued RSC soot blower leakage temperature monitoring system
- Continued Propane system storage tank modifications
- Continued vendor print reviews
- Continued Silo Loading Guidelines
- Continued construction support
- Continued electrical design audits
- Continued cable tray structural support modifications
- Continued refractory installation plans
- Continued pipe min wall resolution

Major Activities Planned for Next Month:

- Complete RSC soot blower leakage temperature monitoring system
- Complete Propane system storage tank modifications
- Continue vendor print reviews
- Complete RSC Management of Change documentation
- Complete Silo Loading Guideline
- Continue construction support
- Complete electrical design audits
- Complete refractory installation plans
- Complete pipe min wall audit/resolution

IV. MATERIALS MANAGEMENT ACTIVITIES

Major Activities Accomplished this Month

- Continued close monitoring and expediting of remaining material deliveries, including Rosemount electronic transmitters, Allen-Bradley motor control center components, valves, wire, and cable.
- Issued contract for Certified Domestic Wastewater and Potable Water Operator Services to USA Utilities.
- Issued an Invitation For Bid, conducted a pre-bid meeting, and received bids for Paving, Grading, & Roadway Surfacing.
- Established a consignment agreement with Florida Industrial Products for no-cost stocking of small bore pipe fittings in support of CP-011 and CP-012.
- Provided commercial support to Construction Management and Start-Up regarding resolution of Auxiliary Boiler punch list items.
- Continued to action Technical Representative Call-Out requirements and maintain LAN tracking of field service requests and commitments.
- Competitively bid, evaluated, and awarded miscellaneous fabrication and installation work (e.g.'s cable tray supports and barriers; pipe spool pieces and supports; and support steel and platforms).
- Continued to action back charges and maintain LAN tracking.
- Reached negotiated settlement with Southeastern Construction and Maintenance (HGCU Structural Steel) regarding outstanding commercial issues.
- Provided commercial support to Resident Engineering and Construction Management in resolution of pipe and weld minimum wall thickness issues involved with B. F. Shaw.
- At the request of Construction Management, and in light of increased safety awareness, suspended extra "quitting-time" traffic patrol services provided by the Polk County Sheriff's Office.
- Provided commercial support to Resident Engineering and Construction Management in resolution of Radiant Syngas Cooler and Gasifier Refractory issues involved with Harbison-Walker.

- Provided commercial support to Plant Operations and Production Engineering regarding delivery issues involved with the Plant Simulator and Bailey Controls Company.
- Secured expedited delivery of fuel oil meter ticket forms.

Major Activities Planned for Next Month:

- Continue close monitoring and expediting of remaining material deliveries, including reworked pipe spool pieces, Rosemount electronic transmitters, valves, wire, and cable.
- Competitively bid installation of balance-of-plant fire extinguishers.
- Receive and evaluate competitive bids for CP-023, Waste Transfer and Chemical/Waste Oil Storage Facilities.
- Finalize evaluation and award Water Treatment Consulting Services.
- Finalize evaluation and award Amine supply.
- Finalize evaluation and award Paving, Grading, & Roadway Surfacing.
- Competitively bid Heat Recovery Steam Generator (HRSG) Pre-Boiler and Boiler Chemical Cleaning.
- Continue administration of Technical Representative Call-Out and Back Charge Administration processes.
- Finalize evaluations and award separate contracts for Pump and Valve Predictive Maintenance and Repair Services.
- Competitively bid supply and installation of the Expanded Metal Protection Screens for the Hot Gas Clean Up structure.
- Continue to action Problem Material Reports (PMRs) and effect necessary repair or replacement of defective or damaged equipment. •

V. CONSTRUCTION MANAGEMENT ACTIVITIES

A. CM STAFFING

The total CM staff of 41 includes 36 professional and 5 administrative. The budget total is 37 and the plan total is 37.

B. CONSTRUCTION STATUS SUMMARY

Major Activities Accomplished this Month:

- Commenced alignment of the Steinmüller equipment in the Gasifier Structure.
- Installed LP Diaphragms and Bearings in Steam Turbine.
- Completed rough set of major HGCU equipment.
- Completed excavation for the Slag Storage area. Commence liner installation.
- Completed erection of Sulfuric Acid plant.

Major Activities Planned for Next Month:

- Continue assembly of Steam Turbine; start final alignments.
- Complete installation of lower liner for Slag Storage pond.
- Complete installation of Coal Handling Conveyors.
- Complete installation of HRSG piping.
- Commence installation of Hot Gas Refractory.
- Prepare Combustion Turbines for GE Modifications to start January 30, 1996.

C. PROJECT FIELD ENGINEERING

Total field engineering staff is at 10, 1 Civil, 2 Electrical, 5 Pipe/Mechanical, 1 Welding, and 1 P.F.E. The plan is to keep this level through the middle of March, 1996.

Major Activities Accomplished this Month:

- Resolved minimum wall thickness problem on High Pressure Steam system. Coordinated return of repaired spools by B.F. Shaw. ETA January 3, 1996.
- Supported permitting efforts for operation of potable water and sanitary sewer systems.
- Pre-qualified HGCU Refractory Installation sub-contractor to support starting work in January.
- Coordinated Gasifier and RSC refractory requirements. Material and design to support Contractors Execution Plan.
- Reviewed as-built drawings for CP-010A Control Building contractor and CP-008 Main Civil contractor.
- Completed CM walk-downs of the Combustion Turbine, Air Separation Unit and Sulfuric Acid Plant to support turnover dates.
- Performed final inspection and Punch list on Steam Turbine Condenser.
- Walked down Fire Protection system with TEC's Insurance representatives.
- Obtained Steinmüller approval of final alignment for the Gasifier West Wing equipment to allow weld-lip seal weld out.

D. ENVIRONMENTAL

Major Activities Accomplished this Month:

- FDEP inspected the site on 11-28-95 to monitor the progress of reclamation activities east of SR 37. Comments from inspectors included that as-built contour drawings of wetlands had not been received, reviewed or approved by FDEP prior to planting. To date these drawing are still being developed.

- FDEP inspected the site again on November 30, 1995 to monitor compliance with NPDES permit conditions. FDEP wants all sampling and analytical requirement information located at the site. These include QA/QC program, analytical data, and supporting information.
- Potable water system bacteria analyses continue to be tested on distribution system as start-up completes action items. Redrawn as-builts drawings are being completed this week.
- ▶ Air plant nitrogen storage tanks were registered with the state of Florida this month.
- ▶ Initial ground water sampling is still on hold awaiting FDEP approval of variance on sampling technique (micro-purging).
- ▶ Storm water outfall 002 was opened on December 7, 1995 and closed on 12-8-95. Again reopened on December 11, 1995 and closed on December 12, 1995. Discharge samples were obtained according to NPDES permit. Flow rate was 150 gpm.
- ▶ FDEP approved provisionally the use of the sanitary system on December 22, 1995 and the system was placed in service. The conditions for use included posting signs at faucets that read " Do not drink, not approved for Human Consumption" and that all faucets and water fountains be valved off.
- ▶ Completed the certified potable water and sanitary waste water operator contract. The operator services began on December 18, 1995.

VI. CONTRACTOR STATUS

A. FIRE PROTECTION (A-015) F.E. Moran

Polk Power Contractor Safety Matrix	Number of First Aid Cases	Number of Doctor Cases	Number of OSHA Recordable Cases	Number of Loss Time Incidents	OSHA Recordable Rate
Current Month	0	0	0	0	0
To Date through December 31, 1995	0	0	0	0	0

F.E. Moran's progress is 41.3% actual vs. 44.1% scheduled as of December 31, 1995. Presently F.E. Moran's average work force is 8.

Major Activities Accomplished this Month:

- Completed check out of fuel oil and unloading foam systems.
- Commenced fire system in the Coal Unloading and Coal Conveyor areas.
- Completed checkout of main transformer deluge systems.

Major Activities Planned for Next Month:

- Complete work on Coal Grinding building sprinkler system.
- Continue Coal Grinding Building standpipe system.
- Complete electrical work for Maintenance and Warehouse Building.

B. SITE DEVELOPMENT (CP-001) Johnson Bros.

Polk Power Contractor Safety Matrix	Number of First Aid Cases	Number of Doctor Cases	Number of OSHA Recordable Cases	Number of Loss Time Incidents	OSHA Recordable Rate
Current Month	4	2	0	0	0
To Date through December 31, 1995	91	33	9	0	2.99

Site development (earthwork, paving, drainage structures and highway improvements) is 97.3% actual vs. 97.9% scheduled as of December 31, 1995.

Major Activities Accomplished this Month:

- Wetland planting in B1 continues.
- Revegetation in the 9 acre mitigation tract is complete.
- 98% of all earthwork is complete. Remaining work is C2 site grading.
- Cooling reservoir earthwork is complete.

Major Activities Planned for Next Month:

- Continue area B2 and B1 wetland planting.
- Continue filling cooling reservoir (forecast complete mid-February).
- Continue wetland revegetation

C. MAIN CIVIL INSTALLATION CONTRACT (CP-008) Johnson Bros.

Polk Power Contractor Safety Matrix	Number of First Aid Cases	Number of Doctor Cases	Number of OSHA Recordable Cases	Number of Loss Time Incidents	OSHA Recordable Rate
Current Month	0	0	0	0	0
To Date through December 31, 1995	78	15	10	1	8.29

The contract is now complete.

**D. GASIFICATION AND COAL HANDLING MECHANICAL/
ELECTRICAL (CP-011) TIC**

Polk Power Contractor Safety Matrix	Number of First Aid Cases	Number of Doctor Cases	Number of OSHA Recordable Cases	Number of Loss Time Incidents	OSHA Recordable Rate
Current Month	20	9	2	1	0
To Date through December 31, 1995	74	19	3	1	1.30

In mid-December, the contractor revised his schedule to address the work added in the Change Notices issued to date. The changes include adding in the estimated man-hours required to perform the CCN work (approx 18,000 mhs) and updating the piping quantities in Primavera to match the final isometric revisions. The resulting commodity installation curves indicate that the work is approx 1-2 weeks behind the mid-point curves. A task planning meeting was held to review the Contractor's recovery plan. The preliminary plan includes hiring of additional crafts, shifting crafts from the Coal Handling area as it completes in January, shifting of mechanical completion milestones (one startup system date may be impacted) and increased small bore pipe fabrication. The plan will be presented formally on January 8, 1996.

We continue to monitor progress and manpower on a weekly basis. There were 407 contractor personnel (including 80 indirects) for CP-011 on site as of December 20, 1995. The contractor is 56.4% complete vs 62.0% scheduled (based on midpoint schedule) as of December 31, 1995.

Major Activities Accomplished this Month:

- Commenced installation of insulation for equipment and piping in the pipe racks and structures.
- Continued installation of Steinmüller and MAN GHH piping and weldout of equipment.
- Continued installation of piping, equipment and electrical in the Pipe Racks, Gasification structure and Coal Handling areas.
- Completed installation of the steel mesh and siding in the Gasification elevator shaft.
- Completed final setting Steinmüller equipment in the Gasification structure.

- Completed electrical and mechanical work at the Flare and Truck Unloading Building.
- Completed erection of Coal Handling and Gasification structural steel.
- Turned over SLP-1, SMP-1, CNA-1, WOC-2 and CNC systems to Startup.

Major Activities Planned for Next Month:

- Complete installation of the Truck Unloading and Coal Conveyors to the Coal Silos.
- Continue piping, equipment and electrical activities noted above.
- Commence installation of siding on the Coal Grinding building.
- Commence installation of RSC thermocouples and insulation.
- Turnover of the CNM and FCU systems to Startup.

Concerns

FCU system - Several engineering revisions and FMC fabrication errors on the Conveyor system have impacted TIC work on this equipment. The engineering items have been resolved and the Contractor is working these items. Dixie Southern will be complete with fabrication rework by January 7, 1996.

All work should be complete by the Startup date of January 15.

Critical path activities

There were 92 critical path activities on the original schedule. The revised schedule that TIC is preparing has moved the LPN, HPN and NIT systems out 4 weeks to match the Startup need date. They have also requested that insulation be an exception to the WHP and WMP system mechanical completion dates. In addition, we are checking with Startup to determine if the FWP system can be sub-scoped to delay turnover of a portion of the system.

E. GASIFICATION WASTE PROCESSING (CP-011A) TIC

Safety Matrix is included with the information of CP-011.

TIC, the Gasification Waste Processing (Hot Gas Clean Up, Brine and Slag Handling) contractor, is 52.2% complete vs. 47.7% revised Recovery Curve as of December 31, 1995. See CP-011 for Manpower status.

Major Activities Accomplished this Month:

- Contractor submitted "Revised Target" schedule.
- Completed erection of structural steel for the Brine area.
- Continued structural steel Punch list work on HGCU.
- Continued handrail for tier 3.
- Completed tier 3 bolt-up and torquing of HGCU structural steel.
- Continued installation of Brine Area skids, piping and electrical.
- Commenced Brine Area paving activities.
- Continued installation of mechanical and electrical work at the Thermal Oxidizer.
- Completed rough set of major HGCU equipment.
- Completed Slag Handling pipe rack, started loading pipe.
- Continued Slag Handling piping/electrical activities
- Continued Slag Handling area paving
- Contractor released the following systems to Start-up:
CNA-1, XWT, SLP-1, WOC-2, PAS-1, CNM and CNC.

Major Activities Planned for Next Month:

- Continue installation of Brine Area equipment,
- Continue installation of Brine Area electrical tray and conduit.

- Continue installation of Brine Area electrical lighting and temporary power.
- Continue Brine Area paving.
- Continue Brine Area equipment alignment.
- Continue assembly of Brine Area skids.
- Continue with HGCU fill-in steel - tier 3.
- Continue installation of HGCU mechanical equipment.
- Commence Slag Handling area paving.
- Continue piping and electrical activities HGCU.
- Continue Slag Handling area paving.
- Continue pipe and electrical activities for Slag Handling.
- Mechanical completion of Startup systems:
PAS, CNL & DWS-2 to support Startup activities.

Problems

Schedule progress continues to track to the "Revised Recovery" schedule. TIC has indicated that hiring continues and overtime will be worked for piping activities.

**F. POWER BLOCK AND PLANT UTILITIES
MECHANICAL/ELECTRICAL CONTRACT (CP-012) H. B. Zachry**

Polk Power Contractor Safety Matrix	Number of First Aid Cases	Number of Doctor Cases	Number of OSHA Recordable Cases	Number of Loss Time Incidents	OSHA Recordable Rate
Current Month	20	2	1	0	0
To Date through December 31, 1995	257	36	3	0	1.15

H.B. Zachry (HBZ) is 81.5% complete vs. 87.4% current early target scheduled. Actual manpower is 286 vs. 200 scheduled.

Major Activities Accomplished this Month:

- The following Startup systems turned over this month:
 - ABM, FOG, XWT, SMP-1, SWS, CNA-1, FWA, FWI, LOT, GTG, HPU, WOC-2
- From HBZ QUIPS program, piping installation activities are 92% complete.
- HBZ worked the following piping systems:
 - SMP-1, SLP-1, PAS, COT, HPU, GTG, and CNL.
- Piping problems continue to be answered by RFI's. Percent of re-work due to misfabs, design and interference is about 2.6%.
- Nine main steam spools had wall thickness problems. As of January 2, 1996 8 of 9 spools have returned from Shaw due to re-work.
- From HBZ QUIPS program, installation of electrical activities are 78% complete.
- Completed all electrical distribution systems.
- Continue to wire HRSG and Steam Turbine

- Completed wire to the GE Combustion Turbine.
- Electrical problems continue to be limited to set-route. Not all design is complete and scoping of cables in the correct Startup system remain the two major problems.
- Continue to build LP and HP Section, set LP diaphragms and bearings.
- Steam Turbine continues to slip due to HBZ work activities.
- Continue to install concrete paving in Power Block area.
- Continued to build CT platforms. Engineering design issues continue on fit-up of platforms.
- Completed close out of Change Request #8.

Major Activities Planned for Next Month:

- Continue to erect, pipe and wire the steam turbine and HRSG.
- Continued piping activities to support Startup systems:
 - SMS, SRH, SBD, SGW, SGG, LOS, FWP
- Continued electrical activities to support Startup systems:
 - SBD, SGW, CEM, PCS, TME, LOS, ZAC
- Systems to be turned over next month are:
 - SMS, SRH, SBD, SGW, CEM, PCS, SGG, TME, LOS, FWP, PRO, ZAC

G. FIELD ERECTED TANKS (D-001) Tampa Tank Inc.

Polk Power Contractor Safety Matrix	Number of First Aid Cases	Number of Doctor Cases	Number of OSHA Recordable Cases	Number of Loss Time Incidents	OSHA Recordable Rate
<i>Current Month</i>	1	1	0	0	0
To Date through December 31, 1995	6	2	0	0	0

The Contractor is working to the revised schedule. The Contractor was 100% complete vs. 100% scheduled for the field erection/painting as of December 31, 1995. All erection work is complete. Remaining work is Punch list and painting.

H. WEST OF SR 37 RECLAMATION CONTRACT (CP-022) Johnson Bros.

Polk Power Contractor Safety Matrix	Number of First Aid Cases	Number of Doctor Cases	Number of OSHA Recordable Cases	Number of Loss Time Incidents	OSHA Recordable Rate
Current Month	2	0	0	0	0
To Date through December 31, 1995	2	0	0	0	0

The reclamation west of SR 37 commenced on November 13, 1995 and is 11.3% complete actual vs. 10.3% planned.

Major Activities Accomplished this Month:

- Mobilization of equipment is complete.
- Dewatering continues.
- Earthwork continues in two areas of the 1500 acre site. The western most section (A3) and north of Albritton Road (A1) is working. Two shift operation is limited with consideration to nearby residences.

Major Activities Planned for Next Month:

- Complete grading north of Albritton Road
- Commence drainage structures.

I. GASIFICATION STRUCTURE ELEVATOR (T-008) Montgomery Elevator

Polk Power Contractor Safety Matrix	Number of First Aid Cases	Number of Doctor Cases	Number of OSHA Recordable Cases	Number of Loss Time Incidents	OSHA Recordable Rate
Current Month	0	0	0	0	0
To Date through December 31, 1995	0	0	0	0	0

The Contractor mobilized this month after TIC finished siding the elevator shaft.

Major Activities Accomplished this Month:

- ▶ Completed installation of temporary work platform.
- ▶ Commenced work on installation of elevator guides and rails.

Major Activities Planned for Next Month:

- ▶ Continue installing rails and guides.
- ▶ Commence installation of elevator doors.

J. AIR SEPARATION UNIT (V-004) - Air Products and Chemicals, Inc.

Polk Power Contractor Safety Matrix	Number of First Aid Cases	Number of Doctor Cases	Number of OSHA Recordable Cases	Number of Loss Time Incidents	OSHA Recordable Rate
Current Month	1	0	0	0	0
To Date through December 31, 1995	22	7	2	0	3.47

Progress is 100% complete vs. 100% scheduled.

Major Activities Accomplished this Month:

- Continued to work off Punch list items.
- Successfully ran Main Air Compressor at full load for approximately nine hours.
- Successfully ran the DGAN motor uncoupled.

Major Activities Planned for Next Month:

- Continue commissioning activities including commissionings of the TSA, distillation column, and product compressors.

K. SULFURIC ACID PLANT (V-014) - Monsanto Enviro-Chem

Polk Power Contractor Safety Matrix	Number of First Aid Cases	Number of Doctor Cases	Number of OSHA Recordable Cases	Number of Loss Time Incidents	OSHA Recordable Rate
Current Month	9	0	0	0	0
To Date through December 31, 1995	46	3	0	0	0

Monsanto Enviro-Chem is currently 100% complete actual vs. 100% scheduled.

Major Activities Accomplished this Month:

- Completed partial process checkout of plant.
- Completed mechanical checkout of plant.

Major Activities Planned for Next Month:

- Complete insulation week of January 4, 1996.
- Review and initiate lay-up activities for plant.
- Return for final checkout and catalyst loading in June 1996.

L. SLAG STORAGE AREA (Z-000) - EMCON

Polk Power Contractor Safety Matrix	Number of First Aid Cases	Number of Doctor Cases	Number of OSHA Recordable Cases	Number of Loss Time Incidents	OSHA Recordable Rate
Current Month	1	1	0	0	0
To Date through December 31, 1995	1	1	0	0	0

Major Activities Accomplished this Month:

- Mobilization completed this month.
- Slag Storage area earthwork commenced and completed.
- HDPE Liner installation commenced.

Major Activities Planned for Next Month:

- Continue Liner.
- Commence Leachate Sump piping

M. SUBCONTRACTS

Safety Matrix, Total of All Subcontractors

Polk Power Contractor Safety Matrix	Number of First Aid Cases	Number of Doctor Cases	Number of OSHA Recordable Cases	Number of Loss Time Incidents	OSHA Recordable Rate
Current Month	1	0	0	0	0
To date through December 31, 1995	15	2	0	0	0

Subcontractors working on site in September were:

- SURVEY SERVICES (SC-001) EMK
- SECURITY (SC-002) Wells Fargo
- CIVIL TESTING (SC-003) Professional Services Industries
- NDE SERVICES (SC-004) Industrial NDT
- GENERAL SERVICES (SC-005) Harmony/Turner

VII. STARTUP ACTIVITIES

Schedule Summary:

As of December 29, Startup is 24 percent complete versus a scheduled 27 percent (Attachment B). Actual percent complete is based on the percent complete status of each system and each system is weighted based on the complexity of the system. Scheduled percent complete is based on the August 27, 1995 revised project schedule.

Startup has received 60 system turnovers versus 59 scheduled. Checkout is complete on 42 systems (except for minor punch list items) and 13 systems are behind schedule. Startup is steadily recovering from late system turnovers that occurred in October and November and plans to be back on schedule in early February. The next two schedule milestones "Steam to the ASU" and "First Coal" are forecasted to be completed on schedule.

During the month of December a curve representing startup system turnovers to operations was developed. It is included as Attachment C.

Major Activities Accomplished this Month:

Walk Downs and Turnovers

- Completed joint walk downs with construction and received system turnovers for the following systems: ABM - Auxiliary Boiler, FOG - Fuel Oil to Gas Turbine, XWT - Chemical Cleaning Tank, SMP-1 - Medium Pressure Steam, SLP-1 - Low Pressure Steam, SWS - Steam/Water Sampling, FP7 - Fire Protection for Transformers, CNA-1 - Condensate System 10" & 4" Main Header, FWA - Feedwater System, FWI - Feedwater to HRSG IP Drum, PAS - Plant Air, ASU - Air Separation Unit, LOT - Lube Oil Storage & Transfer, HAC-2 Power Block Crane, WOC-2 Open Loop Cooling Gasification & HGCU, GTG - Gas Turbine, HPU - Hydraulic Power Unit Combustion Turbine, CNC - Condensate Collection & Return, and CNL - Low Pressure Condensate Return.
- Completed joint walk down with construction on system: CNM - Medium Pressure Condensate.

ABM - Auxiliary Boiler

- Performed loop checks and powered up the burner management control.
- Meggered, Hipot tested and ran the boiler feed pumps.
- Hydro tested, repaired leaks and filled boiler deaerator and associated piping.
- Installed temporary piping for boilout.

CCA - Auxiliary Boiler Chemical Control

- Checked out system, flushed and placed in service.

CCC - Condensate Feedwater and Chemical Control

- Checked out system, flushed and placed in service.

DWS - Potable Water

- Filled potable water tank and placed in service.

EHD - ASU Substation S3B

- Energized the 4160 feeder from Substation S6 to Substation S3B for the ASU Nitrogen Compressor.

EHI - Gasification Substation S6

- Energized the 13.8 KV - 4160 V transformers.
- Received turnover and began checkout of Input/Output Cabinet 6.

FOG - Fuel Oil to Gas Turbine

- Checked out system and flushed with fuel oil.

FOY - Fuel Oil System

- Checked out system, filled fuel oil tank, flushed with fuel oil and placed in service.

FWD - Fire Water Distribution

- Hydro tested and began checkout of the fire protection systems for the Fuel Oil Area, Water Treatment Area, and Transformers.

HAC-1 - Intake Structure Crane

- Performed 2nd load test and placed in service.

IAS - Main Air Compressor

- Meggered and Hipot tested the main air compressor.
- Energized and placed in service.
- Removed the temporary compressor.

PAS - Plant Air

- Completed checkout, blew headers and placed in service.

SLP-1 Low Pressure Steam

- Began installing temporary pipe in preparation of steam blows.

SMP-1 Medium Pressure Steam

- Began installing temporary pipe in preparation of steam blows.

TSW - Sanitary Treatment

- Loaded activated sludge and placed in service.

WCP - Closed Loop Cooling Water Power Block

- Checked out system, flushed and placed in service.

WDD - Demin Water

- Filled demin tank and placed system in service.

WRO - Reverse Osmosis

- Loaded RO membrane.
- Completed RO bench marking for train A & B.
- Completed checkout and placed in service.

Other Accomplishments

- Energized the cathodic protection circuits for service water tank, condensate storage tank, demin water tank, and fuel oil tank.
- Started energizing lighting transformers and feeders in the Power Block Area.
- Placed in service the control and maintenance building restroom facility.

Major Activities Planned for Next Month:

- Receive turnover and begin checkout on system: CNM - Medium Pressure Condensate.
- Complete joint walk downs, receive system turnovers and begin checkout for the following systems: DWS-2 - Potable Water Gasification/HGCU, FCU - Coal Unloading, and ZAC - CT Generator.
- Perform steam blows on the low pressure and medium pressure steam systems.
- Complete steam to the Air Separation Unit.
- Complete lube oil flush for gas turbine.
- Complete checkout and place in service the following systems: ABM - Auxiliary Boiler, CCA - Auxiliary Boiler Chemical Control, CCC - Condensate/Feedwater Chemical Control, CNC - Condensate Collection, DWS-2 - Potable Water Gasification, FOG - Fuel Oil to Gas Turbine, FOY - Fuel Oil System, FWI - Feedwater to HRSG IP Drum, HAC-2 Power Block Crane, HPU - Hydraulic Power Unit Combustion Turbine, LOT - Lube Oil Storage & Transfer, SMP - Medium Pressure Steam, SLP - Low Pressure Steam, SWS - Steam Water Sampling, WCP - Closed Loop Cooling Water, WOC-2 Open Loop Cooling Water Gasification and XWT - Chemical Clean Waste Tank.

Staffing:

As of the end of December, there were seventeen non-manual Bechtel Startup personnel, seven TECO non-manual Startup personnel, one secretary supplied by an employment agency and one administrative aid supplied by an employment agency.

VIII. OTHER PROJECT PARTICIPANTS

A. GENERAL ELECTRIC

General Electric met with Tampa Electric and Tampa Electric's insurers to address the insurers' concerns about the operating and maintenance history of the 7F/9F fleet. GE explained all of the significant problems experienced to date and how they might apply to the Project. Most of the problems were on earlier generation machines and are not of a concern. The insurers expressed specific concerns with the 2-3 spacer problem (modifications planned for February) and turbine wheel intergranular surface cracking (shot-peening performed after machining).

The combustion liners to be installed at Polk are in fabrication. The liner portions from GE's subvendor are complete, have had the thermal barrier coating applied, and are in Greenville, S.C. for installation of the caps. Delivery is expected in mid January.

Work continues on consolidation of comments to GE's proposed warranty extension related to the 2-3 spacer modification.

B. GEESI

Due to equipment problems at the HGCU pilot plant in Schenectady, the test scheduled for early December, 1995 did not occur. Concerns about quality control for the METC 10 sorbent delivered to CRD are being resolved. It now appears that the next opportunity to run a pilot plant test will be in March, 1996 as winter weather permits. Bench scale testing of Phillips' Z-Sorb IV is near completion, and this sorbent is also expected to be available for a pilot plant run in March, 1996.

TEC and Bechtel comments have been incorporated into the GEESI O&M Manual and books are being assembled for final issue.

IX. PROJECT SCHEDULE

The Auxiliary Boiler erection was completed and checkout has begun to support the Project Milestone STEAM TO ASU scheduled for January 10, 1996. The Sulfuric Acid Plant checkout has begun and is expected to complete earlier than the Project Milestone ACID PLANT COMPLETE scheduled for February 15, 1996.

The Critical Path for the project remains the Gasification Tower steel and piping. Additional paths which are nearing the Critical Path are:

Combustion Turbine Completion, Lube Oil Flush, GE Mods, and Startup
Steam Turbine Completion and Startup

The Project Summary Schedule, Rev. 11 is included as Attachment E stasured through the end of December, 1995. This schedule summarizes the Project Integrated Schedule as issued and approved in Schedule Change Notice 027 issued December 18, 1995. The *Activity Bars on the schedule are stasured ahead or behind the Status Line indicating status against the target plan. Completed milestones are shaded with an actual date typed below the line.*

The Schedule Change Notice 027 was issued to adjust Startup Turnover Dates that were earlier than the Contractor's Mechanical Completion Dates. The Startup Activities that were adjusted as a result of SCN 027 are indicated with a Rev. 11 triangle next to the *column of Startup Summary Dates on the right side of the schedule. The Revised Schedule meets all Project Milestones including the Turnover to Operation date of September 15, 1996.*

The actual Construction Percent Complete continues to track slightly below the Target Percent Complete. The Project Schedule Curve reflects the planned progress the planned progress for the remaining work as issued in SCN-027. The Resource Curves reflect the same picture with Large and Small Bore Pipe actuals tracking slightly below the schedule curves. The new Schedule Curve reflects the Integrated Project Schedule as issued in Schedule Change Notice 026.

The Project Summary Schedule indicates several of the areas where the actual work has deviated from the plan during December. Below is a summary of the changes along with analysis of the impact and recovery:

- The CP-014 Package for Grading, Paving, Landscaping will be issued early January to support construction start in March, 1996. CP-002 Package for Fencing will also be issued in January with expected start of work in March, 1996 as scheduled.
- Excavation for Contract Z-009 Slag Storage Area was completed and the lining installation has begun. Although this work started late, Emcon has submitted a recovery schedule that completes the work per the original plan.

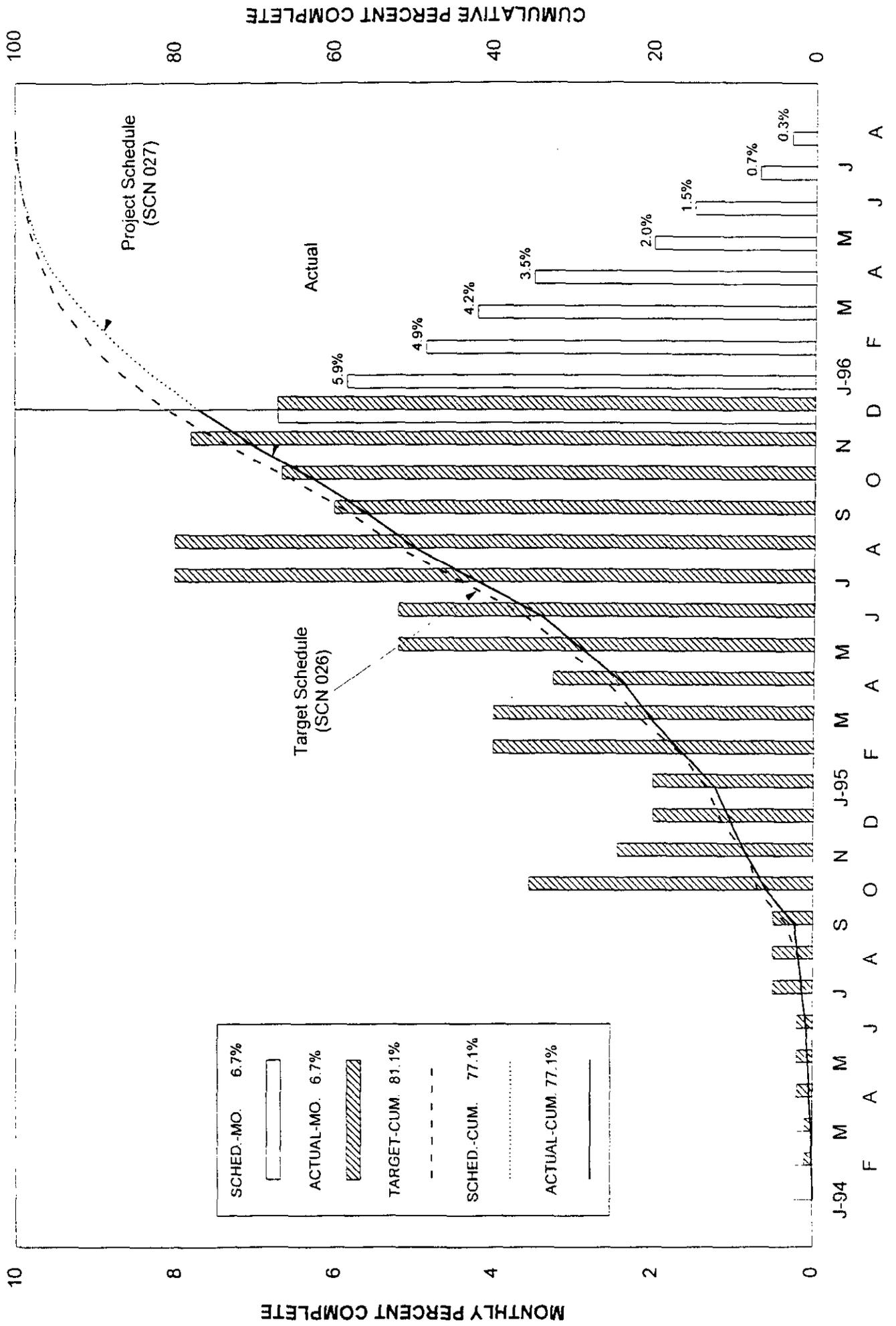
- Rotor installation for the Steam Turbine started in December. Although Zachry is running about 2 weeks later than their target plan they are working to a recovery schedule to meet the Startup Turnover Date of February 13.
- The HRSG Vendor Pipe installation will complete in January meeting the Startup Turnover Date. HRSG Hydrotest is schedule to start February 1.
- The Steinmueller equipment setting was completed and alignment has begun. The large and small bore piping installation has fallen 2 weeks behind the plan and TIC is addressing the issues to recover in this critical area.
- Montgomery Elevator started work in December. This work was delayed approximately a month. This work is not critical to any system completions.
- The Slag Handling piping continues to run about a week behind the plan because TIC has concentrated on the more critical Gasification Area. The Slag Handling area is not critical and the schedule will be recovered in 1st Quarter, 1996.

X. ATTACHMENTS

- A. Construction Percent Complete
- B. Startup System Turnover and Percent Complete
- C. Total Project Bulk Installation Progress
 - C1 A/G Large Bore Pipe
 - C2 A/G Small Bore Pipe
 - C3 A/G Conduit
 - C4 Wire and Cable
- D. Total Project Resources
- E. Project Photos
- F. Project Summary Schedule

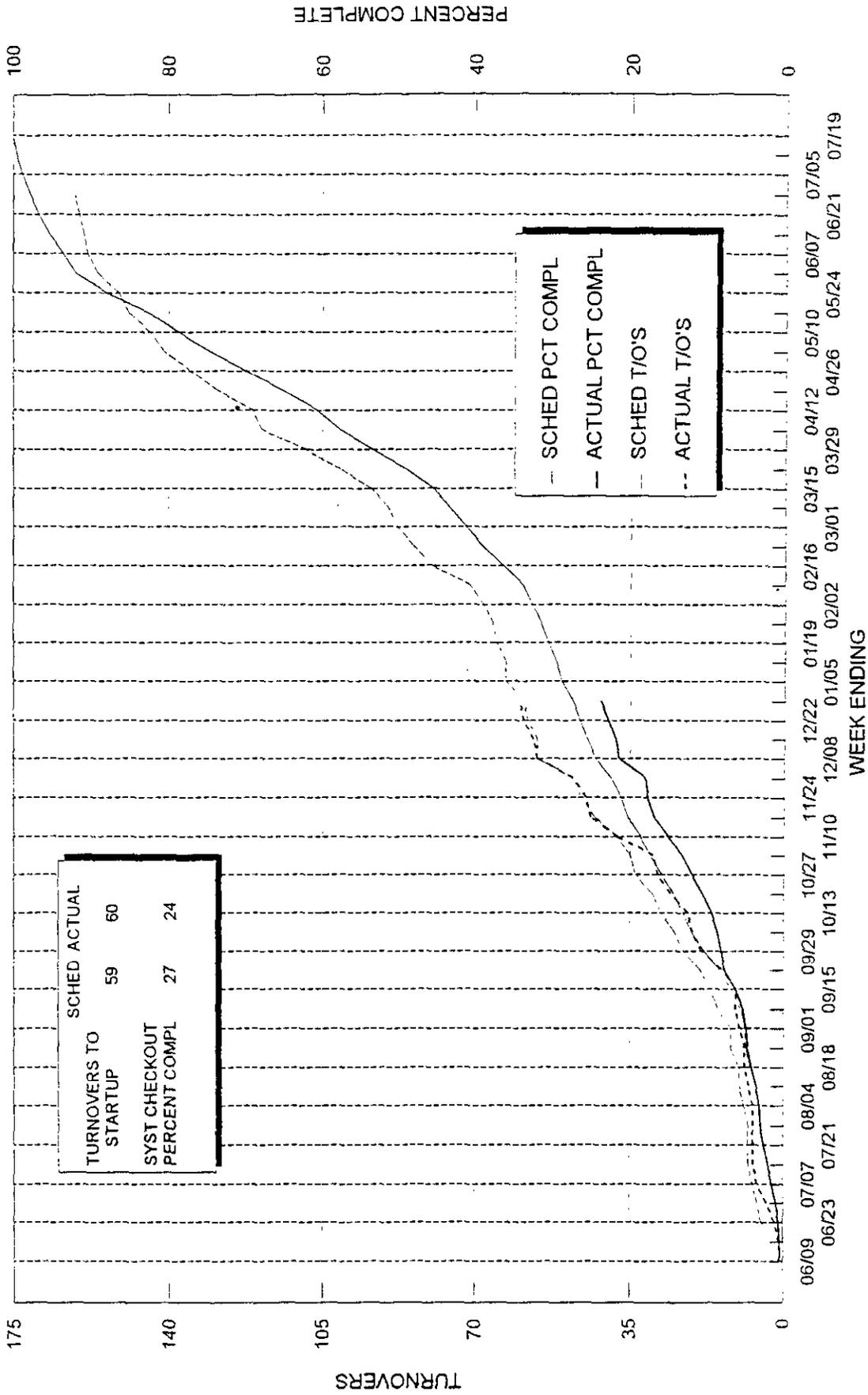
POLK POWER STATION - UNIT 1

CONSTRUCTION PERCENT COMPLETE - DECEMBER 1995



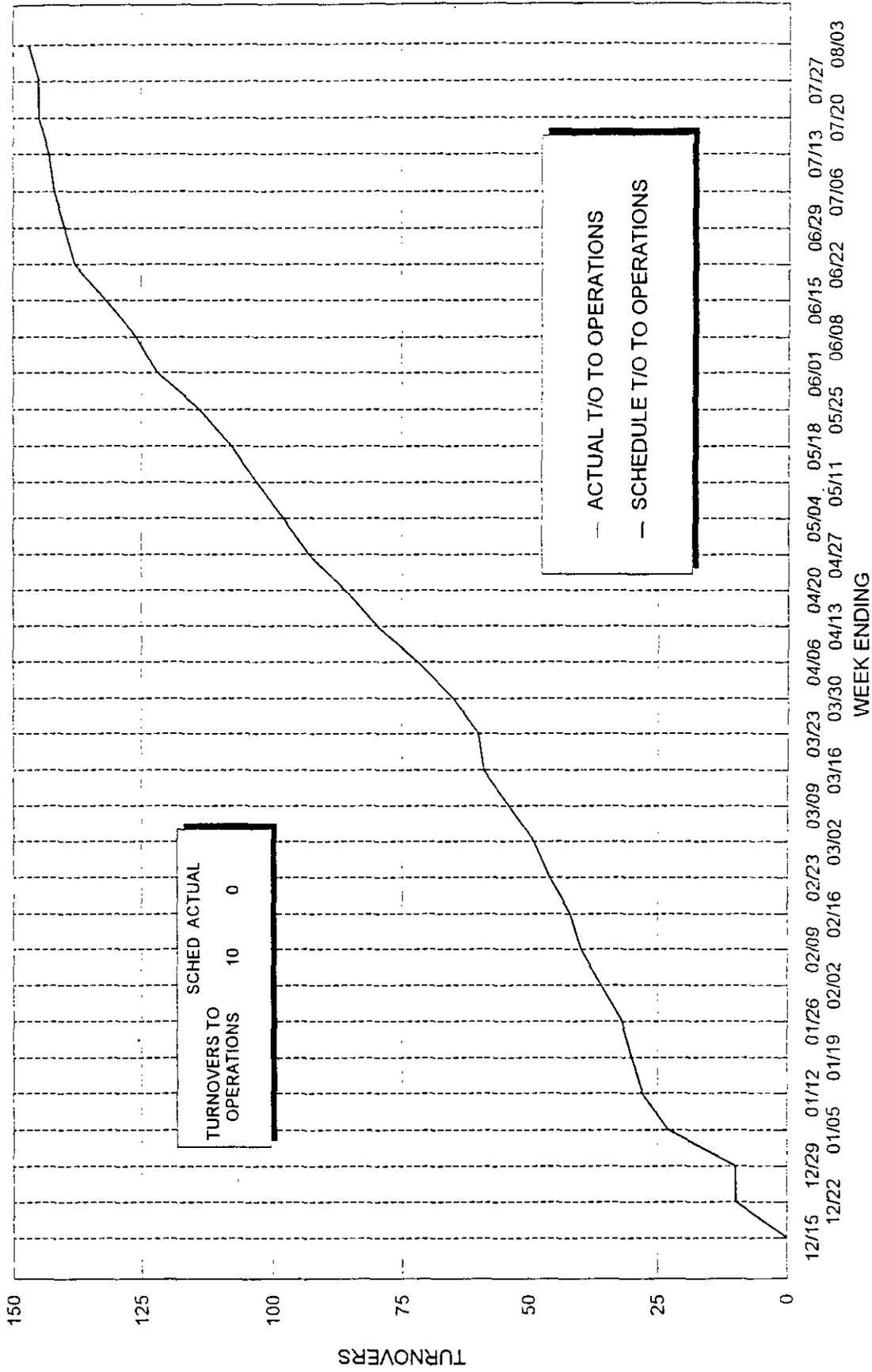
STARTUP SYSTEM TURNOVER & PERCENT COMPLETE

STATUS AS OF 12/29/95



STARTUP SYSTEM TURNOVER TO OPERATIONS CURVE

STATUS AS OF 12/29/95



SCHED ACTUAL	
TURNOVERS TO OPERATIONS	10 0

—	ACTUAL T/O TO OPERATIONS
—	SCHEDULE T/O TO OPERATIONS

POLK POWER PROJECT

TOTAL PROJECT A/G LARGE BORE PIPE

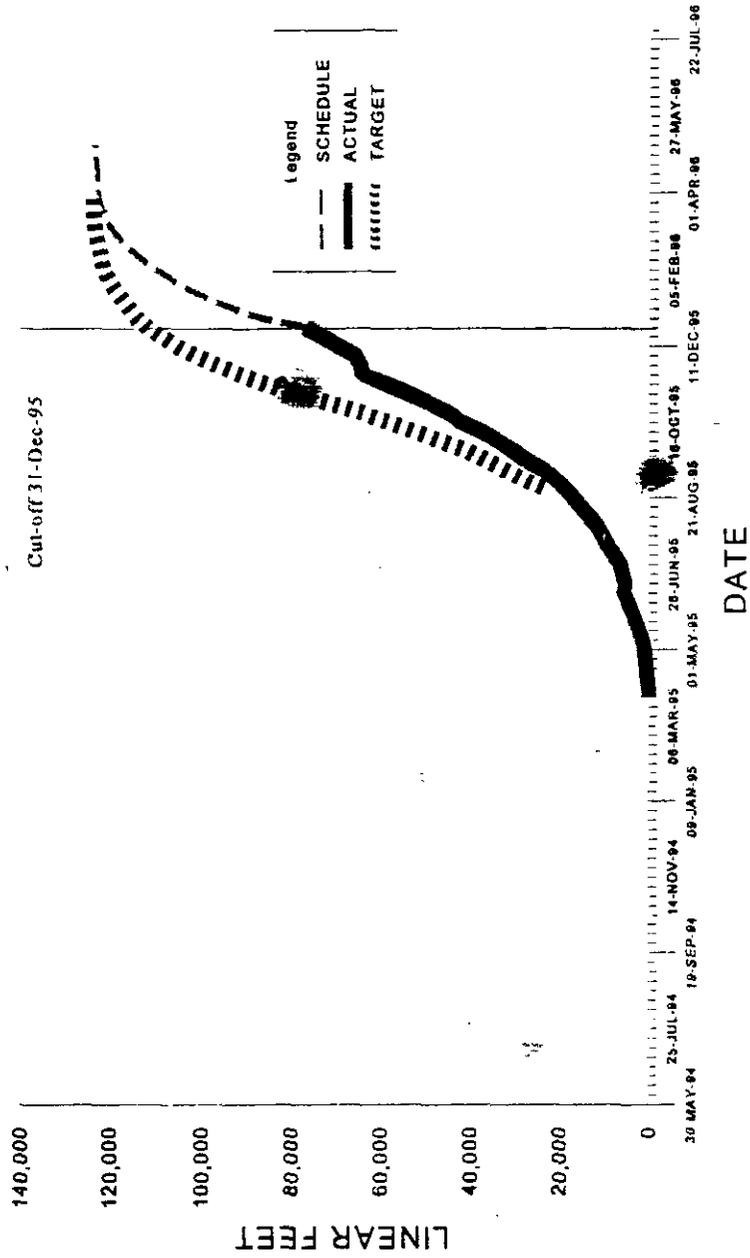


Figure 1

POLK POWER PROJECT

TOTAL PROJECT A/G SMALL BORE PIPE

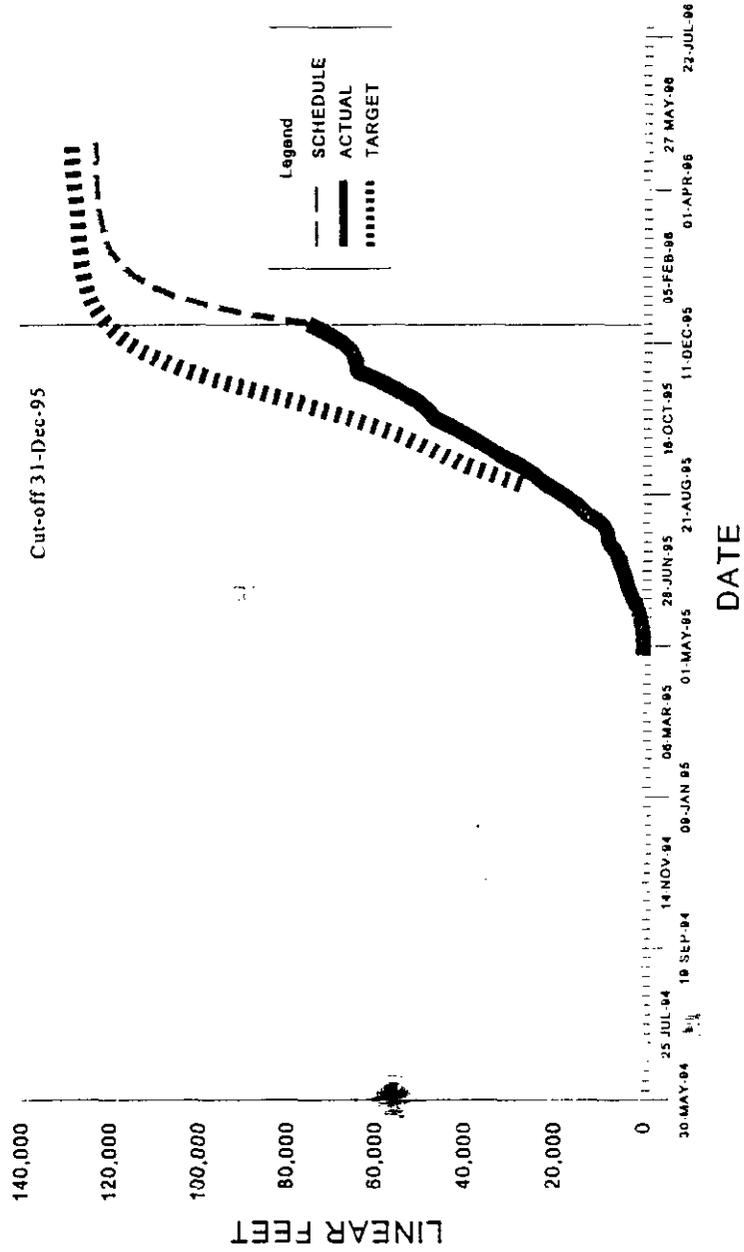


Figure 1

POLK POWER PROJECT

TOTAL PROJECT A/G CONDUIT

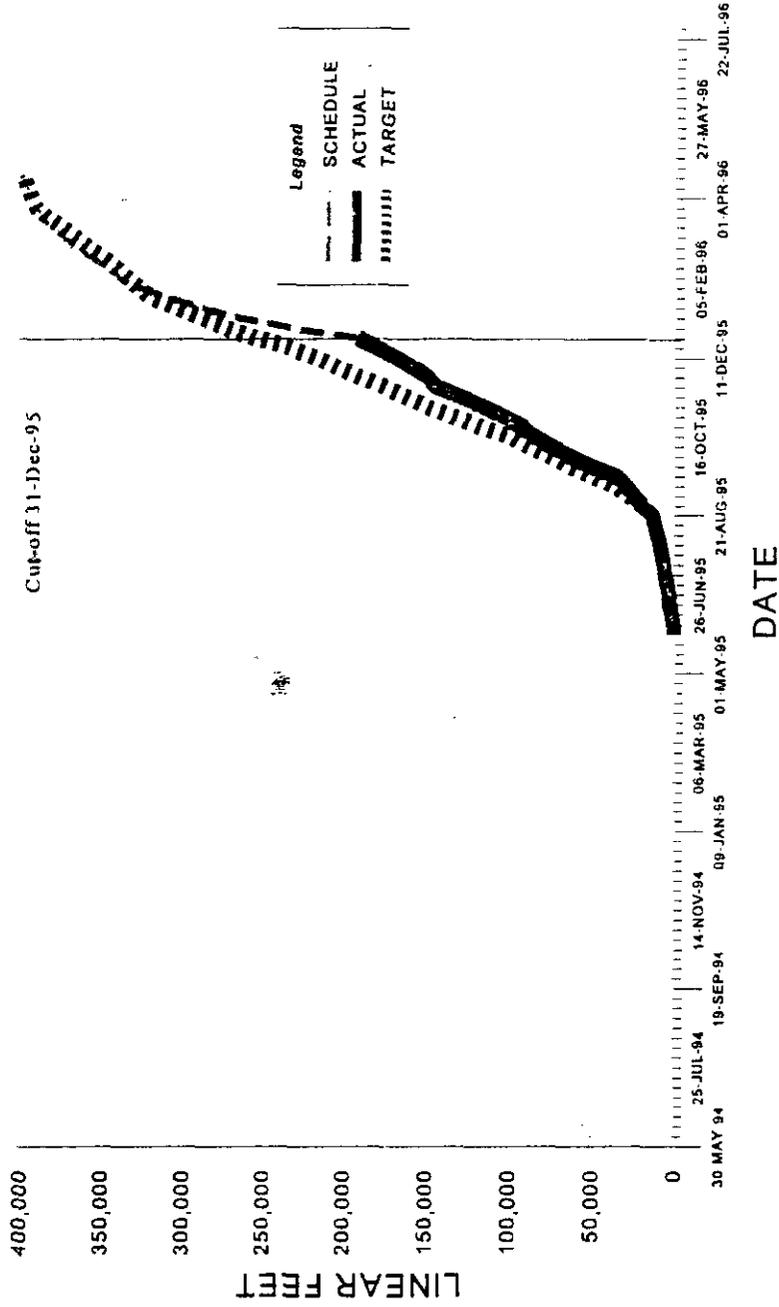


Figure 1

POLK POWER PROJECT

TOTAL PROJECT WIRE & CABLE (INCL TERMS)

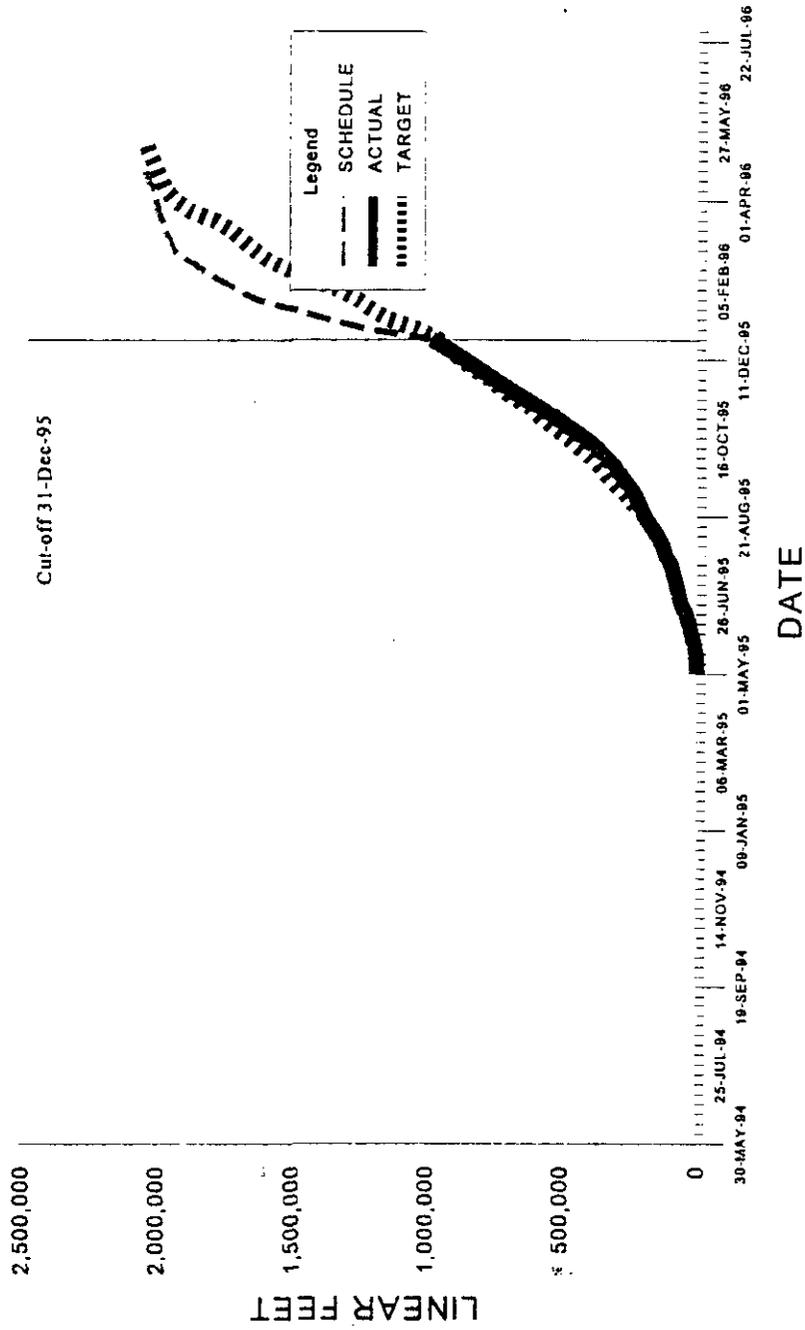


Figure 1

POLK POWER PROJECT

TOTAL PROJECT RESOURCES

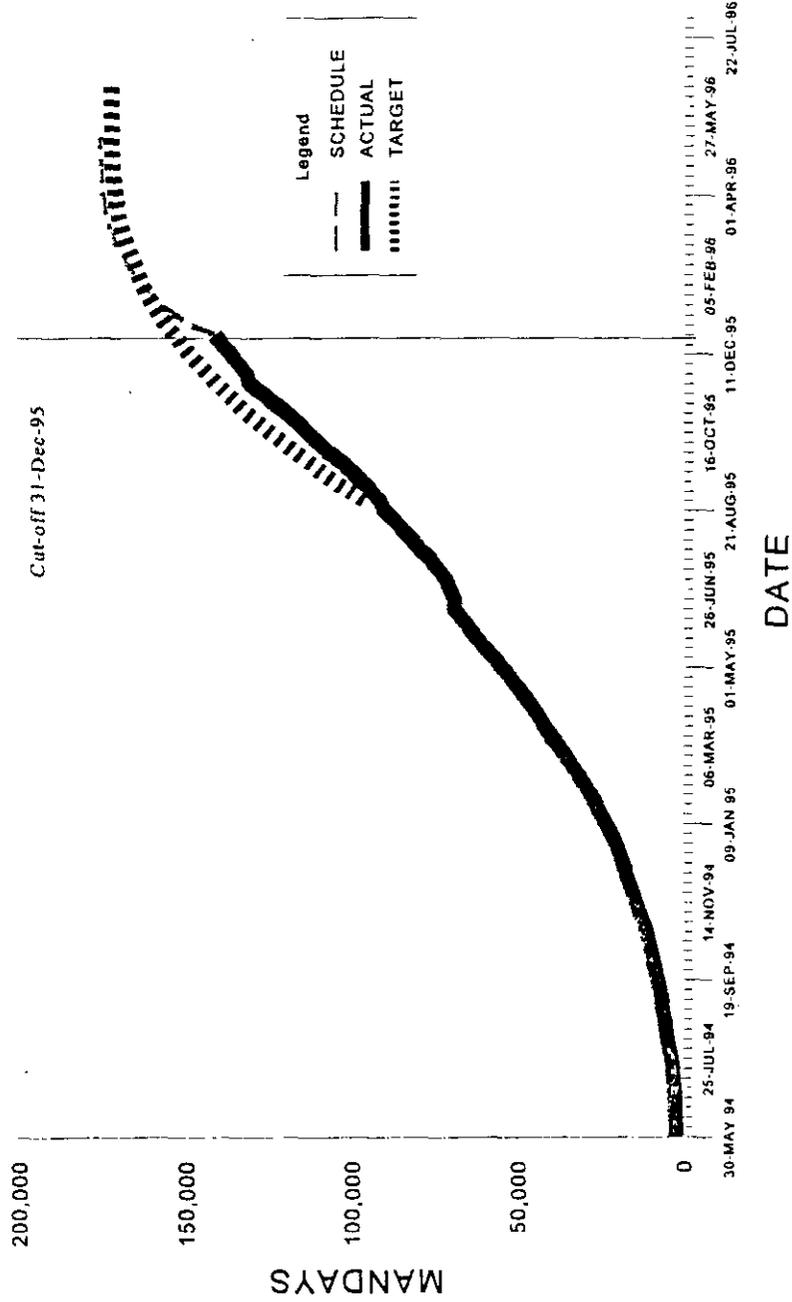
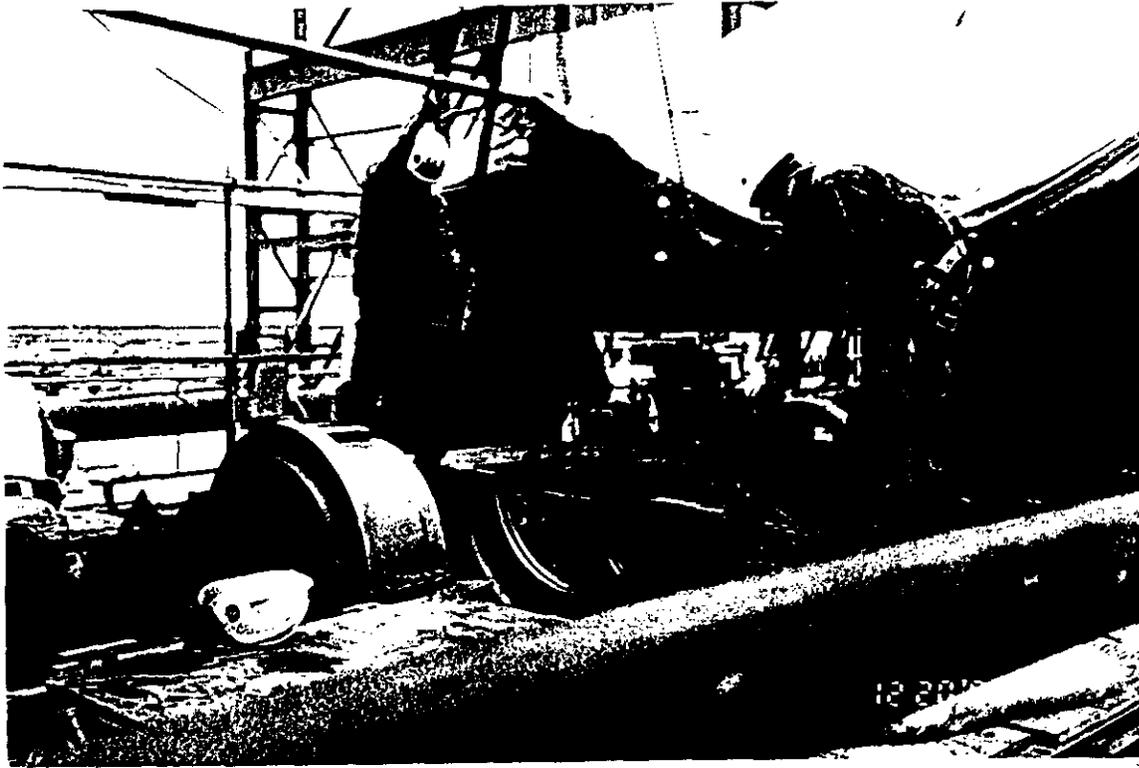
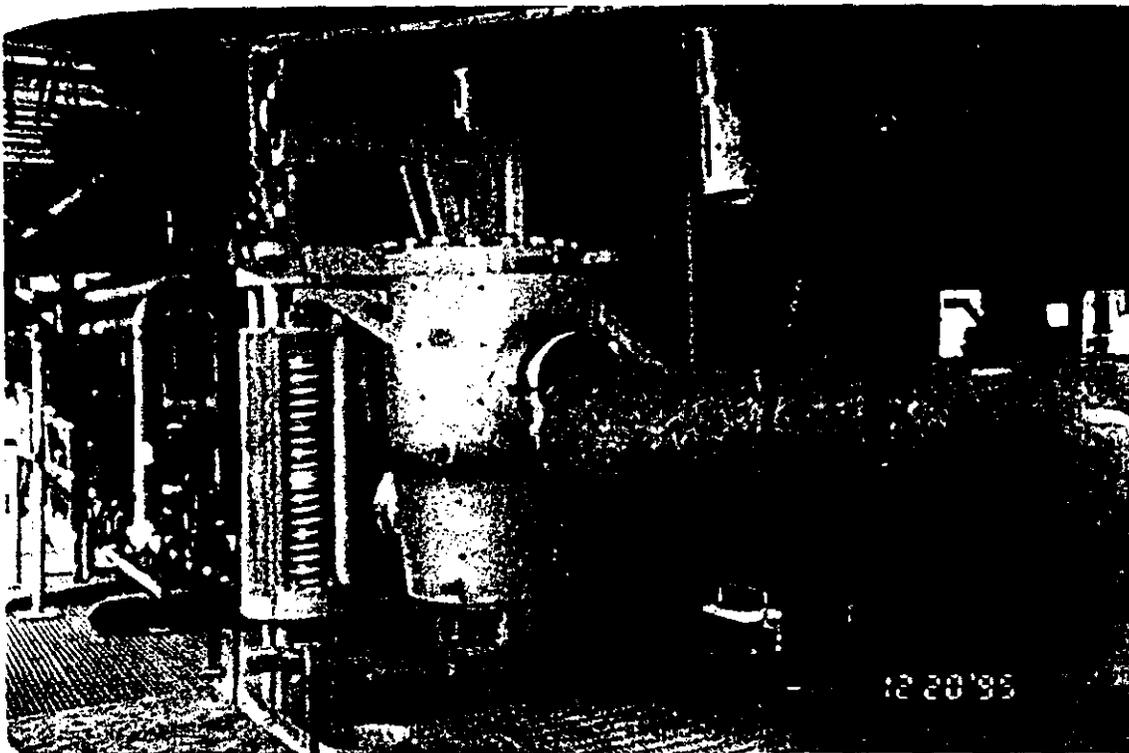


Figure 1

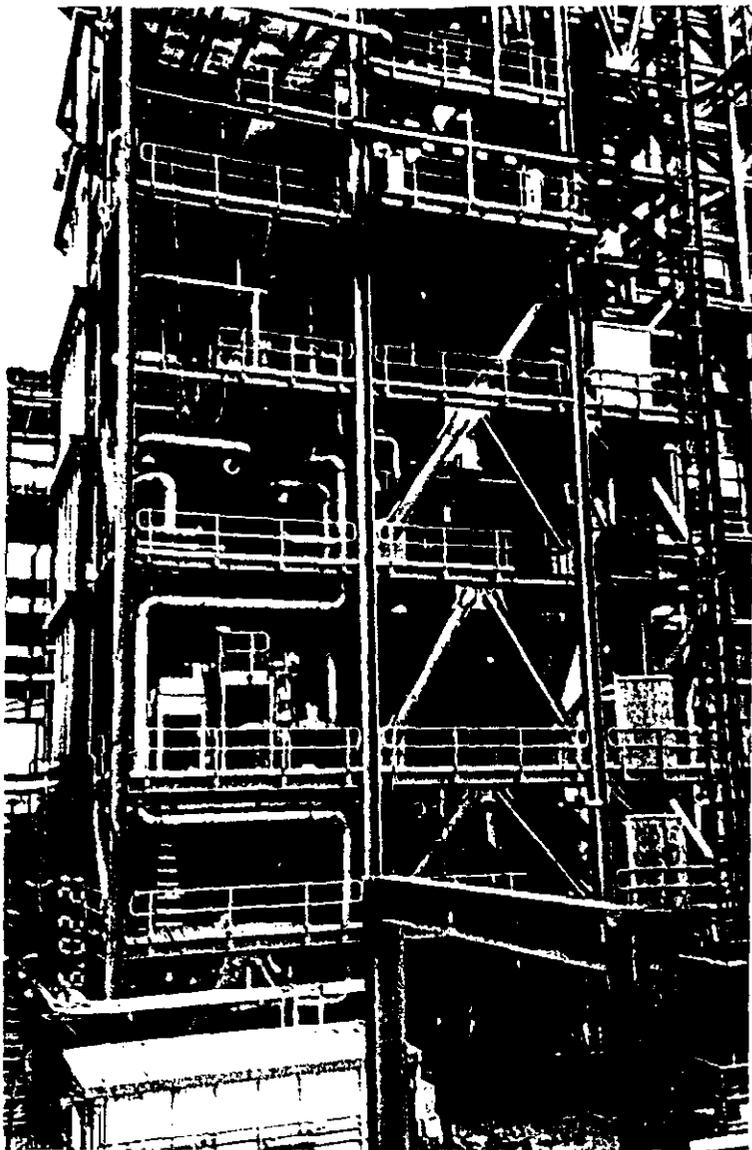
ATTACHMENT E
PROJECT PHOTOS



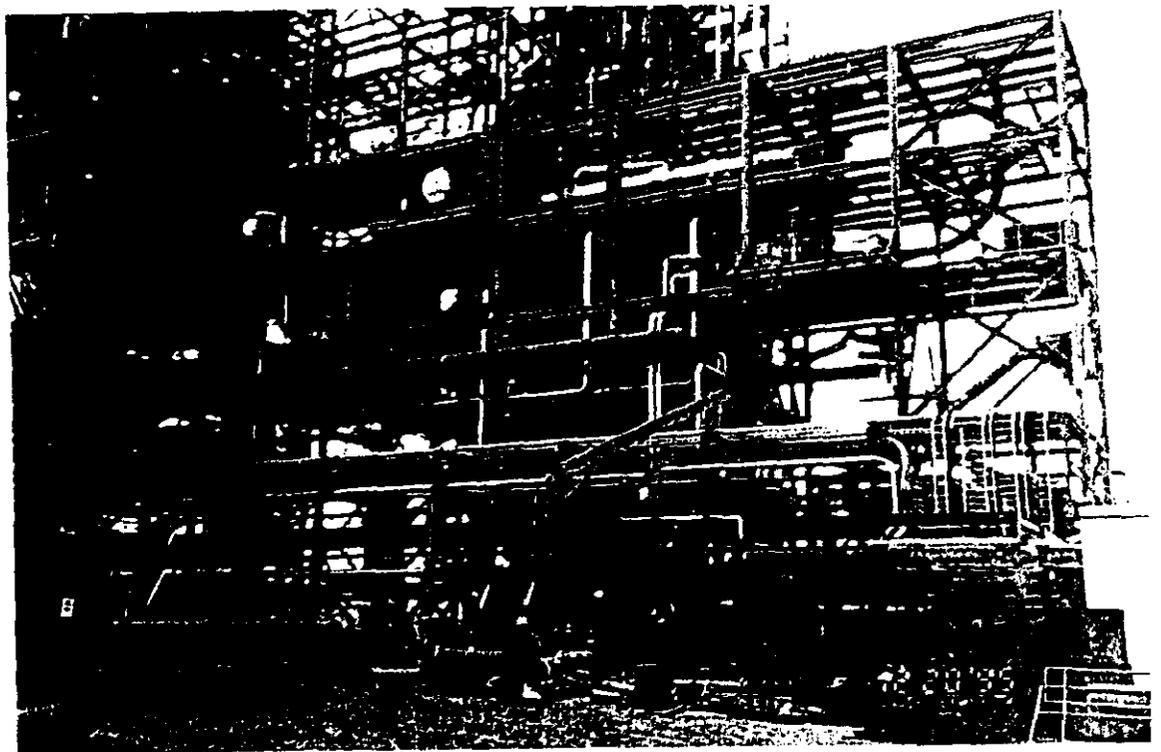
View Southwest of the Steam Turbine showing installation and alignment of the L.P. Diaphragms



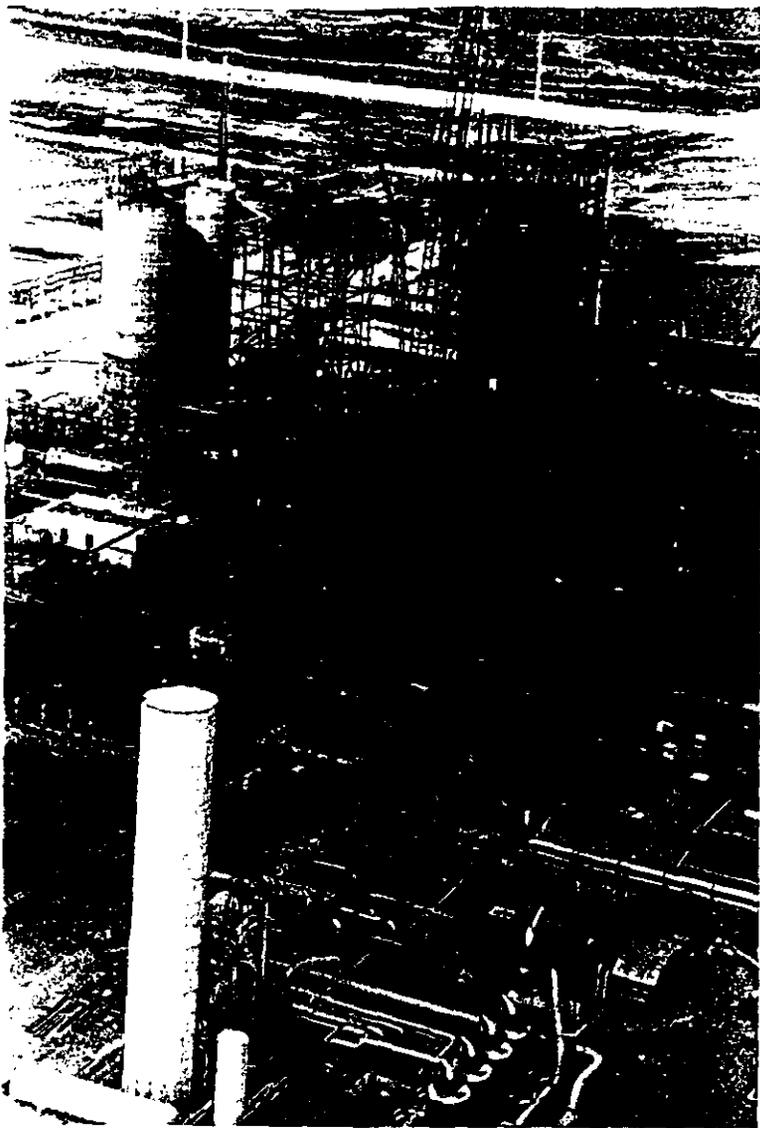
View Northeast of the Main Steam Control Valve Under the Steam Turbine Deck



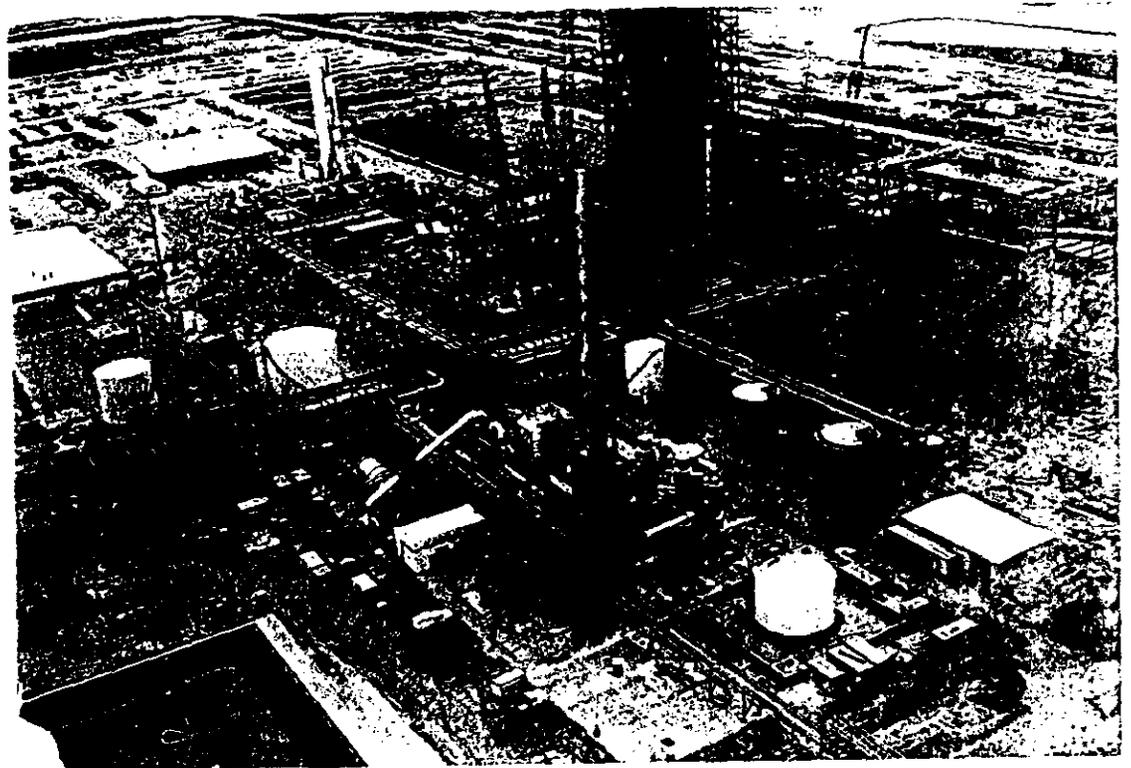
View North of Piping, Tray, and
Equipment Progress in the HGCU
Structure (To Elevation 167')



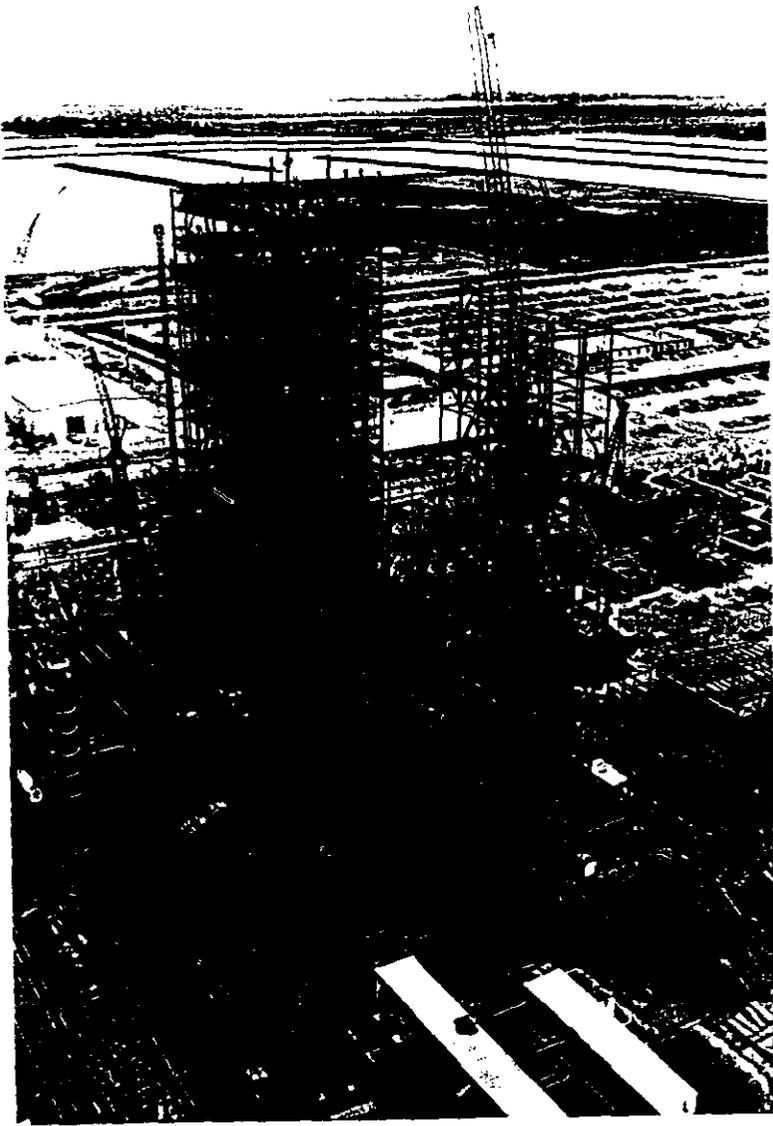
View Southeast of
Piping and Tray
Progress on the
North Side of the
West Wing of the
Gasifier Structure



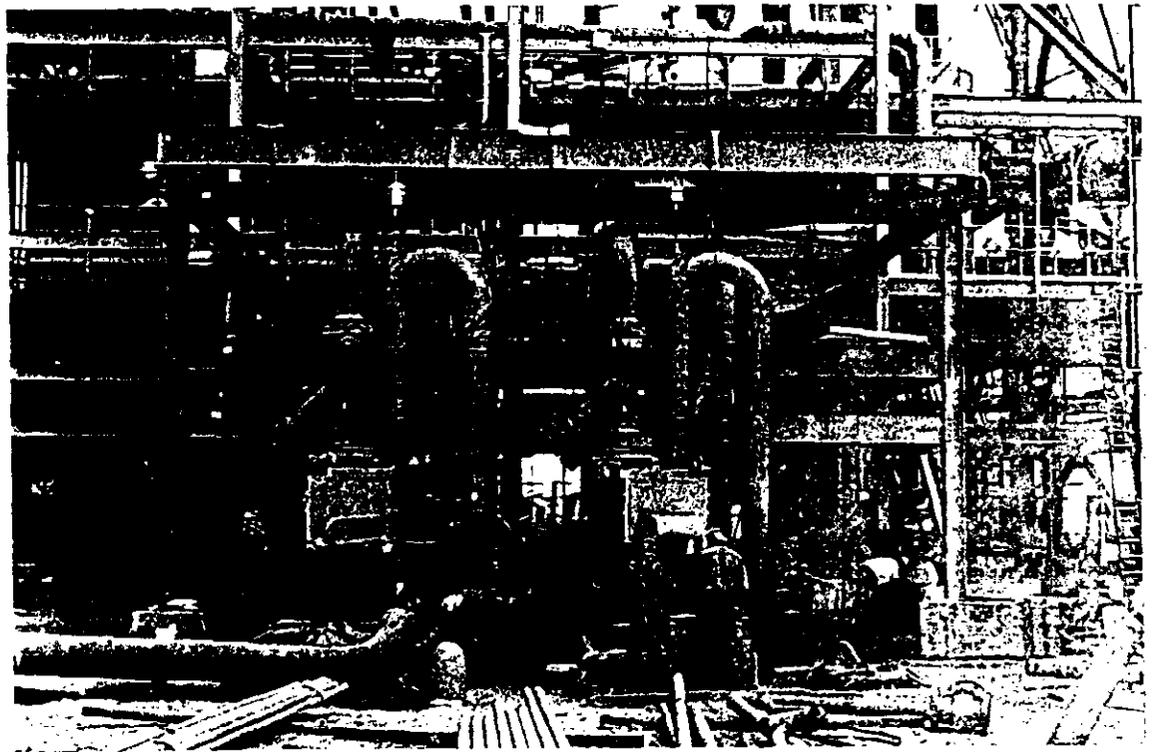
Aerial View Northwest
of Gasification and Air
Separation Unit
(Taken 11/28/95)



Aerial View to Southwest
of Sulfuric Acid Plant
(Taken 11/28/95)



Aerial View to Southeast of
Gasification and HGCU Structures
(Taken 11/28/95)



View North of Progress
on the Syngas Cooler
High Pressure Circulating
Pumps