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FINAL REPORT
GUINEA AGRICULTURAL PRODUCTION CAPACITY
AND TRAINING PROJECT - 675-0201
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT (AID)

I. WORK COMPLETED UNDER SWEC SUPERVISION

For the final period of Stone & Webster Engineering Corporation's (SWEC) participation, all contractor (SATOM) work took place at the Tindo Experiment Station. All items of electrical rework were accepted, and all circuits were tested with a portable generator. Plumbing, where completed, was not tested due to the contractor's inability to fill the water tank.

A. Punch List Items

At the Technicians' Villas, all louvers, interior and exterior locks, kitchen cabinets, and closet shelves were completely installed. All plumbing for the kitchens, including hot water heaters, and bathrooms was completed as well. The ten hot water heaters were electrically connected, as were the two (of ten) ranges delivered. Circuits for remaining ranges were installed. In addition, culvert passages were constructed for access to the four west-side villas.

The condensing and fan coil units for the two cold rooms at the Training Center laboratory were 100 percent electrically connected, but only one had the refrigerant piping installed because the other fan coil unit was damaged. The unit was repaired on site and can now accept the precharged lines. Gas and water lines were installed to the extent possible (50 percent). Completion of piping is contingent upon the installation of the Fisher Scientific Company laboratory furniture, which is only 10 percent complete. The ceiling exhaust fan for the fume hood was mounted and electrically wired, as was the 3 kVA transformer and a J-type lighting fixture.

Kitchen counters and sink were completed at the Training Center, along with the installation of exterior locks and electrical circuits. A separate circuit for an electric stove was not installed because of the recent decision by SWEC and U.S. AID engineer R. Sullivan to switch to a gas stove.

All electrical circuits, plumbing, and structural work have been completed at the Administration Building and the Dormitories.

The Laborers' Quarters' kitchens, laundry, and toilets have been completed, except where outdoor fixtures were not installed as directed by the Government of Guinea (GOG). Additions to kitchen walls were 20 percent completed. All wiring was installed, as were door louvers and locks.

At both the Hangar/Magazine and the Livestock Center, the electrical wiring was 100 percent completed. Hasps for locks on all sliding doors were mounted. The showers and toilets at the Hangar/Magazine were completed, while the two sinks there are 90 percent complete due to a lack of drain fittings.

All electrical work at the Generator House was completed.

B. Supplementary Work

In addition to punch list items, other tasks not in the contractor's original scope of work were identified by SWEC and charged to either the contractor or local craftsmen to complete. At the direction of SWEC, SATOM constructed a culvert passage underneath Road "A." All exterior water shutoff valves that had been stolen were reinstalled in the interior of the buildings, where possible. Installed doors that had suffered damage due to either transport or environment were 100 percent repaired.

Electrical poles that arrived from Conakry unsatisfactorily welded together were repaired and reinforced on site.

II. WORK TO BE COMPLETED - TINDO

At the completion of SWEC's contract, punch list items at Tindo were 90 percent complete. The remaining items of work follow.

A. Water Distribution System

Materials are being procured in three separate packages. One includes the controls for the pumps and generator. This package will be provided by SWEC. Another package consists of the pumps and their specific level and shutoff controls. The final package is the piping and fittings required. The pumps and piping will be supplied through two different suppliers through GOG purchase orders.

Drawings and instructions for installation from SWEC engineers were turned over to R. Sullivan and D. McClellan, REDSO Engineer in Abidjan, Ivory Coast. All controls will be mounted at the pump house, with the exception of the level control to be installed at the water tower. Four hundred and fifty meters of 4 in. PVC pipe and 460 meters of two-wire cable will run underground from the pump house to the junction at the Laborers' Quarters where the pipe feeds into the Tindo network and the cable goes above ground to the electric poles and runs to the water tower.

In conjunction with the above, the final fuel connections, battery installation, and startup for the pump house generator must take place. M. Frapier, a local contractor, has been engaged to put all generators in running condition.

B. Training Center

Fisher furnishings for the lecture hall must be procured and installed. For the kitchen, an electric stove, along with the necessary breaker, transformer, and electrical fixtures, is needed.

The small kitchen cabinet is missing a counter top that cannot be fabricated locally.

C. Laboratory

The remainder of the Fisher equipment; gas, water, electric, and drainage lines; and duct for the fume hood must be installed (about 50 percent remains). Precharged refrigerant lines (suction and liquid) must be brought up from Foulaya to replace those inadvertently discharged when connected to the faulty fan coil unit (repaired on site) in the north-side cold room.

D. Generator House

The ductwork from the radiator exhaust to the windows must be completed. A new coolant level switch (Murphy Switchgage No. EL-150-K1) must be purchased and installed on Unit No. 1.

E. Hangar/Magazine

The sliding door rollers previously procured are too large. The width required is 1 3/4 in. A door must be procured and installed (consult R. Sullivan) and two bushings for the sink drains (1 1/2 in. x 1 1/4 in.) must be obtained.

F. Technicians' Villas

The ten transformers (10 kVA) for the electric ranges must be installed, as well as the eight remaining ranges.

G. Electric Poles

Pole No. 31, at the junction of roads "B" and "C-east," must be straightened, and a guy support on Pole No. 17 is required. A street light on Pole No. 21 is to be installed.

The eight remaining electric poles delivered from Conakry must be strengthened in the same manner as were the previous five, i.e., complete welding of a 3 m piece of 18-gage structural steel on each side of the pole.

H. All plumbing must be tested, as well as the electrical work at Faranah Farm.

III. SUGGESTIONS AND COMMENTS

Except where materials could not be delivered, contractor work was progressing at a satisfactory pace. To assist continuing progress, certain suggestions may be considered.

A. A Fisher laboratory furnishings specialist should schedule a visit at the end of March for a minimum of ten days to oversee lab installations at Tindo/Faranah and Foulaya (to finish).

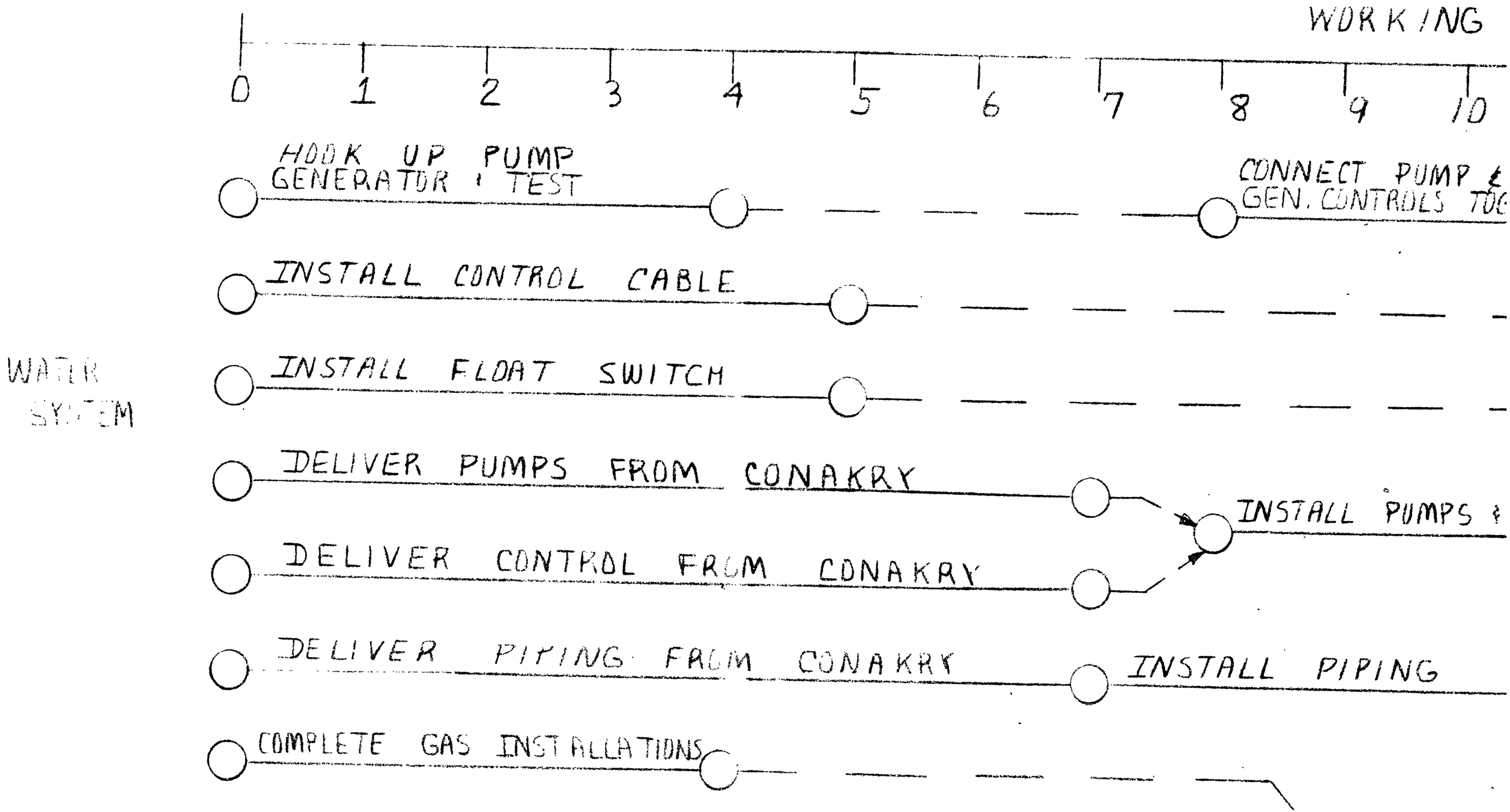
B. An Onan Generator representative should be scheduled for a five working-day visit in April to inspect and test (load and no-load) all generator installations, including transfer switches.

C. Assistance should be given to DEG (Distribution d'Eau en Guinee), wherever necessary (labor, procurement, design, etc.), to expedite their contractual obligations to the project.

D. Procurement of material for reconstruction of the Foulaya drying room (according to SWEC preliminary design left with N. Garner, U.S. AID, Conakry) should begin immediately so that the contractor may not be impeded when work recommences in Foulaya.

In order to facilitate logistics problems, the client directed that all work would be completed at one site before moving to another, beginning at Tindo. Therefore, no work was carried out at Faranah Farm, Faranah Institute, or Foulaya Research Center under SWEC supervision. Fragnets for the completion of work at Tindo have been included with this report. Those fragnets previously drawn up for the other work sites are valid as of March 1, 1983.

It must be noted that breakdowns in logistics occurred frequently. Transport for needed material took weeks to secure, and then often the wrong or insufficient material was transported. The lack of fuel for project vehicles impaired contract progress. For repair of materials damaged in transport, it was necessary to rely on other expatriate communities for equipment and assistance.


WORKING
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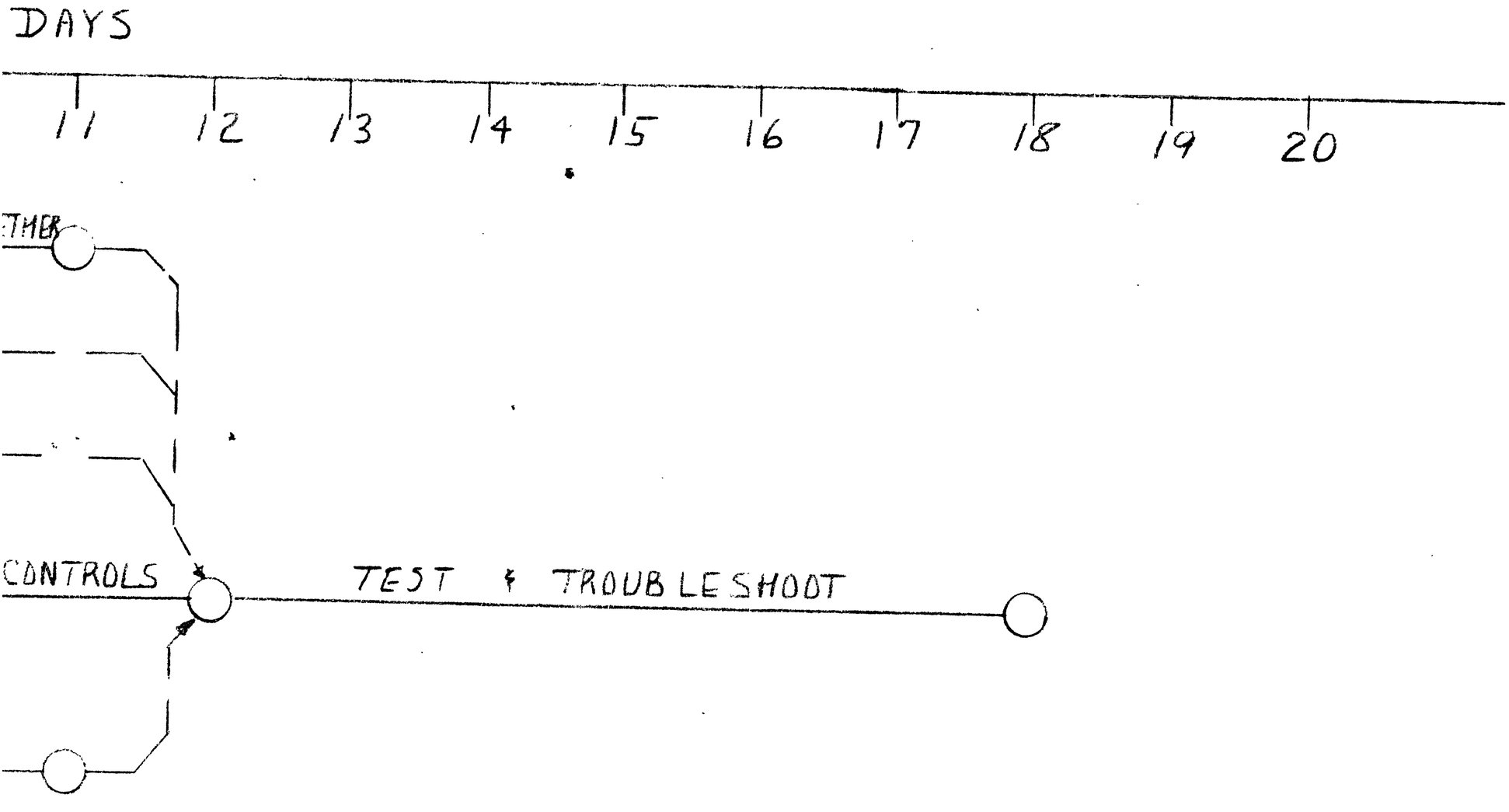
HOOK UP PUMP
GENERATOR & TEST
CONNECT PUMP &
GEN. CONTROLS TOG
INSTALL CONTROL CABLE
WATER
SYSTEM
INSTALL FLOAT SWITCH
DELIVER PUMPS FROM CONAKRY
INSTALL PUMPS &
DELIVER CONTROL FROM CONAKRY
DELIVER PIPING FROM CONAKRY
INSTALL PIPING
COMPLETE GAS INSTALLATIONS


DAYS
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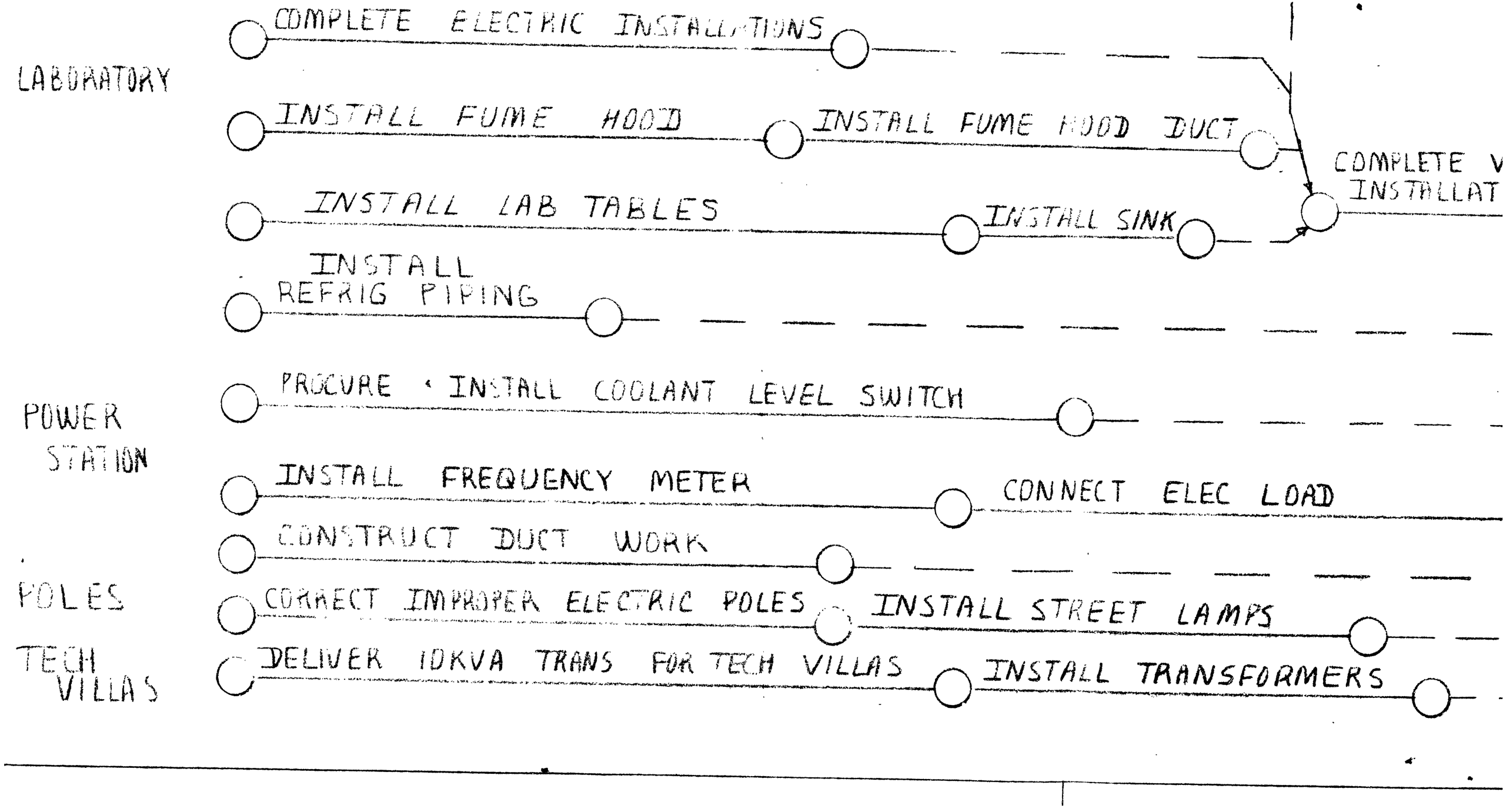
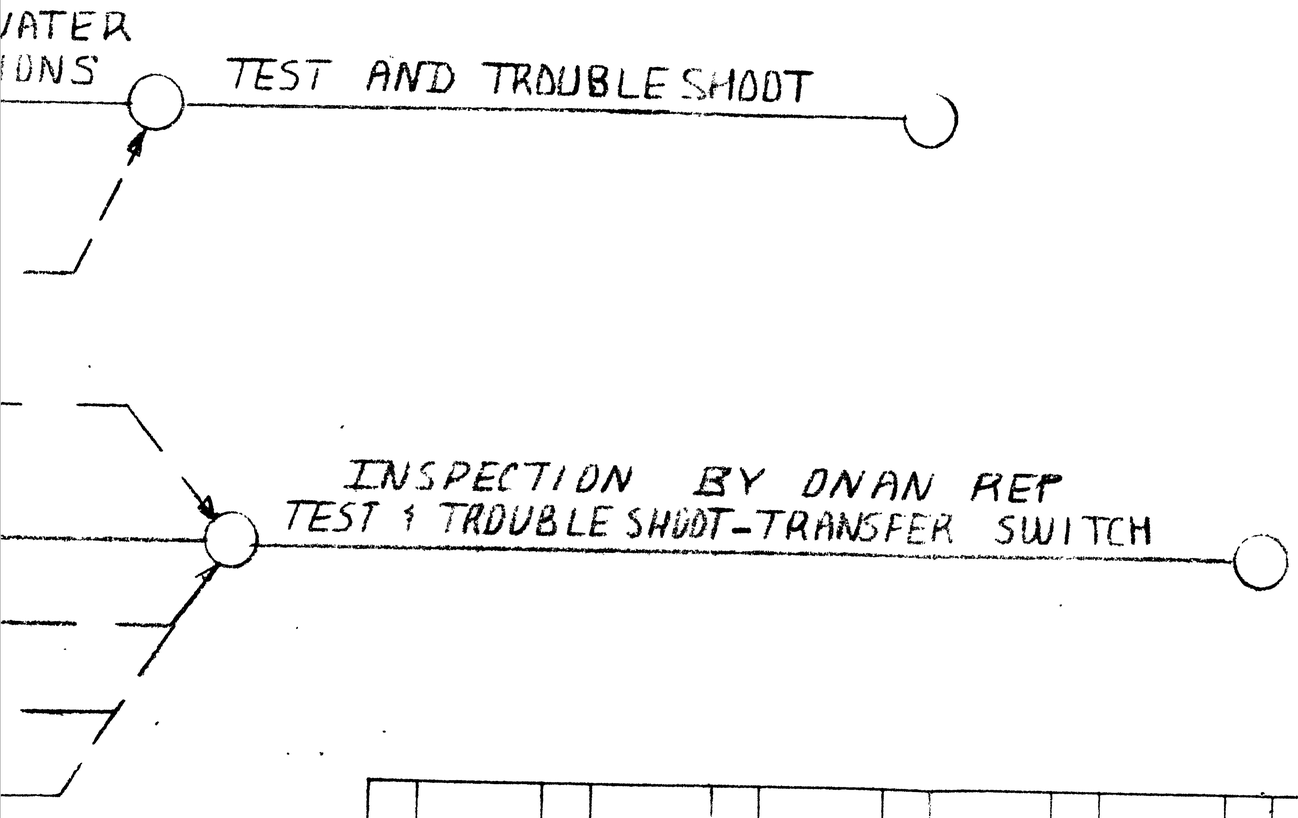
CONTROLS
TEST & TROUBLESHOOT


LABORATORY
COMPLETE ELECTRIC INSTALLATIONS
INSTALL FUME HOOD
INSTALL FUME HOOD DUCT
COMPLETE V
INSTALLAT
INSTALL LAB TABLES
INSTALL SINK
INSTALL
REFRIG PIPING
POWER
STATION
PROCURE & INSTALL COOLANT LEVEL SWITCH
INSTALL FREQUENCY METER
CONNECT ELEC LOAD
CONSTRUCT DUCT WORK
POLES
CORRECT IMPROPER ELECTRIC POLES
INSTALL STREET LAMPS
TECH
VILLAS
DELIVER 10KVA TRANS FOR TECH VILLAS
INSTALL TRANSFORMERS



TINDO GENERAL

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT
GUINEA AGRICULTURAL PRODUCTION
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675-0201 J.O 14208

STONE & WEBSTER ENGINEERING CORPORATION

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