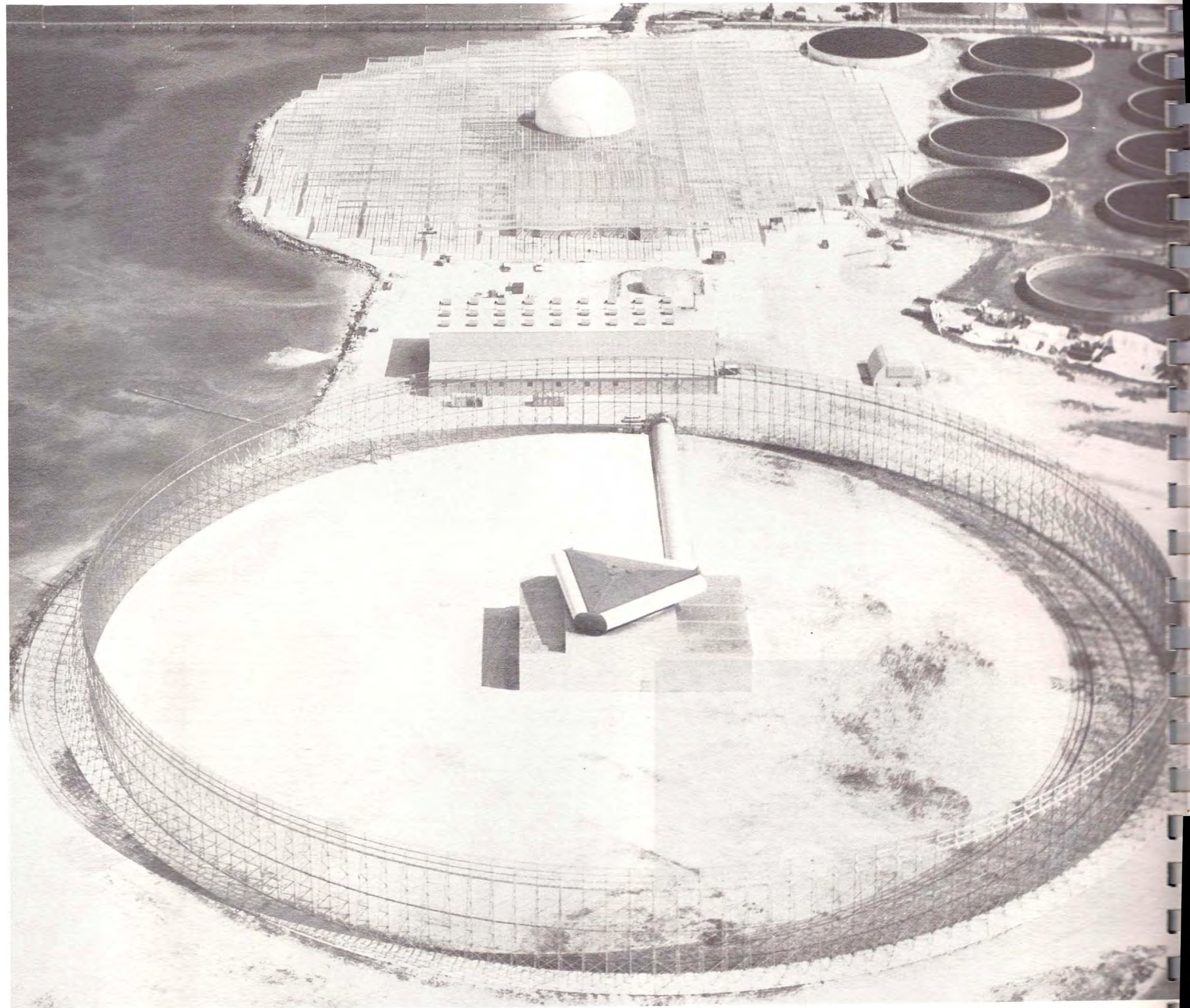
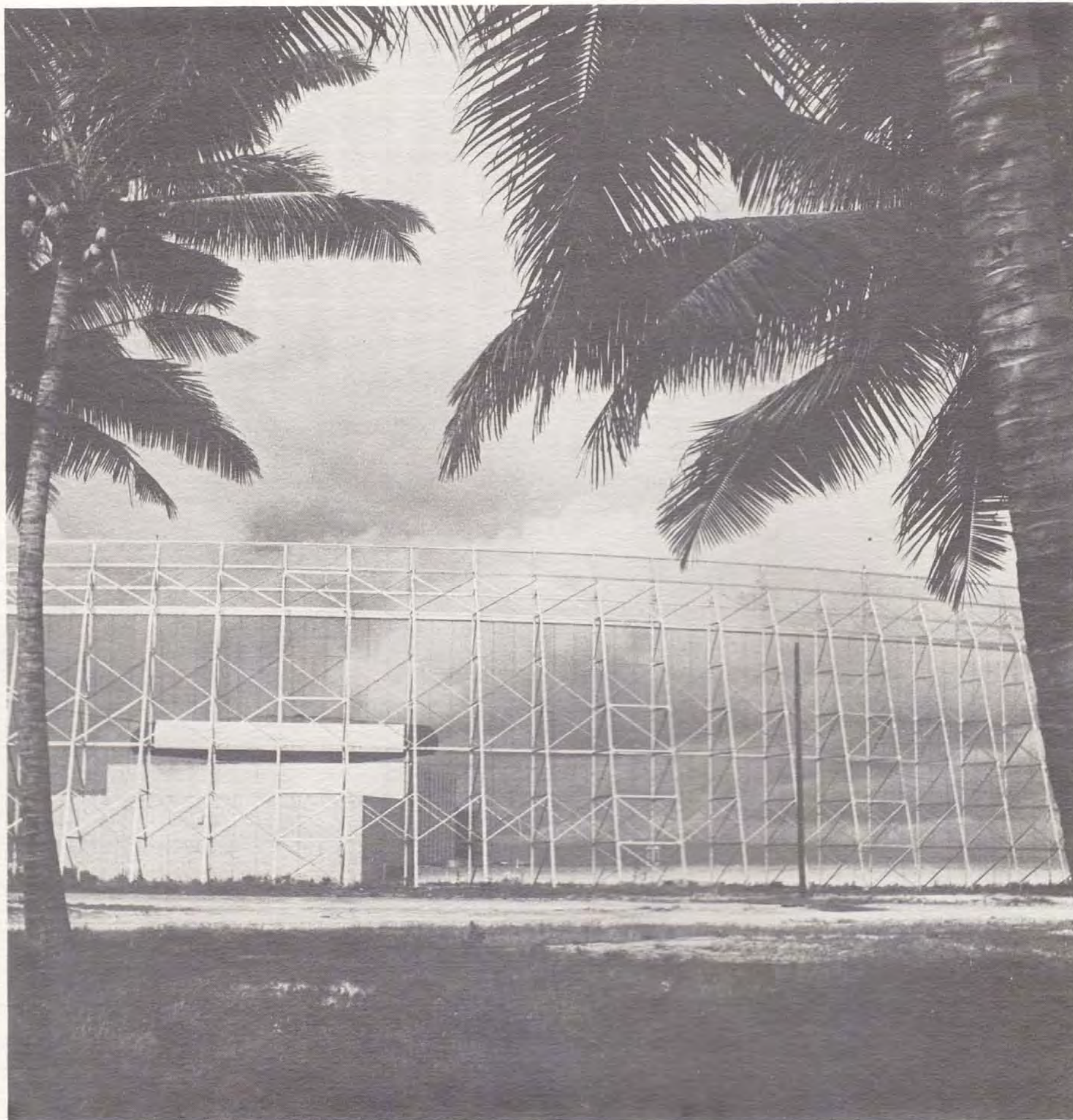


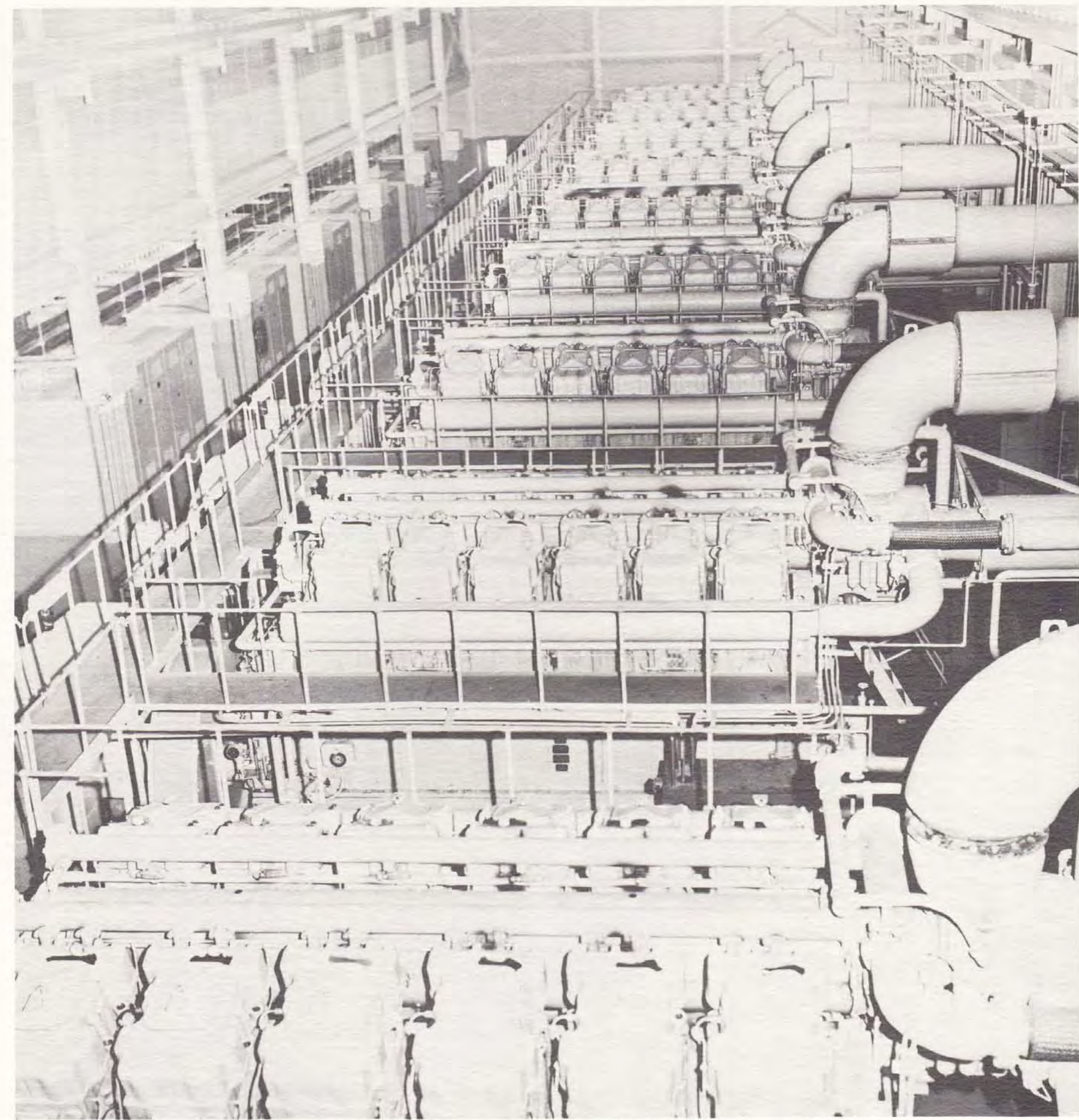
ZAR Complex



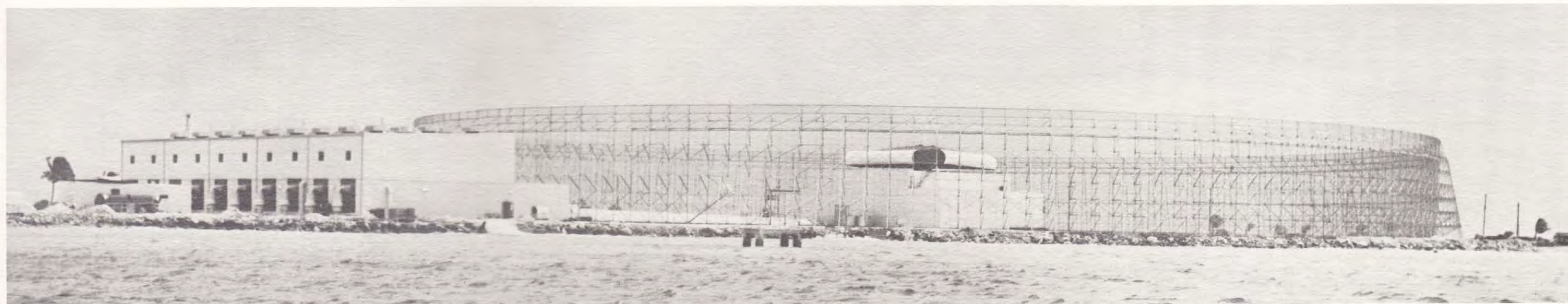
Aerial view of ZAR area showing transmitter facilities in foreground and receiving facilities in background. The fence is six stories high. ZAR Power House between the two installations.



Transmitter building is completely surrounded by beam forming fence 60' high and 690' in diameter; covered with 130,000 sq. ft. of wire mesh material.

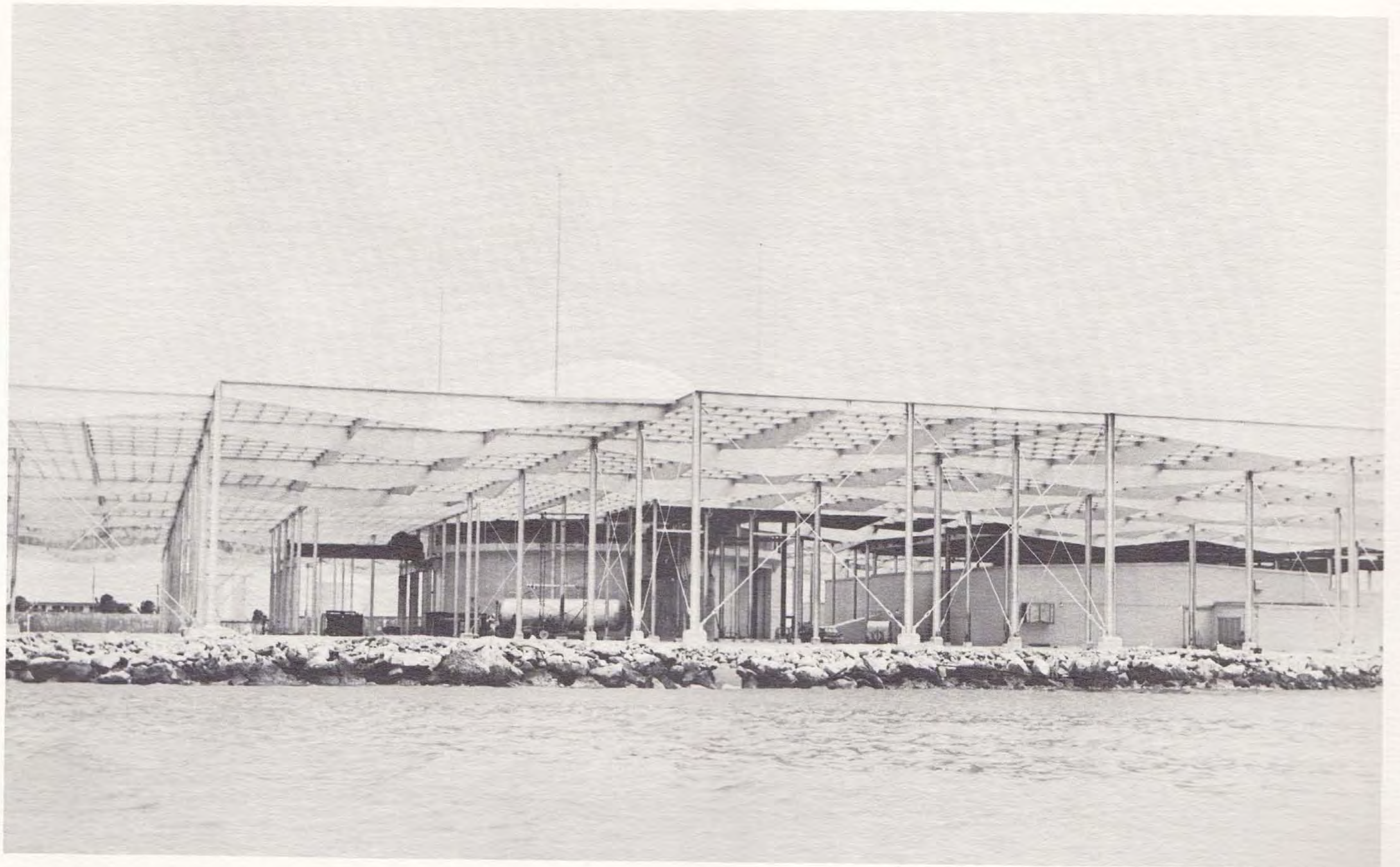


ZAR Power Plant — 112' x 222' steel framed building (38' to top of steel) housing 2120 HP diesel engine generator units.

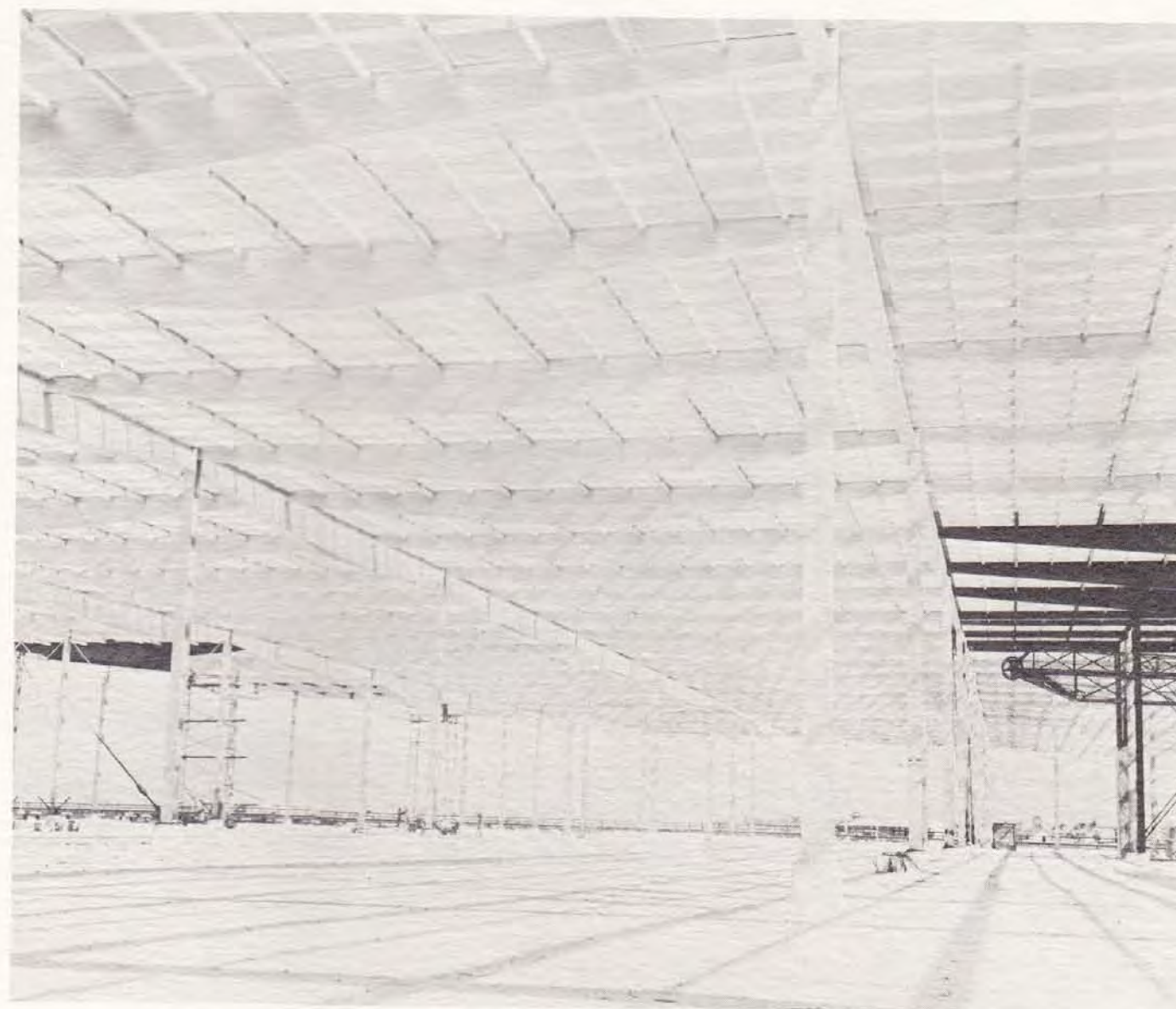


ZAR Transmitter Building — 102' x 140' reinforced concrete structure containing three floors of electronic and mechanical equipment; massive concrete foundation and ring-bearing for revolving antenna.

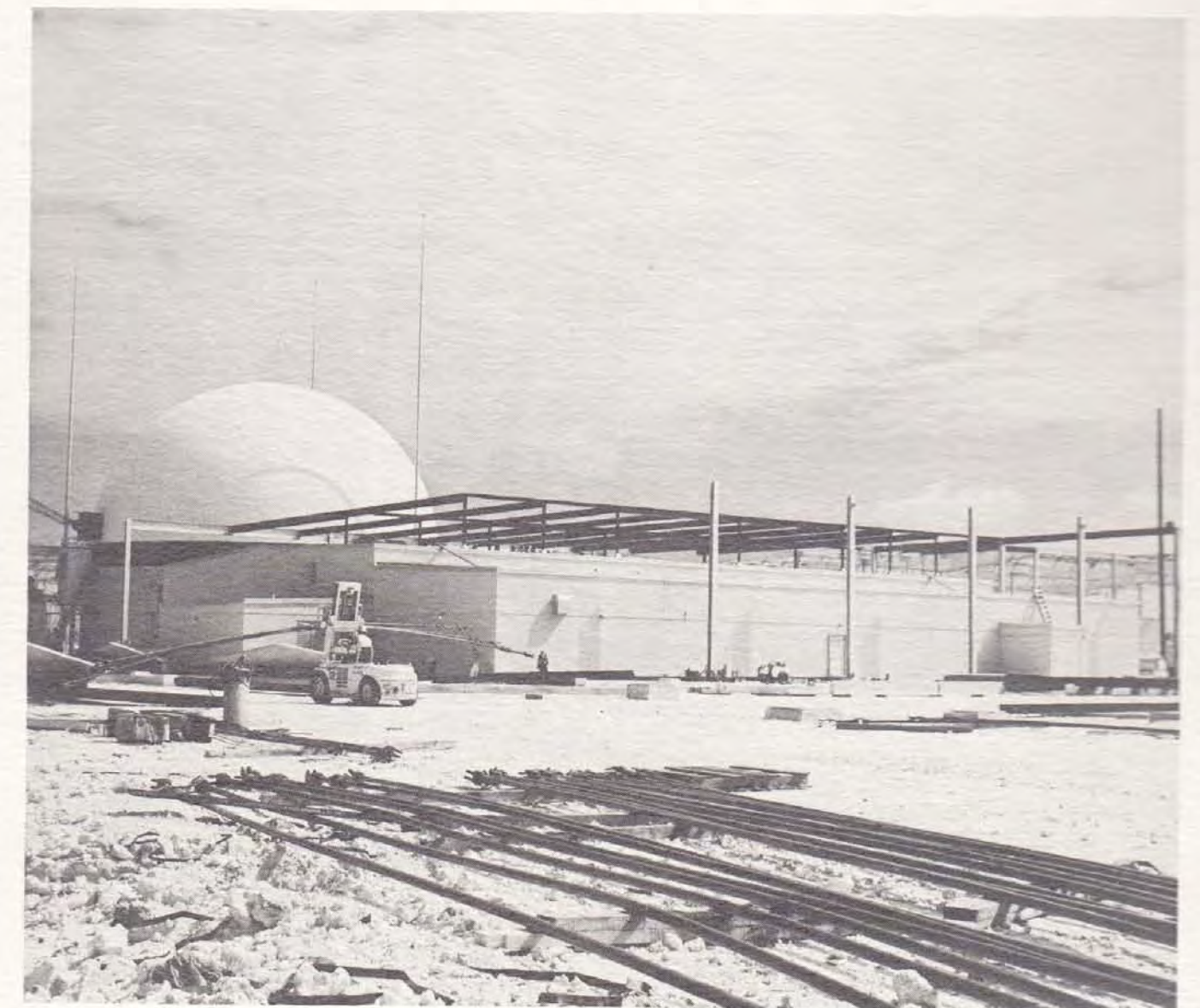
ZAR Complex, cont.



ZAR Receiver Antenna and Ground Plane.
Receiver building on the right. Foundations for
antenna 40 feet below surface water table.



Part of ZAR ground plane, a structural steel assembly
600 ft. in diameter and 32' above grade covered
with 275,000 sq. ft. of wire mesh material.

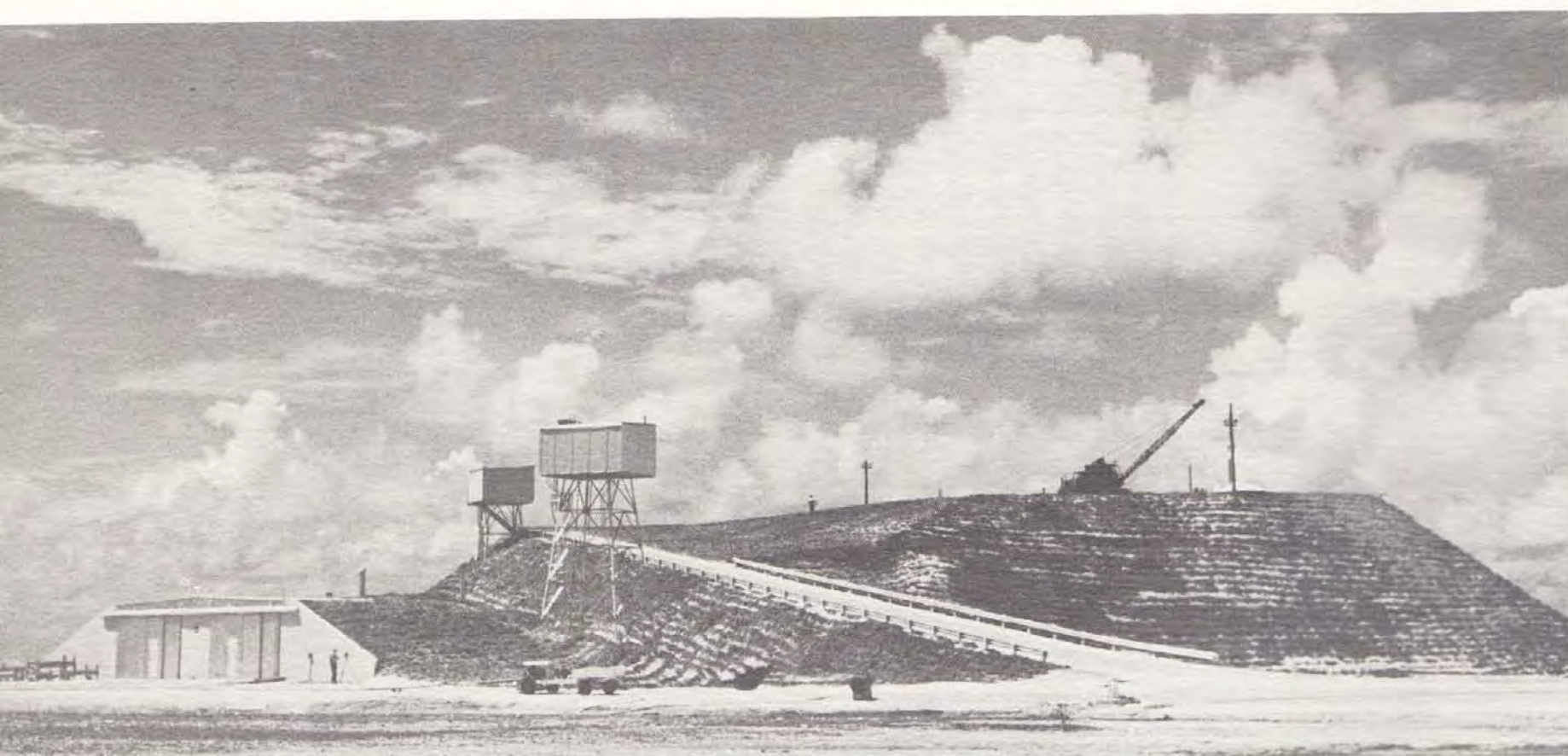


ZAR antenna foundation is reinforced concrete
structure consisting of massive inner core 36' in
diameter, enclosure wall 100 ft. in diameter.
Ground plane construction underway and
extending over Receiver Building.

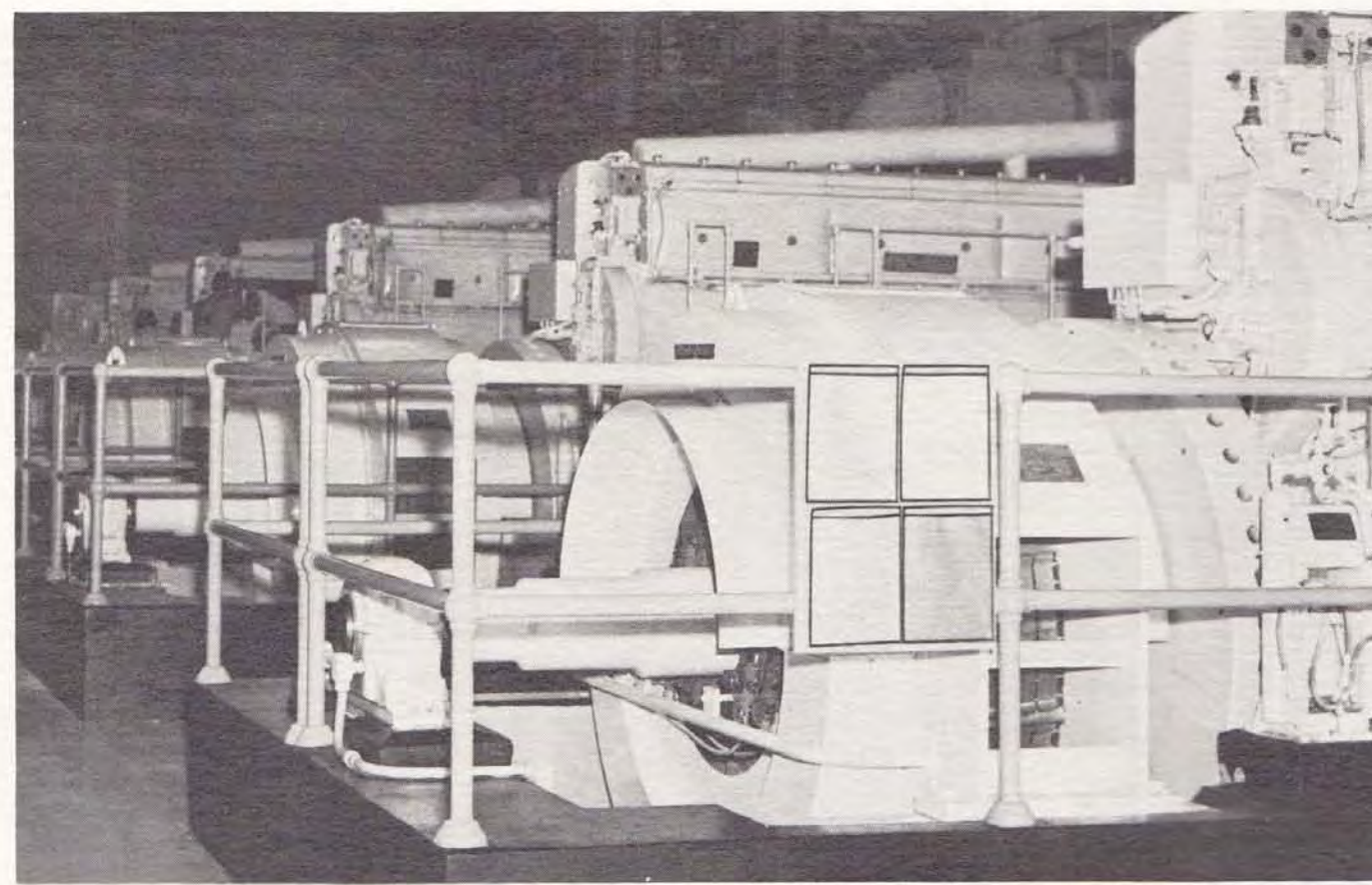
Nike-Zeus Missile Complex

Missile Launch Cells & Camera Stations — Launch cell area comprises 4 - 60' deep reinforced concrete launch cells set in a mounded fill of about 200,000 c.y. of compacted earth. Three camera stations mounted on steel towers near the launch cells house closed circuit t.v. cameras and equipment for monitoring of operations.

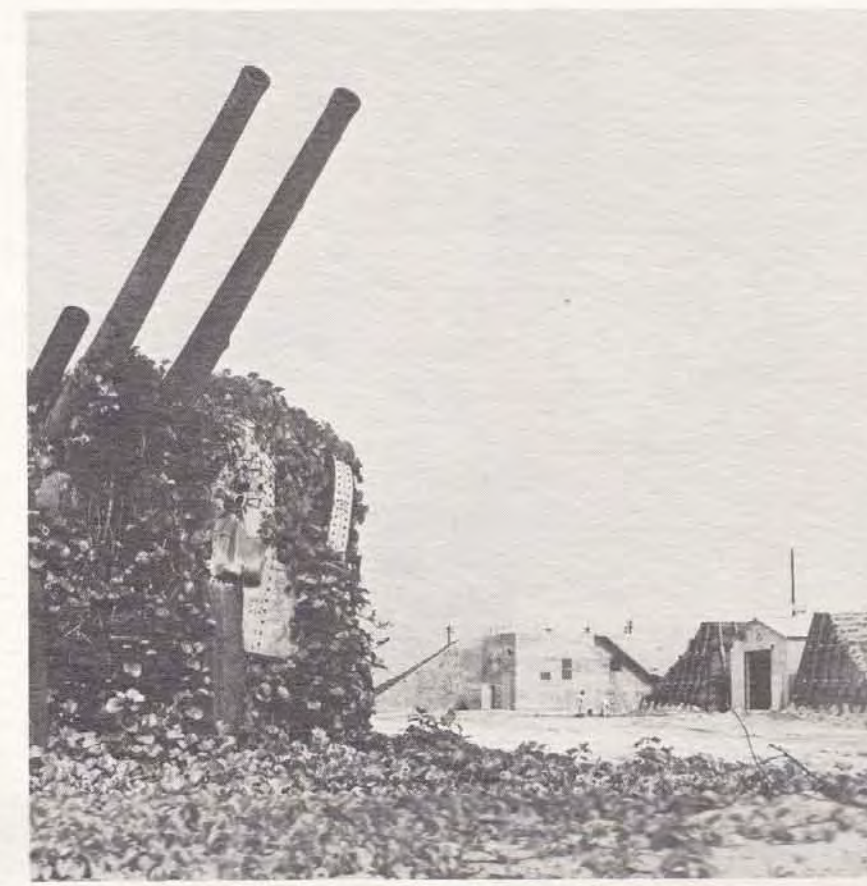




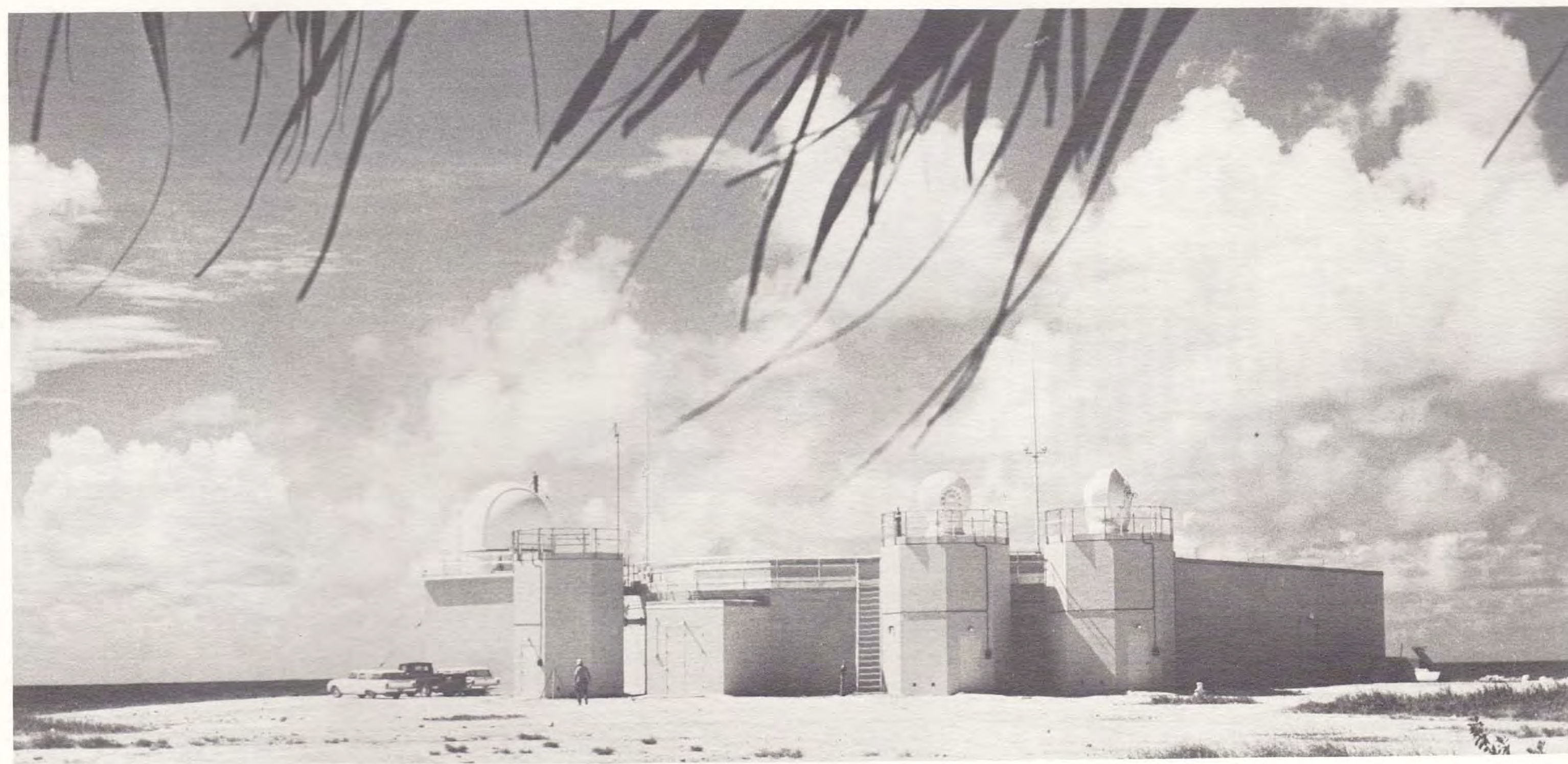
Profile of launching pad showing camera stations and, at left, one of five air-conditioned and dehumidified concrete buildings for storage, etc.



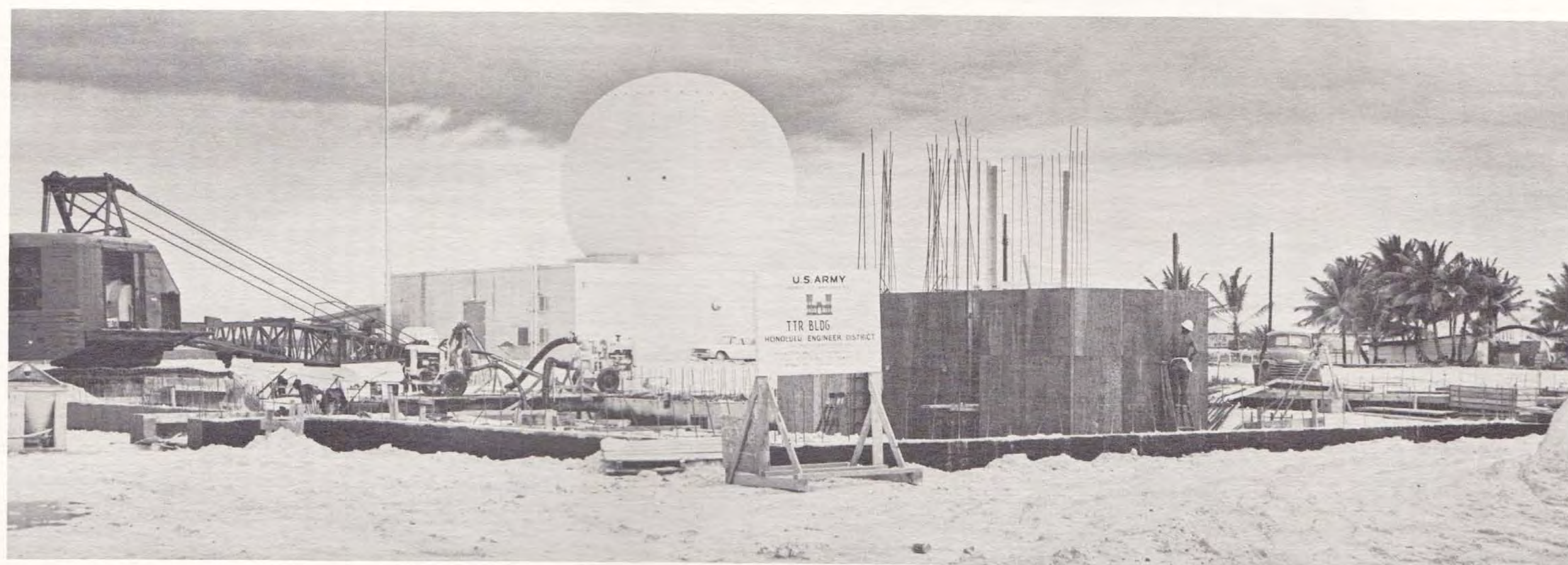
Weapons Battery Power Plant — 128' x 100' steel framed building (32' to top of steel) housing six diesel engine generator units producing precise power for the missile complex.



'Speedball' Missile Facility on Island of Roi-Namur: Inert storage, live assembly and live storage buildings, firing revetment and launch pads for smaller rockets used in testing and alignment of radar equipment on Kwaj. The old and new age is shown by World War II Japanese guns on the left.

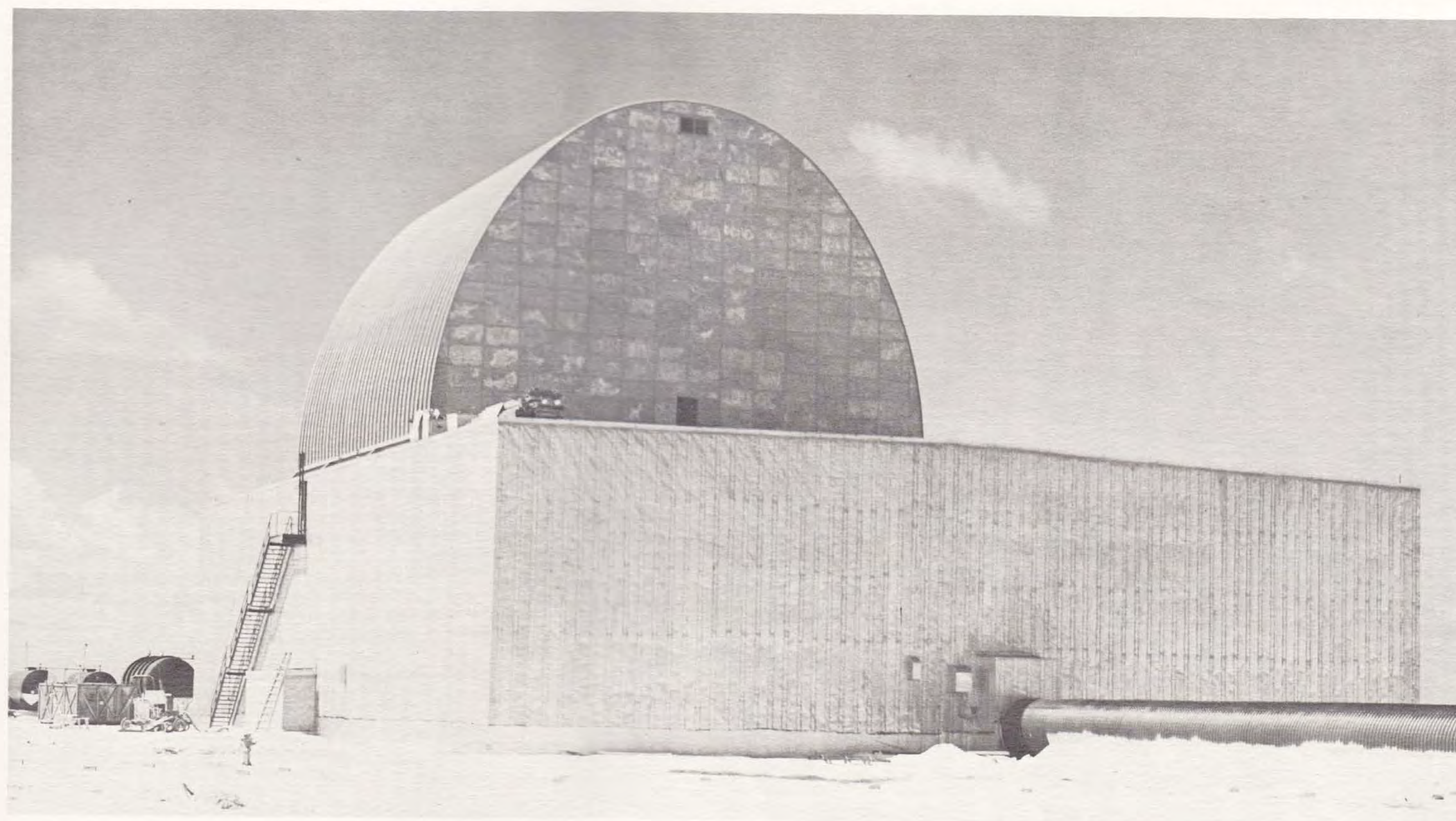


Battery Control Building — Building: 97' x 130', single floor, concrete block and steel. Houses missile tracking radar equipment and launch-monitoring equipment in shielded rooms. Also includes three Missile Track Radar Antennas; Missile Control and Communications systems.



In Background, Target Track Radar Building No. 4 — 77' x 91' completely shielded building containing heavily reinforced concrete pedestal core for antenna (about 40' in diameter and 20' high) — connected to 110 ft. boresight tower by 2640 ft. ($\frac{1}{2}$ mile) of elevated 'wave-guide' structure.

In Foreground Under Construction, Target Track Radar Building No. 5 — 85' x 90' shielded building, similar to TTR #4 — connected by 250 ft. of wave-guide structure to TTR #4 Building.



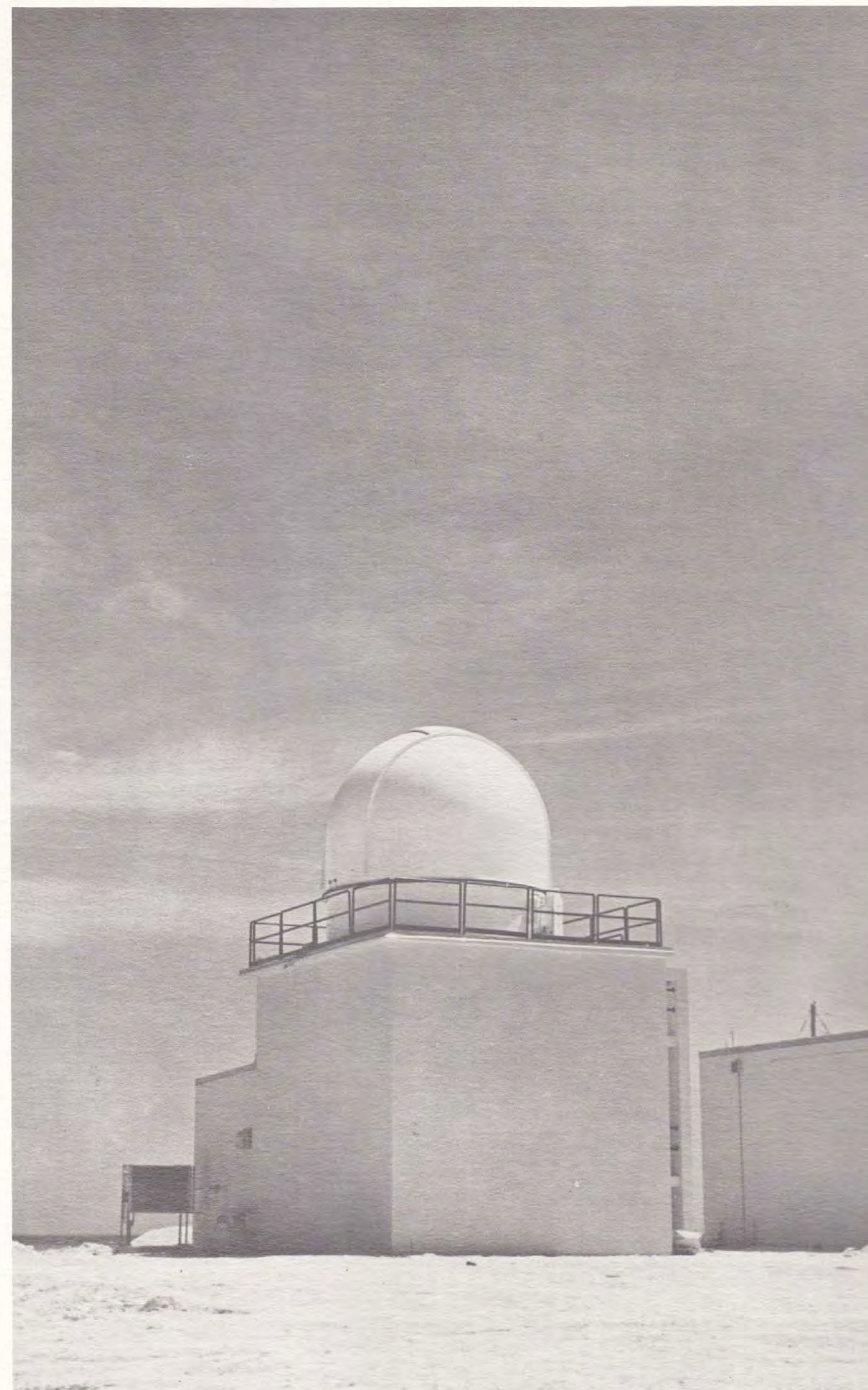
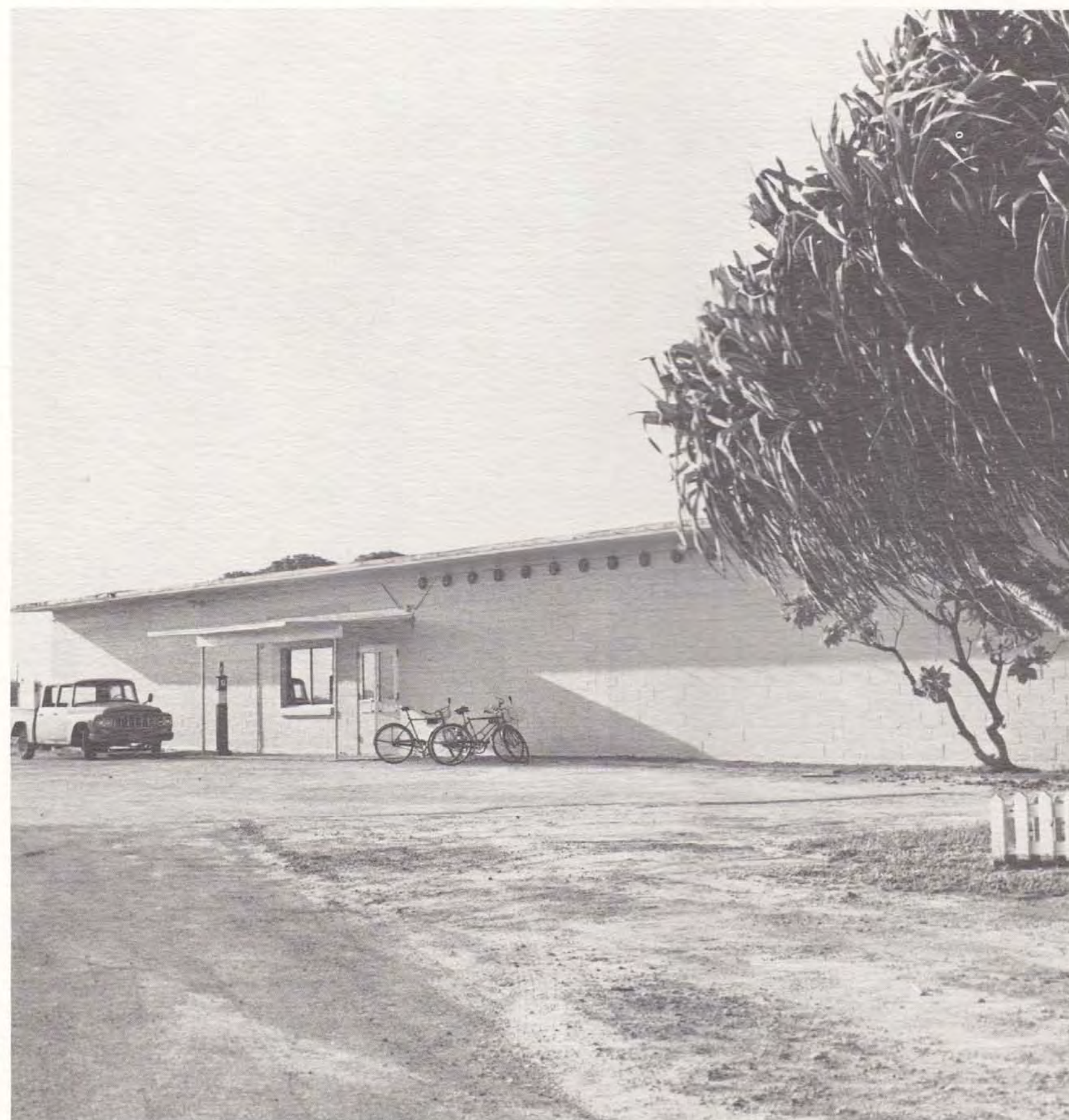
Discrimination Radar Building — Complex steel and reinforced concrete building about 40' high, 130' x 158'. Shielded personnel access tunnel in right foreground. Extensive shielding of equipment; 38 ft. diameter radome on roof.

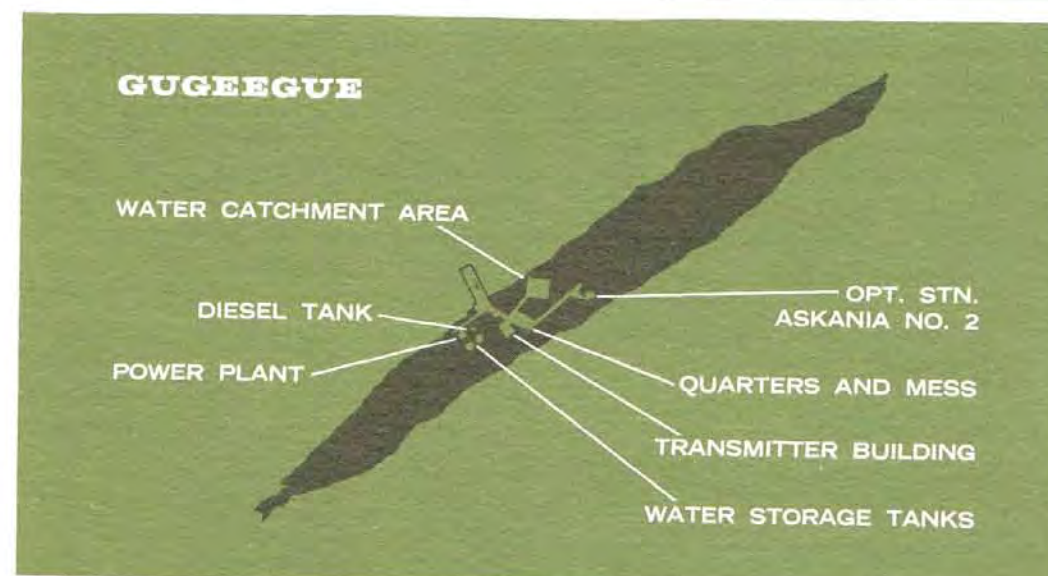
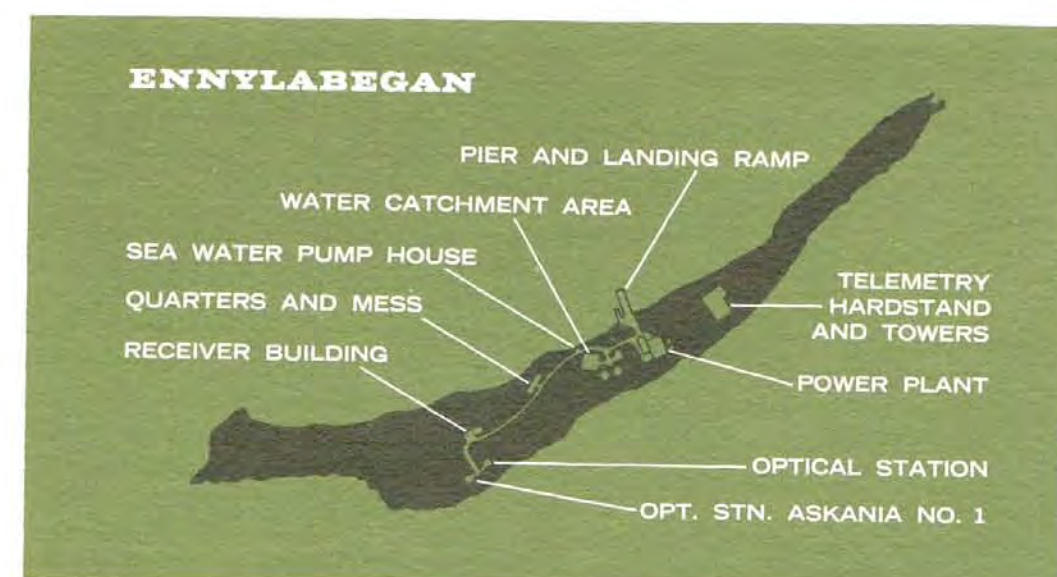
Wonder Building — Temporary shelter for radar dome on top.

Communication & Instrumentation Facilities

One of many optical stations.

Photographic Facility — Conversion of existing Navy Communications Building to P.M.R. Photo Laboratory involved extensive demolition in the 120' x 90' structure; and complete remodeling and air-conditioning for the complex equipment now housed in the building.



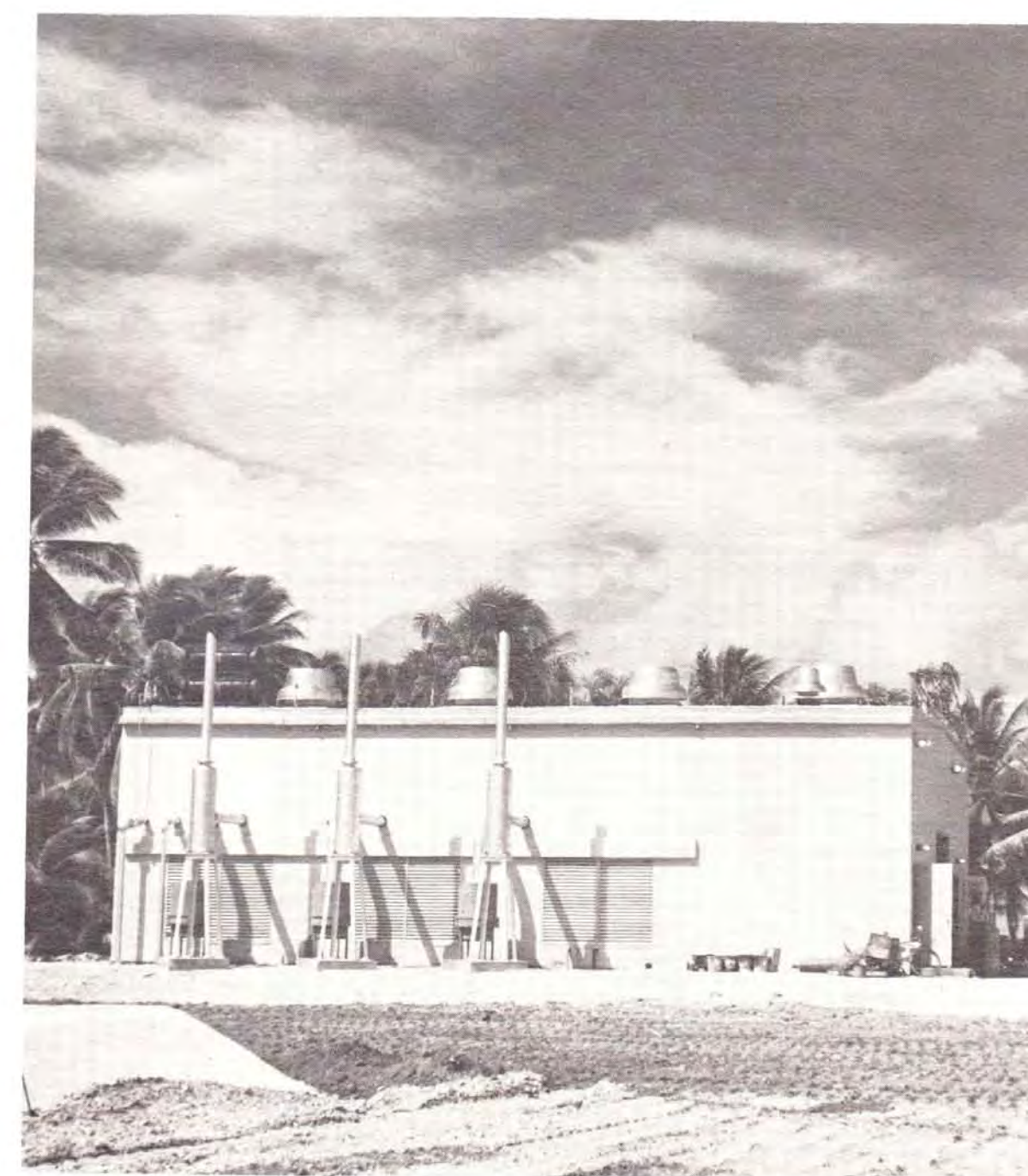


Penetrating jungle growth was necessary to survey sites on Ennylabegan.

GUGEEGUE—Located in easterly chain of islands of Kwaj. Atoll, about eight miles north of Kwajalein. There were no usable structures or facilities, fresh water supply or distribution system at beginning of job. All material and equipment had to be transported by small boats and LCU's.



STRUCTURES — **Transmitter Building** — 110' x 74' single floor concrete block building-communication equipment for P.M.R. stations. **Power Plant** — 50' x 75' structure housing three engine-generator units. **Quarters & Mess** — Housing & Messing facilities for thirty men in 30' x 140' two-story concrete and steel building. **Single Optical Station** — Askania.



Ennylabegan Power Plant — 46' x 58' building with three engine-generator units.