



—Staff Photo

Aswan's Generators Will Be Built in Kiev

Ahmed M. Talaat (center), deputy director for public relations of the Aswan High Dam Ministry, examines the model of a Westinghouse steam electric generating turbine installed at the Helena Steam Electric Station of Arkansas Power and Light Company, as John P. White,

manager of AP and L's Production Department, and Mrs. William Coleman, a member of the International Hospitality Committee and one of Talaat's hostesses, look on. The 12 generators in the Russian-financed Aswan Dam are to be built at Kiev.

Arkansas Group Hears of Aswan And Egypt's Progress From Visitor

Egypt sent Ahmed M. Talaat, deputy director for public relations for the once-controversial Aswan High Dam, to the United States for an extended tour of dams, natural resources development projects and private corporations, ostensibly to study public relations methods and techniques.

Talaat, however, held a small group of Army Engineers and other invited guests spellbound last week, briefing them on the construction of the gigantic Aswan project and of its meaning to Egypt's economic development. He spent Friday at the Dardanelle Dam as the Engineers' guest.

All new governments like his own, Talaat began, look to the United States "as an example of an established democracy and of freedom and progress."

"Your country faced the same problem that we faced," he said, slyly. "We both suffered from British occupation and we all fought for the unity of our country. You also faced an economic depression, as we are facing it now."

Fifteen years ago, when the "new regime" was established, Talaat said, 0.5 per cent of the Egyptian population owned 50 per cent of the national wealth. A few were extremely wealthy and a great many were unable to afford even bread. Only 40 per cent of the 5,000 villages had electricity and clean water.

Egypt expects to double its population of 30 million in 15 years, and this prospect called for the new regime to establish a plan for economic development that not only would feed twice the present population but to increase the living standards of all in the process.

The Nile River, which flows from south to north through Egypt, is the nation's life's blood. Rainfall averages less than an inch a year, and thus is insignificant. All water must come from the Nile, whose flow ranges from 40 billion cubic meters at low level to 120 billion in the annual flood season.

The flooding of the Nile causes the country to lose some 20 billion cubic feet of fresh water annually to the Mediterranean—a resource too valuable to lose.

Egypt now has 6 million acres under cultivation. The Aswan High Dam will enable the country to increase that acreage by one-third, to eight million, still not enough to provide for all the population. To take up the slack, Egypt has turned to industrialization, the power to be generated by Aswan slated to run the factories. Aswan, when its 12 power generators are installed in two years or so, will produce 10 billion kilowatts of power annually, almost double the national production of 10 years ago. (For purposes of reference, Arkansas Power and Light Company produced seven billion KW last year.)

Recovery of Cost In 2 Years Foreseen

The cost of Aswan, Talaat said, will be recovered in increased national income "in about two years."

Egypt had been negotiating with the United States for the loan to build Aswan and the matter appeared to be settled until the late John Foster Dulles, then secretary of State, suddenly canceled the commitment in what has since come to be thought largely a matter of personality conflicts between Dulles and Egyptian President Nasser.

Egypt turned to Russia for a low-interest (2.5 per cent) 15-year loan, which already is being repaid.

Aswan was located in south Egypt, at a point where the river flows through a narrow passage between granite mountains. It had the advantage of affecting little arable land and

of having a solid granite foundation on which to build.

The project began, Talaat said, with construction of a south-to-north diversion canal, most of it open but a short section of it burrowing through a mountain in six tunnels, each of which is divided at the outlet end so that there are 12 outlets to operate 12 turbines.

In May 1964, the cofferdam that kept the Nile out of the diversion canal was blasted and water was diverted through it, bypassing the site of the dam itself—a stone and sand structure of monumental proportions—17 times as big as the Great Pyramid of Cheops, containing 50 million cubic yards of fill in its two miles of length.

To build the dam, barges dumped loads of stone into the river, then divers were sent down to inspect how the stone had fallen, so the next load could be properly placed. To fill in the crevices, sand was needed.

"Now, Egypt has plenty of sand," Talaat said, "but of course it is not where it is needed." So large pipe was constructed to the nearest available sand 10 miles from the dam site, water was mixed with the sand and transported through the pipe back to the site. Gradually the sandy water filled in between the underwater piles of granite. However, to make the dam watertight and to prevent seepage, a 600-foot-deep grouted curtain was injected under enormous pressure, with inspection ports built in to facilitate maintenance.

Before the dam, Aswan, 15 miles to the north of the site, was a city of 35,000. Now it has 150,000, daily visitors to the dam site itself number 800 to 1,000, and 35,000 Egyptians and about 800 Russians work at the site and have used 1,000 tons of dynamite in the excavation of the canals. Talaat said 3,000 cubic feet of concrete are used daily and it must be cooled to a uniform temperature before being poured, to prevent cracking. In Aswan's 120- to 125-degree temperature, this is a major operation itself.

In the course of the work so far, iron ore was found near Aswan, and with it Egypt built a steel mill. From that came several manufacturing concerns, making railroad rolling stock, cars, tractors, trucks. Paper, which the ancient Egyptians invented, was wholly imported until 10 years ago, but Egypt now is producing its own again. It is manufacturing cement for its own use and for export, and under an agreement with RCA Victor is assembling television sets and is building a factory to manufacture TV parts.

TV Provides Cowboys, But Also Instruction

"We started TV six years ago and we now have three channels," Talaat said. "We have 12 hours of cowboy films ***."

The networks are put to far more practical use than entertainment, however. In villages without electricity, transistor sets are provided so that villagers can be instructed in how to help develop themselves.

"We plan to reconstruct in 20 years all 5,000 villages in the nation," Talaat said.

Copper ore also was found, and a copper wire plant was built. Batteries—perhaps crude by American standards—are being manufactured for the trucks and cars, a feat in light of the fact that as recently as five years ago, all batteries, even to transistor ones, were imported. Egypt has produced textiles for some time, but has stepped this up and even manufactures woolen goods under British license. It must import 70 per cent of all oil, but

it refines this and the native-produced oil in two refineries on the Red Sea, and Phillips Petroleum Company is searching for more.

As Aswan nears completion, the land its water will support is being reclaimed from the desert.

Talaat told of another major project the Egyptians are considering. Not too far from the Mediterranean Sea is a vast natural depression in the desert, covering 7,000 square miles. There is a proposal to build a canal or conduits to drain the salty Mediterranean seawater into this depression, generating 1.5 billion kilowatts of power in the process. Prevailing rains from the Mediterranean toward the south would be expected to cause the evaporated water from this Kattara Depression to fall as rain in the desert area to the south, reclaiming more desert land and improving the climate in the process. Talaat said the possibility of distilling fresh water either for industry or agriculture is being studied.