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III. CONSTRUCTION OF THE MAIN TURKMEN CANAL ACCELERATED BY NEW RAILROAD LINE TO TAKHIA TASH

On 11 September 1950 a decree was published by the Council of Ministers of the USSR initiating the construction of the Main Turkmen Canal. The project calls for the completion by 1957 of a navigable canal 1,100 kilometers (700 miles) long and 100 meters (300 feet) wide, which will connect the Amu-Dar'ya River with the Caspian Sea at Krasnovodsk [redacted] The exploration of the proposed canal site was launched in 1951 and began simultaneously from the northeastern and southwestern ends of the route -- Cape Takhia Tash (approximately 42°17'N-59°45'E) and the vicinity of Yashkan Lake (39°42'N-55°35'E), north of Kazandzhik. Construction work on the canal has been most intensive in the vicinity of Takhia Tash, the main installation on the future canal. From the initiation of the project until 1952, progress of construction was relatively slow, owing to problems of supply and shipping, which taxed to the limit the available river and air transport routes. A possible solution was the construction of some supplementary means of transport.

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Attention was brought to focus on the railroad line already under construction between Chardzhou (36°06'N-63°34'E), the trans-shipping center for freight to the Main Turkmen Canal, and Kungrad (43°05'N-58°55'E), the northern terminal in the Amu-Dar'ya Delta. Prior to 1952 this line had been completed to Urgench (41°33'N-60°38'E), some 120 kilometers (75 miles) southwest to Takhia Tash.

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The additional incentive for building the railroad speeded up construction, and the railroad line was extended to Takhia Tash by 27 February 1952. [redacted] the first freight train arrived at Takhia Tash on February 29. This achievement assured an uninterrupted flow of supplies and material to the main construction site of the Turkmen Canal. Since that date, equipment required for the construction project has been shipped on a 24-hour basis. The shipments consist largely of dump trucks, concrete mixers, mechanical loading machines, gasoline engines, and precision instruments of various types. The railroad, whose construction apparently was stimulated by the construction of the canal, has itself become a significant artery of transport for the economic development of the area. 25X1

Takhia Tash is located 7 kilometers (4 miles) southwest from Nukus, the capital of the Kara-Kalpak ASSR, Uzbek SSR, and is situated at the outlet of the Main Turkmen Canal to the Amu-Dar'ya. Although a rocky promontory unknown until recently, Takhia Tash is being developed into the most important power and hydrotechnical installation along the course of the canal. The installations will consist of an earthen dam across the channel and flood basin of the Amu-Dar'ya, a concrete spillway, a power house, concrete structures for the entrances to the two existing irrigation canals (Lenin and Kyz-Ketken) opposite Cape Takhia Tash, embankments, aqueducts, a navigation lock, settling reservoirs, and the first section of the Main Turkmen Canal.

The dam across the Amu-Dar'ya will raise the water level by 6 meters (20 feet), thus ensuring water for the canal and for the whole system of irrigation canals on both sides of the river. The settling reservoirs will prevent silt from the Amu-Dar'ya from entering the canal. The reservoir, in addition to providing a constant and even inflow of water into the canal, will also provide water to irrigate the entire area of the Khorezm Oasis, located nearby. The dam and dikes of the reservoir will also prevent floods of the Amu-Dar'ya, which have often caused serious damage to the settlements, fields, and gardens of the Khorezm population of the area.

An aerial tramway is being built across the Amu-Dar'ya to carry workers and supplies to the construction site at the other end of the dam. Its 800-meter (2,600-foot) cables will be anchored to ferroconcrete towers and will serve as a temporary river crossing until the dam has been completed.

From Takhia Tash, the Main Turkmen Canal will flow in a west-southwestward direction, passing to the south of the Sarakamysh Depression, and will proceed across the Kara-Kum Desert along the ancient bed of the Amu-Dar'ya (the Uzboy) to the arid regions of the Caspian Plain. In the vicinity of Kazandzhik, two parallel trunk canals will branch off southward toward the Atrek River.

The method of constructing the canal is of a pioneer type in which a narrow channel is cut for several kilometers, filled

with water, and then widened and deepened to the required dimensions by suction dredges. The volume of water pumped from the Amu-Dar'ya is initially fixed at 350-400 cubic meters (12,360-14,125 cubic feet) per second. It is planned to increase the volume to 600 cubic meters (21,000 cubic feet) per second in an effort to maintain a navigable water level to the Caspian Sea.

In addition to the main dam and electric power plant at Takhia Tash, two other dams along the canal, both with impounding reservoirs, and electric power plants have been planned. One installation, the Burgun Dam and Reservoir, will be built in the region of the Igdy Wells at approximately 40°N. The second will be located at Yashkan Lake. The combined rated capacity of the three hydroelectric plants is estimated at 100,000 kilowatts.

The Main Turkmen Canal project will be of great significance to the economic development of vast areas of Soviet Central Asia. It is claimed that irrigation will be extended to 1,300,000 hectares (3,000,000 acres) of new farm land located in the southern Caspian Plains of western Turkmenia, on the delta of the Amu-Dar'ya in the Kara-Kalpak ASSR, and in the northern part of Turkmenia. In addition, the project is to supply water to 7,000,000 hectares (17,290,000 acres) of pasture land in the Kara-Kum Desert, to 500,000 hectares (1,235,000 acres) of productive forest plantings along the canal, and to areas surrounding industrial centers and populated places. The size of the areas to be irrigated by the Turkmen Canal is based solely on published

Soviet figures, which have been quoted without verification in various publications both in Great Britain and the United States.

Finally, the Main Turkmen Canal will be an important transportation artery, carrying cotton, grain, mineral fertilizers, and farm machinery, as well as passengers, from the Caspian Sea to the lower reaches of the Amu-Dar'ya and the Aral Sea.