

(1) GREAT RIVER WATER UTILIZATION AUTHORITY – Libya (1994) – Half a Million Cubic Meter Earth Reservoir Capacity

Libyan Great Man Made River secure water to add new green lands to the desert extended horizon. The new Tarhuna & Weshitata earth fill reservoir has the capacity to store more than half a million cubic meter of water to plant 4 Million square meter of new added green area. The reservoir has 200 m inner diameter and 239 m outer diameter with a 4 m of water maximum height. The reservoir has one inlet point, one outlet point, wash out and spillway. The trapezoidal cross section has 2.5:1 slope at the upstream and 2.0:1 at the downstream faces. On top there is a 6.00 m belt road to access the reservoir different zones. Natural job site soil materials GP, GM and SM were utilized to construct the reservoir cross section. The upstream slope and the bottom are protected against water ingress by layers of; geotextile, geomembrane and bituminous concrete. A layer of 200 mm thick dense plain concrete is placed on top of the subgrade before placing water protection section. The conceptual design includes; environmental, hydraulic, geotechnical and structure.

