

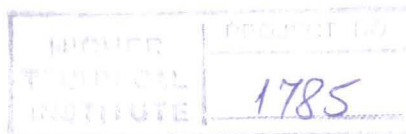
DESIGN OF OXIDATION PONDS

by

Paraskeva                      Lyssiou  
Marilena                      &                      Aspasia

Project Report  
Submitted to  
the Department of Civil Engineering  
of the Higher Technical Institute  
Nicosia, Cyprus  
in partial fulfilment of the requirements  
for the diploma of  
TECHNICIAN ENGINEER  
in  
CIVIL ENGINEERING

June 1991



## ACKNOWLEDGEMENTS

Numerous people have contributed to the birth and growth of this project.

The authors express their appreciation and gratitude to the supervisor of this project Mr N. Kathitziotis, lecturer of the Higher Technical Instituede for his willing co - operation during the preparation of this project.

The process has been made easier by the help and encouragement of Mrs E. Theopemptou who spent a lot of time discussing the problems of this document. Many of the ideas resulted from a 6 month period of close involvement with her as well as with the whole of the Sewerage Board of Nicosia. They have provided a friendly working environment together with generous help and advice whenever it was needed.

Acknowledgement is also extended to the Meteorological and Statistical Office, the Department of town planning and housing and Yeri's Development Council for their valuable guidance in any information that we requested during the investigation procedure of our work.

Finally the authors would like to express their thanks to a number of typists and assistants who translated all shaky pencil writtings and sketches into recognizabe ones and special thanks to Gregoriou Spyros, student of the Civil Engineering in H.T.I, for his appreciable willingness in printing out the whole project.

## SUMMARY

The aim of this project is to treat the sewage from Yeri's community by using oxidation pond method. This method was selected because it is considered as the best one for the specified area. The favourable local recourses at Yeri, like sunshine, wind and high temperatures justify our selection.

Several other factors were considered also, in order to facilitate the function of the ponds such as its location, geometry and security.

The design of this treatment method is based on D. Mara's equations. After deciding the most suitable pond combination of the plant, the design procedure was carried out. The dimensions of the ponds were found to be:

Aerated Lagoon 50\*80 m<sup>2</sup>

Two parallel facultative ponds each one of 100\*180 m<sup>2</sup>

Two maturation ponds in series each one of 50\*100 m<sup>2</sup>

Finally the total area of land required was found to be 100000 m<sup>2</sup> situated 4 Km from Ayios Sozomenos village and 5 Km from Yeri's residential area.

The effluent from the treatment plant at Yeri was calculated that it will reach a BOD value of 18 mg/L which according to the effluent standards for reuse is considered as most suitable for crop irrigation especially cotton crop which is an industrial product and thus safer as far as pollutant hazards are concerned.

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