

MUJIB DAM - JORDAN

Project Name	Mujib Dam
Purpose of the project	Irrigation and Water Supply
Project location	Madaba Region Hashemite Kingdom of Jordan
Client	Jordan Valley Authority (JVA)
Contractor	Aegek-Hydrogradnja J.V.
Consultant	Lahamayer
Dam Type	RCC with earthfill abutments (clay core)
Height above foundation	62 m
Crest level	199 m a.s.l.
Crest length	750 m
Capacity of the Reservoir	35 million cubic meter
Volume of the concrete	800.000 cubic meter (RCC dam)
Foundation soil	Bituminous Lime Stone
End of construction	May 2004

GENERAL VIEWS OF THE DAM DURING CONSTRUCTION





INSTRUMENTS INSTALLED

The installation started during 2001 and according to the dam construction schedule it was terminated on May 2004	
V.W. piezometers and pore pressure transducers	No. 22 (Sisgeo models PK45S and PK45A)
V.W. earth pressure cells	No. 30 (Sisgeo model L143D)
Concrete temperature sensors	No. 238 (Sisgeo thermistors model T3800)
Direct pendulum with optical reading unit	No. 2 (Sisgeo models S9110025-S9RTB150)
Inclino-settlement columns with magnet target rings	No. 6 (total 330m Sisgeo S141 ABS casing)
Reservoir water level pressure transducers	No. 2 (Sisgeo model P252R)
V-notch weir for seepage monitoring	No. 9
Staff gauges	60 meters
Pair of studs for removable joint meter	No. 51
Casagrande piezometers	No. 6 (Sisgeo model P101)
Bench marks	No. 28
Datum pillar	No. 5
Accelerographs	No. 3 (Kinematics Mt. Etna)
Instrument status	On May 2004: 100% of the instruments were working except one earth pressure cells.
	Courtesy of Eng. M. Fardous (Aegek)



Combined inclinometer-settlement column and magnet ring within dam filling



Inclinometer measurements during earth-fill embankment construction



Earth pressure cells for 3D stress monitoring in the clay core



Installation of temperature gauge within RCC dam body

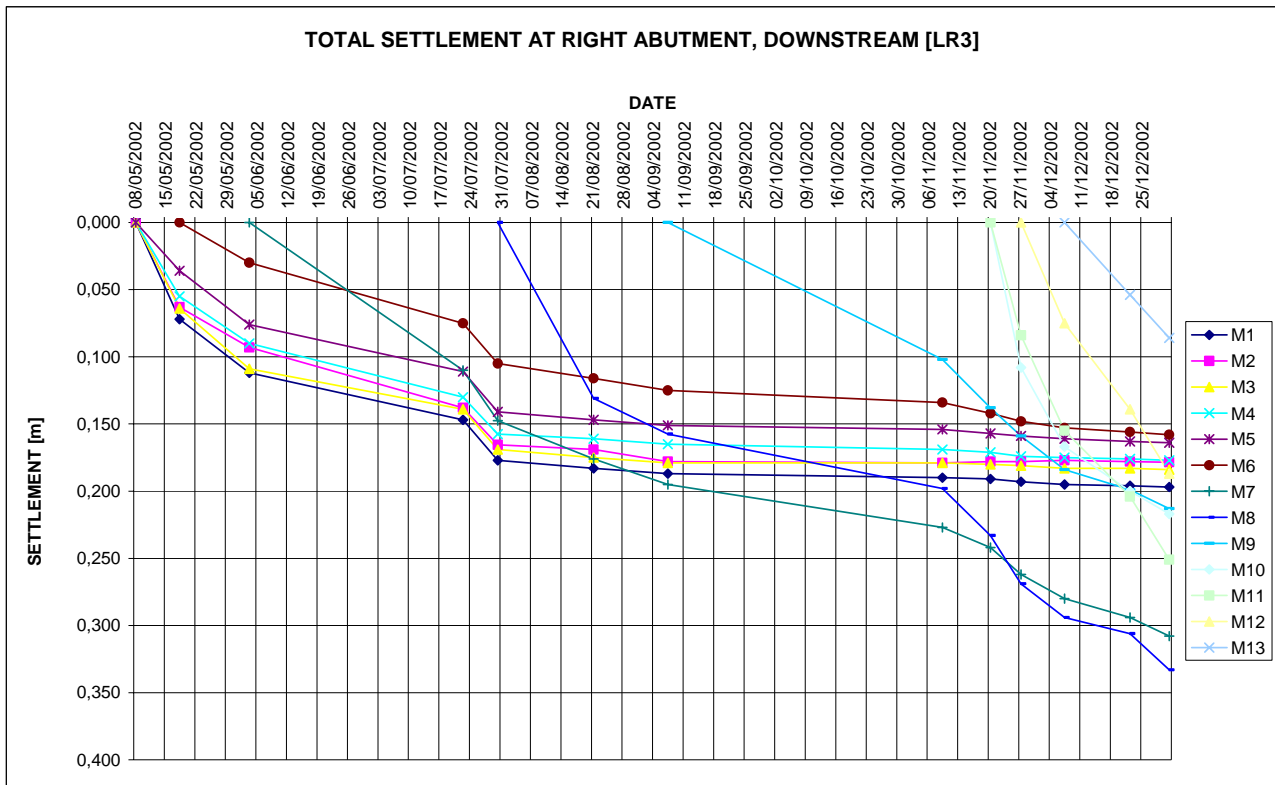


Inclinometer-tube with plate ring

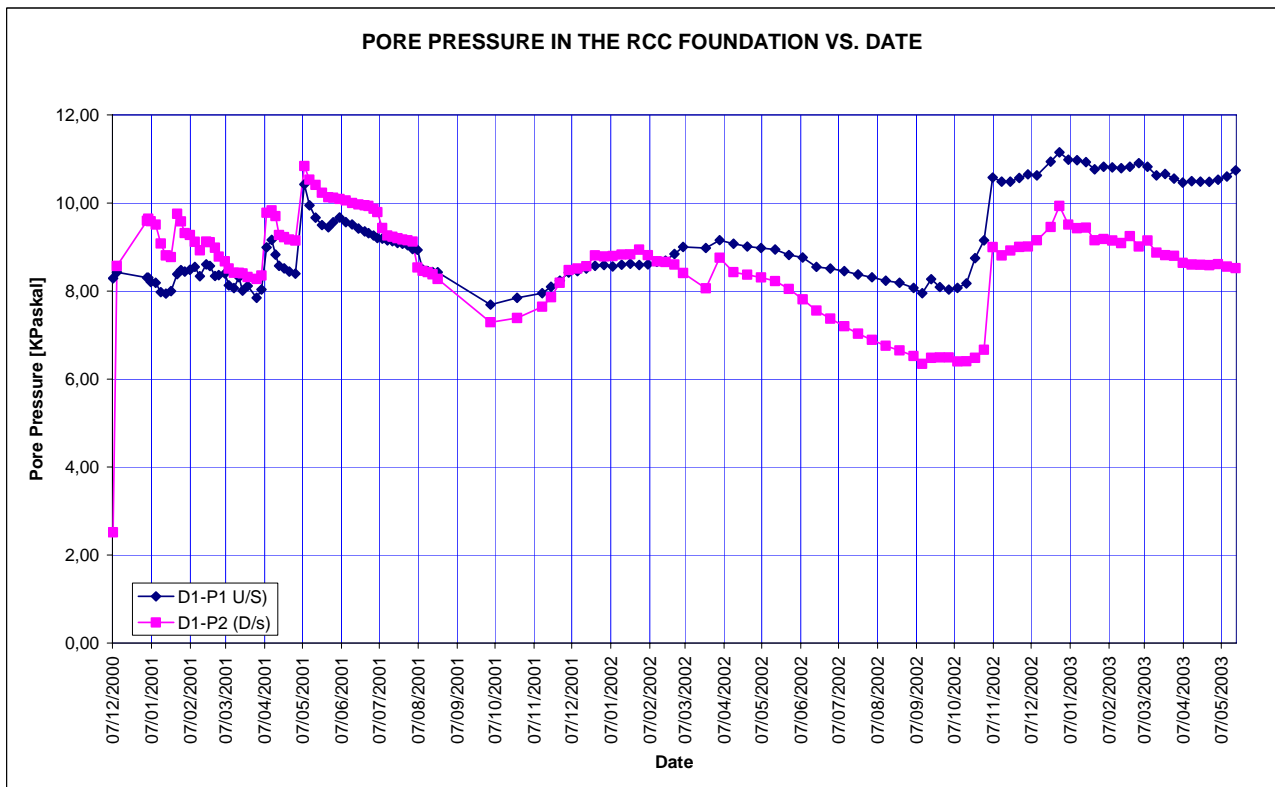


Inclinometer measurements during embankment construction

MEASUREMENTS AND DATA PROCESSING



Graphs of settlements during the filling construction



Graphs of pore pressure readings up-stream and down-stream the cut off wall