

Dam: Grand Ethiopian Renaissance Dam (GERD)

Country Ethiopia

River Blue Nile

11°12'50.81"N 35°05'34.34"E

11.214114 35.093056

Owner/Client Ethiopian Electric Power (EEP)

Designer/Engineer *Unknown*

Contractor WeBuild (Salini - Impregilo SpA)

Purpose (code) H

Site start 30.12.2010

RCC start 15.05.2013

RCC completion 31.05.2022

Site completion 31.12.2024

Height (m) 160

Length (m) 1790

Volume of RCC ( $m^3 \times 10^3$ ) 10100

Total volume ( $m^3 \times 10^3$ ) 10500

Reservoir capacity ( $m^3 \times 10^6$ ) 74000

Upstream slope 0.22

Forming of upstream face (code) (3')

Downstream slope 1.00

Forming of downstream face (code) (3') \*

Spillway slope 1.00

Forming of spillway face (code) (3') \*

Depth of layers (mm) 400

Depth of lifts (mm) 400

Cement content ( $kg/m^3$ ) 67 to 105

Pozzolan content ( $kg/m^3$ ) 23 to 35

Code for pozzolan (N)

RCCDAM Unique Serial No. RCCDAM0672

## Under Construction



RCCDAM0672UC

## Completed Dam



RCCDAM0672CD

## Google Earth



RCCDAM0672GE

# Guide to Abbreviations

## Purpose

- E Environmental
- F Flood control
- G Groundwater recharge
- H Flood control
- I Irrigation
- N Navigation
- P Pollution control
- R Recreation
- W Water supply

## Facing method

- (1) Traditional concrete against formwork
- (2) Traditional concrete against formwork with external geomembrane
- (3) RCC against formwork
- (4) RCC against formwork with external geomembrane
- (5) Traditional concrete against precast concrete panels
- (6) Traditional concrete against precast concrete panels with geomembrane
- (7) RCC against precast concrete panels
- (8) RCC against precast concrete panels with geomembrane
- (9) RCC against precast concrete panels with hot poured membrane
- (10) RCC against precast concrete blocks
- (11) Reinforced conventional concrete cast before RCC placement
- (12) Reinforced conventional concrete cast after RCC placement
- (13) Reinforced concrete cast against precast units or slip-formed facing elements
- (14) Slip-formed/extruded facing elements
- (15) RCC supported by fill shoulders
- (16) Mechanically compacted unformed face of RCC
- (17) Unformed face of RCC
  - ' GEVR/GE-RCC
  - \* Stepped face

## Pozzolans

- (-) No Pozzolan Used
- (C) High-lime flyash (ASTM Class C)
- (F) Low-lime flyash (ASTM Class F)
- (M) Milled sand
- (N) Natural pozzolan (ASTM Class N)
- (R) ROLAC (mixture of flyash and slag with or without limestone fines)
- (S) Ground-granulated blast-furnace slag
- (L) Mixture of GGBFS and limestone fines