

Dam: Mangla Emergency Spillway Control Weir

Country: Pakistan

River: Jhelum

33°09'41.59"N 73°38'10.73"E

33.161552 73.636314

Owner/Client: WAPDA (Water and Power Development Authority)

Designer/Engineer: MJV (Mangla Joint Venture) (NESPAK, Binnie Black and Veatch, Harza + others)

Contractor: CWE JV

Purpose (code): H I

Site start: 01.08.2004

RCC start: 01.12.2007

RCC completion: 30.11.2008

Site completion: 31.01.2009

Height (m): 17

Length (m): 370

Volume of RCC (m<sup>3</sup>x10<sup>3</sup>): 54

Total volume (m<sup>3</sup>x10<sup>3</sup>): 79

Reservoir capacity (m<sup>3</sup>x10<sup>6</sup>): 6500

Upstream slope: V  
0.30

Forming of upstream face (code): (3')  
(3') \*

Downstream slope: V  
0.70

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

Spillway slope: 0.70

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

Depth of layers (mm): 300

Depth of lifts (mm): 300

Cement content (kg/m<sup>3</sup>): 60

Pozzolan content (kg/m<sup>3</sup>): 120

Code for pozzolan: (S)

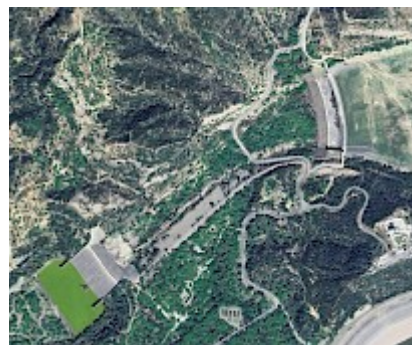
RCCDAM Unique Serial No.: RCCDAM0420

## Completed Dam



RCCDAM0420CD

## Google Earth



RCCDAM0420GE

# 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