

Dam: Las Cruces (formerly San Bartolo)

Country Panama

River San Pablo

8°19'22.93"N 81°16'11.1"W

8.323217 -81.270042

Owner/Client Corporacion de Energia del Istmo Ltd. S.A.

Designer/Engineer Technoproject, S.A. de C.V.

Contractor *Unknown*

Purpose (code) H

Site start 01.01.2013

RCC start 01.01.2014

RCC completion 31.12.2015

Site completion 31.12.2016

Height (m) 41

Length (m) 371

Volume of RCC (m<sup>3</sup>x10<sup>3</sup>) 77

Total volume (m<sup>3</sup>x10<sup>3</sup>) *Unknown*

Reservoir capacity (m<sup>3</sup>x10<sup>6</sup>) 39

Upstream slope V

Forming of upstream face (code) (3')

Downstream slope 0.85

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

Spillway slope 0.85

Forming of spillway face (code) (12)

Depth of layers (mm) 300

Depth of lifts (mm) 300

Cement content (kg/m<sup>3</sup>) 90

Pozzolan content (kg/m<sup>3</sup>) 0

Code for pozzolan (-)

RCCDAM Unique Serial No. RCCDAM0660

## Completed Dam



RCCDAM0660CD

## Google Earth



RCCDAM0660GE

# 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