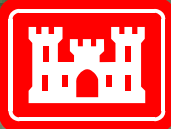




Portugues Dam RCC Overview



US Army Corps
Of Engineers
Jacksonville District

Overview

- Introduction
- RCC Projects
- Selected Processes
 - GERCC (Grout Enriched RCC)
 - Galleries
- Testing and Laboratory Requirements

RCC ?

- **RCC vs Conventional Concrete**
 - Higher sand content
 - Lower water content
 - Lower cementitious material content (cement + ash)
 - Methods of consolidation and testing
- **Cost**
 - Placement Rate
 - Formwork
 - Labor

RCC Applications

- Dams
 - Gravity
 - Arch
 - Cofferdams
- Earth covered structures
- Spillway Lining
- Overtopping Protection
- Buttressing
- Navigation Locks
- Foundations
- Overflow and Diversion Weirs
- Channel Lining
- Stilling Basins
- Paving
 - Roadways
 - Airfields
 - Hardstands
 - Parking areas
 - Log Yards
 - Settling basins

Willow Creek Dam – World's First



Saluda Dam

South Carolina



Hickory Log Dam

Georgia



Al Wehdah Dam

Jordan



Overtopping Protection (Hungry Mother)



Overtopping Protection

(Hungry Mother)



3rd Avenue Extension Ketchikan, Alaska



3rd Avenue Extension Ketchikan, Alaska



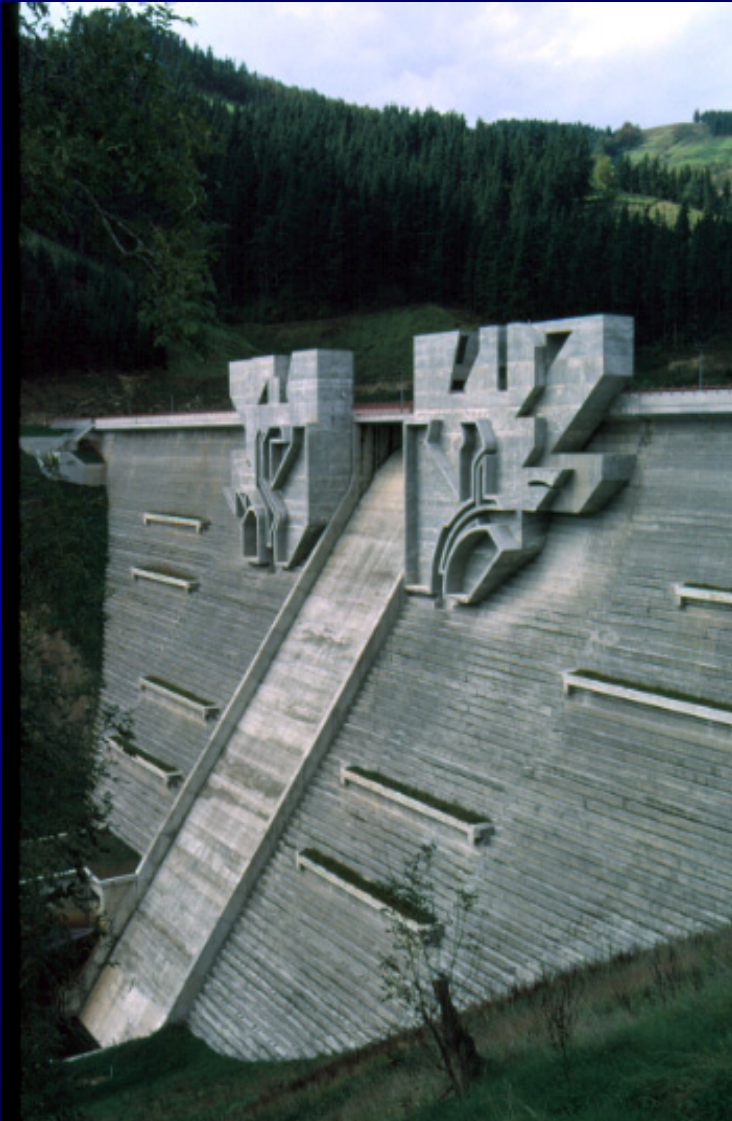
Elkwater Fork Dam

West Virginia



Aryaran Dam

Spain

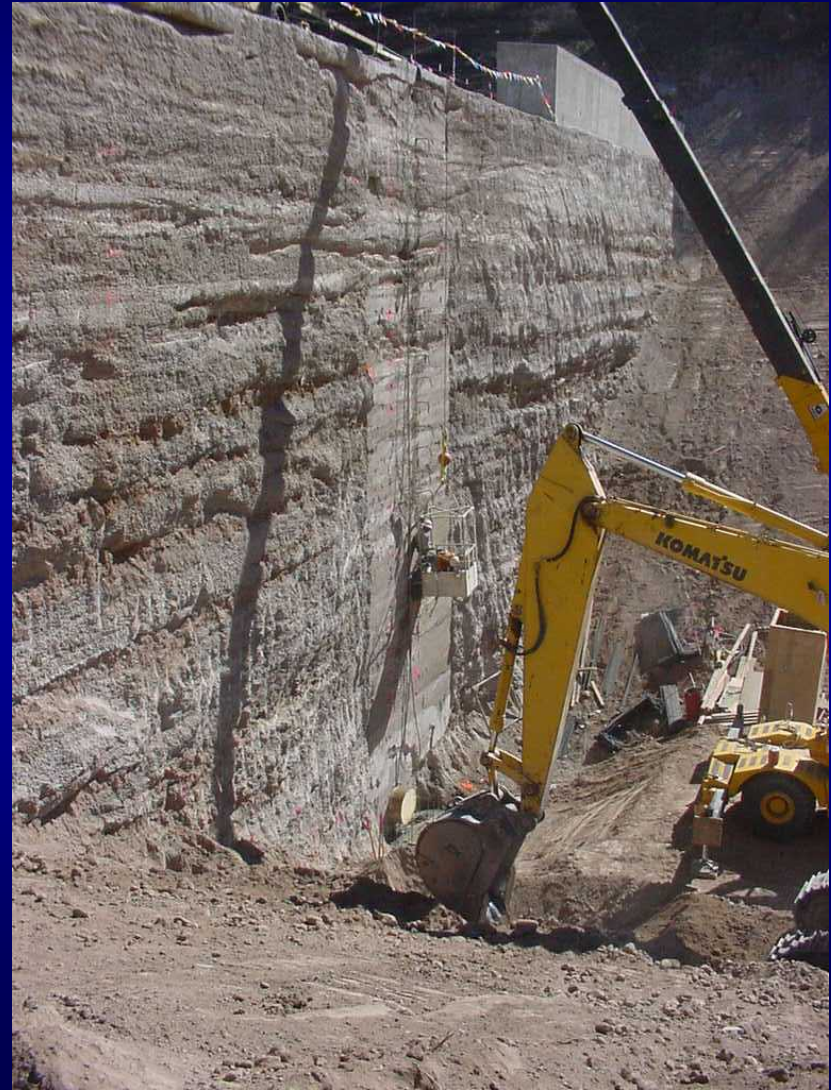


Ralco Dam

Chile



Pajarito Canyon Dam



Elk Creek Dam



Elk Creek Dam



Pajarito Canyon Dam, Compaction at Abutment



Pajarito Canyon Dam, Compaction at Abutment



Pajarito Canyon Dam, Gallery Construction



Pajarito Canyon Dam, Gallery Construction



Pajarito Canyon Dam, Gallery Construction



Pajarito Canyon Dam, Gallery Construction





RCC against form – no grout/bedding

GERCC (North Fork Hughes)



GERCC (NF Hughes)



GERCC Finished Surface – (McAlpine Test Section)



RCC - Appearance



RCC - Appearance



RCC - Appearance

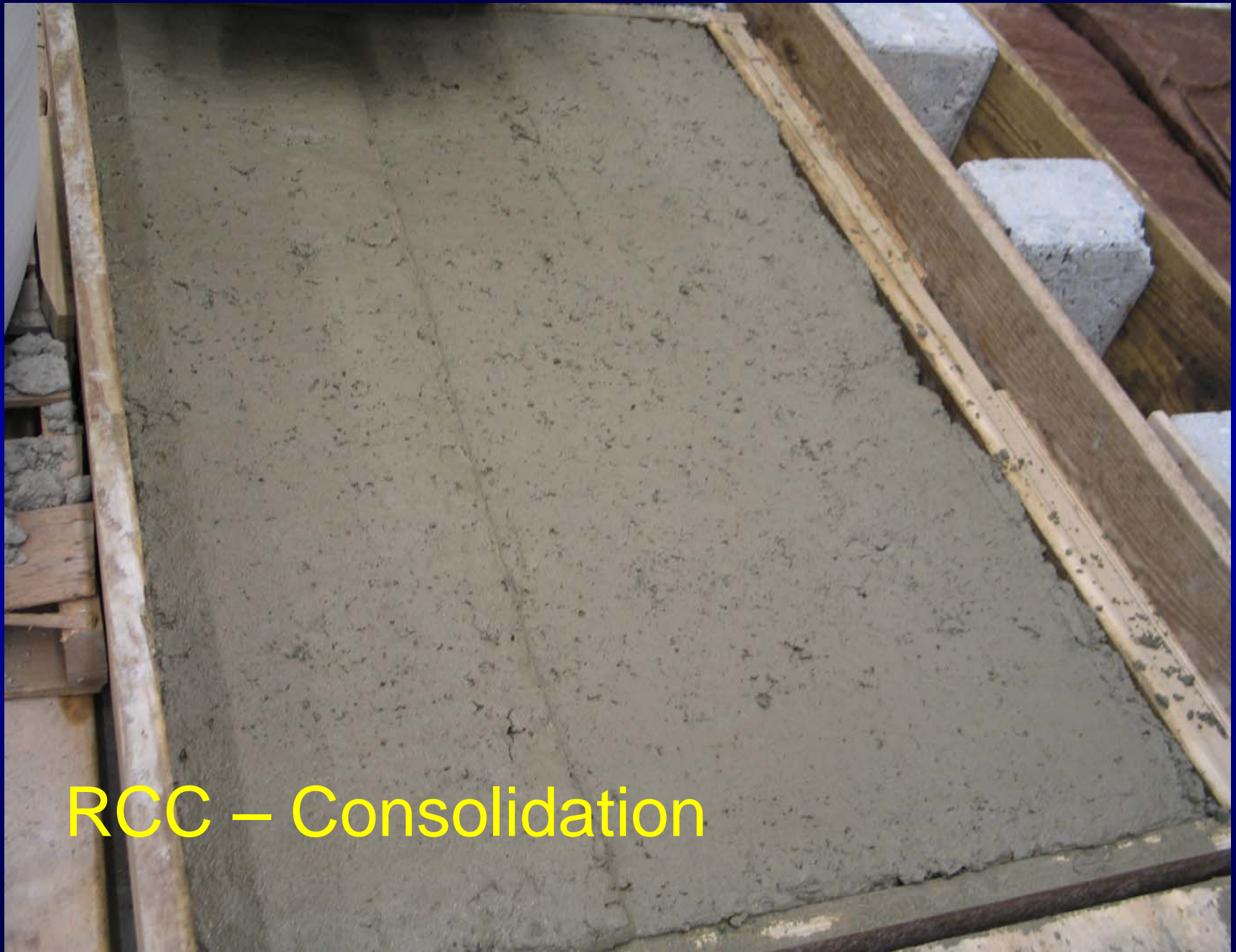


RCC – Consolidation





RCC – Consolidation



RCC – Consolidation









Cast Test Cylinders





Drilled Cores

Vebe Test



Vebe Test



Q/A Laboratory

- Mix Design
- Aggregate Quality and Routine Concrete Control Testing
- Test Section Evaluation



Thank You