

FOUNDATION ENGINEERING

Expansion of Abu Dhabi International Airport Midfield Terminal Complex & Package 1

AIRPORTS • ICONIC • DIAPHRAGM WALLS • ROTARY BORED PILES • DEEP EXCAVATION • CAVITY FILLING/LEANMIX



Client

The Supervision Committee for Expansion of Abu Dhabi International Airport (SCADIA)

Consultant

Parsons International, and KPF & ARUP

Main Contractor

NSCC International

Location

Abu Dhabi, UAE

Start Date

February 2009

Completion Date

November 2010

One of the largest piling jobs ever to be seen in the region, the sensitive nature of the structure and challenging rock conditions (due to the presence of cavities in relatively soluble rock) had to be carefully considered in our design. The NSCC Team devised methods of probing the rock and locating the cavities in every pile to a depth of 30 meters.

Project Details

1000 mm Dia. Piles : 1,924 nos. (approx. length 27 m)

1200 mm Dia. Piles : 880 nos. (approx. length 27 m)

1500 mm Dia. Piles : 4,621 nos. (approx. length 24 m)

1000 mm Dia. Preliminary Load Test : 5 nos.

1200 mm Dia. Preliminary Load Test : 2 nos.

1500 mm Dia. Preliminary Load Test : 5 nos.

1000 mm Dia. Working Pile Load Test : 19 nos.

1200 mm Dia. Working Pile Load Test : 7 nos.

1500 mm Dia. Working Pile Load Test : 48 nos.

Calliper Logging Tests, Sonic Coring Test etc...

Diaphragm Wall : 2100 m, 19 m deep and 800 mm thick

Excavation : 1,290,000 m³

Dewatering : 180,000 m², max. 10 m deep (102 deep wells, max. discharge of 600m³/hr)