

COWARRA DAM, NSW

CIVIL WORKS FOUNDATION GROUTING



Sustainable Technology



Client: Hastings Municipal Council
Consultant: DPWS New South Wales



Contractor: Austress Menard Pty Ltd

THE PROJECT

The Cowarra Storage Dam is located between Port Macquarie and Wauchope on the New South Wales Mid-North Coast. Forming part of the Hastings District Water Supply Augmentation Scheme, the dam has been designed to progressively cater for the districts water supply needs over the next 20 years.

THE STRUCTURE

This \$26 million 10,000ML earth-filled dam completed in 2001 is 620 metres long and 43 metres high with the embankment containing over 1.2 million cubic metres of clay core, sand filters and earth.

AUSTRESS MENARD'S ROLE

Following the completion of the preliminary earthworks and foundation preparation, Austress Menard was awarded the foundation grouting contract in June 1999. Drilling, water testing and multiple downstage grouting to a maximum depth of 30 metres were completed using a hydraulic drill rig and three grout stations. A combination of both hydraulic and electric powered grout stations were utilised, each unit consisting of a colloidal mixer, agitation tank and a multiple stage mono pump.

Due to the highly fractured and weathered nature of metamorphosed sedimentary rock on site, a full length, full width concrete grout cap was installed to minimise surface leakage and to aid the overall grouting process. Blanket grouting was performed in areas of high rock permeability, adjacent to a major strike-slip fault that intersected the lower left abutment.

Over the course of the project, Austress Menard completed some 11,500 metres of drilling and injected in excess of 850 tonnes of cement over the 620 metre long grout curtain.

Austress Menard offered local employment opportunities, with the specialist grouting crews being supplemented by indigenous labour from the Bunyah Tribe arranged through the local Aboriginal Land Council.

Drilling and grouting activities were completed in early December 1999, ahead of schedule.

SYDNEY

13-15 Lyonpark Road, Macquarie Park NSW 2113
Tel: 61 2 9491 7100 Fax: 61 2 9491 7111

BRISBANE

20 Bogan Street, Albion, QLD 4010
Tel: 61 7 3862 1511 Fax: 61 7 3862 1516

MELBOURNE

41 Boundary Road, North Melb. VIC 3051
Tel: 61 3 9321 1333 Fax: 61 3 9326 8996

AUCKLAND

PO Box 72734, Papakura, Auckland NZ
Tel: 64 9 236 3385 Fax: 64 9 236 3385