Waterwise Abseiling

The ‘waterwise’ sign attached to a lime silo at Wauchope WTP had come loose on one corner, and the options for re-attaching it were limited - a large crane and man basket ...or some divers who were ‘working close by’.

Part of the Aqualift process is being able to operate safely and rescue injured team members (if necessary) from elevated areas - using our own skills and resources. Rope access is a good adjunct skill to commercial diving and a lot of our diving equipment has now been adapted to ‘blend the two disciplines’ together.

The Waterwise sign was a good opportunity to change over from diving to abseiling for an hour or so. The silo roof area offered good solid anchor points for the ropes and an operator was quickly ‘over the side’ and assessing the problem - a threaded stud that had worked loose and fallen out. A new stud was made up and then screwed in to securely attach the sign again - the remaining studs were also re-tightened at the same time to avoid any future failure from occurring.

The ‘divers’ then took the opportunity to refresh their skills by abseiling down, changing direction and then climbing back up the ropes.. several times...just to make sure the sign was secure!!

DBs NEXTEP Reservoir Products and Services

43 Hobart St Riverstone NSW Australia 2765 • Tel + 61 2 9838 3172 Fax + 61 2 9838 3173
david@aqualift.com.au - www.aqualift.com.au • candrews@nextep.net.au - www.nextep.net.au

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In the Field
Special Edition

Canberra Sediment Boom Removal

The project entailed the removal of hundreds of metres of sediment boom material, originally placed into Corin and Bendora Dams at Canberra, following large scale bushfires.

The boom material was breaking down and posing a threat to down stream pumps and pipe work.
The booms were scattered along all the tributaries and inlets into the dams, often in shallow water and up to five kilometres from the base camp areas. In addition to our normal work boats, two Honda jet skis were used to support the divers and to 'power' a purpose built diving and harvesting barge. The jet skis could operate more safely in shallower waters than the boats and there were no entanglement issues with propellers, divers and airlines to worry about.

The project was further complicated by the absence of local motels and food supplies – Aqualift set up a complete two week onsite camp. Tents, swags, nutritious food and a mobile office including satellite phones were simply 'part of the job'.

After dinner movies were provided with the help of a laptop and data projector, using the side of the dive truck as a screen – latest release DVDs were just part of the onsite 'perks' (along with the trout fishing).

Glossodia Reservoir Repair

A 'wine glass' shaped reservoir thirty metres above the ground was displaying seepage through the centre access tunnel. This tank could not be removed from service, so any repairs had to be carried out while the tank remained full of water.

Internal inspection using a potable dedicated dive team revealed heavy localized corrosion to the tunnel wall area, adjacent to a brass protective screen covering the outlet penetration. The brass material was providing a strong cathodic reaction to the 8mm thick mild steel plating that comprised the access tunnel. After scraping back the bitumen protective coating and the corrosion nodules, a strong leak developed due to seven metres of water head pressure bearing on the affected area. A large adjacent area of tunnel wall was also identified as having less than 20 percent remaining of it's original plate thickness.
A ten-cent coin was used to initially block the water flow. This was further sealed and held in place with 'Blue-Tac', which had sufficient viscosity to withstand the significant water pressure.
NMP 1720 underwater epoxy was applied over an area of 1 square metre to completely cover and re-enforce the weakened steel section of the tunnel. This epoxy was built up to an average thickness of 20mm around the affected areas without exhibiting any significant slumping. The Kevlar fibres incorporated in the epoxy will ensure the tank can now remain safely in service for several years, until the internal protective lining is replaced. The client, Sydney Water, was extremely pleased with the end result.