LEACHATE PUMPING SOLUTIONS PRESENTATION
WHO IS AIRWELL GROUP

- Australian owned and operated total fluids management company
- 25 years experience in providing pumping solutions for environmental applications
- Manufacturer of unique direct air displacement pumping systems
- Leachate Recovery Equipment on Landfills across Australia
- Worked on some of the largest pollution recovery projects in Australia.
- Supplier of many other pump types and brands
- WA based with representation in VIC, QLD and NSW
- Wide range of services and expertise
A SNAPSHOT OF SOME OF AIRWELL’S ENVIRONMENTAL SERVICES

- Landfill Leachate Recovery
- Remote Monitoring and SCADA Control
- Bubbler Tube Systems and Monitoring
- Groundwater/Bore Sampling
- Pump/Flow Testing
- Pollution Recovery and Site Remediation
- Electric Submersible Sales and Service
THE AIRWELL PUMPING SYSTEM

- Top & bottom filling direct air displacement pumps available in intrinsic safe & non-intrinsic safe options
- 24/7 operation remote from power
- Will exactly match the production of the bore
- Ability to handle large amounts of suspended contaminants and corrosive fluids without the risk of damage to the pump
- Long service life with low maintenance characteristics due to few mechanical/moving parts
- Full automation, control & telemetry available
(a) FILL CYCLE

COMPRESSED AIR, OR ALTERNATIVE GAS

WHEN SIGNAL IS RECEIVED, THE CONTROLLER INITIATES THE DISPLACEMENT CYCLE

SOLAR, OR TWIN SOLENOID TYPE, CONTROLLER

USED AIR IS VENTED TO THE ATMOSPHERE

LIQUID DISPLACES GAS

BALL VALVE IS IN THE OPEN POSITION, ALLOWING LIQUID TO FLOW THROUGH

LIQUID RISES THROUGH THE INLET SCREEN; WHICH FILTERS OUT LARGE DEBRIS

(b) DISPLACEMENT CYCLE

COMPRESSED AIR, OR ALTERNATIVE GAS

WHEN PROBE SENSES MAXIMUM LIQUID LEVEL, IT SIGNALS THE CONTROLLER

SOLAR, OR TWIN SOLENOID TYPE, CONTROLLER

GAS DISPLACES LIQUID

BALL VALVE IS IN THE CLOSED POSITION, FORCING THE DISPLACED LIQUID TO RISE THROUGH THE PICK-UP TUBE

WHEN LIQUID LEVEL FALLS BELOW BOTTOM PROBE, SIGNAL TO CONTROLLER IS NO LONGER RECEIVED, FILL CYCLE IS THEN RE-INITIATED

OPEN BALL VALVE ALLOWS LIQUID TO FLOW THROUGH TO THE STORAGE VESSEL
LEACHATE RECOVERY

- Airwell pumping systems are used extensively in leachate recovery in Australia.
- Uses include the detection and recovery from leaks in residue ponds, tailings dams and landfill sites.
- We have experience in developing systems for both hazardous and non-hazardous environments.
- Recent focus on telemetry and monitoring systems
LANDFILL LEACHATE RECOVERY

- The low flow capabilities of the Airwell system allow it to match the production of any leachate without any damage to the pumping equipment.
- The Airwell’s ability to handle grit, silt and iron oxide bacteria make it ideally suited to landfill leachate recovery applications.
- Not only does the Airwell system recover leachate, it also acts as a leachate detector as the pump will only operate when there is leachate present.
- Airwell have an ability to design custom equipment to suit various landfill sumps and bores depending on requirements.
AIRWELL LANDFILL LEACHATE RECOVERY SYSTEMS
REMOTE MONITORING AND SCADA CONTROL

- Growing area in the landfill industry
- Airwell skid control systems allow for remote monitoring and control of pumping systems
- Ability to monitor and report on leachate levels, volume of fluid pumped and rate of pumping.
- Compatible with Airwell and existing pump systems and equipment.
- Information and data is controlled and owned by the client
- SCADA Dashboard easy to use interface and allows clients to generate reporting data easily in excel format.
BUBBLER TUBE SYSTEMS AND MONITORING

- Bubbler Tubes used as a replacement for pressure transducers in leachate pumping and monitoring environments
- Accurate method of liquid level measurement using compressed air
- Requires no expensive down well equipment that is damaged by leachate in the wells
- Skid monitoring or portable monitoring case
Airwell Group have developed evaporation sprinkler systems as an alternative to traditional evaporators. Floating systems or attached systems keep evaporated leachate from spreading to other areas of the landfill or nearby land. These systems run purely off compressed air with the assistance of an Airwell pump.
GROUNDWATER/BORE SAMPLING

The Airwell Group environmental sampling equipment is designed and manufactured from the highest quality components and assembled in our Perth factory.

We offer a full range and level of bore sampling services to help our clients meet their environmental and reporting requirements to the relevant government departments.

Our Services Offered Are:

- **Complete sampling service:** Supply of all pumping equipment, 4wd vehicle and trained operator to complete your sampling requirements.

- **Dry Hire of equipment:** Supply of all pumping equipment required to complete your sampling.

- **Purchase Options:** Outright purchase of an Airwell bore sampling unit.
PUMP / FLOW TESTING SERVICES

Airwell is fully equipped to undertake pump/flow tests ranging from 0 to 30 litres per second and from depths up to 150 meters.

Testing outside of these parameters is available subject to negotiation.

We offer:

- A selection of electric submersible pumps to achieve your required flow rates.
- Mine site ready vehicles
- Trained and experienced operators with previous mine site exposure.
- Equipment meets major mine site safety requirements for staff not to have to remain at the pump site for prolonged periods (minimum exposure to risk)
- Prompt and Efficient service
- Highly accurate results
- Modern and up to date testing equipment
ELECTRIC SUBMERSIBLE PUMPING EQUIPMENT

- As well as its own systems, Airwell can specify, design and install a full range of conventional pumps.
- Airwell is an agent for the Franklin Electric range of pumping equipment.
- Airwell can supply not just Franklin Electrical submersibles but also Franklin Artificial lift systems and Franklin Solar pumps.
- Airwell can also supply a range of other pumping products and brands.
- Airwell has experienced installers of electric submersible pumping equipment.
SELECTION OF OUR CLIENTS

Bore Sampling
- Fortescue Metals Group
- Kimberley Diamonds
- MMG Golden Grove
- Troy Resources
- Iluka Resources
- Xstrata Copper

Site Remediation
- Orica
- BP
- Alcoa Kwinana and Pinjarra
- URS
- AECOM

Flow Testing
- Newmont Boddington Gold
- ALCOA Kwinana
- GHD

Landfill Leachate Recovery
- Run Energy
- East Metropolitan Regional Council
- Mindarie Regional Council
- Transpacific
- SITA
- Veolia
- City of Mt Gambier
- Logan City Council
MORE INFORMATION

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