

PROCENTEC



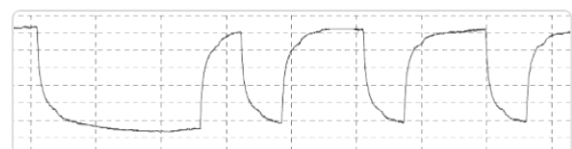
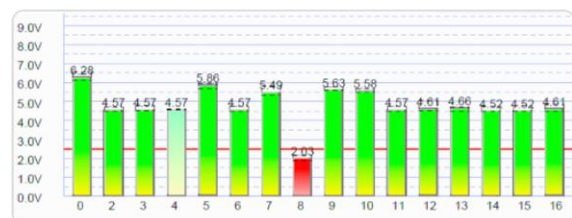
Barwon Water increases PROFIBUS network reliability and robustness with PROCENTEC ProfiHubs

The Barwon Water biosolids drying facility is a fully enclosed thermal drying operation in Australia. The facility provides an environmentally sustainable, long-term solution for reclamation of 100% of the biosolids produced at the Barwon Water's Black Rock and smaller regional water treatment facilities. In order to keep the PROFIBUS system going, Barwon Water uses PROCENTEC ProfiHubs. By using these multi-functional network components the facility is continually assured of the most reliable, high quality and robust PROFIBUS network with the highest uptime.

The Barwon Water biosolids drying facility utilizes PROFIBUS for the entire production process. The network has a combination of PROFIBUS DP, fiber optics, DP/DP couplers and a wide range of PROFIBUS PA devices. After a few years in operation, interruptions within the PROFIBUS network began to appear. To get the PROFIBUS network at peak operation again, Barwon Water called in PROCENTEC's valuable distributor Pentair PICC to assist. They visited the site and carried out a detailed network audit, through the use of PROCENTEC ProfiTrace. This innovative tool enables engineers to check the quality of the PROFIBUS network within a few hours.

After the network audit, Pentair PICC realized the PROFIBUS installation at Barwon Water biosolids facility was not operating according to the PROFIBUS guidelines and that the physical layer of

the network needed urgent attention as a few devices were on the verge of dropping from the network.



PROCENTEC ProfiTrace report before network upgrade



PROCENTEC ProfiHub A5 with open cover

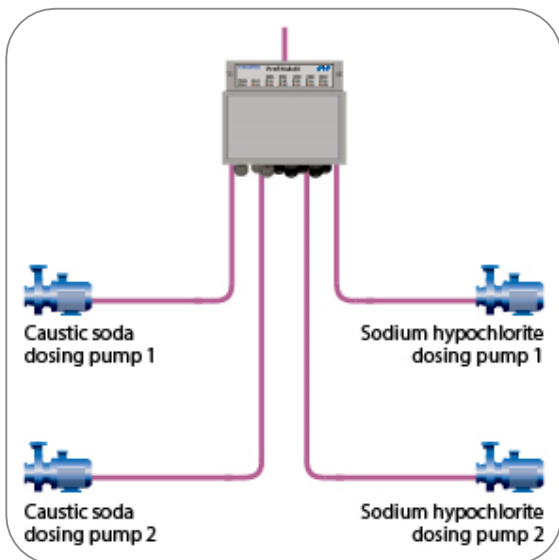
PROFIBUS Network Upgrade

In order to make the PROFIBUS network more stable and reliable, Pentair PICC recommended detailed actions to upgrade the PROFIBUS network. The PROFIBUS network upgrades were executed accordingly during a planned three-day site shut down. First, PROCENTEC ProfiHubs were installed on the PROFIBUS DP network, with critical devices isolated on separate segments to achieve galvanic

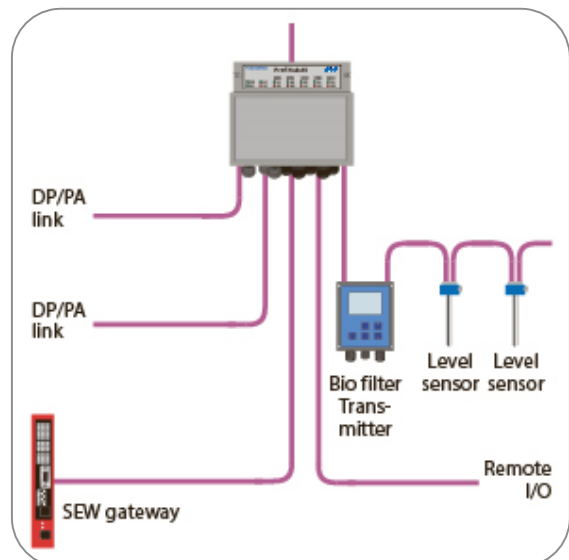
power surge isolation, isolated spur lines maintenance, and reduced potential junction failure. The ProfiHubs were installed in various MCC cabinets to allow separation of main channels entering into the dosing pump areas. Further, the ProfiHub was utilized to connect transmitters, level sensors, remote I/O's, gateway(s) and DP/PA links within the facility.

The second recommendation was a baud rate reduction from 1.5Mbits/sec to 500kbits/sec. The baud rate was changed at the master PLC by the system integrator, allowing for increased cable lengths. Unused devices were disconnected from the network and hardware configuration on the PLC updated accordingly.

Poor connections were reconfigured, improper termination was corrected, and damaged connectors were replaced. These recommendations all feed into increased operational capabilities, eliminating the poor signals that were affecting this network.



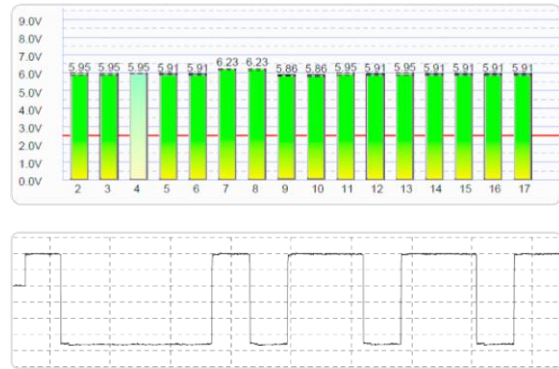
Example: PROCENTEC ProfiHub installed in the above illustration allowing for new cables laid for each dosing pump segment



Example: PROCENTEC ProfiHub installed in the above illustration for various network connections

Reliable PROFIBUS Network

After the network upgrade, a PROCENTEC ProfiTrace report was generated showing the improved network health. The PROFIBUS network at the Barwon Water biosolids drying facility has improved remarkably compared to earlier reports. The modifications made to the network have made a significant difference in quality of the signal and the strength of the PROFIBUS network, making the network very robust and stable.



PROCENTEC ProfiTrace report after network upgrade



About Barwon Water

Barwon Water is the largest regional urban water corporation in Victoria, Australia. They provide high quality water, recycled water and sewerage services. Barwon Water service to more than 287,000 permanent residents. Over the summer holiday period, their serviced population can even reach 492,000 people. The total coverage area is 8,100 square kilometers on the Australian Coast. The Barwon Water biosolids drying facility plays a vital role in Barwon Water's long-term goal to operate a 'no waste' sewerage system – where 100 per cent of recycled water and biosolids are committed to sustainable use.

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