a better way

Gen 4 cells installed

The Demonstration Unit installed at MNIT

Case Study 8:

Demonstration Unit India

Hydro-dis® (International) Ltd Partnership with the Rajasthan Centre of Excellence in Water and Resource Management

Background

Hydro-dis® (International) Ltd in partnership with Rajasthan Centre of Excellence in Water and Resource Management (RaCEWaRM) and the South Australian based International Centre of Excellence in Water and Resource Management (ICEWaRM) has been working to bring the Hydro-dis technology to India.

RaCEWaRM has facilitated the implementation of a Demonstration Unit at the Malaviya National Institute of Technology (MNIT). The Demonstration Unit has been installed on a Student Accommodation Hostel at the MNIT, under the guidance and direction of Professor AB Gupta Head of Civil Engineering Department.

Following negotiations between RaCEWaRM supported by the Water and Sanitation Support Organisation (WSSO), and Hydro-dis at the September 2017 meeting the board approved the implementation of the Demonstration Unit.

The trial was aimed at replicating a village level water disinfection application typical of what an installation would be like via a recirculating loop keeping the tank water at the required chlorine level of 0.2 to 0.4ppm. This system has the capacity to handle the various demand peaks and maintains the disinfection outcomes required by the client. By having it set up at the MNIT it allows for detailed monitoring by PhD students for research processes leading to regulatory approval for the Hydro-dis technology to be used across India. It was agreed that the system would be installed and commissioned as part of the upcoming SA Government Lead Mission in November.

Hydro-dis (International) Ltd has become the first Industry partner of RaCEWaRM.

Challenge

In the 7 week period available Hydro-dis built the system including bringing forward R&D work on the PLC controller to enable remote monitoring and control of the system in India enabling further enhancements and adjustments to be made. R&D was also brought forward on the Gen 4 cells.

In the first week of October our Chief Technical Officer Rob Richardson and our Operations Manager Graham Ivery travelled to India and installed the Demonstration Unit at MNIT.

The Demonstration Unit was inaugurated by the Governor of South Australia, The Honourable Hieu Van Le, the Rajasthan Minister Public Health and Engineering Department Sh. Surendra Goyal and the South Australian Minister for Trade and Investment The Honourable Martin Hamilton-Smith on 8 November 2017 during the SA Government Trade Mission to India.

In December 2017 our Chief Executive Officer Mark Carey and Rob Richardson visited Jaipur for follow up meetings with the RaCEWaRM, WSSO and MNIT and installed a Gen 4 prototype unit which is even better suited to Indian ground water supply installations. The prototype unit is achieving disinfection outcomes more effectively than the original Gen 3 system.

Outcome

The trial data confirmed that the installation of Generation 4 cells and operating methodology has achieved the trial targets of disinfection of the supply water while simultaneously producing a constant level of free chlorine without the use of chemicals. This has resulted in the MNIT signing off confirming that the trial was a success and is now complete.

Further trials with MNIT for disinfecting treated wastewater and for regional tube well disinfection have been agreed and these will investigate the efficacy of the Hydro-dis Generation 4 technology in disinfecting this water.

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