

GARY SLENDERS

PRINCIPAL PROCESS ENGINEER



POSITION/TITLE: Principal Process Engineer - Wastewater

PROFESSION: Chemical Engineer

NATIONALITY: Australian

YEARS EXPERIENCE: 37 years

EDUCATION: Bachelor of Engineering in Chemical Engineering - Royal Melbourne Institute of Technology, 1985.
ADMS 4 Dispersion Model Training Course 2013
Cambridge Environmental Research Consultants

PROFESSIONAL AFFILIATIONS: Chartered Chemical Engineer
Registered Practising Engineer of Queensland

SPECIALISATION

Chemical Engineer. Chemical Process Design, Design Draftsman, Project Manager, Construction Supervisor, and Commissioning of Chemical Process Plant, Odour Control, Water and Wastewater Treatment Plants.

- Sewer Odour and Corrosion Assessment. Upgrade of Software for the dynamic modelling of Sulphur Generation, and Transport in Sewers
- Project Management and Team Leader
- Design, documentation, supervision of construction, and commissioning of Heat Exchanger Equipment for Sludge Digester Applications
- Design, Construction, Installation and Commissioning of Odour Control System for Municipal and Industrial Applications.
- Air Ducting Layout, and Design. Duct Sizing, and air balancing. Fan selection, installation and commissioning.
- Drafting and Computer Aided Drawing P&IDs, General Arrangement Drawings, Detail Design Drawings
- Project Manage Installation of Odour Control Systems
- Piping Layout, and Design. Process Piping material selection. Economic Pipeline Sizing. Pumping system design, installation and commissioning.
- Development of Models and Application programs for BioTrickling Filters and BioFilters, Packed Bed Air Humidifiers, Chemical Packed Bed Scrubbers, Chemical Scrubbers, and Activated Carbon systems
- Specialist Designer for Odour Control for industrial applications including Meat Render Plants, Chemical Storage Tanks and Oil Refinery Waste Streams
- Design, documentation, construction, and commissioning of Chemical Dosing Systems
- Skilled level user of Microsoft Office (Excel, Word, Powerpoint, Projects) AutoCad 2D, and registered code writer of proprietary engineering software.

EMPLOYMENT

AOMC Pty Ltd**2014 - Present**

Principal Process Engineer and co-director. Process Design, Installation, Commissioning of Air Treatment System and Investigation and Evaluation of Odour Control Requirements.

- Yarra Valley Water Sewer Asset Management Vent Stack Assessment
- Process Designer for Odatech Pty Ltd. Water Corp (WA) site – Albany, Clydebank. Harrison Manufacturing NSW. Inghams Chickens – Osborne SA
- BioTrickling Filter Systems Design Review and Site Commissioning Logan Water, SA Water – Bioaction Pty Ltd
- Design Review of Render Plant Odour Control Operations – Australian Tallow Producers
- Design of Concrete Housing BioFilter Arrangement – Oztek Rendering
- Technical Reviewer Bindaree Beef Biodigestion Plant & Wastewater System Upgrade - Meateng
- Project Barangaroo Odour Control System Installation and Commission BTEX contaminated ground water – Enviropacific (Aust)
- Aljoaib Consulting Engineering Saudi Arabia – Royal Commission of Jubail and Yanbu, Lead Process Engineer, and Task Manager for Stage 4 development of Industrial Wastewater Treatment Plant No. 8

MWH Global (UK)**2012 to 2014**

Principal Process Engineer Level 7 – Secondment to United Utilities AMP5 alliance. Process Design Specification development for Advanced Digestion Systems, Biosolids Handling and Odour Control.

- Leigh Biosolids Handling process upgrade. Odour Control and CHP Biogas desulphurisation and Siloxane removal specification Process Investigation and design specification.
- Carlisle Biosolids Lime Sludge Plant odour control system tender technical assessment and detailed design of Raw Sludge odour control BioTrickling Filter
- Workington WwTW Odour Control System. Construction supervision and commissioning assistance for Wet Chemical Scrubber (Caustic / Hypochlorite) odour control system
- Ellesmere Port WwTW Biosolids Handling and Refinery Waste Inlet Works stream odour control systems. Process Investigation and design specification.

MWH Global (Australia) Pty Ltd**2007 – 2012**

Senior Process Engineer Level 6 – Technical. Process Specialist for MWH Melbourne. Plant Design and Sewer Odour Assessment - Melbourne, Sydney, and Brisbane. Biological Odour Control system design.

- Water Resources Alliance – Melbourne Water Corporation East Drop Structure Project (\$ M 14) Sewer Septicity and Ventilation Modelling, Process Design and Selection. Project Costing, Process Design, Specification and Tender Assessment. Western Treatment Plant Biogas Audit and Flare Stack System.
- Melbourne Water Corporation DAF Plant Augmentation Commissioning (\$ M 2.5)
- Sydney Water Corporation – Wollongong Sewerage Treatment Works Biosolids Odour Control System. EPCM contract, two stage Biological and Activated Carbon Design. (\$ M 16)
- US Alliance South East Water – Flinders SPS and Shoreham SPS Pressure Balance Vessel Design, Dromana Odour Hotspots Investigation, Mt Martha Rotary Drum Thickener design report. Woollara Drive Odour Investigation
- Murrumba Downs Alliance Morten Bay Water (\$ M2.5) Design Options for Permanent Odour Control System and for Temporary Odour Control System
- Pimpama Coomera Waterfuture Alliance (\$ M1.50) Tender Assessment and HAZOP review for Biological Odour Control.
- Yarra Valley Water Lilydale Sewer Upgrade Odour and Corrosion Assessment Report.

ENVIRONMENTAL GROUP (OPERATIONS) Pty Ltd**2004 to 2006**

Biological Process Engineer Responsible for the Development of Processes and Procedures for the manufacture of BioTrickling Filters and BioFilters

- Wodonga West Wastewater Treatment Plant - BioFilter Media Changeover
- Redcliffe Wastewater Treatment Plant - Inlet Works Odour Control Augmentation. BioTrickling Filter Design, Manufacture, Installation and Commissioning

CLEAN TEQ Pty Ltd**1997 to 2004**

Process and Factory Manager:

Design Development, Commissioning Engineer, Procurement and Project Management:

- Bolivar High Salinity Project (\$M1.45) – BioTrickling Filters and Activated Carbon
- Woodman Point Odour Control System (\$600,000) - BioTrickling Filter and BioFilter
- Earth Power Technology (Camellia – NSW (\$800,000) – Ammonia Fluidbed Scrubber, BioFilter
- Maroochy Shire Council Yandina Pump Station (\$30,000) – BioTrickling Filter
- Yates (Wye) Odour Control and Continuous Ion Exchange Process. (\$M 1.8) – Packed Bed Chemical Scrubber and BioFilters
- Spotswood Pump Station & Straining Well (\$M 2.3) – BioScrubber and BioFilters
- Maroochy WWTP inlet works (\$ 650,000.00) - BioFilters
- Shortlands WWTP (Newcastle) inlet works (\$ 380,000)- BioFilters
- Merrimac, Coombabah, & Elenora WWTPs - Gold Cost City Council (\$M 1.1) - BioFilters

Professional Affiliations**PROFESSIONAL MEMBERSHIP**

Chartered Member of the IChemE UK and Australia
Registered Practising Engineer of Queensland (RPEQ)

PRESENTATIONS AND PUBLIC APPEARANCES

IChemE Victoria Chapter – Presentation on Odour Control and Odour Management Systems
Victoria EPA – Presentation to Staff and to Environmental Teams on site management of odour and maintenance of odour control systems.
Gold Coast Water – Presentation to Staff on proper operation and management of BioTrickling Filters.