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| <b>Project Location:</b>  | Prospect NSW   |
| <b>Commencement Date:</b> | September 2019   |
| <b>Completion Date:</b>   | Ongoing  |
| <b>Client:</b>            | Suez   |
| <b>Contract Value:</b>    | \$1 Million +  |
| <b>Key People:</b>        | Tim Cartwright, Wesley Hess, Wahaj Raja, Sean Brady, Nick Cuevas, Milan Bachraty |



### Overview:

The Prospect Water Filtration Plant is a critical infrastructure site that supplies 85% of Sydney's drinking water. Complete replacement of site wide control system that had reached end of life was required. This included conversion of existing code to new PLC's, installation of new PLC's and IO hardware, and full simulation validation testing of multiple plant operational systems.

### Scope:

Key members of the Coengineer team, had full responsibility for the management and delivery of the project. The project scope involved the complete replacement of all site PLC's, IO and upgrade of software on a live running plant (Australia's largest Water Treatment Plant) over an 24 month period to date and ongoing.

The project required extreme attention to detail on all levels, including:

- Project Management & Planning
- PLC & SCADA programming
- Stringent Factory Acceptance Testing (FAT) and Simulation
- Commissioning & Risk Management
- Stringent Site Acceptance Testing (SAT) on Live Plant

**"I have worked with Matthew Bradley and Wesley Hess over many years on sites and projects across Australia. Our company has benefited greatly from their quality approach and professionalism."**

– Mark Lautre, Operations East, Suez Environnement

### Project Challenges:

- Upgrade involving work with 13+ year old equipment.
- Conversion and consolidation of existing PLC code into latest software Platform, with necessary modifications to ensure compatibility.
- Extremely high risk project with technical challenges from legacy systems as well as no room for error on commissioning as the plant had to continue to operate throughout the entire project (no downtime).
- Challenges to prevent interruption and impact to ongoing plant operations and water supply to residential premises, landscapes and stadiums.
- Environmentally sensitive flora and fauna located through work area

### Project Specifics:

- Complete replacement of 9 PLC controllers running critical plant systems, including systems related to chemical batching & dosing of hazardous chemicals, flow control and filtration.
- Conversion and error correction for existing PLC code, including modifications to ensure compatibility.
- Modification to existing SCADA screens to accommodate interfacing to new controllers and modifications to existing system control philosophies.
- Stringent Simulation Testing as part of the Factory Acceptance Testing Process, demonstrating complete system functionality.
- Ongoing support of operational systems throughout the project.