

Case Study: SWA wastewater Treatment Plant PPP

Presentation overview

Samoa Water Authority Wastewater System

- Mandated under the SWA's Act 2003 & Sewerage and Wastewater Regulations 2009.
- Pressure Sewerage System and Wastewater Treatment Plant
 - Commissioned in August 2010
 - 100 pump stations serving 110 commercial customers within Apia CBD
 - WWTP capacity 1.2 ML DWF
 - Activated Sludge treatment system. (Sequencing Batch Reactors)
 - WWTP – Design, Construct and operate arrangement (5 years) -PPP
- Implemented under the Samoa Sanitation and Drainage project funded under an ADB Loan
- Project Total cost approx \$25m SAT (11m USD)



SWA wastewater Treatment Plant- PPP

- Tennix New Zealand (formerly Rob Stone Engineering) awarded contract to Design, Construct and operate WWTP for a period of 5 years.
- Due to cost implications, contract revised for TNZ to provide“ Supervisor to oversee O&M activities, technical support from NZ including quarterly visits from Reaman Industry (TNZ sub contractor) engineer. Cost to SWA – 10K NZD/month
- SWA provided supporting staff for O&M, procurement of consumables/spare parts as well as utility charges
- Operations component of contract ended 30th April 2015.
- SWA taking full O&M of the WWTP since then.
- Overseas Technical support only engaged when required.



Lessons Learned

- Contractor to maintain plant performance at 100% (including odour) during 5 year operations contract however no clear penalties were incorporated into the contract should the performance drops below target.
- Partnership provided good capacity building for SWA staff to operate and maintain WWTP
- Issues with back up support for spare parts procured by SWA from a different supplier other than Reaman industries. (i.e programming of ultrasonic sensors etc.)



5 Year plan.

- WWTP currently operating at 70% capacity. More infill properties to be connected to the system.
- Continuously strive to improve system efficiency and performance by incorporating new technology out in the market. (.i.e odour control systems)
- To upgrade local scada system in order to be able to remotely control WWTP processes. This includes implementing scada system for the Pressure sewer network.
- SWA to continually Operate and maintain WWTP with Technical/back up support to be outsourced and engaged 3-4 time a years and emergency services as requires.
- Start exploring alternative options for network expansion should the WWTP reaches maximum capacity

