



case study:

Apia Wastewater Treatment Plant

Apia is the capital of Samoa and its population and economic centre. Apia's growing urban population density, adverse ground conditions, high water table and regular flooding mean that multiple septic tank systems in the denser urban areas can no longer effectively treat the wastewater produced.

The Government of Samoa recognised the need to address Apia's wastewater management, sanitation and drainage issues and commissioned the Samoa Drainage and Sanitation Project. As part of the Project, Tenix was awarded the contract to design, construct, commission and operate Samoa's first centralised custom-built wastewater treatment plant.

Key Features and Outcomes

Tenix is providing the new 1ML/day SBR (Sequence Batch Reactor) plant as a turnkey project including civil works, supply and installation of mechanical plant and equipment, electrical and controls plant and equipment, plus plant commissioning.

The project brief called for a robust, reliable treatment process, process equipment and control system, all in a compact wastewater treatment plant. In response, Tenix offered the SBR process as a well established, proven technology.

The plant consists of an influent tank, two SBR tanks (27m x 8m x 6.5m rectangular), decant and waste sludge tank chambers, filters and ultra-violet treatment. The plant buildings include the control office which houses the PLC system, electrical room, plant room, chemical room and amenities.

The plant provides a centralised replacement for multiple septic tanks and a far superior and more efficient treatment process. Sludge is dewatered and sent to a landfill and the treated wastewater discharged to the sea.



Tenix®



Field Services

- Preventative Maintenance
- Corrective Maintenance
- Fault Services (24/7)
- ✓ Asset Replacement
- ✓ New Build
- Connection services

Management Services

- ✓ Design
- ✓ Project Management & Systems
- ✓ Quality Management & Systems
- ✓ HR & IR Management
- ✓ Construction Management
- ✓ Procurement Management
- ✓ Subcontractor Management
- ✓ Cost Planning & Estimation
- Planning Approvals
- ✓ Stakeholder Management



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Our Role

Tenix managed the entire project. We provided the design and construction of the plant including the supply of all plant, labour and materials. This included the design, supply and installation of associated mechanical, electrical and control equipment, site development and construction of infrastructure for the WWTP. Tenix is also providing the testing and commissioning of the plant plus operation of the plant for five years.

Tenix proposed an alternative design for the plant than the one specified in the original tender. By collaborating with the Samoa Water Authority we were able to provide an improved plant at lower cost to the client. Sludge dewatering was not a part of the original specification, but was proposed and recommended by Tenix Robt Stone. We also worked with the Prime Minister to relocate the plant to decrease the odours.

As a matter of policy, Tenix sought to maximise the amount of work offered to local contractors. Tenix engineers also worked closely with local engineers, advising and assisting, where possible, to help enhance their skills and capabilities.

Tenix controlled all site, safety, management and engineering issues, ensuring that all job-specific safety management and quality plans were in place.

Asset Type: Wastewater Treatment Plant	Duration: 1 year
Client: Samoa Water Authority	Value: \$7 million
Location: Apia, Samoa	Scope: Turnkey plus operation
Contracting Style: Lump sum	Contract Secured: June 2008

