



PNG LNG FACILITY EXPANSION NEW WASTEWATER TREATMENT PLANT

Centurion Water & Wastewater Solutions is delivering a modular Sequencing Batch Reactor (SBR) wastewater treatment plant for an LNG project in Papua New Guinea, designed to support a growing workforce and integrate with existing infrastructure. The staged system will scale from 500 to 750 EP, with durability, efficiency and future expansion built into the design.

THE CLIENT

A leading energy company with an LNG project in Papua New Guinea.

CLIENT CHALLENGES

- Scalable design - the solution needed to integrate with the existing Hides Gas Conditioning Plant (HGCP) SBR system and support future capacity increases
- Fluctuating camp populations - workforce fluctuations required a system capable of handling significant variation in flow and load
- Material durability - all infrastructure had to withstand harsh environmental conditions, necessitating high-grade stainless-steel materials
- Reliability and minimal operator involvement - the plant needed to operate reliably with minimal manual operation
- Options to reuse infrastructure - cost-effective use of existing infrastructure was a priority to reduce overall capital expenditure.



OUR SOLUTIONS

Centurion delivered a comprehensive wastewater treatment solution with a focus on modularity, durability, and efficiency:

500 EP SBR Wastewater Treatment Plant

- Modular design similar to the existing HGCP SBR system for seamless integration
- Tanks fabricated from 316 stainless steel for superior durability in challenging environments
- Engineered for easy operation and maintenance.

250 EP Expansion Module

- Scaled the existing system's capacity from 500 EP to 750 EP
- Included a 90m³ balance tank (316 stainless steel) and an anoxic/aerobic tank constructed from carbon steel with a chemical-resistant coating
- Integration with existing infrastructure, including the sewage pumping station, sludge storage, and treated effluent tanks.

RESULTS

- Modular scalability - enabled staged capacity increases without disrupting ongoing operations
- Operational reliability - robust Sequencing Batch Reactor technology delivered consistent performance with minimal operator involvement
- Long-term durability - high-grade, stainless-steel material and chemical resistant coatings ensured system longevity and compliance
- Reduced manual handling - upgraded IBC dosing container to reduce manual chemical handling
- Effluent reuse and water savings - designed the disposal system to HGCP specifications, enabling safe effluent reuse and reduced water consumption through spray field disposal
- Cost savings - by reusing the existing sludge dewatering system from the original 500 EP plant, minimising additional capital investment.



CONCLUSION

Centurion Water & Wastewater Solutions successfully delivered a modular, high-performance wastewater treatment plant tailored to meet the evolving needs of ExxonMobil's LNG project. Through a combination of durable construction, scalable design, integration with existing assets, and the reuse of infrastructure, Centurion delivered a fully compliant, cost-effective solution for the client.

CONTACT INFORMATION

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