



Beyond The Septic Tank: How Ariescor Water Helped Limay Dialysis Center, Build a Smarter Wastewater Treatment System

Every healthcare facility has a responsibility that extends beyond patient care. It also has the responsibility to protect the environment through proper wastewater management. For Limay Dialysis Center in Brgy. Wawa, Limay, Bataan, this responsibility became increasingly important as the facility sought a more sustainable and compliant way to manage its wastewater.

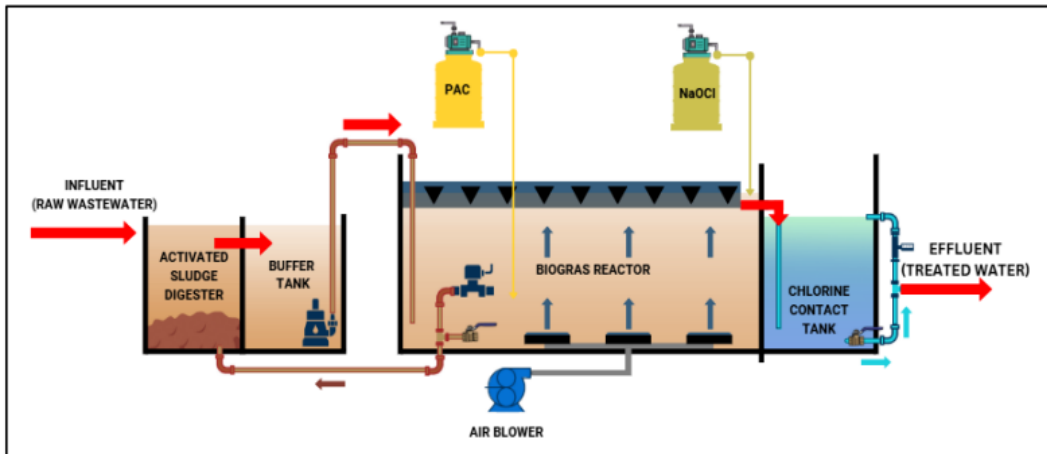


Prior to partnering with Ariescor Water, the center relied solely on a conventional septic tank for wastewater disposal. While adequate for primary containment, a septic tank alone does not provide the level of treatment necessary to consistently achieve the effluent quality required under the Department of Environment and Natural Resources (DENR) Effluent Standards for Manila Bay (Class SB) when direct discharge is required. As sludge accumulated over time, unpleasant odors became more frequent, while regular desludging and hauling operations resulted in increasing maintenance costs and operational disruptions. Although electricity consumption was not a significant issue, the existing system was no longer aligned with the facility's long-term operational and environmental objectives.

Recognizing these challenges, Limay Dialysis Center engaged Ariescor Water to develop a wastewater treatment solution that would go beyond simply replacing the existing system. Ariescor Water approached the project by first conducting a comprehensive assessment of the facility's wastewater characteristics, available installation space, operational requirements, and regulatory obligations. Rather than offering a generic treatment plant, the engineering team focused on developing a technology platform specifically designed to improve wastewater quality, simplify operations, reduce maintenance requirements, and support long-term regulatory compliance. This engineering-first approach ensured that the proposed solution would not only address the immediate challenges but also provide lasting operational value for the healthcare facility.



Process Flow Diagram



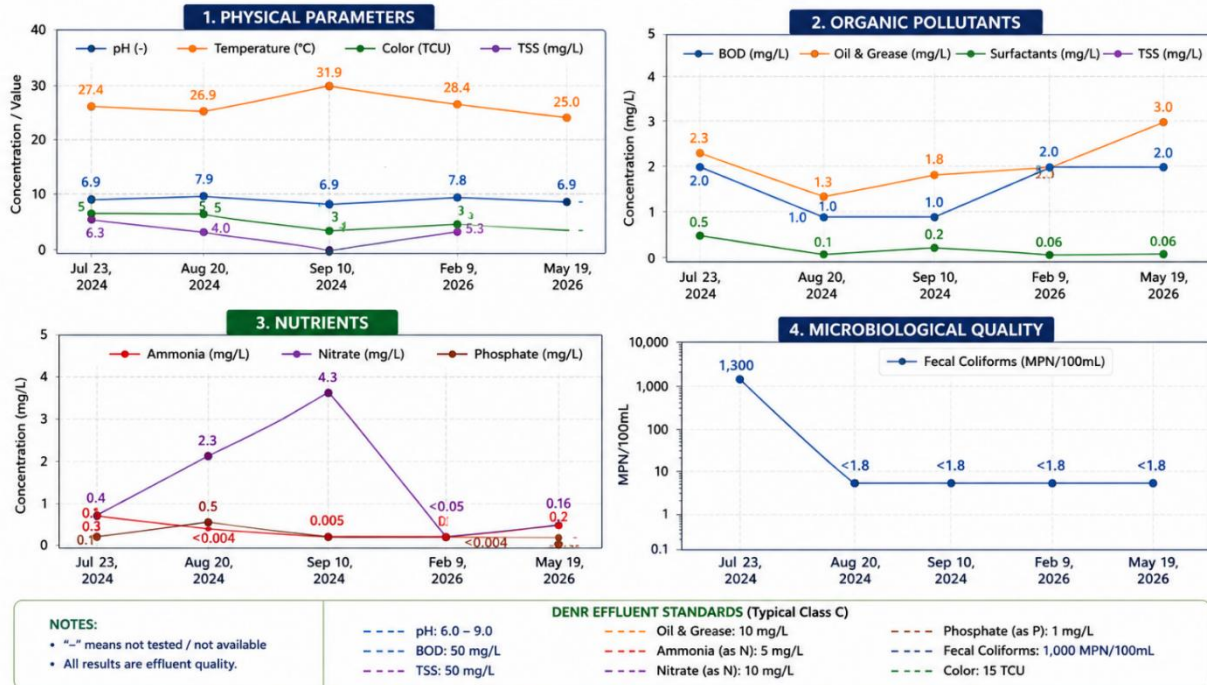
To achieve these objectives, Ariescor Water designed and implemented a **20 cubic meter per day (CMD) Granua® Modular Sequencing Batch Reactor (SBR)** wastewater treatment system. Unlike conventional septic systems that merely store wastewater, the Granua® Modular SBR actively treats wastewater using a biological process that combines aeration, settling, and controlled discharge through fully automated treatment cycles. The system intelligently controls blowers, pumps, and valves, allowing each treatment stage to operate only when necessary. This automated process not only improves treatment efficiency but also minimizes manual intervention, reduces sludge generation, and optimizes overall system performance. The modular design also allows the treatment system to fit efficiently within the available site while providing reliable wastewater treatment tailored to the specific needs of a dialysis facility.



Following commissioning, the Granua® Modular SBR transformed the facility's wastewater management process from simple wastewater storage into a complete biological treatment system capable of supporting compliance with the DENR Effluent Standards for Manila Bay (Class SB). Through its programmed treatment cycles, the system significantly improves wastewater quality before discharge while reducing sludge accumulation compared to conventional septic systems. Although laboratory performance values for influent and effluent parameters may be presented separately, the installed treatment platform was specifically engineered to consistently meet regulatory requirements while providing stable and reliable long-term operation.



Limay Dialysis Center Granua® Technology Effluent Performance



The Limay Dialysis Center Granua Technology STP has consistently maintained effluent quality within regulatory limits, demonstrating stable and reliable treatment performance.

(PARAMETER DATA RESULT GRAPH)

Beyond regulatory compliance, the project also delivered meaningful operational and economic benefits. Because the Granua® Modular SBR performs biological treatment rather than relying heavily on chemical processes, the facility requires only minimal chemical consumption during normal operation. This reduces the need for coagulants and other treatment chemicals while simplifying routine maintenance. The biological process also minimizes sludge production, significantly reducing the frequency of septic tank desludging and hauling services that previously contributed to high operating expenses. With a quarterly maintenance cost of only **₱359,000** during the first year of operation, the facility benefits from predictable maintenance planning and lower overall operating costs.



At the same time, the system's automated sequencing technology improves energy efficiency by operating blowers, pumps, and valves only when treatment cycles require them, eliminating unnecessary equipment runtime and helping reduce electricity consumption without sacrificing treatment performance.

Today, Limay Dialysis Center operates with a modern wastewater treatment platform

designed not only to satisfy environmental regulations but also to support the facility's long-term sustainability goals. What was once a wastewater management system dependent solely on septic storage has evolved into a reliable biological treatment process that improves operational efficiency, reduces maintenance demands, minimizes environmental impact, and provides greater confidence in regulatory compliance. For a healthcare institution, this means more than cleaner effluent. It means having a dependable wastewater infrastructure that supports uninterrupted patient care while protecting surrounding communities and water resources.



This project demonstrates Ariescor Water's commitment to developing integrated drinking water and wastewater technology platforms that solve real-world challenges through sound engineering, innovative treatment technologies, and practical operational solutions. Rather than simply supplying equipment, Ariescor Water partners with clients to understand their unique requirements and deliver treatment systems that provide measurable environmental, operational, and economic value. From healthcare facilities and commercial establishments to industrial plants and local government projects, Ariescor Water continues to help organizations build resilient water infrastructure that performs reliably today while preparing them for the challenges of tomorrow.

**Client Testimonial**

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Before the installation of the Wastewater Treatment System, our Dialysis Center relied on wastewater hauling for disposal. After the system was installed by Ariescor Water Inc., we were able to treat our wastewater on-site and successfully obtain a DENR Discharge Permit, eliminating the need for regular hauling services. We are satisfied with the performance of the Wastewater Treatment Plant and the continuous support provided by Ariescor Water Inc. through their Preventive Maintenance Service (PMS). Their team has been responsive and helpful in ensuring that our treatment facility remains operational and compliant.

Ms. Romalyn Villar
Managing Head