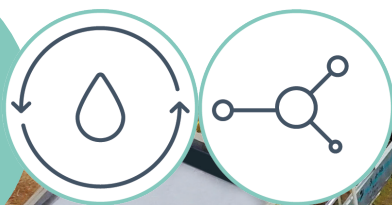


CASE STUDY



Aspinal™ Smart Packaged Wastewater Treatment System

Rural Wastewater Treatment, Henan Province, China

- **Location:** Taiping Village, Luolong District
Henan Province, China
- **Capacity:** 300 m³/day (79,200 GPD)
- **Technology:** Aspinal™ MABR-based Smart Packaged Wastewater Treatment System
- **Customer:** Qingshuiyuan Environment Technology Co. Ltd

Background

To comply with new and expanding government regulations for wastewater reuse, Taiping village, located in Henan Province, needed a wastewater

treatment plant to treat effluent produced by 5,000 residents that was previously untreated in this rural setting.

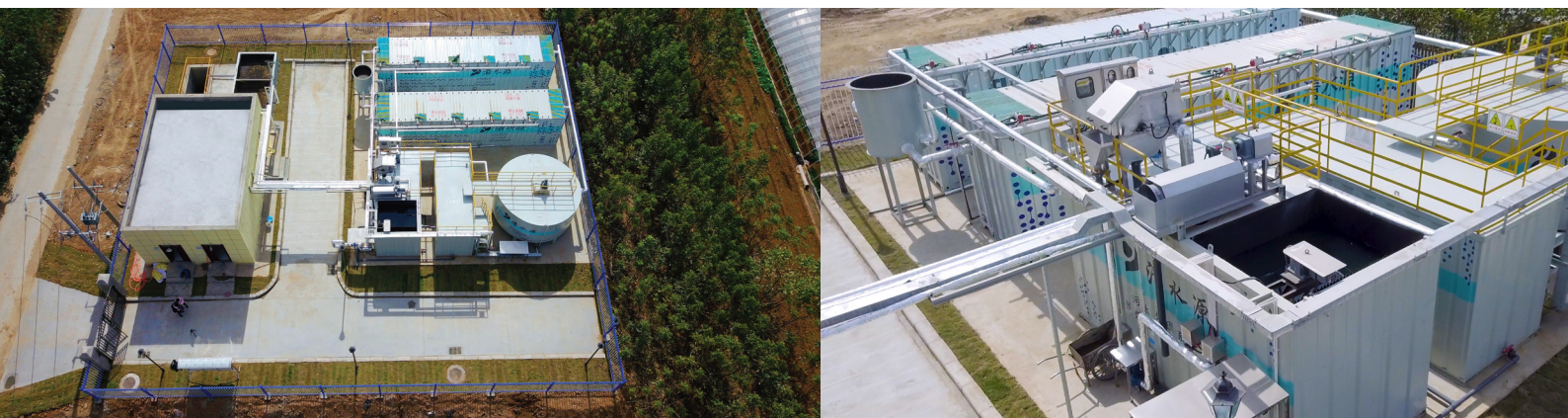
The Challenge

- The remote location and limited accessibility of the site make it difficult for normal transportation to deliver the system and equipment
- The installation and commissioning schedule of the entire plant equipment was extremely tight with only ten days for completion
- The commissioning of the plant was during the region's rainy season, which caused occasional water flows that impacted the influent design parameters and the equipment scope

Solution Criteria

- Meets Class 1A effluent standards
- Capacity: 300 m³/day
- Low energy consumption
- Economical CapEx & OpEx
- Environmentally friendly

CASE STUDY • Luolong Henan | 300 m³/day Aspiral™



The Solution

The plant is constructed using an Aspiral™ MABR-based solution, which was chosen due to its innovative capabilities and unique advantages:

- Lower energy consumption
- Efficient Nitrogen and Phosphorous removal
- Smart remote monitor and control
- Modular, portable, scalable

Design Parameter (mg/L)	pH Range	NH ₄ -N	COD	TN	TP	TSS	BOD
Influent	6~9	30	400	40	5	300	200
Effluent	6~9	< 5	< 50	< 15	<0.5	< 10	< 10



3rd Party Wastewater Test Report

Released by Henan MOL Testing Company
Report#No. MOLT201810033

Item (mg/L)	pH	NH ₄ -N	COD _{cr}	TN	TP
Influent	7.34	22.7	99	24.4	1.86
Effluent	7.41	0.344	16	10.4	0.393
Class 1A Standard	6 ~ 9	< 5/8	< 50	< 15	< 0.5

* Class 1A Standard refers to the National Standard of P.R.China GB18918-2002 Pollutant Discharge Standard of Municipal Wastewater Treatment Plants