NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE | Nanyang Environment and Water Research Institute

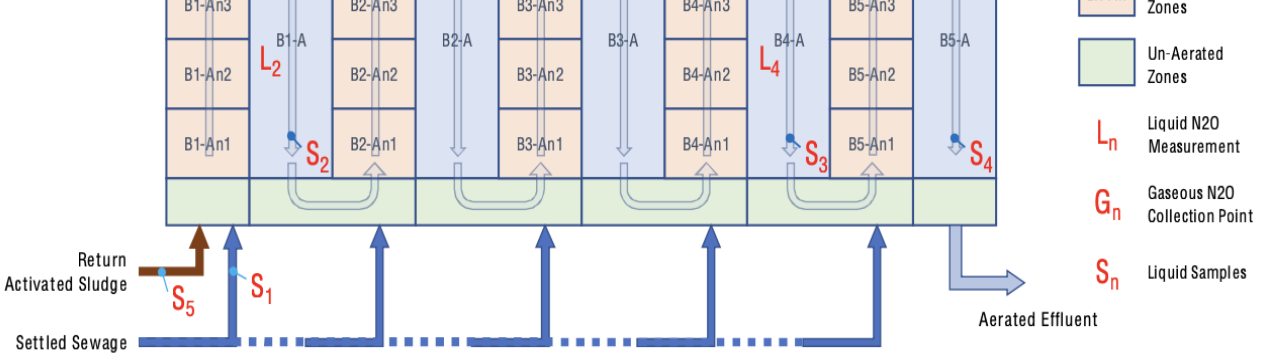
NEWRI INNOVATION

QUANTIFICATION AND MULTI-CORRELATION ANALYSIS OF N_2O FOOTPRINT VIA BIG DATA TECHNOLOGIES

Objectives

- Quantify the overall N_2O footprint of Changi Water Reclamation Plant
- Understand correlations between N_2O emissions and plant operations and process control, etc.
- Establish a robust and reliable monitoring regime for N_2O emissions in Water Reclamation Plant.

Monitor Procedure at Changi Water Reclamation Plant



Big Data Mining and Modeling

- Collect long-term time series data of pollutant concentrations, operating parameters and environmental factors.
- Analyze the relationship between liquid N_2O and gaseous N2O emitted by the Changi Water Reclamation Plant.
- Establish a recurrent neural network to predict N_2O emission rate.

Presented by

Biotechnology and Bioprocesses
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