GROUP7

NEWSLETTER

TUESDAY 9/01/2024

TECHNOLOGY INFORMATION SYSTEM

Source : My Cyber Station

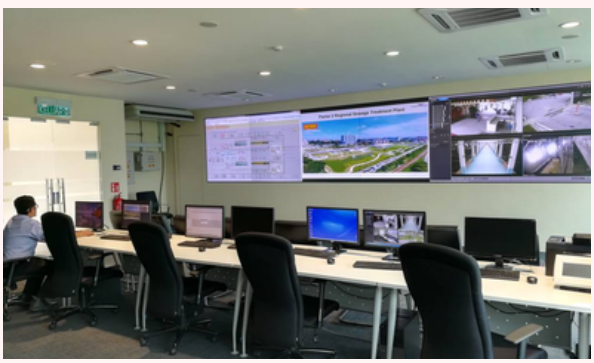
SUMMARY OF THE VISIT

A visit to one of Indah Water research centres, located at Titiwangsa Lake, is conducted by Indah Water as an industrial visit to UTMKL students in SECP1513 (Technology and Information System) course at 3 January 2024. In the trip, students are taught what Indah Water company is, how it works and what it is for. Briefing of Indah Water is done to give clear insights regarding the sewerage system of Malaysia. Students were also given a look at the specimen of untreated sewages (crude sewage, mixed liquor suspended solid) and treated sewages (final effluent, tap water, biosolid) to be able to differentiate. Next, students joined a guided tour to each important facility in research centre, including the septic tanks, software system and hardware system behind the tanks while also being given explanation of the facilities by the staffs-in-charge. The visit ends with a group photo with the staffs to keep as a memorable memory.

ISSUES : SEWAGE

Water in residential homes who are dirty flows to individual septic tank after being used. Each individual septic tank is emptied every 2 years by Indah Water company for treating purposes; prevents airborne diseases (Hepatitis B, Cholera, etc), cleaner environment free of water pollution, and produces usable products (bioeffluent, biosolids and biogas)

Source : mncf.org



Source : EcoKnights

TECHNOLOGIES : SCADA SYSTEM

SCADA system is short for Supervisory Control and Data Aqcuisition. This system is used for controlling, monitoring and analysing the septic tanks and all of the equipment used during the treatment process. This system has a huge hardware located in a warehouse near the building where the control room located. This system house ten of thousands of data on every aspect during the whole treatment process.

Source : Industrial Visit to IWRC

TECHNOLOGIES USED :

IMHOFF TANKS

simple sewage treatment to remove scum, reversing flow of sludge and desludging without any equipment.

OXIDATION PONDS

treate the sewage to high quality effluent.

MECHANICAL SEWAGE TREATMENT PLANT

more efficient sludge scum and grease removal

SCADA SYSTEM

the system bulit to maintain, control and supervise the entire sewage plant

Source : The Star

THE PROCESS

INSPECTION

the wastewater is inspected(grey colour = normal colour)

AERATION

wastewater flows to second tank where bacteria break down organic waste

SEDIMENTATION

wastewater flows to third tank and left for a day. Small solids, sludge and sand are removed from time to time

DISINFECTION

further removal of biodegradable organic and suspended solids. Disinfectant is then applied.

DISCHAGRE

treated wastewatre is discharged depending on its quality of standard BOD(Biochemical Oxygen Demand)

Source : Industrial Visit to IWRC

REFLECTION...

REPORTING :

Students of UTMKL, were taken to a visit to Indah Water Research Centre to learn more about the sewage system in Malaysia

RESPONDING :

The visit was informative because it taught us many things relating to the sewerage system.

RELATING :

Previously, I thought that the toilet sewage would go directly into the ocean. After the visit, I have full understood the treatment process of our waters.

REASONING :

The wastewater need to be treated to prevent countless of disease from infecting the community.

RECONSTRUCTING :

Sewerage is a major system in every country that are often overlooked. Throught the contribution of many, we can maintain and improve our sewerage system to ensure the cleanliness in our daily lives.