WASTEWATER TREATMENT SYSTEM SPECIFICATIONS

Saint Louis University Wastewater Treatment System in the Main Campus and Mary Heights Campus is upgraded to the latest and most innovative technology available in the industry today. The Wastewater Treatment System in the University Campuses serves to remove contaminants from sewage to produce an effluent that is suitable for discharge to the surrounding environment or an intended reuse application, thereby preventing water pollution from raw sewage discharges.

Saint Louis University commissioned and joins partnership with KBWorld Trading Corp. and Hyper Kem and Machineries, Inc. in the attainment of the Wastewater Treatment System upgrade of the two campuses, Main Campus and Mary Heights Campus, respectively.

KBWORLD TRADING CORP.

Office : Unit B3/2F ECCO Bldg 2. No 39 Marcos Highway co. Balsigan, Baguio City
Showroom : Unit C4 Cuesta 4 Bldg., ABCR Brgy. #149 A. Bonifacio St., Baguio City
Mobile Nos. : 0928-588-0223/ 0917-300-6138
Email : kbworldphilippines@gmail.com

SEWAGE TREATMENT PLANT USING ADVANCED WASTEWATER TREATMENT SYSTEM SPECIFICATIONS

Process Description

Sewage Treatment Plant (STP) using **Advanced Wastewater Treatment System** is the latest and most innovative technology available in the industry today. It is an excellent technology to meet the effluent standard set by the regulating agency. Advanced wastewater treatment is done using combination of Ozonation and Biofiltration process for the efficient removal of wastewater contaminants.

Ozone is a colorless gas with an odor that is associated with the smell of air after a spring electrical thunderstorm. Ozone is known to be the fastest, strongest, and most natural disinfectant and provides water, wastewater, and other treatments. It is 3000 times faster and 300 times stronger than chlorine. It also breaks down to oxygen when not utilized, preserve healthy water minerals and it has no consumables. Ozone is an unstable gas so it must be manufactured on site by passing air or oxygen through electrodes with high alternating potential differences.

Biofiltration System is used to reduce the level of suspended solids (turbidity) in incoming feed water. Suspended solids consist of small particles such as silt, clay, grit, organic matter, algae, and other microorganisms and to increase the efficiency of the system and achieved quality effluent.

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SEWAGE TREATMENT PLANT OF SAINT LOUIS UNIVERSITY

(DIEGO SILANG, JOSE BURGOS, CCA AND LIBRARY)

FRONT VIEW OF SEWAGE TREATMENT PLANT

(LOCATED AT LEFT SIDE OF BISHOP CARLITO GYM)

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ENTRANCE OF SEWAGE TREATMENT PLANT

(LOCATED AT LEFT SIDE OF THE FACILITY)

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PHOTO INSIDE THE FACILITY

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PHOTO INSIDE THE FACILITY SHOWING COARSE FILTER AND OZONATION UNITS

KBWORLD TRADING CORP.

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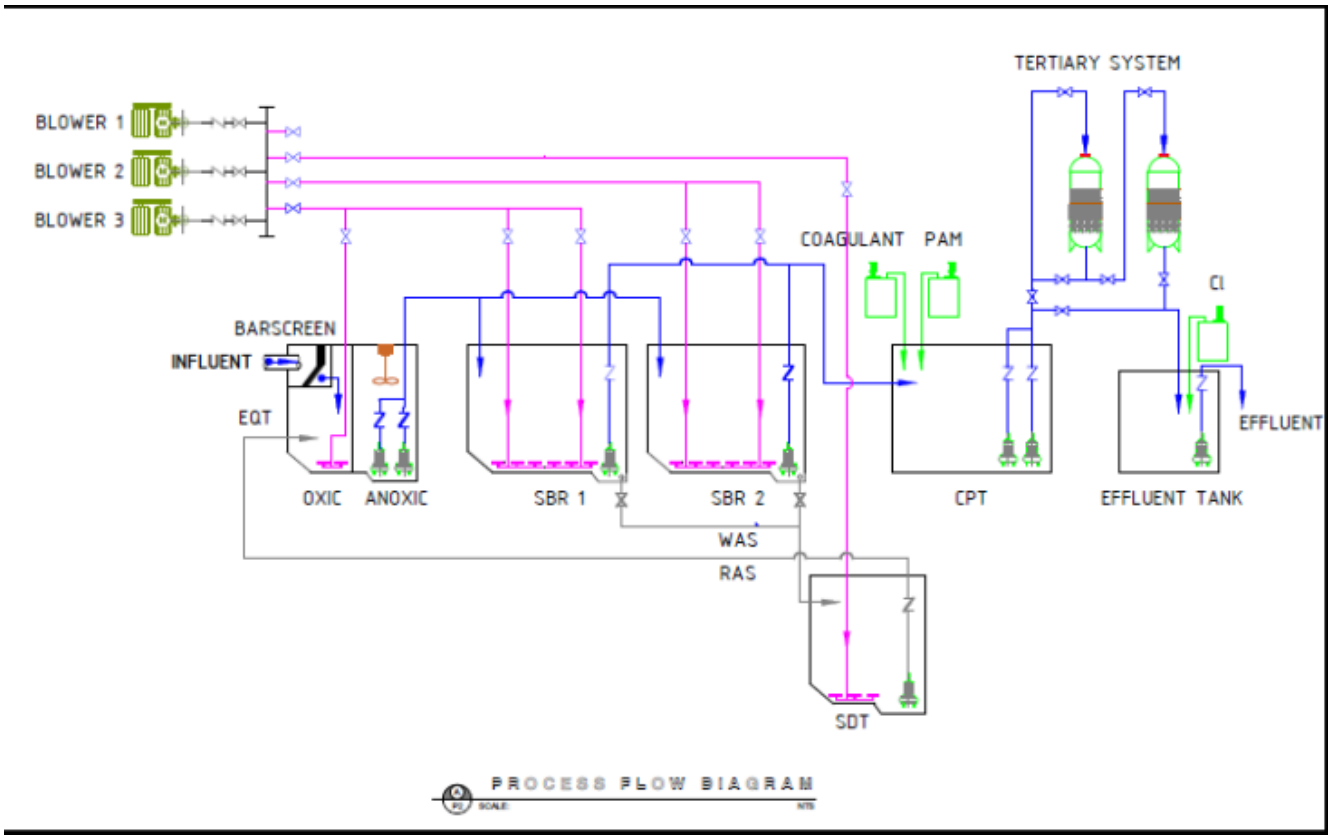
PHOTO INSIDE THE FACILITY SHOWING FINAL FINE FILTERS

HYPER KEM
AND MACHINERIES, INC.
WATER SOLUTIONS: OUR LIFE, OUR PASSION

SLU Mary Heights System Description



The sequencing batch reactor (SBR) is a fill-and draw activated sludge system for wastewater treatment. In this system, wastewater is added to a single "batch" reactor, treated to remove undesirable components, and then discharged. Equalization, aeration, and clarification can all be achieved using a single batch reactor. To optimize the performance of the system, two or more batch reactors are used in a predetermined sequence of operations. SBR systems have been successfully used to treat both municipal and industrial wastewater. They are uniquely suited for wastewater treatment applications characterized by low or intermittent flow conditions.

UNIT PROCESS DESCRIPTION

SCREENING - Raw sewage from the building will be collected through a sewer system that converged at theinlet box of the sewage treatment plant. Sewage is then passing through bar screen where large object such as plastic rugs and metals and the like will be removed. These objects, if not removed, may damage the pump; hang over weirs, and block valves, nozzles, channels, pipeline and appurtenances, thus creating serious operation and maintenance problems.

SEPTAGE TANK - is a sequence of processes by which microorganism breakdown biodegradablematerial in the absence of oxygen.

ANOXIC TANK - Serve as home for Phosphorus Accumulating Organism (PAO) which digest most ofphosphate in the sewage water. Suspended solids and oil and grease is also reduced in this stage.

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SBR TANK - . The sequencing batch reactor (SBR) is a fill and draw type modified activated sludge process, where four basic steps of filling, aeration, settling and decantation take place sequentially in a batch reactor.

CHEMICAL PRECIPITATION CHAMBER (CPC) - This is where we inject chemical such as (PAC) & (PAM)to coagulate and flocculate the remaining suspended solids before going to the filter.

CHLORINE TANK (CT) - Decanted sewage from the reaction tank shall be provided withthe chlorine contactchamber. The chlorine contact chamber shall provide with baffles to avoid short circuiting of flows. Enteric organism associated with various water borne diseases contained in the sewage shall be removed. Liquid sodium hypochlorite solution (NaOCI) shall be diluted to 5% solution and inject to the chlorine contact chamber by using chemical feed pump over 24 hours period. Treated effluent from the chlorine contact chamber shall be pumped out to the street sewer line.

SLUDGE DIGESTER TANK (SDT) - Excess sludge generated from the SBR tank is being stored to the ADTand return to the OXIC tank when required.

EFFLUENT WET WELL - The sewage then flows to the effluent wet well. The wet well is equipped with two
(2) non- clog submersible pump responsible for pumping of treated water to the nearby street sewer line.The wet well shall provide float switch complete with protective sleeves and support.

Pictures:

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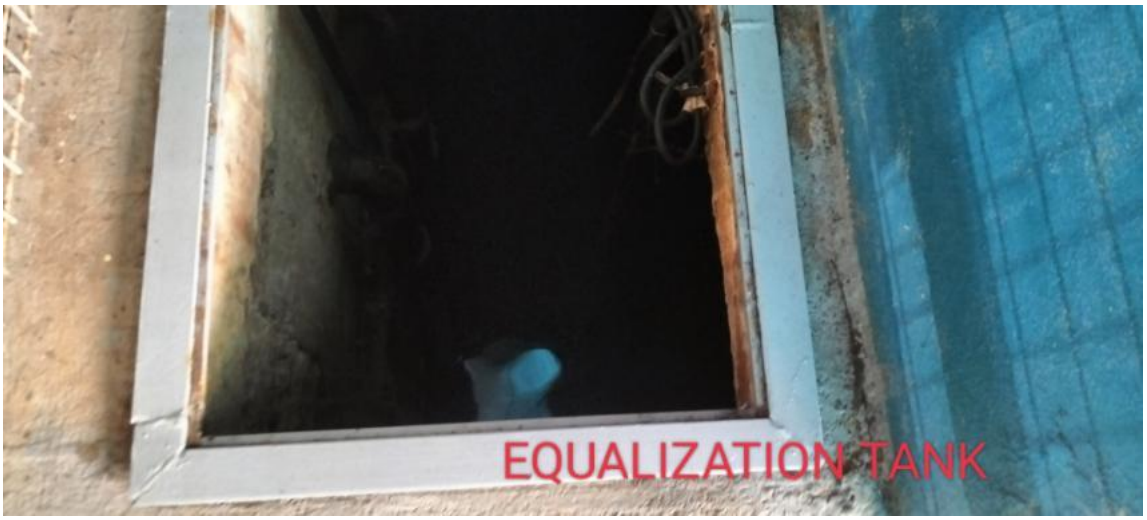

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