Case study: wastewater discharge facility

Business

There’s also an existing conventional plant still in operation to accommodate peak loads, however, this is not their preferable solution. Waste water Is collected In two (2) ways: by tanker and by pipe network. By volume, Tankers correspond to a higher percentage of discharge waste water dumping almost 40, 000 mm dally.

The other volume, approximately, 20, 000 mm comes from the mall domestic pipe network. Given the volume of tankers, the variability of waste water quality and volume has been a factor in their Step’s operation thus, pushing them to look for alternative solution to quantify and control this tanker discharges.

On the other hand, the domestic sewer system is having infiltration of salty water due to its strategic location near the gulf sea. The latter escalates the ADS of the treated water, which has to be controlled. There are two (2) standards they are currently following based on local Ministry of Environment: Class A and Class B. Class “ A” requires a definitive water quality of TTS, BODY at 5 pump.

While Class “ B” effluent are considered to have TTS, BODY of 10 pump. In general, the plant Is having Its own mm screening faculty, compact grit settling and oil skimmer, screening washer and compactor they collectively called HEAD arks.

The main biological treatment consists of an anomic and aerobic treatment, followed by an MBA system. The main problem they are facing right now is the control of the discharges of the tanker to avoid non-compliant waste water to be dumped in the system. Thus, they would like to have a system

that shall measure and monitor the flow, pH, suspended solids and conductivity from the tanker discharge and allow it to give a signal to the main operator room. This Is to shut-off the line [manual or automatic] and give warning to truck drivers to stop the discharge due to waste water quality.

APT Is proposing the Installation of the Logger system, salary to the currently installed system in the plant for the same purpose. The logger system should be conceptually Selenga oases on ten Toweling adjectives: (1) Control discharges of Waste Water which encompasses factors and limits based on quality (2) Measure the flow and the volume of waste water being discharged by each tanker (3)altercation of each tanker I. E. Enrollment and smart cards (4) Measure and monitor online parameters I. E.

H, conductivity, suspended solids and flow rate (5) Control the traffic to the discharge facility 6) Allow automatic debits IPSO system using HOW Cards or any ATM/Credit Cards (7) Keep all quality records and information for traceability purposes (8) Remotely controlled and monitor [No hard wiring from the logger to the main CUP]] (9) Easily PLUG-IN assembly To ensure that this system would benefit the client, APT shall propose a PILOT Facility to be installed in one of their current discharge site.

The current discharge area consists of 1 5 available manual discharge facilities. Visually, the current facility is crowded and no space allowed in case of truck problems. The long cue of yellow trucks shows the facility is already choked and loud not accommodate them all. A traffic light is

installed in front of the gate to control entry of all trucks, but this doesn’t help a lot on the situation.

Each truck is equipped with a hose that is connected to the discharge pipe [male – female connection].

Once fitted, drivers would Just open the manual butterfly valve and let it flow by gravity. Leaks on the connection were observed. The pipe assembly is a gallivanted 4″ steel pipe. The current paperwork would Just span (approximately) mm L x mm W. The space constraint is an issue, and has to be considered for the pilot system.