EFFLUENT COLLECTION SYSTEM

The effluent has to leave the UASB reactor via number of launders distributed over entire area, discharging to main launder provided at periphery of the reactor. The effluent launders should be design in such a way that the weir loading (m^3/m.d) should not exceed the design criteria of Secondary Settling Tank (i.e. 185 m^3/m.d). The effluent should leave the reactor as evenly as possible. The width of the launders may be 20 cm to facilitate maintenance. The depth of the launder can be worked out by using formula $Q=1.375\times b\times h^{3/2}$. Additional depth of 10 to 15 cm shall be provided to facilitate free flow. V notches shall be used on both sides of the launders. When effluent launders are provided with scum baffles, the V notches will be protected from clogging as the baffles retain the floating material. A scum layer may be form at the top of reactor and sludge accumulation can occur in the launder hence, periodical cleaning of launders and removal of scum layer should be carried out.