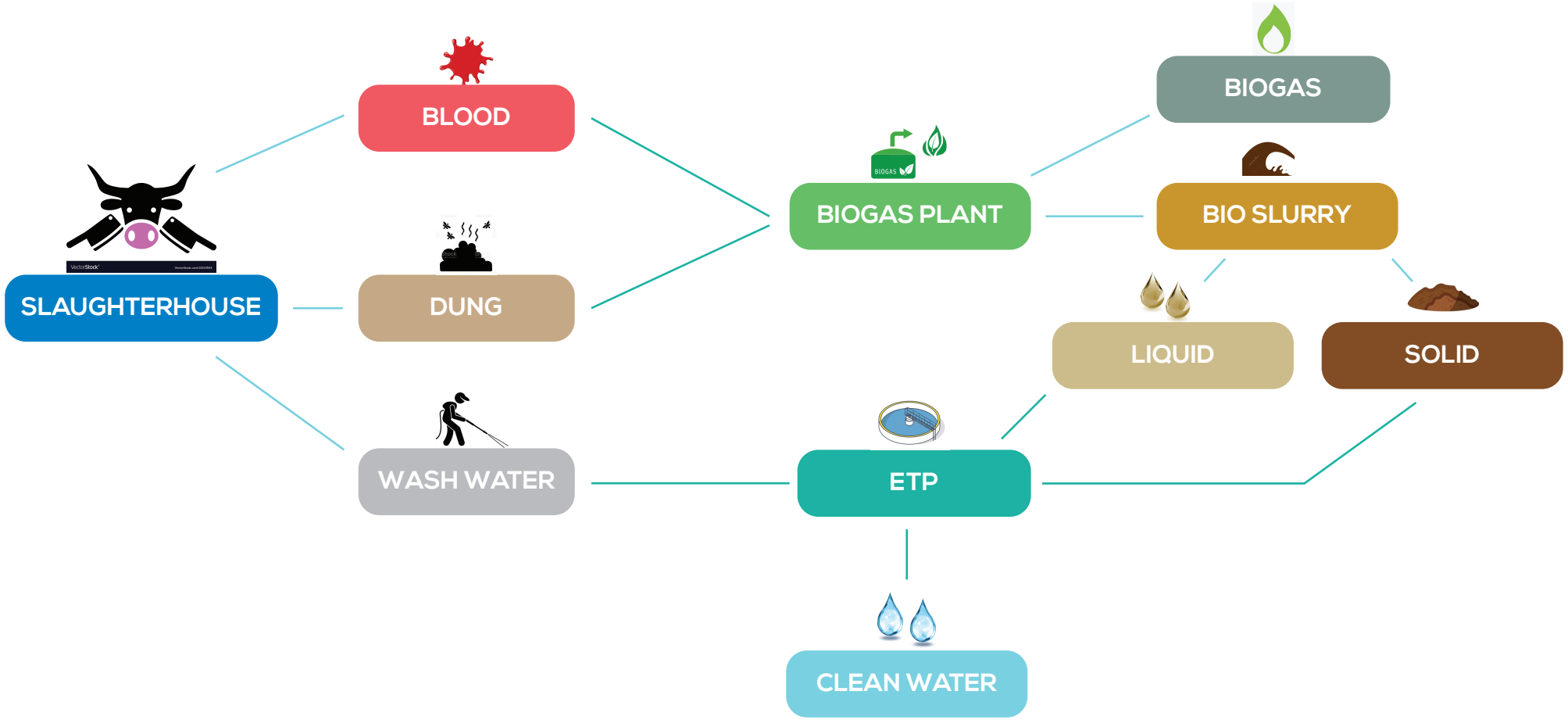
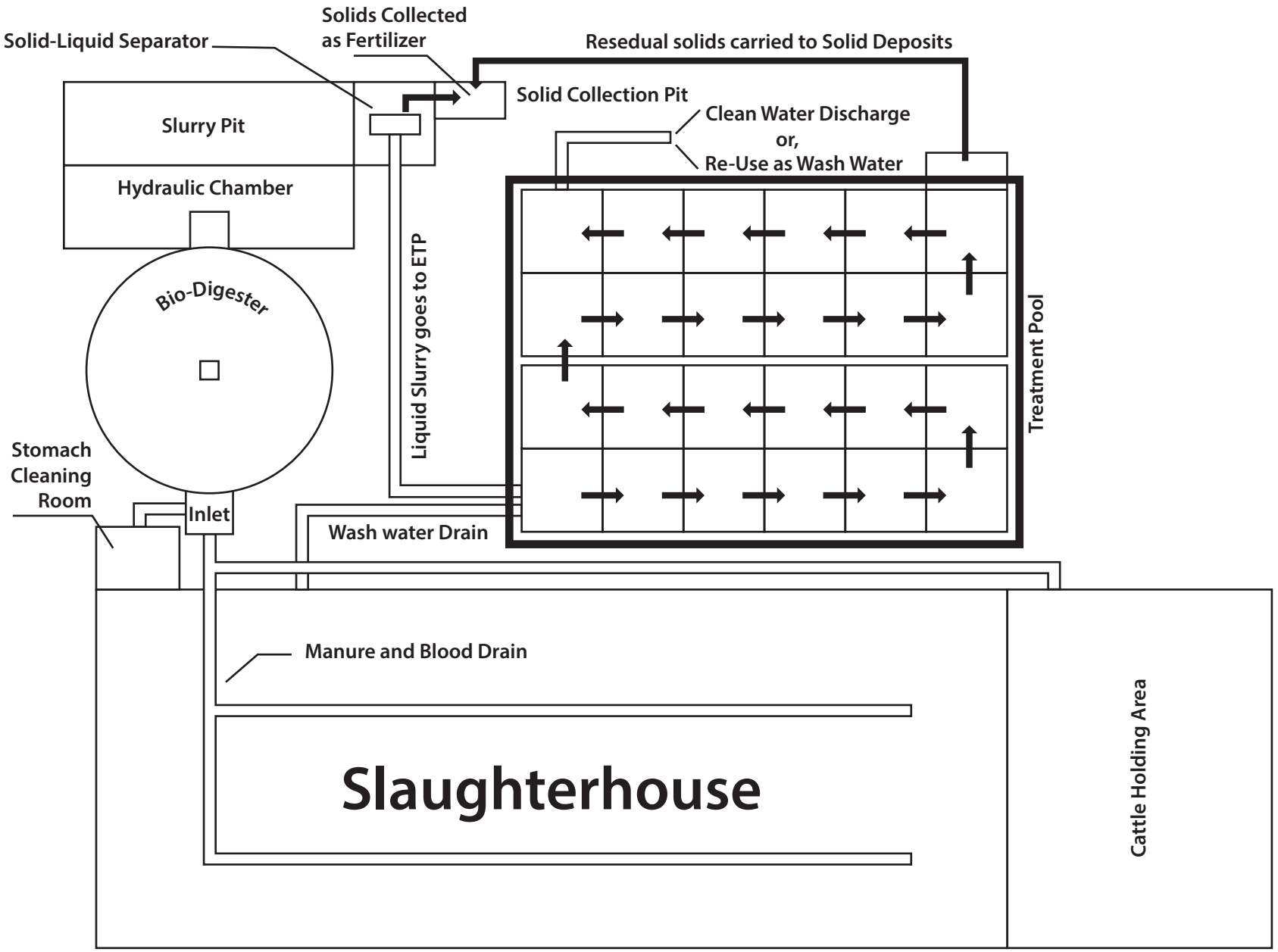
Slaughterhouse Waste Management Flowchart



Slaughterhouse Waste Management Schematic Layout



Biogas Flowchart

Inlet

Drains coming out of the slaughterhouse would be connected to inlet point of the bio-digester. Organic input materials such as Manure, Sludge, Stomach Waste and Blood will be fed into the biogas plant through the inlet as substrate.

Digester

The anaerobic bio-digester being mesophilic, temperature will remain at an approximate 38-40 °C. The substrate will be decomposed by the micro-organisms in the absence of light and oxygen.

Gas Chamber

The final outcome of this digestion process is biogas with methane as the main component. Aggressive hydrogen-sulfide is also contained in the biogas. The biogas generated can be directly burned for cooking.

Hydraulic Chamber

Once the substrate has been digested, it is transported automatically via natural hydraulic balancing to the hydraulic chamber and is retrieved from there for further utilization.

Slurry Pit

Slurry put works as a reservior for the disgestate, which can be utilized as high-quality fertilizer; or can be further processed separating water and solidsm where solids can be used as fertilizer.

ETP Flowchart

Slurry Pool

In the first stage slurry after water separator is deposited in the collection pool.

FABR Pool

In the FABR pool primary sedimentation takes place.

4WR Pool

Oxygenation is done from the bottom of the pool and horizontal flow of the supernatant water from the FABR pool passes through series of filters at this stage. There are multiple sub-stages for this process where COD, BOD and SS comes down.

DT Pool

Lime dosing as decolorization agent and oxygenation is done at this stage to remove N, P and reduce residual COD and SS. At this stage color of the slurry gradually changes and turns to light amber.

CD Pool

The water from the DT pool is transferred to CD pool and allowed to rest. Further sedimentation takes place when color of the water improves further.

HSFW Pool

: At this stage further N, P is removed. The process is mostly completed and ready for discharge in the environment.