

Turtle Bay Resort – Northern Cyprus Turkish Republic



Plant is in Northern Cyprus at a private bay.

Plant Description:

- The first submerged biological membrane plant in Cyprus.
- Plant is completely covered and sensitive to the environment and landscape.
- Effluent quality achieved meets the most stringent reuse requirements.
- The MBR contract agreement provided for the process design, specification and supply of flat sheet membrane units
- Additional services provided were M&E design assistance, inspections during installation, assistance to start-up, commissioning and membrane maintenance advice plus operator and management training.

Process Description:

Tanks are constructed partially underground, concrete and fully covered.
Balance tank feeds process via fine 3mm bi-directional screen to mixing tank.
Single stream treatment process, has one aeration and two membrane tanks.
Treated effluent flows by gravity to the Clean Water Tank for re-use.
Plant designed to operate automatically with minimal supervision

MBR Atıksu Arıtma Sistemleri Ltd.

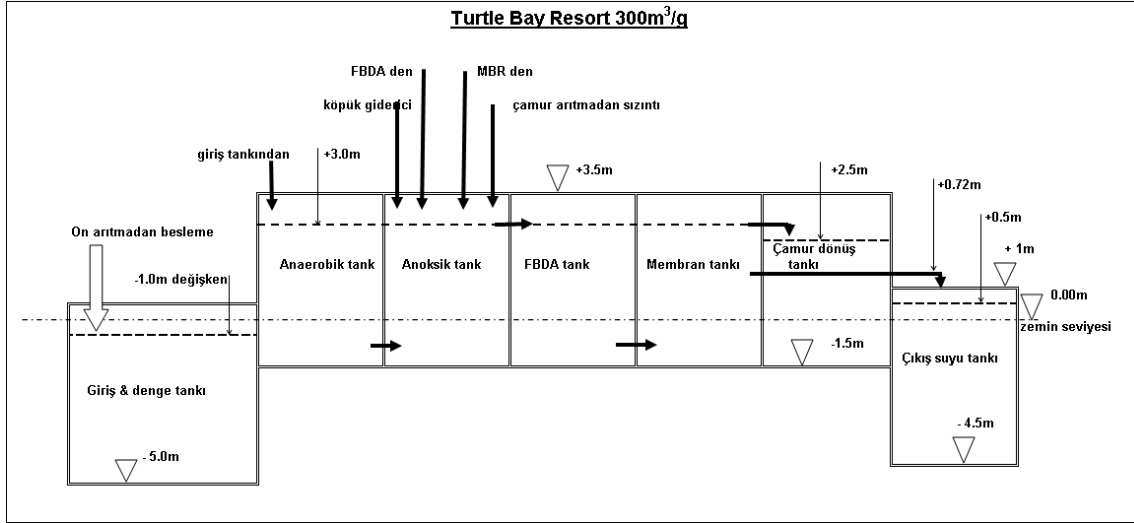
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Design Requirements

Influent average loadings:

BOD	375 mg/l
COD	800 mg/l
TKN	45mg/l
NH ₃ –N	40mg/l
SS	300mg/l
TDS	5,000mg/l

Effluent standards

BOD	5 mg/l
Total N	10 mg/l
Total P	1 mg/l
NH ₃ –N	2 mg/l
SS	5 mg/l

Plant Data

Maximum daily flow	500 m ³ /d
Average daily flow	300 m ³ /d
Peak flow	14 m ³ /hr
MLSS aeration tank	15,000 mg/l
Membrane units	3 x ES200
Membrane area	480 m ²
Sludge age	29 days

Current performance

BOD	<20 mg/l
COD	<60 mg/l
Ammonia	<0.1 mg/l
TKN	<7 mg/l

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