

## HyNet Hydrogen Production Plant 1 – Technical Note

### EPR Response 14a - Specification of WWTP-Capacity of Biological Treatment Plant (MBR)

#### Summary

Advise the hydraulic capacity of the proposed biological treatment plant (MBR).

#### Response

Membrane Bioreactor (MBR) is the proposed biological treatment plant.

The MBR receives water to be treated from two sources:

1. Wastewater Blending Tank (10-BAG-T-001)
2. Corrugated Plate Interceptor - CPI (10-BAG-V-001)

Phosphoric acid, nitrogen supplement and micro-nutrient are mixed into water to be treated upstream of the MBR.

Feeds from Wastewater Blending Tank and CPI are pumped to the MBR. The combined feed is routed to MBR via flow control. A flow transmitter regulates the flow control valve on Wastewater Blending Tank Pumps (Wastewater Pumps 10-BAG-P-001A/B & 20- BAG-P-001A/B) outlet line.

Wastewater Blending Tank is the major source of water for the MBR. Design water flow rate from this tank is 130 m<sup>3</sup>/hr. The design flow rate from CPI to MBR is about 6 m<sup>3</sup>/hr. This brings the input design capacity of MBR to 136 m<sup>3</sup>/hr. The MBR will produce treated, clarified water and sludge.

References:

1. Process Description - U300 Water Systems (5194812-300-49EL-4-0003, Rev. 03)
2. Water Balance (5194812-300-49EL-4-0002, Rev. 03)
3. Utility Flow Diagram – Closed Drains Drum and Wastewater Blending Tank (5194812-000-49DG02-4-0006-01, Rev. 06)
4. Utility Flow Diagram – Membrane Bioreactor-MBR (5194812-000-49DG02-4-0006-02, Rev. 01)
5. Equipment Datasheet - Water Treatment Packages (5194812-000-45ED-4-0001, Rev. 03)