Notes

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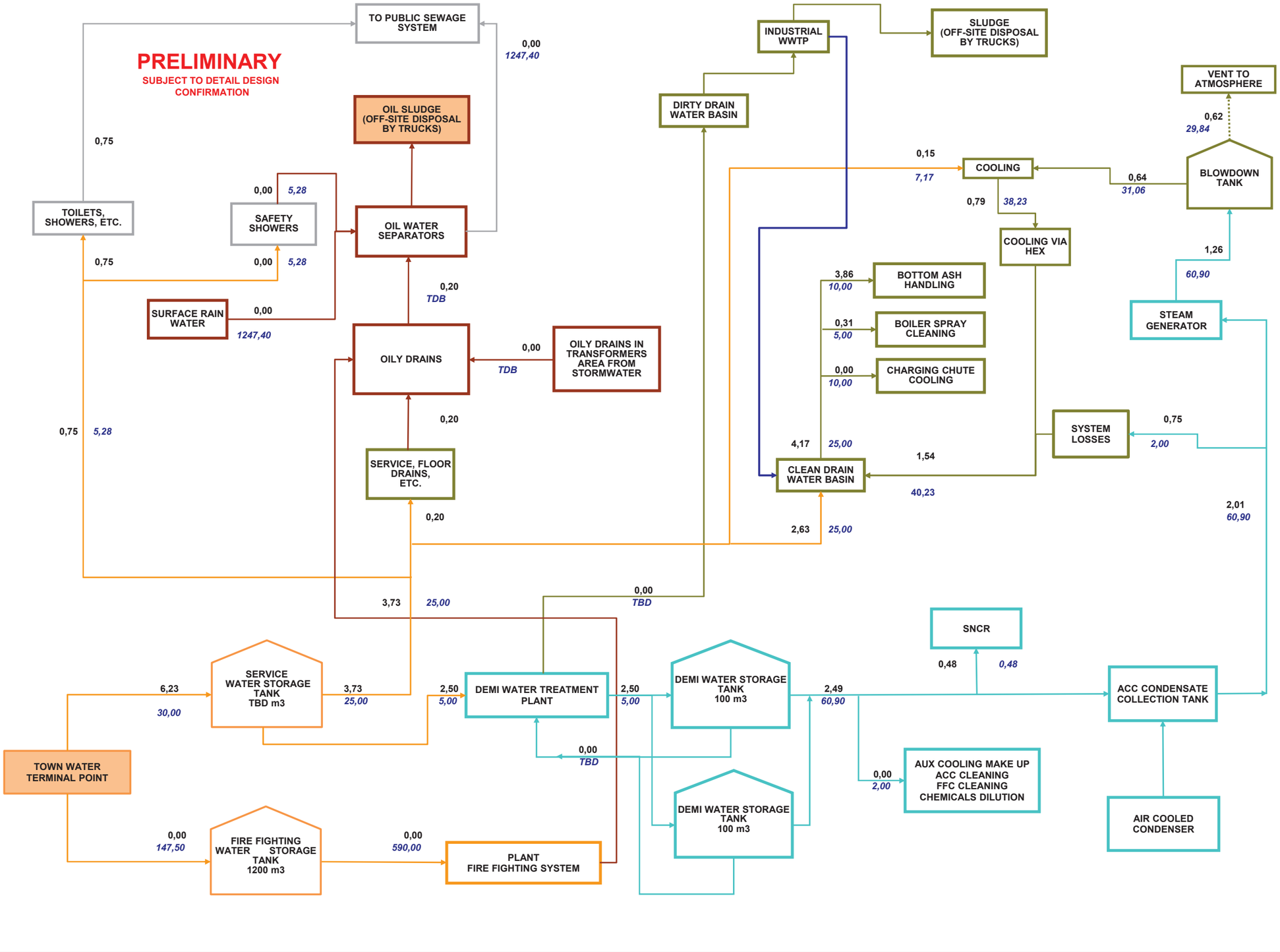
PRELIMINARY

SUBJECT TO DETAIL DESIGN CONFIRMATION



NOTES

1. GENERAL
1.1 All units in t/h.
1.2 Ambient Design Conditions: 15 C, 60% RH, 1013 mbara, Plant at: 100% Load
1.3 Normal flow consumptions are prorated to 24h if not continuous.
1.4 The balance is calculated for 1 x boiler & 1 x Steam Turbine configuration
1.5 **Black numbers** show normal flows. ***Blue Italic numbers*** indicate upset / startup conditions which are not coincident. All figures are preliminary.

2. TOWN / FIREFIGHTING WATER
2.1 Town water is supplied at the relevant Terminal Point
2.2 A firefighting dedicated water tank will be provided
2.3 Fire protection water is consumed in case of fire.
2.4 Firefighting water is supplied through town water Terminal Point
2.5 Fire water demand figure is preliminary
2.6 Used fire fighting water flows shall be collected to the oily drains basin.

3. BOILER START UP & DEMINERALIZED WATER CONSUMPTION
3.1. Boiler starting requires about 6,3 h.
3.2 Total demineralized water consumption during boiler start up around 155 t

4. DEMINERALIZED WATER
4.1 Demi Water Plant overall efficiency is considered equal to 75%.
4.2 Demi Water Treatment plant is featured as two (2x100%) trains with CB & AB & MB with a nominal production capacity of 2,5 t/h
4.3 Two (2) demi water storage tanks with capacity of 100 m3 each, are included.

5. SANITARY / POTABLE / DOMESTIC WATER
5.1 Sanitary water consumption has been considered for 120 people with a normal allowance of 150l / person / day.
5.2 Potable water for human consumption will be supplied by bottles.

6. MISCELLANEOUS CONSUMPTIONS
6.1 Demineralised water consumption to: Chemicals dilution, Aux Cooling Make up, Air Cooled Condneser washing, Fin Fan Cooler washing, etc.
6.2 Boiler Blowdowns are cooled to 85 C with quenching water and further with Aux Cooling Water System of the plant

7. EFFLUENTS
7.1 It is assumed that 100% of service water goes to oily drain network.
7.2 Effluents downstream neutralization basin will be send to Flue Gas Desulfurization Treatment (FGT) and Boilers Bottom Ash Handling process
7.3 During boiler start up a higher blowdown flow than steady state operation is expected with maximum instanteneous rate of 60,9 t/h. A portion of this flow is lossed in the atmoshpere as high pressure / high temperature flashing water and the rest is cooled down initially to 85 and further to 35 C and routed to the clean water basin and from there is consumed to various consumers.

LEGEND

- RAW & FIRE FIGHTING WATER
- DEMI & CONDENSATE WATER
- INDUSTRIAL EFFLUENTS
- EFFLUENTS WITH OIL & SLUDGE
- SEWAGES
- NEUTRALIZED WASTE WATER

Design Basis Conditions: Boiler at 100% load with ambient temperatures of 15C

Rev	Description	By	CB	Date

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Client -

Project Corby Energy from Waste Facility

Title Water Balance Diagram

Status	Drawn By	PM/Checked By
FINAL	JM	TH

Project Number	Scale @ A3	Date Created
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