

STP Overview

The 30 MLD Sewage Treatment Plant (STP) at Pankha and its associated infrastructure were inspected to evaluate operational performance and identify maintenance requirements. Below are the key findings from the inspection.

Observations

Sewage Treatment Plant (STP)

- **Pipeline Work:** 91m balance pipe laying (900 dia RCC NP-3) near BMC hospital completed; 3 out of 4 manholes completed, 1 under construction.
- **Pumps:** All 5 pumps are operational.
- **SBR Unit:** SBR No. 4 running in auto mode.
- **Dissolved Oxygen (DO) Sensor:** 1 sensor is non-operational.
- **Thickener:** Operational.
- **Sludge Feed Pumps:** 1 out of 3 non-operational.
- **Centrifuge:** 1 out of 3 non-operational (shaft jammed).
- **Blowers:** 1 out of 6 non-operational (gearbox assembly damaged).
- **Canopies:** Material available; installation in progress.
- **Organic Return Pump:** 1 pump has coupling issues.
- **Quality Analyzer:** Calibration required.
- **Poly Dosing Units:** 1 out of 3 non-operational.
- **Organic Pumps:** 1 out of 2 non-operational.
- **Screw Conveyor:** 1 unit non-operational.
- **Site Development & Drainage System:** Pending.

Chlorination Contact Tank (CCT)

- **FRC Analyzer:** Functioning.
- **Gas Leak Detector:** Not operational.
- **Toner:** 1 toner in service; 2 filled and 3 empty.

ICI Nala (Intermediate Pumping Station - IPS)

- **Septic Tank Work:** In progress.
- **Pumps:** 2 out of 5 non-operational (motor binding and guide pipe issues).
- **Diesel Generator (DG) Set:** Service pending.

- **Flow Meter Canopy:** Installation pending.
- **Isolation Valve:** Installation pending for an extended period.

Sunder Nagar Nala (IPS)

- **Pumps:** All 5 pumps operational.
- **Pressure Gauges:** Not working.
- **Gate Lighting:** Installation pending.
- **Valve Hood:** Installation pending.

Diesel Stock

- **STP:** 1250 liters.
- **ICI Nala IPS:** 400 liters.
- **Sunder Nagar IPS:** 350 liters.

Additional Observations & Issues

- **ICI Nala:** 4 exhaust fans need installation.
- **Housekeeping & Gardening:** Poorly maintained.
- **PLC Integration:** No PLC connection established for both IPS; pumping status not reflected on STP SCADA.
- **Water Supply Issues:** Water shortage at Sunder Nagar IPS.

Conclusion & Recommendations

The Pankha STP and associated pumping stations are operational but require urgent interventions. The following actions are recommended:

1. Maintenance Priorities

- Repair the shaft of the non-operational centrifuge.
- Replace the damaged blower assembly.
- Resolve coupling issue on the organic return pump.

2. Calibration & Monitoring

- Calibrate quality analyzers.
- Restore functionality of FRC analyzers and gas leak detectors.

3. Pending Installations

- Install canopies over motors and flow meters.

- Install exhaust fans at ICI Nala and valve hoods at relevant sites.

4. Housekeeping & Sludge Management

- Improve housekeeping practices.
- Ensure regular sludge removal from the site.

5. PLC Integration

- Establish PLC connections to display IPS pumping status on the SCADA system.