

Joint Inspection Report of 30 MLD STP, Pankha (23/10/2024)

STP Overview

The 30 MLD Sewage Treatment Plant (STP) at Pankha and its associated infrastructure were inspected to evaluate their operational performance and identify maintenance needs. Key findings from the inspection are as follows:

Observations

Sewerage Treatment Plant (STP)

- **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:** Non-operational; under gear repair.
- **Sludge Feed Pumps:** All 3 pumps are functional.
- **Centrifuge:** 1 out of 3 centrifuges non-operational (shaft jammed).
- **Blowers:** 1 out of 6 blowers non-operational (gearbox assembly damaged).
- **Canopies:** Material available, but installation on motors is pending.
- **Organic Return Pump:** 1 pump has coupling issues.
- **Quality Analyzer:** Calibration required.
- **Poly Dosing Units:** 1 out of 3 units non-operational.
- **Organic Pumps:** 1 out of 2 pumps non-operational.
- **Screw Conveyor:** 1 unit non-operational.
- **Sludge Removal:** No sludge removal observed during inspection.

Chlorination Contact Tank (CCT)

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

ICI Nala (Intermediate Pumping Station - IPS)

- **Pumps:** 2 out of 5 pumps 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:** 4 out of 5 pumps are operational.
- **Pressure Gauges:** Not working.
- **Gate Lighting:** Installation pending.
- **Valve Hood:** Pending installation.

Diesel Stock

- **STP:** 830 liters
- **ICI Nala IPS:** 398 liters
- **Sunder Nagar IPS:** 375 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.
- **Pending Work Compliance:** Road restoration and related works by KRMPL are incomplete and were not inspected.
- **Road Sinking:** Ongoing work near Thermal Nala.
- **Water Supply Issues:** Water shortage at Sunder Nagar IPS.
- **Thermal Nala Overflow:** Overflow observed due to choking in the manual screen and channel.

- **Sewer Line Damage:** The top cover of the 1200 mm RCC sewer line, constructed under the culvert near Thermal Drain A, appears to be damaged and requires urgent repair/attention.

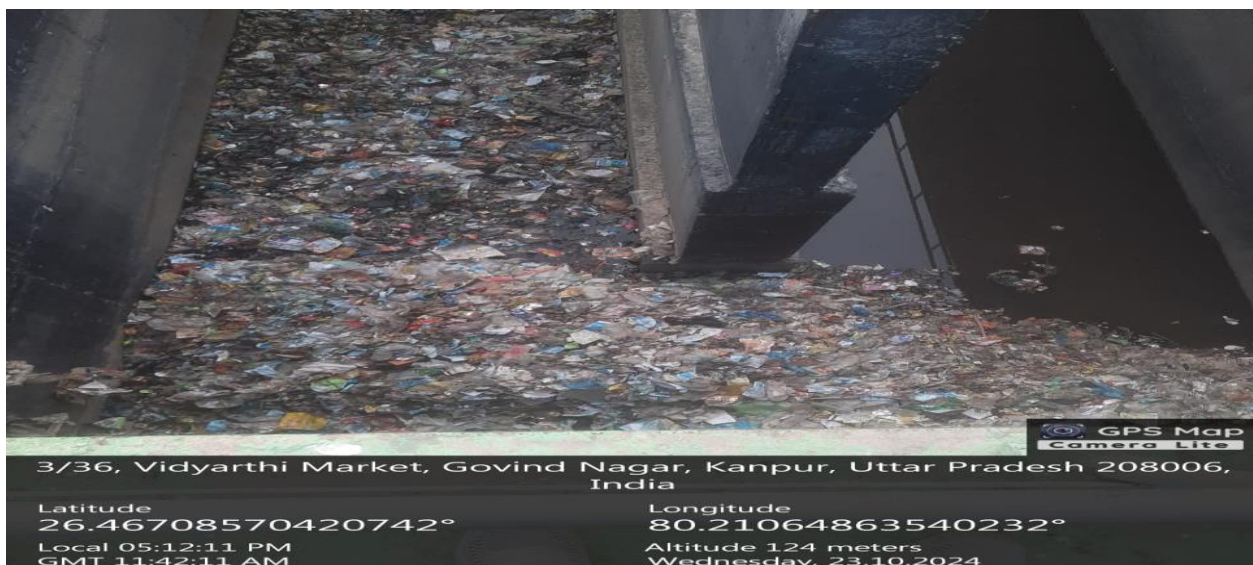
Conclusion & Recommendations

The Pankha STP and associated pumping stations are partially operational, but several issues require urgent intervention. The following actions are recommended:

- 1. Maintenance Priorities:**
 - Complete gear repair of the thickener.
 - Repair shaft of 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. Road Restoration:**
 - Expedite road restoration near Thermal Nala and pending works by KRMPL.
- 5. Housekeeping & Sludge Management:**
 - Improve housekeeping practices.
 - Ensure regular sludge removal from the site.
- 6. PLC Integration:**
 - Establish PLC connections to display IPS pumping status on the SCADA system.



Sludge Removal Pending since long



Thermal nala channel and screen are choked



Housekeeping and Gardening not Maintained



Condition of trolley and shovel in Sudarnagar IPS



Photographs of STP & IPS