

Joint Inspection Note of 130 MLD STP Jajmau & Associated Facilities

A joint inspection has been done for verification of the progress and status of balance work of 130 MLD STP Jajmau and associated facilities by UPJN & PE officials along with Concessionaire representative on dated 05-04-2024 consecutively.

Following officials were present during the visit:

UPJN:

1. Mr. D. K. Gautam, AE, E&M, UPJN(Rural) Kanpur
2. Mrs. Pooja, PE, Civil, UPJN(Rural) Kanpur
3. Mr. Vipin Kumar Pal, APE, Civil, UPJN(Rural) Kanpur
4. Mr. Ankit Singh, JE, E&M, UPJN(Rural) Kanpur
5. Mr. Ajay Kanaujiya, Lab Chemist, UPJN(Rural) Kanpur.

STC Kanpur

1. Mr. Anil Kumar Seth, Team Leader, STC Kanpur
2. Mr. Indra Deo Pandey, Support Engineer (Civil), STC Kanpur.

KRMPL

1. Mr. Soumitra, Civil Engineer , KRMPL, Kanpur.
2. Mr. Alokesh Das, Electrical Engineer, KRMPL Kanpur
3. Mr. Jadab Karmakar, Mechanical Engineer, Kanpur
4. Mr. Deepak Gautam, O&M Engineer, KRMPL, Kanpur
5. Mr. Saurabh Sharma, Process Engineer, KRMPL, Kanpur.

During the site visit following issues were discussed:

**** Deficiency in Work(As per Joint Inspection Report)-***

(Civil Works)-

Common Points- Hand railing painting, installation of anti skid tiles on platforms/walkways of all unit, approach road for units, repair of painted surface in building and land scaping & plantation in the campus is pending.

Inlet Unit- Replacement of structural shade is pending. Concrete platform with 3 side curtain for storage of screening material is pending. Screening material dump on site without laying LDPE sheet and disposal on regular basis are pending. Inlet Screen level sensor kit, display and transmitter installation work is pending. Conveyer belt properly fixing work are pending.

Grit Unit- Replacement of structural shade is pending. Hand trolley arrangement needed. Cleaning and dressing of grit unit area and concrete platform with 3 side curtain for storage of grit material is pending. Organic pump no. 3 is under maintenance. All classifier unit torque switch not working condition. Grit mechanism unit MCB switch and alarm not fixing properly.

Panel Room- Building renovation is Incomplete. Cable trench cover slab damage, Panel room window, drainage pipe & door glass need to be changed. Painting & approach road work is pending. Drainage pipe replacement work are pending.

Distribution chamber- epoxy coating on bottom portion is pending, inside renovation work is pending. Inside renovation work are pending

PST-

- 1- Sludge chamber to thickener common sludge line needs to be rehabilitated.
- 2- PST-1 Primary classifier central drive had been broken KRMPL used old central drive which already used before renovation.
- 3- PST bridge painting, PST load Cell & display not working.

Aeration tank-

- 1- Erection of hand railing at some points and minor repair are balance.

RSPH-

- 1- RSPH building door & window replacement/cleaning is pending.
- 2- RSPH painting work, flooring work are pending.
- 3- Wring, cleaning & cable trench cleaning works are pending.

TEPH Panel Room-

- 1- Door, window, painting, wiring and gate replacement works are pending.

New TEPH-

- 1- Door, window, painting, floor work, finishing work wiring & gate installation are pending.
- 2- Thrust block and concrete encasing in effluent pipe line are pending.
- 3- Flooring, finishing and site development work are pending.

Gas engine room- Window glass replacement, door, painting are balance.

Ventilation Room-

Water tank painting, Brick Work, plastering, finishing & roof treatment works are pending.

HT/LT Panel Room-

- 1- Door, window, installation, flooring, wiring, roof treatment, painting & approach road works are pending.

Flaring unit- Gas pipe line laying is pending.

Chimney- Painting work pending.

Scrubber unit- Shade work & pipe line pending.

Gas holder 1- Base painting is pending.

Gas Holder 2- Foundation & base painting works are pending.

Secondary Digester- 40% sludge cleaning work and rehabilitation are pending.

Digester 1- 35% cleaning, painting, MS plate, sludge valve, inspection chamber glass & hand railing painting works are pending.

Digester 2- Wall dome painting, heat exchanger foundation shade, Recirculation pump installation & outlet gas pipeline works are pending. Heat exchanger foundation costing work completed.

DSPH- window glass replacement & wiring works are pending.

TSPH- 1- window glass replacement & wiring works are pending. Door, window, installation, flooring, staircase finishing wiring and painting approach works are pending.

2- Pump no.2 is under maintenance from last four months. Sludge mixer has been not works properly/

BFP Building-

1- Chute painting, brick Work, finishing, drainage system, sludge storage platform & approach road works are pending.

2- One no. Bore well and appurtenant works are pending.

Electro-Mechanical Works-

S.No.	Process Unit Name	Qty.			Remark
		Proposed (as per Approved BEP)	Installed	Balance	
130 MLD STP Jajmau (Mechanical)					
1	Mechanical Fine Screen	3	3	0	03 nos installed at site but not functional Properly till Date. Need to be Replaced
2	Manual Fine Screen	1	1	0	Installed
3	Grit Mechanism	3	3	0	03 nos installed at site but not functional Properly till Date. Need to be properly Aligned
4	Primary Clarifier Mechanism	3	3	0	03 nos are installed at site but not working Properly till Date. Need to be refabricate scum box to the same as per site condition, valves of all PST need to be replaced.
5	Surface Aerator	18	18	0	18 nos are Installed but Cable dressing work has not been done properly. 1 aerator U/M since 1 more than 1 year.
6	FST Mechanism	3	3	0	03 nos are installed at site but Sludge valves of all FST need to be replaced.

7	Chlorinator & Ancillary	3 Nos.	3	0	Automation Not done till date.
8	Chlorine Tonners	29	16	13	Supply of Toner hoods are pending.
9	Treated Effluent Pumps	11	6	5	05 Nos. pumps set are installed in Old TEPH. It has to be installed at new Pump House. The extension terminal boards are pending.
10	Return Sludge Pump	4	4	0	01 pump set is still pending for commissioning.
11	Gravity Thickener Mechanism	2	2		Not properly operational.
12	Digester Feed Pump	4	4		01 nos. is under maintenance from last 3 months.
13	Sludge digester mixer – Primary	2	1	1	Landia Mixture installed at Digestor N0.01 only but has not been Commissioned Yet.
14	Digester Sludge Recirculation Pump	2	0	2	Installation pending.
15	Digester Sludge Heating System and Ancillary	1	0	1	Not supplied at site Till Date.
16	Digested Sludge/Centrifuge Feed Pump	4	4	0	1 feed pump leakage.
17	Centrifuge Machine/ Belt Filter Press	4	4	0	04 nos. BFP installed at site but not working Properly Till Date. Need to Commissioned all BFPs on Full load.
18	Supernatant Pumps	4	4	0	04 Nos. of VNC type Pump sets are installed at Centrate Filtrate Pump House but Not Commissioned till Date. Not functioning properly and is getting choked.
19	Gas Scrubber with ancillary equipment	1	0	1	Partially installed at site. Gas Line, Dehumidifier etc equipments not supplied and not installed at site till date.
20	Gas Engine with ancillary equipment	2	0	2	02 Nos. of Gas Engines Available at Site and no auxiliary equipment supplied Till date.
21	Gas Flaring System	1	1	0	Not Commissioned till Date, Gas Pipeline work is pending.
22	Agitator for Blending Tank	1	1	0	Installed
23	Agitator for Digester Feed Sump	1	1	0	Installed
24	Agitator for Centrifuge Feed Sump	1	1	0	
25	Poly dosing Tank Agitator	4	4	0	04 Nos. of Poly dosing tank with Agitator installed at site. 1 nos agitator is under maintenance.
26	Poly Dosing Pump	4	4	0	Minor leakage found from poly dosing pump fitting.
27	Valves	1			Partially Done.

28	Gates (Open Channel)	15			Partially Done.
30	Gas Holder Dome	2	0	2	Membrane type Dome Supplied at site but not installed till date.
31	Bore well Pump	2	1	1	
32	Service Water Pump	4	4	0	04 nos. of service water HNC type pump sets installed at site but proper operation is not possible due to water lagging problem at site.
33	Overhead Tanks	2	2	0	
34	Dewatering Pump for Dry well	8	0	8	
35	Monorail for lifting arrangement	8	0	8	Not overhauled Till Date.
36	DI pipes & fittings	1			Partially Done.
37	MS pipes & fittings	1			Partially Done.
38	SS pipes & fittings	1			Partially Done.
130 MLD STP Jajmau (Electrical)					
1	Panel for TEPH (MCC & PCC Panel)	1+1	1+0	1	MCC Panel installed at site, PCC panel and APFC panel not Supplied Till Date.
2	Star Delta Starter For RSPH	1	1	0	
3	11 KV OCB type H.T. Panel	3	3	0	
4	1600 KVA Transformer	1	1	0	Energihed.
5	1600 KVA Transformer	1	0	1	Need to Overhaul
6	800 KVA Transformer	1	0	1	Need to Overhaul
7	440 V L.T. ACB with Panel (PMCC Panel)	3	0	3	Not Supplied Till Date.
8	MCC Panel for PTU, FST & Thickener	1	1	0	Installed
9	MCC Panel for TSPH	1	1	0	Installed
10	MCC Panel for DSPH, Digester, Centrate & Belt Filter Press	1	1	0	Installed
11	LPBS	91	0	91	Not Supplied.
12	Lighting Fixture	120	80	40	

Major Critical Issues:-

1- The supplied mechanical screens are not working properly from day one. The jaws of the screen gets damage on very frequent basis, they are misaligned, unequally spaced and easily breakable. These all reasons contribute to the non efficient working of mechanical screens. These mechanical screens(3 nos) has been designed for full discharge & a manual bar screen for standby arrangement is provisioned but usually concessionaire takes discharge in both mechanical screen as well as in manual screen. Which reflects the non efficiency of mechanical screens.

2- Screw classifier in grit unit is not working properly as the solid and liquid segregation is not proper. The quantity of grit removed is only 15 to 20% as compared to the designed quantity. Therefore due to the non removal of grit in this unit, it flows to forward units.

3- The installed flow meter has not been calibrated, frequently it stops working.

4- The newly installed Scum removal arrangement is acting as a dummy system from day One. A thick layer of scum usually floats on the surface of all 3 PSTs, no scum can be seen floating and carrying by scum carrier blade in to the scum box. Which is further withdrawn by concessionaire by manual labour that indicates non working of scum removal system.

5- The work in sludge handling unit is very slow.

i- The installed supernatant pumps is problematic, concessionaire has not attended the problem in operation of supernatant pumps which hinders the whole sludge withdrawal process as the thickeners has not made operational on proper basis after its renovation.

ii- Cleaning of digester no. 1 has not been completed. The landia system in this digester is pending, 50% work is laying of outlet sludge line, installation of recirculation pump and associated works are pending.

iii- The installed 2 BFPs are not running efficiently. Log book of 2 BFPs which are running on intermittent basis since installation clearly indicates the operational problem. It stayed non operational from more than Six months period after the installation before 1 years. During operational the avg. total running of BFP is 6 to 7 Hrs. the extracted quantity of sludge is not as per design calculations, the solid consistency yet has not been checked. The operation of other 3 & 4 nos. BFPs yet has not been witnessed by UPJN & PE.

iv- As per service engineer of Procta BFP feed pump is design for 6% sludge consistency and 14M³ per hrs pumping capacity but actual sludge consistency is 9.90%, this reason for non functional properly.

6- Replacement of various sluice valves and gates are pending.

7- The Old TEPH is still being operated, the New TEPH is not running as a independent new system. Shifting of 5 no. pumps from old TEPH is pending and isolation of rising main is yet to be done. Level sensor and flow meter installation is pending.

8- Chlorine absorption system and safety related works in chlorination unit are pending.

9- Chlorination system is not operational on continuous basis and concessionaire has not started testing of samples for fecal coliform.

10- The Electrification system of the plant is compromised. Electrical breakdown at campus is frequent which creates a major issue in operational work. The New DG sets has not been supplied at site, the available DGs at site do not run on the requirement due to various issues like unavailability of fuel, DG issues etc.

11- Lab has not been commissioned and chemist & attendant is working but analysis work has not been started so far. Log book of parameter is not being maintained properly, looks like filling manipulated data. Sludge record is also not maintained by KRMPL.

12- There are 4 no. pump installed at TSPH, 2 no. pump running and 2 no. for standby but KRMPL run only one pump at TSPH because BFP machines is not working properly, so that KRMPL not withdraw sludge properly. Due to this all unit overloaded with sludge.

12- Automation of plant is pending. PLC room is under construction and supply of automation materials are pending.

