



# PROJECT ENGINEER *for*

National Mission for Clean Ganga- Development, Rehabilitation with  
Operation & Maintenance of STPs at Kanpur under Hybrid Annuity based PPP mode

**Shah Technical Consultants Private Limited**

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**Ref.** STC/ PE/ KNP/ 2081 / Shuklaganj

**Date:** 22/06/2023

**To,**

Superintending Engineer  
3<sup>rd</sup> Circle  
UP Jal Nigam (Rural)  
Lucknow

**Sub:** **HAM Kanpur:** PE Inspection Report for 5 MLD STP Shuklaganj

Dear Sir,

With reference to the above said subject; inspection report of 05 MLD Shuklaganj for the month of June 2023 is attached herewith for your information.

Yours truly,

(Anil Kumar Seth)

TL-In charge, STC Kanpur

Copy to the following for information and necessary action:

1. Mr. R. K. Gupta, SWMS, NMCG, New Delhi
2. Ms. Nidhi Dwivedi, Technical Officer, NMCG, New Delhi
3. Chief Engineer, Ganga UP Jal Nigam (Rural), Lucknow
4. PM (E&M), 13<sup>th</sup> Div, UP Jal Nigam(Rural), Lucknow
5. Project Manager Kanpur River Management Pvt. Ltd., Kanpur

## SITE INSPECTION REPORT - 05 MLD STP AT SHUKLAGANJ

Date of site Inspection	20 <sup>th</sup> June 2023
STC Site Inspection team	Mr. Anil Kr. Seth – TL (I/c) STC Kanpur Mr. Priyesh Shukla - Supp. Engg. STC Kanpur Mr. Rahul - Supp. Engg. STC Kanpur Mr. Indra Deo Pandey Supp. Engg. STC Kanpur
KRMPL Personal	Mr. Vijay Jadhav, DPM, KRMPL Mr. Avinash Tripathi QA/QC Engg. KRMPL

### 1. COVID 19 precautions followed at site

Compliance of COVID 19 protocols like wearing face masks, installation of hand sanitizer units etc. were not followed at the site. Workers were also not found wearing PPE's like Ear Plugs, Goggles, Hand gloves and Safety helmets. Disinfection spray fogging is being done in labour camps. Personal screening and awareness program are implemented. It is advised for procurement and usage of the PPE usage during work by workers, staff and visitors.

### 2. Specific Points related to the site inspection

i. PE/STC Kanpur discussed about the progress of work, no. of labours, quality checks with UPJN and STC representatives.

ii. Total of manpower / workers were deployed at the site as reported by KRMPL:

SN	Particular	No. of workers
i.	Skilled	18
ii.	Unskilled	19
	<b>Total</b>	<b>37</b>

iii. Despite directions given during several NMCG meetings, manpower has not been increased by KRMPL. There is acute shortage of manpower at the Shuklaganj STP since long time. During inspection NO manpower was found on the site and work was found totally stopped.

iv. During visit, progress of different STP components was checked as per the approved construction plan and it was found that progress of 05 MLD STP is very slow. Total progress was found 66% against the target of approx 98%.

v. Till date only 5 milestones out of total 8 have been completed. **6th milestone completion date was missed on 13/02/2023. 7th milestone completion date was missed on 13/04/2023. Final 8<sup>th</sup> milestone date is 13/06/2023 also be missed.**

### 3. Physical Progress of different units:

i. Major Civil works of STP completed – MPS, Sewer Line, Thickener, Supernatant Sump, Coarse screen chamber, Inlet Chamber, CCT, Staff Quarter and Guard Room;

- ii. VCB room, metering room, transformer foundation excavation done, will be completed in 1 week;
- iii. PTU – grit chamber slab completed. Shuttering work of Channel wall and screen in progress;
- iv. Centrifuge sump final lift shuttering in progress
- v. SBR wall 4<sup>th</sup> lift casting is in progress;
- vi. Mechanical equipment shifting (Decanter, CCT Panel, DG and Pumps) has been done. KRMPL need to expedite installation of mechanical equipments in the presence of OEMs.
- vii. Progress (Civil) of different STP components as per milestone are as following:

SN	STP Units	Target Progress till June 2023	Actual progress till June 2023
1.	I&D structure	100%	20%
2.	Sewer Laying	100%	0%
3.	Manholes	100%	0%
4.	Rising Main	100%	0%
5.	MPS	100%	80%
6.	PTU	100%	50%
7.	SBR	100%	75%
8.	Air Blower	100%	25%
9.	CCT	100%	75%
10.	Chlorination Room	100%	75%
11.	Supernatant Sump	100%	80%
12.	Sludge Thickener	100%	80%
13.	Centrifuge Building	100%	10%
14.	Effluent Disposal System	100%	10%
15.	Admin Building	100%	30%
16.	Staff Quarter	100%	65%
17.	Guard Room	100%	70%
18.	Transformer Yard Area	100%	0%
19.	DG Shed Area	100%	0%
20.	Sludge Storage Platform	100%	0%
21.	Boundary Wall	100%	50%

4. During visits, some issues in construction and quality works of Different units were observed by STC which are as following:

- i. **I&D Structure:** Work of I&D is very slow. Till date only PCC has been done and raft work is in progress (80%). It is to be noted that safety precautions are not followed by KRMPL. Excavated sites should be fully covered by hard barricading.
- ii. **Sewer System:** KRMPL (900mm dia) 85% laid out of sewer line without Approval Drawing and design, Ref letter STC letter no 1652 and UPJN letter.
- iii. **Main Pumping Station (MPS):** At inlet chamber, step arrangement and proper footrest have not been provided. MPS wall casting up to base slab done and cleaning in progress. KRMPL needs to do hydro testing with clear water as per CEPHEEO MANUAL and IS code 3370 in presence of UPJN & STC, before grinding and tar coal epoxy work.



**MPS wall casting work done**

- iv. **Primary treatment unit (PTU):** Alignment of most of the Columns is not straight, bulged twisted & not in Plum bob, improper covers provided, top of Column wrongly smoothly finished & Column edges bend. Most of Steel is corroded. PTU, Column work completed and slab shuttering (60%) and reinforcement work in progress.



- v. **Sequence batch reactor (SBR):** SBR wall has not been done properly. KRMPL has not provided develop length ( $L_d$ ),  $50d$  according to Design in SBR Wall. KRMPL has not used proper shuttering arrangement. Clear cover is not exactly as per design. Due to use of wide range of cover blocks casting of wall by the Concessionaire is not proper. KRMPL also do not use vibrator frequently at the time of casting due to which at some locations honey combing occurred. KRMPL has been instructed to rectify these issues and use vibrator in regular practice.



**SBR - North side wall, reinforcement and shuttering work in progress**

- vi. **CCT & Building:** Brick work is almost completed in Chlorination building. Improper brick joints found in brick masonry. Brick masonry has very large joints. PE noted that third class bricks have been piled up at the site. PE instructed KRMPL to not use this type of brick and to remove third class brick from site immediately. KRMPL agreed for the same. Brick plastering work completed.



vii. **Administration Building cum Air blower:** Air blower foundation completed.

viii. **Sludge Thickener & Supernatant Sump:** Concrete work completed almost one year ago for Sludge thickener & supernatant Sump. UPJN/STC instructed many time for Hydro test but KRMPL did not conduct hydro test till date. KRMPL need to arrange hydro test according to IS code 3370 in presence of UPJN/STC.



**Supernatant Sump, Hydro test pending**



**Sludge Thickener, Hydro test pending**

ix. **Staff Quarter:** Brick work completed plaster work not started.

x. **DG set Foundation, Transformer area & VCB Panel room:** Exuviations done for DG set and transformer area. Pcc work in progress. VCB and Metering room work yet to be started

## **5. General Points related to the site**

- i. Cube test performed in present of STC: Quality Engineer, KRMPL performed Cube test of concrete M30 Grade of SBR wall casting for 28 days in presence of STC and achieved average Cube strength 37 Mpa, it was ok.

- ii. Hard barricading around the excavated structures completely not provided which may lead to unwarranted mishap.
- iii. Number of Site safety slogan boards and caution boards display are to be increased in different places of site area like: DANGER-DEEP EXCAVATION, MEN AT WORK, ELECTRICAL HAZARD, ASSEMBLY POINT, SITE ENTRANCE MAIN BOARD, FIRE EXTINGUISHER, FIRE POINT, and EMERGENCY TELEPHONE NOS.etc. IS 3764 -1992, IS 1642: 1989. IS 9457; 1980.
- iv. Internal electrification conduit & Junction box installation work is in progress. In Guard room, CCT and staff quarter work of conduit laying complete. Wiring to be done.
- v. Power is not available which need to be expedited.
- vi. DG set and transformer have reached at site.
- vii. Cables, Decanters, SAS and RAS pumps, Submersible pump of MPS, Mechanical pipe reported to be shifted to this site.

**6. Note:**

**It is advised to direct the Concessionaire for the submission of schedule of balance work plan and compliance report of this inspection report at earliest.**