



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/ 2078 / Shuklaganj

Date: 29/05/2023

To,

Superintending Engineer
3rd 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 May 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), 13th 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	27 th May 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
KRMPL Personal	Mr. Vijay Jadhav, DPM, 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	19
ii.	Unskilled	24
	Total	43

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 8th milestone date is 13/06/2023 which will also be missed.**

vi. Progress (Civil) of different STP components as per milestone are as following:

SN	STP Units	Target Progress till May 2023	Actual progress till May 2023
1.	I&D structure	98%	20%
2.	Sewer Laying	98%	0%
3.	Manholes	98%	0%
4.	Rising Main	98%	0%
5.	MPS	98%	80%
6.	PTU	98%	50%
7.	SBR	98%	75%
8.	Air Blower	98%	25%
9.	CCT	98%	75%
10.	Chlorination Room	98%	75%
11.	Supernatant Sump	98%	80%
12.	Sludge Thickener	98%	80%
13.	Centrifuge Building	98%	10%
14.	Effluent Disposal System	98%	10%
15.	Admin Building	98%	30%
16.	Staff Quarter	98%	65%
17.	Guard Room	98%	70%
18.	Transformer Yard Area	98%	0%
19.	DG Shed Area	98%	0%
20.	Sludge Storage Platform	98%	0%
21.	Boundary Wall	98%	50%

3. 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. 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 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.
- vii. **Administration Building cum Air blower:** In Admin building cum Air blower shuttering work of column and slab works are in progress. Most of the Column's alignment is not straight, bulged twisted & not in Plum bob. Improper covers provided, top of Column wrongly finished & Column edges are found bend. Most of the Steel is corroded. KRMPL has been instructed to rectify these issues without delay and comply with the standard practices for workmanship and finishing.
- 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:** Not any work started till date.

4. 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. Excavation of soil was done for the Construction of SBR/Staff quarters/Administrative building. To increase of the soil bearing capacity layers of sand and morum etc., was pressed with roller.
- iii. Hard barricading around the excavated structures completely not provided which may lead to unwarranted mishap.
- iv. Around excavated MPR, SBR and along with excavated units hard barricading is urgently needed. IS 3764: 1992, IS 7323: 1994
- v. 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.
- vi. Internal electrification conduit & Junction box installation work is in progress at Guard room.