





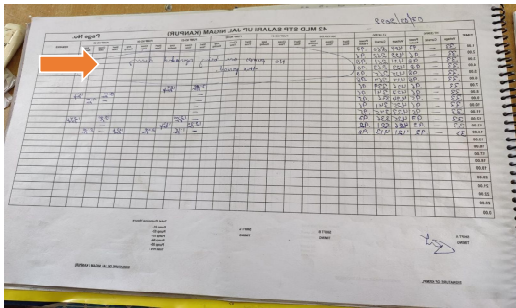
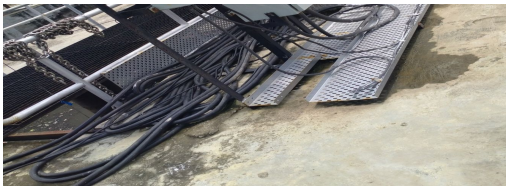
SITE INSPECTION REPORT FOR 42 MLD Sajari STP


SAJARI STP

Date:
07.03.2022

INSPECTED BY:
STC Team:
1) Dr. Giridhar Prabhu Kumar (TL) 2.
Mr. L.K.Rao (Safety Expert)
3) Mr. Rohit Suman (Supp. Engr.
Mechanical)
4) Mr. Pankaj Rawat (Supp. Sup. Civil)

S. No.	Equipment	Assessment of Current Condition	Assessment of Current Condition Photo	Corrective Action Suggested by STC	Corrective Action Completed by KRMPL	Original Date of Issue	Proposed date to resolve by KRMPL	Remark
A	INLET CHAMBER							
1	Inlet Sluice Gates	Operational						
2	Mech. Coarse screen (no.1)	Non-Operational		1) Need to be rectified at the earliest. 2) Auto system level settings needs to be done for proper functioning and it should be get checked by UPJN & PE.		1) 06.03.2022 2) Since handover 11-10-2019		LONG PENDING
3	Mech. Coarse screen (no.2)	Operational 1) When UPJN & STC team reached site, we found both mechanical screens in still condition. Upon asking by UPJN & STC team, KRMPL started running the screen manually. Manually operational but not automated. 2) Level sensor is not installed yet for automated.		1) Every time during visit, it was found in still condition, Needs to be operated on regular basis. 2) Level sensor has to be installed at earliest for automation.		1) 08.02.2022 2) Since handover 11-10-2019	28.02.2022	LONG PENDING
4	Mechanical Screen Level transmitter display	1) Auto System of Mech Coarse Screen -1 & 2 are Under Maintenance 2) Not operating the mechanical screen perfectly 3) Level sensor of 2nd mechanical screen is not available		1) The level setting system has to be corrected as per the inflow level for mechanical screen no. 1 and level sensor for mechanical screen no. 2 has to be installed at earliest for automation. 2) Closing gate must be fixed to the level transmitter casing box. 3) Painting needs to be done on the casing box.		Since handover 11-10-2019	28.02.2022 31.12.2021 31.12.2021	LONG PENDING
5	Belt Conveyor	When UPJN & STC team reached site, we found conveyor belt in still condition and by seeing the belt condition, it has been observed that KRMPL is not running the belt regularly as per requirement. Upon asking by UPJN & STC team, KRMPL started running the belt.		Every time during visit, conveyor belt was found in still condition, Needs to be operated on regular basis.		08.02.2022		
6	Belt Conveyor disposal							
7	Mech. Coarse Screen On-site Panel	1) After around 5 months, Door glasses have now fixed on 26.12.2021 2) Some of the indicators not working		Non working indicators should be replaced.		31.07.2021		LONG PENDING

8	RAW SEWAGE PUMPING STATION							
1	Raw Sewage Pump-01	Non-Operational		1) Need to be rectified at the earliest. 2) Discharge line pressure gauge needs to be replaced		1) 10.01.2022 2) 21.09.2021	15.01.2022	LONG PENDING
2	Raw Sewage Pump-02	Non-Operational		1) Need to be rectified at the earliest. 2) Discharge line pressure gauge needs to be replaced		1) 13.02.2022 2) 31.07.2021	15.01.2022	LONG PENDING
3	Raw Sewage Pump-03	Operational						
4	Raw Sewage Pump-04	Operational After almost 2 months of non-operational since 31.12.2021, it was made operational on 07.03.2022		Discharge line pressure gauge needs to be replaced.		31.07.2021	15.01.2022	LONG PENDING
5	Raw Sewage Pump-05	Operational		Discharge line pressure gauge needs to be replaced		27-10-2021	15.01.2022	LONG PENDING
6	Collection Sump Lever sensor	No level transmitter was found inside collection sump		Install the level transmitter at the earliest and maintain the levels of the collection sump on regular basis.		18.11.2021		As per Article 8.8 (a), this has to be provided by the concessionaire
7	Raw Sewage Pumps operation	1) When STC team reached site, no free fall was being observed and only one pump was being found operational during the visit resulting in reverse flow. Upon asking by STC, KRMPPL started operating two more pumps. 2) Pumps were found not being operated at night hours.		At an average of around 23 MLD flow (which is 55 % of the average design flow) is coming, therefore atleast 2 to 3 nos. of pumps has to be operated during peak flow & atleast 1 to 2 nos. of pumps to be operated during non peak flow on regular basis in rotational way to tackle the problem of backflow/ reverse flow. In case the flow increase more than 23 MLD, more pumps needed to be operated.		27-10-2021		
8	EOT	Operational		Do lubrication work on regular basis				
9	Raw Sewage Pump Starter cable	Raw Sewage pump starter cable dressing are not done		Need to do dressing of cable starter properly		31.07.2021		LONG PENDING
10	Raw Sewage Pump Starter-5	After around 2 months since 27.10.2021, starter has been fixed on 04.01.2022						
11	DI Common header Line							





12	Electro-Magnetic flow meter			Get the calibration done & submit the calibration certificate at earliest		Since handover 11-10-2019		LONG PENDING
13	Panel Room	1) HT Panel & float cum boost charger ammeter not working. 2) Some of the indoor light lights not working. 3) One no. exhaust fan not working.		1) HT Panel ammeter need to be replace. 2) Indoor light 7 no. need to be replace. 3) Exhaust fan 1 no. need to be repaire. 4) Float cum boost charger ammeter need to be repaire immediately.		21-09-2021		LONG PENDING
C PRIMARY UNIT								
1	Fine screen (No. 1 Mech)	The bar spacing at some places in the screen has increased.		Need to be rectified at earliest.		27-10-2021	15.01.2022	Pending
2	Fine screen (No.2 Mech)	The bar spacing at some places in the screen has increased.		Need to be rectified at earliest.		27-10-2021	15.01.2022	Pending
3	Fine Mechancial Screen auto system	No level sensor were present around fine mechanical screen.		1) Level sensor must be installed at earliest. 2) Fine screen must be automated at earliest.		Since handover 11-10-2019	Past date i.e 28.02.2021, is mentioned in KRMPL letter no. 2037 dated 23.12.2021	LONG PENDING
4	Belt Conveyor	When STC team reached site, we found conveyor belt in still condition and by seeing the belt condition, it has been observed that KRMPL is not running the belt regularly as per requirement. Upon asking by STC team, KRMPL started running the belt. Also no operator/ manpower was present on PTU during visit.		1) Belt conveyor needs to be operated regularly. 2) Required Operator/ manpower must be present on PTU for regular operation.		07.03.2022		
5	PTU On site Panel	Some of the indicators not working		1) Non working indicators should be replaced. 2) Panel box painting need to be done.		27-10-2021		LONG PENDING





6	Manual screen	Operational						
7	Grit chamber-1 1)Organic pump with Motor 2)Scraper 3)Classifier Mechanism	Operational		1) Classifier alignment need to be rectified. 2) Canopy must be provide on every motors. 3) Numbering of Grit Mechanism must be done in bold letter so that it can be seen from far positions also.		31.07.2021	31.12.2021 31.01.2022 15.01.2022	LONG PENDING
8	Grit chamber- 2 1)Motor 2)Scraper/Starter 3)Rack Classifier Mechanism	Operational ORP was found non-operational.		1) Canopy must be provide on every motors. 2) Numbering of Grit Mechanism must be done in bold letter so that it can be seen from far positions also. 3) ORP needs to be rectified.		31.07.2021 3) 06.02.2022	31.01.2022 15.01.2022	LONG PENDING
9	Grit Disposal	When STC team reached site, no trolley was found below grit & conveyor chutes.		1) Provide trolley below conveyor and grit chute. 2) Remove the grit on regular basis. 3) Apart from this, make sure that spare trolley must be provided in case of shifting/ removing grit.		11.01.2022		
10	Parshall Flume	No ultrasonic level sensor was found at site. Also, the fixed scale is not readable.		1) Level sensor must be installed at the earliest. 2) Readable scale must be installed. 3) Chart for flow measurement must be fixed at the earliest. 4) Kindly provide the necessary documents on the basis of which scale reading has been provided. 5) KRMPL must record the flow through parshall flumes at every required time intervals on daily basis and its register has to be maintained.		1) Since handover 11-10-2019 2) 11.01.2022		LONG PENDING As per Article 8.8 (a), this has to be provided by the concessionaire
11	PST 1	Operational		Vibration check on regular basis through vibration meter and lubrication to be done on regular basis for PST-1.		27-10-2021	31.01.2022	


12	PST 2	Operational Local push buttons was found not working		1) Local push buttons must be rectified at the earliest. 2) Vibration check on regular basis through vibration meter and lubrication to be done on regular basis for PST-2.		27-10-2021	31.01.2022 15.01.2022	LONG PENDING
13	Cable tray of PST-1 & PST-2							
D	AREATION TANK							
1	Aerator no 1	Operational		Vibration to be checked on regular basis by vibration meter and lubrication needs to be done on regularly for each areator.		21-09-2021		LONG PENDING
2	Aerator no 2	Operational		Vibration to be checked on regular basis by vibration meter and lubrication needs to be done on regularly for each areator.		21-09-2021		LONG PENDING
3	Aerator no 3	Non-Operational		1) Needs to be rectified. 2) Vibration to be checked on regular basis by vibration meter and lubrication needs to be done on regularly for each areator.		1) 06.03.2022 2) 31.07.2021		LONG PENDING
4	Aerator no 4	Operational		Vibration to be checked on regular basis by vibration meter and lubrication needs to be done on regularly for each areator.		31.07.2021		LONG PENDING
5	Aerator no 5	Operational Made operational on 13.01.2022		Vibration to be checked on regular basis by vibration meter and lubrication needs to be done on regularly for each areator.		1) 08.02.2021 2) 31.07.2021		LONG PENDING
6	Aerator no 6	Operational		Vibration to be checked on regular basis by vibration meter and lubrication needs to be done on regularly for each areator.		31.07.2021		LONG PENDING
7	Aerator no 7	After operating 2nd stream from 18.10.2021 for around 1.5 months, KRMPL again shut down 2nd stream from 06.12.2021.		Vibration to be checked on regular basis by vibration meter and lubrication needs to be done on regularly for each areator.		31.07.2021		
8	Aerator no 8	After operating 2nd stream from 18.10.2021 for around 1.5 months, KRMPL again shut down 2nd stream from 06.12.2021.		Vibration to be checked on regular basis by vibration meter and lubrication needs to be done on regularly for each areator.		31.07.2021		


9	Aerator no 9	After operating 2nd stream from 18.10.2021 for around 1.5 months, KRMPL again shut down 2nd stream from 06.12.2021.		Vibration to be checked on regular basis by vibration meter and lubrication needs to be done on regularly for each aerator.		31.07.2021		KRMPL is operating only one stream but no labour force has been deployed for Schedule maintenance works.
10	Aerator no 10	Operational Made operational on 19.02.2022		Vibration to be checked on regular basis by vibration meter and lubrication needs to be done on regularly for each aerator.		31.07.2021		
11	Aerator no 11	After operating 2nd stream from 18.10.2021 for around 1.5 months, KRMPL again shut down 2nd stream from 06.12.2021.		Vibration to be checked on regular basis by vibration meter and lubrication needs to be done on regularly for each aerator.		18-11-2021		
12	Aerator no 12	After operating 2nd stream from 18.10.2021 for around 1.5 months, KRMPL again shut down 2nd stream from 06.12.2021.		Vibration to be checked on regular basis by vibration meter and lubrication needs to be done on regularly for each aerator.		31.07.2021		
13	Aerators on-site push button and indicator	None of aerator's onsite push buttons and indicators were found working		All aerator's push buttons and indicators needs to be rectified/ replaced.		07.03.2022		
E	SECONDARY CLARIFIER AREA							


1	SST 1	Operational 1) Hand railing was not found beside RCC stair 2) Sewage is not flowing uniformly through weir notch		1) Hand railing must be provided at the earliest 2) Weir notch must be levelled at earliest.		27-10-2021	31.01.2022	LONG PENDING
2	SST 2	Sewage is not flowing uniformly through weir notch		Weir notch must be levelled at earliest.		18.11.2021	31.01.2022	LONG PENDING
3	Return sludge pump 1	Operational After approx 9 months since 03.03.2021, pump was fixed on 25.12.2021 and is now operational.		Pressure gauge must be fixed at earliest.		07.03.2022		
4	Return sludge pump 2	Operational After around a month, on-site starter was fixed on 07.01.2022.		Pressure gauge must be fixed at earliest.		07.03.2022		
5	Return sludge pump 3	Non-Operational Pressure Gauge not available		1) Needs to be repaired at the earliest. 2) Pressure gauge must be fixed at earliest.		09.12.2021	31.01.2022	PENDING
F CHLORINATION AREA								
1	Chlorine Tonners (Total Qty.=06 Nos)	Operational 1) Weighing machine is not available at site. 2) Chlorine dosage record can not be trusted as the record entry is on the basis of theoretical calculation. 3) The record of chlorine tonner at plant gate entry is not matching with the stocks mentioned in chlorine dosage register. 4) Pressure gauge was not found working. 5) Some of the indoor lights were not working.		1) Weighing machine must be provided at site. 2) Chlorine dosing record entry must be done by measuring the weight of tonner. 3) Record entry must be made properly. 4) Pressure gauge in tonner room must be replaced at earliest. 5) Non-working indoor lights must be replaced. 6) KRMP must ensure no chlorine leakage from the tonner and chlorination system.		27.10.2021		PENDING
2	Booster Pump no. 1 & 2	1) Operator dosen't know the operation perfectly. 2) Even after closing the gate valves, some flow was been observed through valves. Also leakage through valve was found		1) Leakage from Gate valve and through its internal gland must be fixed at earliest. 2) Deploy experienced operator who knows the operation.		21-09-2021	15.01.2022	LONG PENDING

3	Chlorination Leak detection device	<p>During visit, cylinder was changed and there was leakage of chlorine but leak detecting device sensor doesn't sensed chlorine. It shows that leak detecting device is not working.</p> <p>Non-Operational</p>		Leakage detection device should be rectified and get it checked by UPJN/ PE		31.07.2021		LONG PENDING
4	Safety shower	Operational						
G Sludge system								
1	Sludge thickeners 1	<p>Operational</p> <p>When STC team reached site, it was found that sludge thickener is filled with sludge and influent is not properly treated by Sludge Thickener. It was observed that the sludge is being overflowing through the weir plates and the scum settled on the thickner surface (as depicted in the picture) was manually cleaning and discharging into the outlet launder. Also, at various points weir plate was found damaged & chocked.</p>		<p>1) Sludge thickner processing must be stabilised and proper expertise must be given to the plant incharge monitoring the operation. Also experienced operator must be deployed.</p> <p>2) Overhaul whole mechanical system</p> <p>3) Painting of MS structures must be done at the earliest.</p>		03.03.2021		LONG PENDING
2	Sludge thickeners 2	<p>Operational</p> <p>After around 10 months of non-operational since 03.03.2021, it was made operational on 07.01.2022.</p> <p>This thickner was taken into cleaning and without informing/ witnessing it to UPJN or PE, sludge was filled on 07.01.2022.</p> <p>When STC team reached site, it was found that sludge thickener is filled with sludge and influent is not properly treated by Sludge Thickener. It was observed that the sludge is being overflowing through the weir plates and the scum settled on the thickner surface (as depicted in the picture) was manually cleaning and discharging into the outlet launder. Also, at various points weir plate was found damaged & chocked..</p>		<p>1) Sludge thickner processing must be stabilised and proper expertise must be given to the plant incharge monitoring the operation. Also experienced operator must be deployed.</p> <p>2) Damaged weir plate must be fixed and weir plate must be cleaned & levelled.</p> <p>3) Painting of MS structures must be done at the earliest.</p>		11.01.2022		PENDING
3	Thickened sludge pump 1	Operational						
4	Thickened sludge pump 2	Operational						
5	Sludge digester-01	Operational						

6	Sludge digester-02	<p>Non-Operational</p> <p>1) PE along with UPJN, have inspected digester no. 2 and found that the replaced impeller is colliding with the surrounding DI pipe which is causing heavy noise, which means installation work is not properly done. PE letter no. 1385 dated 11.01.2022 has been issued regarding the inspection for compliance.</p> <p>2) Voltas vendor inspected the digester on 07.03.2022 and he will submit his observations in the coming days.</p>		Needs to be rectified at the earliest		01.06.2020		LONG PENDING
7	Flow Meter for Bio gas.	Non-Operational		Must be rectified at the earliest		18.11.2021	28.02.2022	LONG PENDING
8	Gas engine -1	Operational						
9	Gas engine -2	Operational						
10	Gas engine -3	Operational						
11	Gas Scrubbers	Operational		UPJN has advised KRMPL to connect a pipe from scrubber exit directly to H2S analyser for knowing the value of H2S present in scrubbed gas just exiting scrubber.		11.01.2022		Pending
12	Bio gas blower 1 & 2	Operational						
	Pressure & Temperature Gauges inside Scrubber room	Various pressure & temperature gauges were found not working		Pressure & temperature gauges needs to be replaced		07.03.2022		
13	Sludge drying bed 1	Filled with sludge		Beds are required to be emptied periodically and Sludge to be disposed on regular basis		23.02.2021		No record of disposal of sludge is available.

14	Sludge drying bed 2	<p>After approx 10 months since 23.02.2021, the sludge cleaning work started from 24.12.2021 and cleaning work has been completed but the removed sludge is lying beside the bed on the road resulting in road blockage.</p> <p>As per the register, cleaning work of this bed continued till 04.01.2022 which means from 04.01.2022, the removed sludge which is lying on the road has not been removed from the plant.</p>		Removed sludge lying on the road must be cleaned at the earliest.		11.01.2022		Pending
15	Sludge drying bed 3	After approx 1 year since 23.02.2021, the sludge cleaning work started from 27.02.2022 and cleaning work is in progress		Beds are required to be emptied periodically and Sludge to be disposed on regular basis		07.03.2022		Pending
16	Sludge drying bed 4	Filled with sludge		Beds are required to be emptied periodically and Sludge to be disposed on regular basis		23.02.2021		No record of disposal of sludge is available.
17	Sludge drying bed 5	After approx 11.5 months since 23.02.2021, the sludge cleaning work started from 30.01.2022 and cleaning work is completed on 12.02.2022				12.02.2022		
18	Sludge drying bed 6	Filled with sludge		Beds are required to be emptied periodically and Sludge to be disposed on regular basis		23.02.2021		No record of disposal of sludge is available.
19	Sludge drying bed 7	Filled with sludge						
20	Sludge drying bed 8	Filled with sludge						
21	Sludge drying bed 9	Filled with sludge						
22	Sludge drying bed 10	Filled with sludge						
23	Sludge drying bed 11	Filled with sludge						
24	Sludge drying bed 12	Filled with sludge						
25	Sludge drying bed 13	<p>After approx 9 months since 23.02.2021, the sludge cleaning work was started from 14.11.2021 and continued till 20.11.2021 but the cleaning work was pending as stated in PE's Dec. 2021 inspection report.</p> <p>Now, again the bed was filled with sludge and the sludge was found in dry condition on 07.03.2022.</p>		Beds are required to be emptied periodically and Sludge to be disposed on regular basis		07.03.2022		
26	Sludge drying bed 14	Filled with sludge		Beds are required to be emptied periodically and Sludge to be disposed on regular basis		23.02.2021		No record of disposal of sludge is available.

27	Sludge drying bed 15	<p>After approx 9 months since 23.02.2021, the sludge cleaning work started from 21.11.2021 and continued till 30.11.2021 but the cleaning work was pending as stated in PE's Dec. 2021 inspection report.</p> <p>Now, again the bed was filled with sludge and the sludge was found in dry condition on 07.03.2022.</p>		Beds are required to be emptied periodically and Sludge to be disposed on regular basis		07.03.2022		
28	Sludge drying bed 16	<p>After approx 1 years since 23.02.2021, the sludge cleaning work started from 13.02.2022 and cleaning work was completed on 26.02.2022.</p>				07.03.2022		
29	Sludge drying bed 17	<p>After approx 11 months since 23.02.2021, the sludge cleaning work started from 05.01.2022 and cleaning work has been completed on 11.01.2022 as per record.</p> <p>Now, again the bed was filled with sludge.</p>				07.03.2022		
30	Sludge drying bed 18	Filled with sludge		Beds are required to be emptied periodically and Sludge to be disposed on regular basis		23.02.2021		No record of disposal of sludge is available.
31	Sludge drying bed	Leakage found around sludge drying bed		<p>1) Needs to be restored at the earliest.</p> <p>2) RCC Slab must be provided on all chambers.</p>		29.10.2021		Pending
32	Tubewell pump 1	Operational						
33	Dilution water submersible pump-1	Operational						

34	Dilution water submersible pump- 2	Operational						
35	Filtration pump no. 1	After around 2 months of non-operational since 01.12.2021 , it was made operational on 07.02.2022.		Ammeter & Voltmeter needs to be replaced		01.12.2021		Pending
36	Filtration pump no. 2	Operational						
37	Treated effluent outlet channel							
Miscellaneous								
1	Motor Canopy	STC found that no canopies were present on the motors of equipments		Fix canopy to each motors of equipments.		27-10-2021	31.01.2022	Long Pending
2	Outdoor lighting	When STC team visited site, it was found that various outdoor lights were not working		Needs to be replaced at the earliest.		27.10.2021 (since long back)		Long Pending
3	Laboratory	1) Deployed Chemist do not have the right training/ experience for conducting laboratory analyses. 2) Daily analysis results reported by KRMPL are not matching with NABL laboratory (Shriram) reports		1) Trained chemist has to be deployed for testings at laboratory. 2) Lab. Chemist has to maintain date wise base data of all the testings done. 3) Fecal coliform tests must be done properly. 4) A piping system must be connected to exhaust of laminar air flow cabinet and must be discharged outside laboratory room/ building. 5) Laboratory testings needs be done correctly by following right procedure.		27-10-2021		
4	Log Books & Register			1) Log Books and registers must be maintained and remain available for all units 2) Maintenance register must be filled properly.				
5	House Keeping works	At various locations inside the plant, no house keeping works was found.		1) House keeping work at all locations inside the plant has to be done for which deployment of manpowers needs to be done. 2) Do the house keeping works on regular basis		27-10-2021		LONG PENDING
6	Equipments Numbering			Numbering must be provided in bold letters to all the equipments so that it could be seen easily and there should not remain any confusion about which item is no. 1 & which is no. 2		27-10-2021	31.01.2022	LONG PENDING

7	Manually operated crane	Manually operated crane pulley in Return sludge pump house, primary sludge pump house, thickened sludge pump house etc. were missing lifting chain.		Provide the lifting chain at every places.		18.11.2021		<p>Pending</p> <p>Not Provided yet as indicated in KRMPL Letter no. 2037 dated 23.12.2021 for compliance to inspection carried on 18.11.2021 by PE.</p>
8	Water Tap point near DG Set	Water is found scattered near the tap creating unhygienic condition.		Proper CC slab must be constructed and a drain line to nearest drain must be constructed.		08.02.2022		Pending
9	Gas Holders	Gas holder MS structures are found rusted		<p>1) Painting needs to be done.</p> <p>2) Level scale must be provided showing capacity of gas at various levels.</p>		08.02.2022		Pending