

NATIONAL MISSION FOR CLEAN GANGA (NMCG)
**MINISTRY OF JAL SHAKTI DEPARTMENT OF WATER RESOURCES,
RIVER DEVELOPMENT & GANGA REJUVENATION, GOVT. OF INDIA**



जल शक्ति मंत्रालय
जल संसाधन, नदी विकास और गंगा संरक्षण विभाग
MINISTRY OF JAL SHAKTI
DEPARTMENT OF WATER RESOURCES,
RIVER DEVELOPMENT & GANGA REJUVENATION

**DEVELOPMENT OF NEW SEWAGE TREATMENT PLANTS,
REHABILITATION OF EXISTING SEWAGE TREATMENT
INFRASTRUCTURE AND O&M FOR 15 YEARS IN KANPUR**

UNDER

**ONE CITY ONE OPERATOR CONCEPT THROUGH HYBRID ANNUITY
BASED PPP MODE (HAM – KANPUR)**

(STC agreement dated 19.04.2019 & LOA: Pr-12012/41/2018-PPP/NMCG dated 04.02.2019)

Monthly Progress Report

Of

Project Engineer

JULY - 2023



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ABBREVIATIONS

ASP	Activated Sludge Process
BEP	Basic Engineering Package
BOD	Biochemical Oxygen Demand
CETP	Common Effluent Treatment Plant
COD	Chemical Oxygen Demand
COD	Commercial Operation Date
CPs	Condition Precedent
CTE	Consent To Establish
CTO	Consent to Operate
DFGs	Dual Fuel Generators
DPR	Detailed Project Report
ESHS	Environment, Social, Health And Safety
GOI	Government of India
HAM	Hybrid Annuity Model
I&D	Interception & Diversion
IPS	Intermediate Pumping Station
KPIs	Key Performance Indicators
KRMPL	Kanpur River Management Private Limited
LOA	Letter of Award
MOM	Minutes of Meeting
MPS	Main Pumping Station
O&M	Operation and Maintenance
PLC	Programmable Logic Control
PMC	Project Management Consultant
PDD	Proposal Due Date
PDMC	Project Development and Monitoring Consultant
PPP	Public Private Partnership
QAP	Quality Assurance Plan
RFP	Request for Proposal
RTU	Remote Terminal Unit
RTOLMS	Real Time Online Monitoring System
TOR	Terms of Reference
SBR	Sequential Batch Reactors
STP	Sewage Treatment Plant
TEPH	Treated Effluent Pump House
UASB	Up-Flow Anaerobic Sludge Blanket Reactor

MONTHLY PROGRESS REPORT – HAM KANPUR

1. INTRODUCTION

The Govt. of India, recognizing that long-term rejuvenation of the river Ganga will have significant social and economic benefits on the lives of the 500 million people living along its basin, has identified cleaning of the river Ganga as one of its priorities. For this purpose, in May 2015, the GoI approved the flagship Namami Gange program for cleaning, rejuvenation, and protection of the river Ganga. In January 2016, the GoI approved a hybrid annuity model to implement STP projects under the Namami Gange program on a PPP basis.

Subsequently, the MoWR issued the River Ganga (Rejuvenation, Protection and Management) Authorities Order, 2016 (Ganga 2016 Order) to constitute various authorities to assist the GoI in achieving its aim of effective abatement of pollution in the river Ganga. The Ganga 2016 Order applies to all states in the catchment of the river Ganga basin, including Uttar Pradesh. The Ganga 2016 Order revised the legal status of NMCG (which was initially constituted as a registered society under the Societies Registration Act, 1860) to an authority constituted under the Environment (Protection) Act, 1986 and designated NMCG as the nodal agency for the implementation of the Ganga 2016 Order.

Rapidly increasing population, rising standards of living and exponential growth of industrialization and urbanization have exposed water resources, in general, and rivers, in particular, to various forms of degradation. The mighty Ganga is no exception. The deterioration in the water quality impacts the people immediately. Ganga, in some stretches, particularly during lean seasons has become unfit even for bathing. The threat of global climate change, the effect of glacial melt on Ganga flow and the impacts of infrastructural projects in the upper reaches of the river, raise issues that need a comprehensive response.

The Uttar Pradesh Jal Nigam (Jal Nigam) is a statutory body constituted under the Uttar Pradesh Water Supply and Sewerage Act 1975, and has the power to develop, maintain and regulate water supply and sewerage works in Uttar Pradesh. With a view to implement the Namami Gange program and the Ganga 2016 order in the State of Uttar Pradesh, the Jal Nigam, in association with NMCG has decided to undertake the development of:

- three new STP facilities (30 MLD Pankha, 15 MLD Unnao & 5 MLD Shuklaganj) and their O&M for 15 years;
- rehabilitation of existing 130 MLD Jajmau Phase-I STP facility with O&M for 15 years and;
- O&M for three existing STP facilities (43 MLD Jajmau Phase-II, 210 MLD Bingawan & 42 MLD Sajari) in Kanpur under Hybrid Annuity based PPP mode.

While the Jal Nigam will be the principal executing agency and bidding authority for the Project, NMCG will be responsible for making payments to the Concessionaire and Project Engineer.

2. HYBRID ANNUITY MODEL (HAM)

Government of India has approved the Namami Gange program as an integrated approach for effective abatement of pollution in river Ganga and Yamuna. As part of this and to ensure that no untreated domestic sewage flow into the river Ganga and Yamuna, various interventions are planned such as Interception & Diversion works and development & operation of Sewage Treatment Plants (STPs).

Considering various development models in practice for the construction, operation and maintenance of Sewage Treatment Plants, Government of India has approved the Hybrid Annuity based Public Private Partnership (PPP) mode as one of the options for the development & operation of STPs. Under this model, private investor/developer will design, build, finance, construct, rehabilitate, renovate, operate and maintain the asset (STPs, IPS, and MPS) to the Project Executing Agency/Jal Nigam at the end of the Concession Period (15 years). 40% of the Capital cost will be paid to the developer during construction of the STP. Balance 60% along with Operation & Maintenance (O&M) cost will be paid over the Concession Period on achievement of key performance indicators as per the contract. Entire cost of development and operation of the STPs will be 100% funded by the Government of India as central sector scheme.

NMCG & UPJN appointed M/s. Shah Technical Consultant Pvt. Ltd., as third party engineering firm as Project Engineer for this project through tendering process. Letter of Award is issued dated 4th February 2019 and agreement signed between the parties on 12th April 2019.

3. OBJECTIVES

To achieve above objectives, effective development of three new STP facilities at Pankha, Unnao and Shuklaganj with O&M for 15 years, rehabilitation of existing Jajmau 130 MLD STP with O&M for 15 years and O&M of existing 210 MLD USAB based Bingawan STP facilities, 43 MLD Jajmau and for 42 MLD Sajari STP facilities for 15 years are proposed under this program. The objectives that NMCG and the UP Jal Nigam wish to achieve through the Project are mentioned in Figure 1.

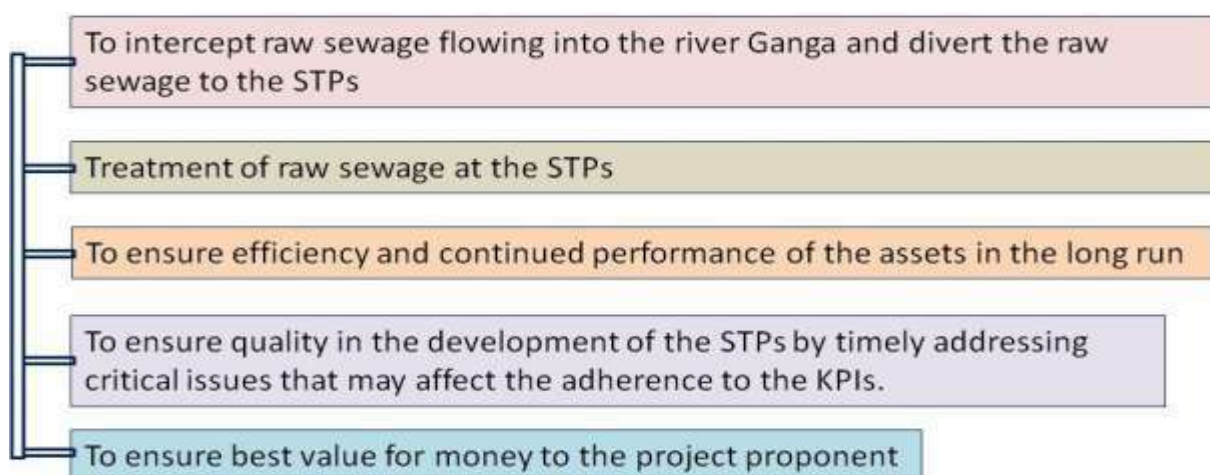


Figure 1: Objectives of NMCG and UP JAL NIGAM

4. HAM KANPUR PROJECT AT A GLANCE

Details of HAM Kanpur project are given in the following table:

Table 2.1: HAM Kanpur Project at a Glance

Name of Project	:	Development of new Sewage Treatment Plants and O&M for 15 years, Rehabilitation of existing Sewage Treatment Infrastructure and O&M for 15 years in Kanpur under One City One Operator concept through Hybrid Annuity based PPP mode. (HAM – Kanpur)
Client	:	National Mission for Clean Ganga (NMCG), New Delhi and UP Jal Nigam
Execution Agency	:	Uttar Pradesh Jal Nigam (UPJN)
Consultant	:	Shah Technical Consultants (P) Ltd. as ‘Project Engineer’
Agreement &LOA	:	STC Agreement dated 12.04.2019 & LOA: Pr-12012/41/2018-PPP/NMCG dated 04.02.2019
Concessionaire	:	Kanpur River Management Private Limited (KRMPL) an SPV of Shapoorji Pallonji & Company Private Limited, Mumbai
Concessionaire’s Agreement	:	14/GM/2018-19 dated 21.12.2018
Cost of Project (CAPEX+OPEX)	:	Rs. 816.25 Cr. (CAPEX 255.50 Cr. + OPEX 560.75 Cr.)
Effective Date	:	11.10.2019
Completion date (as per contract)	:	24 Months from effective date (21 months construction + 3 months trial run)
O&M period	:	15 years after last Commercial Operation Date (COD)
Description of Work	:	<ul style="list-style-type: none"> ➤ Construction of three new STPs (SBR) at different locations (30 MLD at Pankha, 15 MLD at Unnao and 5 MLD STP at Shuklaganj) and related infrastructure with 15 years of O&M; ➤ Rehabilitation of 130 MLD (Phase-I) STP at Jajmau with construction of 200 MLD TEPS and 173 MLD CCT at Jajmau with O&M for 15 years; ➤ O&M of 43 MLD (Phase-II) Jajmau facilities, O&M of 210 MLD Bingawan facilities and O&M of 42 MLD Sajari facilities for 15 years;

5. PROJECT WISE DETAILS OF COMPONENTS UNDER HAM KANPUR PROJECT

HAM Kanpur project is divided into 5 districts of the Kanpur– Pankha (District –III, Kanpur), Unnao & Shuklaganj – (District Unnao), Jajmau – (District I, Kanpur), Bingawan – (District II, Kanpur) and Sajari – (District IV, Kanpur).

Under this project, development and O&M work of total seven STP facilities are proposed in which three new STP facilities based on SBR technology with associated infrastructure have been proposed for - 30 MLD Pankha (District III, Kanpur), 15 MLD Unnao&5 MLD Shuklaganj.

Rehabilitation and O&M for 15 years is proposed for 130 MLD Jajmau STP facilities (Phase-I) and O&M of 210 MLD USAB based Bingawan STP facilities, 43 MLD Jajmau Phase-II and for 42 MLD ASP based Sajari STP facilities for 15 years.

5.1 PANKHA FACILITIES

Project wise components details of Pankha Facilities are given in table 5.1:

Table 5.1: Pankha Facilities

SN	STP Facility	Capacity/Dia./Size	Nos./Length
Date of Start- Effective Date (11.10.2019)			
Scope of Work- New Construction and O&M			
1	STP	30 MLD	1
2	MPS	115MLD	1
3	ICI Nala IPS	25 MLD	1
4	Sundar Nagar	20 MLD	1
5	Thermal Nala (A) tapping	22 MLD	1
6	Thermal Nala (B)(tapping)	8 MLD	1
7	ICI Nala (tapping)	7.85 MLD	1
8	Rising main (IC Nala IPS to collection chamber)	800mm-φ	6.450 km
9	Rising main (Sundar Nagar IPS to collection chamber)	800mm-φ	0.547 km
10	Common Gravity main (collection chamberto MPS)	2000mm- φ	1.948Km
11	Sewer network	16.624 km	
		350mm-φ	2.258 km
		400 mm-φ	0.611 km
		450 mm-φ	0.704 km
		500 mm-φ	0.718 km
		600 mm-φ	1.046 km
		700 mm-φ	1.079 km
		800 mm-φ	3.226 km
		900 mm-φ	1.171 km
		1000 mm- φ	0.060 km
		1200 mm-φ	2.290 km
		1600 mm-φ	1.635 km
		2000 mm-φ	1.826 km
12	Manhole		308 nos.

5.2 UNNAO FACILITIES

Project wise components details of Unnao Facilities are given in table 5.2:

Table 5.2: Unnao Facilities

SN	STP Facility	Capacity/Dia./Size	Nos./Length
Date of Start- Effective Date (11.10.2019)			
Scope of Work- New Construction and O&M			
1.	STP	15 MLD	1
2.	Sump cum Pump house (MPS)	40 MLD	1
3.	I&D works (Nala tapping)	90 MLD	1
4.	Trunk Sewer	1200mm ϕ	3.6Km
5.	Manholes		46 nos.
6.	Rising main (MPS to STP)	750mm ϕ	100m
7.	Rising main (bypass)	750mm ϕ	100m
8.	Effluent gravity channel (STP to discharge point)	1.5m x1.0m	300m
9.	Effluent disposal drain	700mm	570m

5.3 SHUKLAGANJ STP FACILITIES

Project wise components details of Shuklaganj STP are given in table 5.3:

Table 5.3: Shuklaganj Facilities

SN	STP Facility	Capacity/Dia./Size	Nos./Length
Date of Start- Effective Date (11.10.2019)			
Scope of Work- New Construction and O&M			
1.	STP	5 MLD	1
2.	Sump cum Pump house (MPS)	20 MLD	1
3.	Connecting sewer (in zone 2)	400-500mm ϕ	200m
	Effluent Disposal line	400mm ϕ	310m
	(I&D to STP)	600mm ϕ	430m
	I&D works (Nala tapping)	45 MLD	1
4.	Collection chamber	3.5mx3.6mx1m	1
5.	Rising main (MPS to STP)	500mm ϕ	50m
6.	Rising main (bypass)	500mm ϕ	50m
7.	Effluent channel (STP to discharge point)	1.5m x1m	100m

5.4 JAJMAU (PHASE I) FACILITIES

Project wise components details of Jajmau are given in table 5.4:

Table 5.4: Jajmau Facilities

SN	STP Facility	Capacity/Dia./Size
Date of Start- Effective Date (11.10.2019)		
Scope of Work- Renovation and O&M		
1	STP (ASP) with power Generation	130 MLD
2	Sump cum Pump house (TEPH)	200 MLD
3	CCT	173 MLD
4	Nawabganj IPS	14.35 MLD
	PH1	5.35 MLD
	PH2	9 MLD
7	Parvat IPS	66.67 MLD
	PH1	32.83 MLD
	PH2	21.6 MLD
	PH3	12.4 MLD
11	Baba Ghat / Muar mill IPS	7.42 MLD
	Guptar Ghat IPS	1.44 MLD
	Jajmau CSPA	129.6 MLD

5.5 JAJMAU PHASE II STP FACILITY

Project wise components details of Jajmau Phase II are given in table 5.4:

SN	STP Facility	Capacity/Dia./Size
Date of Start- Effective Date (11.10.2019)		
Scope of Work- Renovation and O&M		
1	Khalasi Lane IPS	50.69 MLD
2	Sanjaypuram IPS	4.03 MLD
3	Jajmau MPS	25 MLD

5.6 BINGAWAN FACILITIES

Project wise component detail of Bingawan is given in table 5.5:

Table 5.5: Bingawan Facilities

SN	STP Facility	Capacity/Dia./Size
Schedule Handing Over Date- 01.04.2019		
Scope of Work- Renovation and O&M		
1	STP (USAB)	210 MLD
2	Installation of online monitoring system (RTOLMS)	
3	Bingawan MPS	200 MLD
4	Rakhimandi IPS	108 MLD
5	Halwakhanda IPS	69.12 MLD
	Munshipurwa IPS	18.79 MLD
7	Sisamau Nala (tapping)	8 MLD

5.7 SAJARI FACILITIES

Project wise component detail of Sajari is given in table 5.6

Table 5.6: Sajari Facilities

SN	STP Facility	Capacity/Dia./Size
Schedule Handing Over Date- 11.10.2019		
Scope of Work- O&M for 15 years		
1	STP on ASP Technology	42 MLD
2	MPS	42.24 MLD
3	Chakeri IPS	14.33 MLD
4	Sanigawan IPS	14.33 MLD

6. PHYSICAL PROGRESS OF WORK

As per the provision of Concessionaire Agreement, effective date of the project was to be declared before 19th April 2019. Effective date for work execution under HAM Kanpur project was declared on 11th October 2019. Hence, work related to construction / execution of new STP facilities and related infrastructure started after effective date i.e.

- i. transfer of land for STP in Pankha from KDA;
- ii. permission of laying of sewer line along road in Pankha from KDA;
- iii. Unnao & Shuklaganj and renovation of existing facilities i.e. Jajmau 130 MLD.

The overall physical progress of the facilities have been taken in the same proportion as financial progress as per milestones in approved Construction Plan. Overall progress can be monitored as project works have been divided in eight milestones each having progress of 12.5%. Execution of works of new STP facilities and O&M of existing facilities were hampered because of COVID-19 pandemic. Nationwide lockdown was imposed in April 2020 to June 2020 due to which work progress was affected severely. Again in April 2021, due to second wave of COVID-19 progress of work was again affected as majority of workers, staff and officials were affected by the second wave of COVID pandemic.

Once process of unlock started, the Concessionaire was asked to speed up the work. The Concessionaire submitted revised construction plans for new STP construction facilities compensating relevant construction milestone works with extended timeline. Originally, the scheduled date of project completion was 10th October 2021 i.e. 24 months from the effective date. But due to COVID pandemic and heavy rainfall during monsoon season of 2021, milestone works were lagging far behind the schedule. On dated 03.09.2021, in the JMD UPJN meeting, new target date for completion of balance works of Pankha and Unnao STPs was given i.e. 15th Dec. 2021. But the works of these STPs couldn't be completed on 15th Dec. 2021 due to inadequate deployment of manpower and poor work planning / lack of double shift working at these facilities. In the NMCG meeting dated 30.12.2021, the Concessionaire assured to make Pankha plant operational on 15.01.2022 by taking Thermal Nala-A flow into the STP. For Unnao STP, NMCG directed the Concessionaire to complete the works of STP by 31.01.2022.

In the NMCG meeting dated 17.02.2022 the Concessionaire requested for final time extension due to COVID-19 1st & 2nd waves as per guidelines released by GOI and also requested for extension due to additional works under variation. With above, the Concessionaire requested for EOT for Pankha till 25/04/2022 and for Unnao till 15/05/2022. DG NMCG discussed EOT with UPJN and PE and it was decided to grant the EOT for the aforesaid period with condition of double penalty if works still not completed within extended time. The progress of construction of new STP facilities is given in following headings.

During 11th & 12th April 2022, ED (T) along with Mr. Rajat Kumar Gupta, SWMS NMCG visited Kanpur to know about the status and progress of the project. It was noted that due to fund issues with KRMPL, desired progress of STPs has not been achieved. PE informed that at Pankha and Unnao STPs 85-90% of civil works are completed but due to non supply / erection of E&M

equipments and incomplete works of sewer laying/manholes and IPS (Sundar Nagar & ICI Nala) progress is not increasing. Also, since last month manpower is extremely low (15-20) and KRMPL will not be able to complete the Pankha and Unnao STPs at scheduled extended dates.

In the NMCG meeting dated 27.04.2022, chaired by DG, progress and status of HAM Kanpur project was again discussed. It was noted that KRMPL has missed the final deadline i.e. 25.04.2022 for the completion of Pankha STP and will also miss the Unnao STP completion date i.e. 15.05.2022. DG, NMCG expressed displeasure towards KRMPL and after discussion completion dates of Pankha and Unnao were decided as 15.07.2022 and 15.06.2022 respectively. DG, NMCG also put condition that failing to complete the mentioned plants on time KRMPL will be subjected to triple fold penalty.

On dated 5th & 6th June 2022, DG, NMCG along with ED (T) and Mr. R.K. Gupta, SWMS NMCG visited Kanpur for progress review of HAM Kanpur Project. During visit DG NMCG was disappointed with the KRMPL regarding slow progress of the project. DG NMCG gave strict directions to increase the manpower, required machinery and expedite the Pankha, Unnao, Jajmau and Sajari STP works. New timeline to complete Pankha & Unnao STP with full plant operation on SCADA control given is 31/07/2022 and 15/07/2022 respectively.

In the NMCG meeting dated 02/08/2022 and Kanpur visit dated 08/08/2022, ED (P) NMCG gave strict directions to increase the manpower, required machinery and expedite the Pankha, Unnao, Jajmau and Shuklaganj STP works. New timeline to complete Pankha, Unnao & Shuklaganj STP with full plant operation on SCADA control given is 31/10/2022, 15/10/2022 and 13/06/2022 respectively.

In the NMCG meeting dated 05/09/2022 ED (P) NMCG again reviewed the progress status and gave strict directions to increase the manpower, required machinery and expedite the Pankha, Unnao, Jajmau and Shuklaganj STP works.

In the NMCG meeting dated 01/11/2022 ED (P) NMCG reviewed the progress status and gave strict directions to increase the manpower, required machinery and expedite the Pankha, Unnao, Jajmau and Shuklaganj STP works. New date for completion of Pankha and Unnao STPs is 20/12/2022.

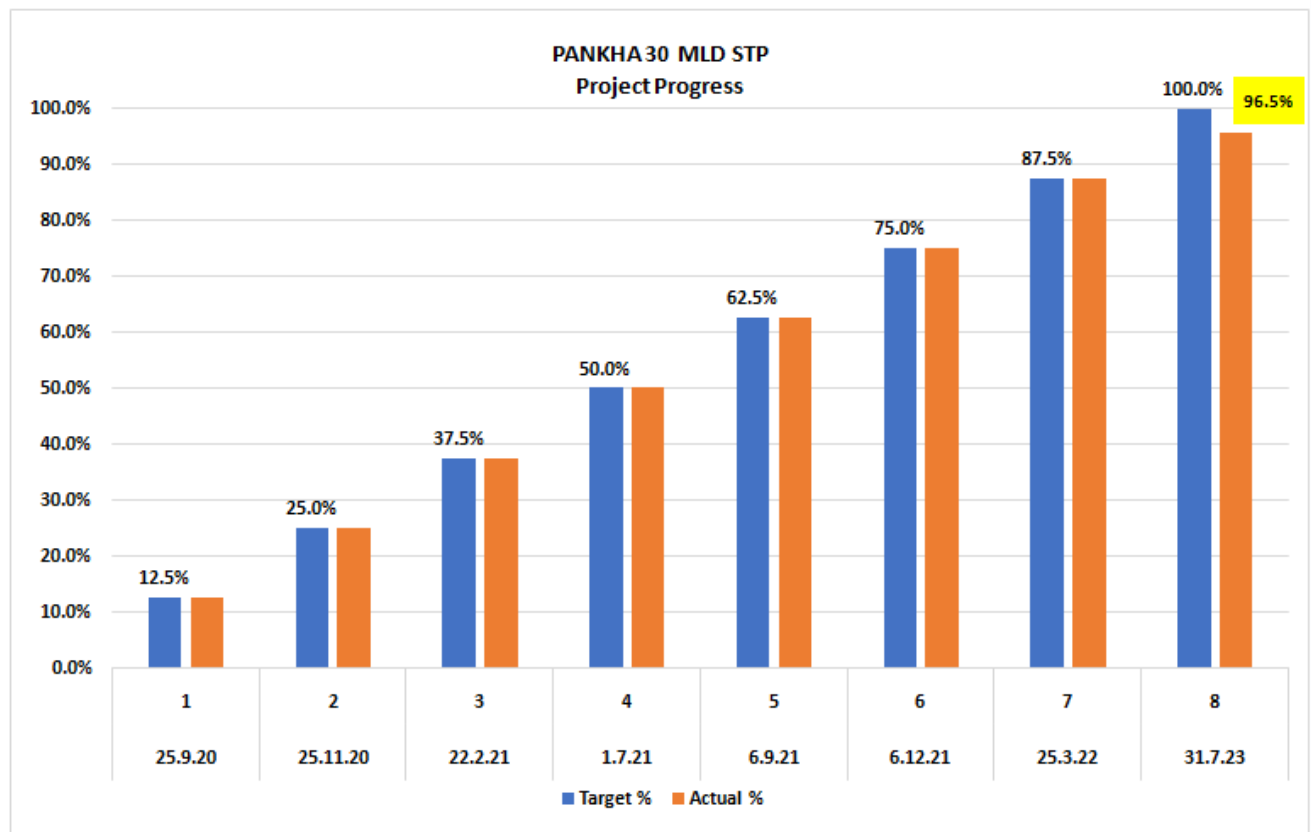
In the NMCG meeting dated 06/02/2023 ED (P) NMCG reviewed the progress status and gave strict directions to increase the manpower, required machinery and expedite the Pankha, Unnao, Jajmau and Shuklaganj STP works. New date for completion of Pankha and Unnao STPs are 15/03/2023 and 30/04/2023 respectively.

During Secretary GOI Kanpur visit dated 14-15 May 2023, the Concessionaire was directed to complete the balance works of Pankha, Unnao and Jajmau STP by 15 June 2023. For Shuklaganj STP, directions were given to expedite the installation of EMI equipments in the presence of OEMs and complete the plant by Oct 2023.

A meeting for review of the progress and balance works of HAM Kanpur project was held on 27/07/2023 at the office of MD, UPJN (Rural) Lucknow. Considering critical situation of the project, MD, UPJN directed KRMPL to complete the balance works of the Pankha, Unnao and Shuklaganj STP and associated infrastructure on emergency level and to ensure the compliance of the O&M plants of Bingawan, Sajari and 43 MLD STP Jajmau Phase II at the earliest.

6.1 MILESTONE WISE ACTIVITIES AND PROGRESS: PANKHA STP FACILITIES

- Total progress of 30 MLD Pankha STP till June 2023 is 96.5%.
- Manpower deployed was 30-50 nos.
- 7 milestones have been achieved out of total 8.
- 8th Milestone was due on 25/03/2023;
- During meeting on dated 27/07/2023 at the office of MD, UPJN (Rural) Lucknow, the Concessionaire was directed to complete the balance works of Pankha STP by 15 August 2023.

**Balance Works of Pankha STP:**

- Horticulture
- RTOLMS data work is pending
- DO Analyzer installation pending as per CA
- All Mechanical equipment testing & commissioning work is pending.
- Finishing works of STP and IPSs, campus development, internal roads and drainage are pending in Civil works. Anti skid tiles are to be installed at all new STPs.
- Supply and installations of some equipments are balance in E&M works. Punch list of balance works is attached in Annexure 2.
- MD, UPJN directed that 8th milestone shall be released when 100% works of Pankha STP will be completed by KRMPL.

SUMMARY OF MILESTONE WISE PROGRESS AT PANKHA STP

Milestone	Schedule Completion date	Actual completion date	Milestone Amount (Rs.)	Targeted Progress till 31.07.2023		
				Milestone Amount (Rs.)	% Target	% Achieved
1st milestone	25.09.2020	25.09.2020	12,48,39,750.00	1248,39,750	12.50%	12.50%
2nd milestone	25.11.2020	25.11.2020	12,48,39,750.00	1248,39,750	12.50%	12.50%
3rd Milestone	22.02.2021	22.02.2021	12,48,39,750.00	1248,39,750	12.50%	12.50%
4th Milestone	01.07.2021	01.07.2021	12,48,39,750.00	1248,39,750	12.50%	12.50%
5th Milestone	06.09.2021	06.09.2021	12,48,39,750.00	1248,39,750	12.50%	12.50%
6th milestone	06.12.2021	06.12.2021	12,48,39,750.00	1248,39,750	12.5%	12.50%
7th milestone	25.03.2022	25.03.2022	12,48,39,750.00	1248,39,750	12.5%	12.50%
8th milestone	25.03.2023 Approval pending	Not completed	12,48,39,750.00	907,27,739	12.5%	9.08%
			99,87,18,000.00	9646,05,989	100%	96.58%

Unit Wise Progress Status of 30 MLD STP Pankha

STP Units	Target %	Achieved %
I&D structure (All 3)	100%	93%
Sewer Laying (15 km of 16.624)	100%	90%
Manholes (245 completed of 308)	100%	87%
Rising Main (6.65 km of 7 km)	100%	97%
MPS	100%	97%
PTU	100%	95%
SBR	100%	98%
Air Blower	100%	96%
CCT	100%	98%
Chlorination Room	100%	95%
Supernatant Sump	100%	98%
Sludge Thickener	100%	98%
Centrifuge Building	100%	95%
Effluent Disposal System	100%	95%
Admin Building	100%	96%
Staff Quarter	100%	98%
Guard Room	100%	98%
Transformer Yard	100%	97%
DG Set	100%	97%

Boundary Wall

100%

95%

Milestone Wise Progress of Work

Detail of Milestone wise progress is given in the **Annexure 1** attached separately with this MPR.

PHOTOGRAPHS OF PANKHA STP SITE



MPS works



VCB Panel & Admin Building



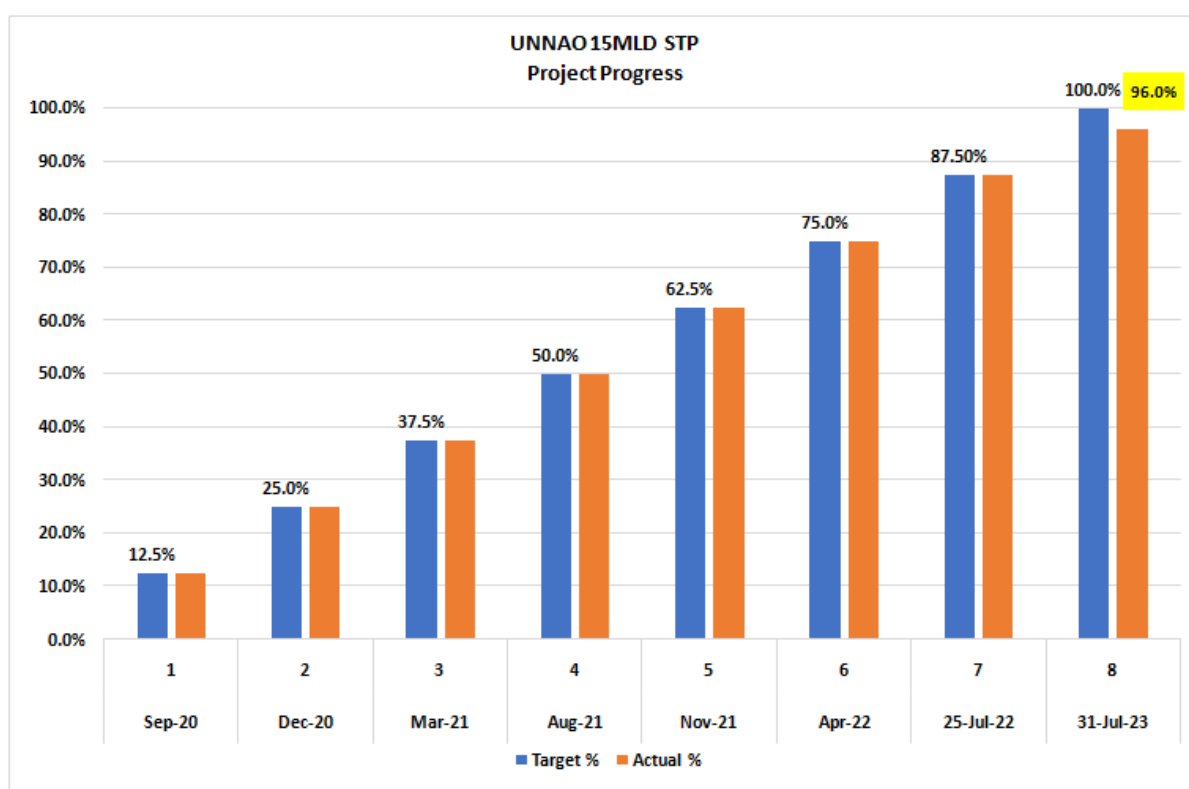
Chlorination Room



Centrifuge Building

6.2 MILESTONE WISE ACTIVITIES AND PROGRESS: UNNAO STP

- Total progress till July 2023 is 96%.
- Till date 7 milestones out of 8 completed.
- Manpower deployed at the 15 MLD STP Unnao site was in the range of 20-30 nos.
- Sewer Line cleaning Works - To be completed by August 2023
- Intake of sewer - To be completed by September 2023
- KRMPL assured that by October 2023 plant will be operational.

**SEWER LINE CLEANING:**

- Cleaning / de-silting work of 2800m Sewer line out of 3200m has been done.
- Pipe cleaning work in progress - 587 meters,
- Pipe cleaning work balance- 224 meters,
- Manhole - 2 Nos. Pending.
- Desilting through manhole no. 37 & dewatering through manhole no. 38 in progress for rectification of manhole no. 38.
- KRMPL has been directed to increase the no. of manpower and expedite the cleaning / repair works before rain starts.

EARTH FILLING STATUS:

- Total 13,000 cum earth filling was done by KRMPL out of total 19,000 cum. 8000 cum earth filling is still pending.
- Earth filling activity was stopped since 11.02.2023 and despite many letters by PE and UPJN, KRMPL has not started balance earth filling work.

- Due to lack of above activities, there is no progress in STP campus development and following works are not completed:
 - Internal roads and drainage works are pending.
 - Plinth protection work not started till date.
 - Fixing of entrance gate is pending.
 - Coping and painting work is pending.
 - Electric pole & lighting fixing work is pending.
- During visit it was noticed that due to negligence of KRMPL on backfilling and proper compaction works, the STP campus is in very bad condition. There are frequent undulations, big ditches and accumulation of rain water due to which major part of the plant campus is inaccessible and risky. Photographs are attached below for reference.



- KRMPL need to expedite the earth filling and related activities including layer by layer mechanical compaction. UPJN and PE directed KRMPL for compaction test/field dry density test (FDD) in presence of UPJN/STC and submit IIT report for compaction test of back filling but KRMPL not complied till date.
- KRMPL needs to expedite earth filling and related activities including layer by layer mechanical compaction. Further Field Dry Density (FDD) test should be conducted for each layer after compaction.

STATUS OF DIFFERENT STP UNITS ARE:

STP Units	Target %	Achieved %
I&D structure	100%	100%
Sewer Laying (3.2 km of 3.2 km)	100%	90% (Cleaning and testing due)
Manholes (42 completed of 42)	100%	90% (Cleaning and testing due)
MPS	100%	100%
PTU	100%	100%

SBR	100%	100%
Air Blower	100%	100%
CCT	100%	95%
Chlorination Room	100%	95%
Supernatant Sump	100%	95%
Sludge Thickener	100%	95%
Centrifuge Building	100%	100%
Effluent Disposal System	100%	100%
Admin Building	100%	93%
Staff Quarter	100%	95%
Guard Room	100%	97%
Transformer Yard	100%	95%
DG Set	100%	95%
Boundary Wall	100%	90%

SUMMARY OF OVERALL PROGRESS AT UNNAO STP

Milestone	Schedule Completion date	Actual completion date	Milestone Amount (Rs.)	Progress till 31.07.2023		
				Milestone Amount (Rs.)	% Target	% Achieved
1st milestone	25.09.2020	25.09.2020	4,78,36,250.00	47836250.0	12.50%	12.50%
2nd milestone	06.12.2020	06.12.2020	4,78,36,250.00	47836250.0	12.50%	12.50%
3rd Milestone	25.03.2021	25.03.2021	4,78,36,250.00	47836250.0	12.50%	12.50%
4th Milestone	07.08.2021	07.08.2021	4,78,36,250.00	47836250.0	12.50%	12.50%
5th Milestone	15.11.2021	15.11.2021	4,78,36,250.00	47836250.0	12.50%	12.50%
6th milestone	25.03.2022	04.04.2022	4,78,36,250.00	47836250.0	12.50%	12.50%
7th milestone	25.04.2022	Not completed	4,78,36,250.00	47836250.0	12.50%	12.50%
8th milestone	15.06.2022	Not completed	4,78,36,250.00	325,41,212.0	12.50%	8.50%
Overall Progress			38,26,90,000.00	3673,94,963	100%	96.00%

Milestone Wise Progress of Work

Detail of Milestone wise activities and their progress of work for Unnao STP is given in the **Annexure 2** attached separately with this MPR.

PHOTOGRAPHS OF UNNAO STP SITE



MPS final works



PTU



SBR



Sludge Thickener



HT VCB Panel testing done

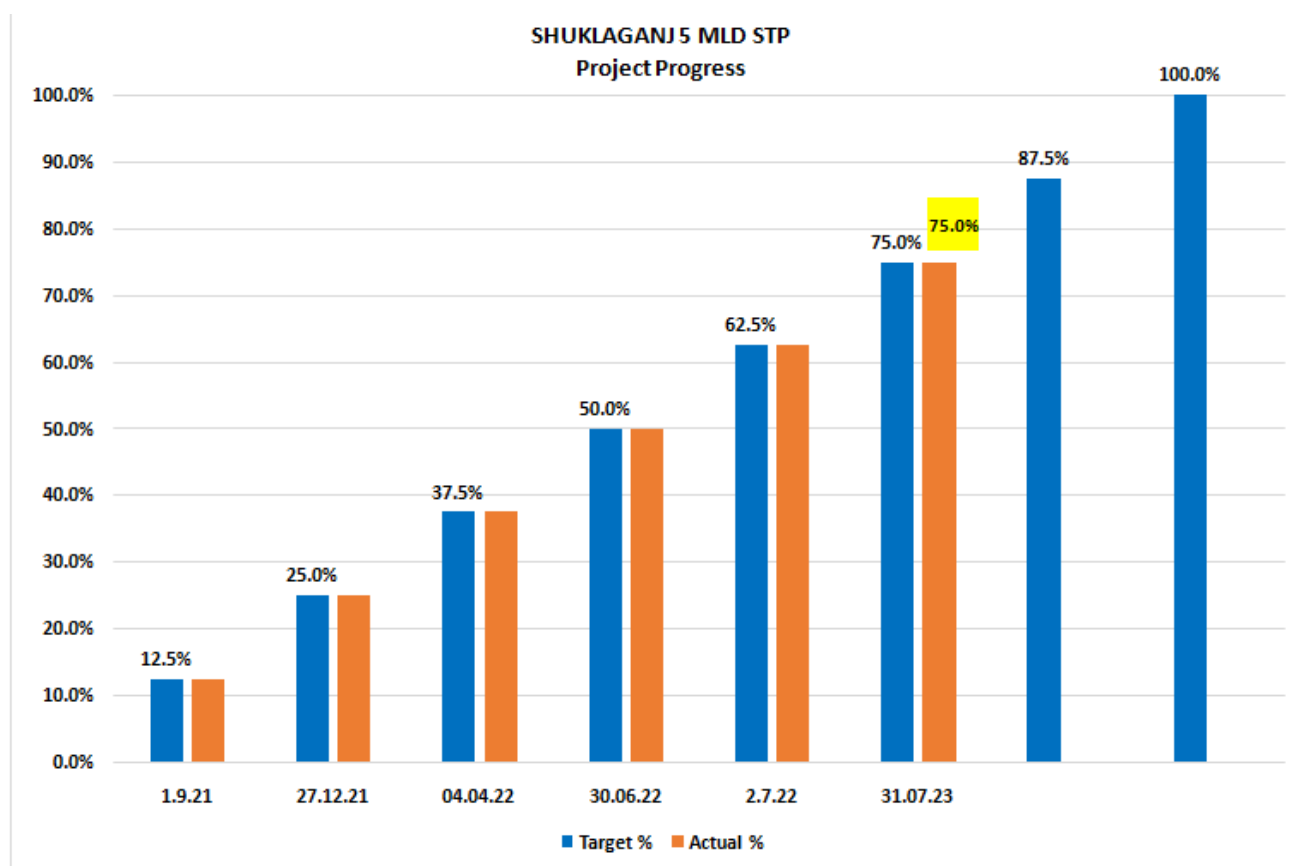


Sewer Line and Manhole Cleaning at MH 37 on 26.07.2023

6.3 MILESTONE WISE ACTIVITIES AND PROGRESS: SHUKLAGANJ STP

Progress of construction works for 05 MLD STP at Shuklaganj is very slow. Total progress till July 2023 is 75%. Status and progress of Shuklaganj STP is as following:

- During July 2023, the manpower deployed at the 05 MLD STP site was 15-20 nos. KRMPPL need to increase the manpower up to 100 to achieve the target on time;
- Total 6 milestones have been completed out of 8.
- In the MOM dated 03.07.2023, date for completion of plant is given 30 Dec. 2023.
- KRMPPL assured to complete the plant by December 2023.
- Civil works of STP completed – MPS, Sewer Line, Thickener, Supernatant Sump, Coarse screen chamber, Inlet Chamber, CCT, Staff Quarter and Guard Room;



- Mechanical equipment shifting (Decanter, CCT Panel, DG and Pumps) has been done. KRMPPL need to expedite installation of mechanical equipments in the presence of OEMs.
- During visit, progress of different STP components was checked. Detail is given below:

STP Units	Target %	Achieved %
I&D	38%	10%
Sewer Laying (900 mm, 424m)	38%	10%
Manhole (09 nos.)	38%	0%
Pumping Main (500mm dia, 80 m)	38%	0%

MPS	38%	75%
PTU	38%	20%
SBR	38%	65%
Blower	38%	20%
CCT, Chlorination Building	38%	50%
Thickener, Supernatant Sump	38%	75%
Centrifuge	38%	15%
Admin Building	38%	20%
Staff Quarter	38%	45%
Guard Room	38%	70%
Boundary Wall	38%	50%

SUMMARY OF OVERALL PROGRESS AT SHUKLAGANJ STP

Milestone	Schedule Completion date	Actual completion date	Milestone Amount (Rs.)	Progress till 31.07.2023		
				Milestone Amount (Rs.)	% Target	% Achieved
1st milestone	01.09.2021	01.09.2021	2,66,18,775.0	266,18,775.0	12.50%	12.50%
2nd milestone	27.12.2021	27.12.2021	2,66,18,775.0	266,18,775.0	12.50%	12.50%
3rd Milestone	25.03.2022	04.04.2022	2,66,18,775.0	266,18,775.0	12.50%	12.50%
4th Milestone	02.05.2022	29.06.2022	2,66,18,775.0	266,18,775.0	12.50%	12.50%
5th Milestone	13.12.2022	10.02.2023	2,66,18,775.0	193,11,049	12.50%	9.07%
6th milestone	13.02.2023	11.07.2023	2,66,18,775.0	174,07,484	12.50%	8.17%
7th milestone	12.11.2022	-	2,66,18,775.0	80,26,192	12.50%	3.77%
8th milestone	14.12.2022	-	2,66,18,775.0	86,50,908	12.50%	4.06%
Overall Progress	21,29,50,200.0			1598,70,732	100%	75.07%

Milestone Wise Progress of Work

Detail of Milestone wise activities and their progress of work for Shuklaganj STP is given in the **Annexure 3** attached separately with this MPR.

Photographs of Shuklaganj STP



MPS works



PTU column casting



Supernatant Sump



CCT Building works

7. STATUS AND ISSUES OF JAJMAU (PHASE – 1) 130 MLD STP AND IPS REHABILITATION

Till July 2023 overall progress is **82.40%**.

- **Aeration Tank** – All 18/18 aerators replaced; 3 of 3 tanks rehabilitation completed.
- **Thickener** – One thickener testing and commissioning still pending.
- **New CCT** – Caustic tank, neutralization tank and recirculation pumps, ejector pipes and valves etc. supply and installation pending
- **TEPH** – 11 pumps have been supplied but all accessories of valves, NRV, pipe and Dismantling Joint and ARV etc pending
- **Sludge Digester (2 nos)** – 2nd Digester cleaning still pending
- **Gas holder (02 nos).**- Supply done installation pending
- **BFP** – 2 BFP installed out of 4 and 4 BFP supply still pending

MILESTONE WISE ACTIVITIES AND PROGRESS

Milestone	Schedule Completion date	Actual Completion date	Milestone Amount	Targeted progress till 31.07.2023		
				Milestone Amount	% Target	% Achieved
1st	15.10.2021	15.10.2021	240160000.00	240,160,000	25%	25%
2nd	15.03.2022	15.03.2022	240160000.00	240,160,000	25%	25%
3rd	15.06.2022	06.03.2023	240160000.00	234,858,228	25%	24.44%
4th	09.08.2022	Not completed	240160000.00	76,426,047	25%	7.95%
Overall progress	960640000.000			791,604,275	100%	82.40%

Mechanical equipment Status for 130 MLD STP Jajmau

SN	Mechanical Equipment Name	Total QTY. (Nos)	Supplied (Qty.)	Pending Supply Qty.(Nos)	Drawing Submission pending from KRMPL ends
1	Poly Dosing Tank	8	8	0	
2	Belt Filter press	4	4	0	
3	Floculator Tank	4	2	0	
4	Belt	8	4	4	
5	EOT	1	0	1	Pending
6	Valves(NRV, Sluice Valve) for Supernatant pumps	1 Lot	0	0	Pending
7	Caustic Solution Tank	1	0	1	
8	Caustic pump	2	0	2	
9	Absorption tower	1	0	1	
10	Booster Pumps	3	0	0	
11	Ejector	3	0	0	
12	PVC Pipe & Fittings for chlorination system	1 Lot	0	1 Lot	
13	Chlorine Tonners	25	0	25	

SN	Mechanical Equipment Name	TotalQTY. (Nos)	Supplie d (Qty.)	Pending Supply Qty.(Nos)	Drawing Submission pending from KRMPL ends
14	Piping / valves for Chlorine gas line Gas chlorine pipework	1 Lot	0	1 Lot	
15	Landia system	1 Lot	100%		
16	Gas Holder Membrane type domeaccessories	1 lot	0		
17	Multistage Centrifugal Blowers	2	0	0	
17	BEM heat Exchanger	3	2	1	
18	Dehumidifier	1	0	1	
19	Radiator	2 lot	0	2 lot	
20	Ventilation system	2 lot	0	2 lot	
21	Gas Engine feeding blower	2	0	2	
22	Main Water Pump	2	0	2	
23	Auxiliary Water Pump	2	0	2	
28	Valves, NRV& DJ for TEPH	1 Lot	1 lot	0	
29	Valves, NRV & Fittings for TSPH	1 Lot	1 lot	0	
30	Valves, NRV& DJ for RSPH	1 Lot	0	1 Lot	Pending
31	Filtrate pump-7.5 kw	2	2	0	
32	Sluice Gates	15	0	15	Pending

EMI equipment Status for 130 MLD STP Jajmau

Electrical Equipment Name	Total QTY. (Nos)	Supplied (Qty.)
DG set-2 nos.	2 nos.	Pending
LPBS-91 nos.	91 nos.	Pending
Main LT PCC Panel-1nos	1 sets	Pending
LT distribution panel-1 nos.	1 nos.	Pending
T.E.P.H panel-1 nos.	1 nos.	Pending
APFC Panel -2 nos.		

EMI equipment Status for 130 MLD STP Jajmau

Unit /Location	Items / Description of Work	Total Quantity	Supply
Mechanical & Manual Fine screen chamber	Differential Ultra level transmitter	6 Nos	Pending
Grit Chamber	torque Switch	3Nos.	Completed
Parshall flume	Open channel flow meter	1nos.	Completed
	Online water quality Analyzer	1 nos.	Pending
Distribution Chamber	Ultrasonic level transmitter	1 nos.	Pending
Primary sedimentation tank (PST)	torque Switch	3 nos.	Pending
Aeration tank	DO meter	3 nos.	Pending
Final Sedimentation tank (FST)	torque Switch	3 nos.	Completed
	Pressure indicators	4 nos.	Pending

Unit /Location	Items / Description of Work	Total Quantity	Supply
Return sludge Pump house	Ultrasonic level transmitter	1 nos.	Pending
Sludge Thickener & Blending Tank	torque Switch	2 nos.	Completed
	level indicating transmitter	1nos.	Pending
	Ultrasonic level transmitter	2nos.	Pending
Thickened Sludge Sump	level indicating transmitter	1nos.	Pending
	Ultrasonic level transmitter	1nos.	Pending
Digester Unit	level indicating transmitter	1nos.	Pending
	Ultrasonic level transmitter	1nos.	Pending
	Radar level transmitter	2nos.	Pending
Belt filter press feed pumps unit	pressure indicator	4 nos.	Pending
Supernatant Sump unit	pressure indicator	4 nos.	Pending
	level indicating transmitter	1 nos.	Pending
Poly Dosing System	Ultrasonic level transmitter	1nos.	Pending
	Pressure indicator	1 nos.	Pending
	Level switch,	1 nos.	Pending
	conductivity type level switch	8 nos.	Pending
Biogas handling unit	Flow meter,	2 nos.	Pending
	Temperature gauge	1 nos.	Pending
	Level transmitter	1 nos.	Pending
	Gas Analyzer	1 nos.	Pending
Chlorination Building	Leak absorption system	1 nos.	Pending
	Pressure gauges	1nos.	Pending
Chlorine contact Tank (CCT)	Level switch	1nos.	Pending
	Pressure gauges	1nos.	Pending
Treated effluent Pump house	Pressure gauges	11 nos.	Pending
	Ultrasonic level transmitter	1 nos.	Pending
Overhead Ground water tank	Floating type level switch	2 nos.	Pending
PLC / SCADA		Sets	Pending

Nawabganj IPS: Supply of Electrical & Instrumentation equipments List:

Unit /Location	Items / Description of Work	Total Qty	Supply
Wet well	Ultrasonic Level transmitter	2 nos.	Pending
Pump House-1	Pressure indicator	3 nos.	Pending
	pressure transmitter	3 nos.	Pending
	Inlet flow meter	1 nos.	Pending
Pump House-2	Pressure indicator	4 nos.	Pending
	pressure transmitter	4 nos.	Pending
	Inlet flow meter	1 nos.	Pending

Parvat IPS: Supply of Electrical & Instrumentation equipments List:

Unit /Location	Items / Description of Work	Total QTY	Supply
Wet well	Ultrasonic Level transmitter	1nos.	Pending
Pump House-1	Pressure indicator	3nos.	Pending
	pressure transmitter	3nos.	Pending
	Inlet flow meter	1nos.	Pending
Pump House-2	Pressure indicator	2nos.	Pending
	pressure transmitter	2nos.	Pending
	Inlet flow meter	1 nos.	Pending
Pump House-3	Pressure indicator	2nos.	Pending
	pressure transmitter	2nos.	Pending
	Inlet flow meter	1nos.	Pending

Babaghat IPS: Supply of Electrical & Instrumentation equipments List

Unit /Location	Items / Description of Work	Total QTY	Supply
Manual coarse screen channel	Ultrasonic Level transmitter	1 nos.	Pending
Wet Well	Pressure indicator	3nos.	Pending
	pressure transmitter	3nos.	Pending
	Inlet flow meter	1nos.	Pending
	PMCC Panel	1nos.	Pending
	APFC Panel	1nos.	Pending

CSPS: Supply of Electrical & Instrumentation equipments

Unit /Location	Items / Description of Work	Total QTY	Supply
Coarse screen channel (Mechanical)	Level indicating transmitter, 2 Nos.	2nos.	Pending
Wet well	Ultrasonic level transmitter, 1 Nos.	1nos.	Pending
Pump House	Pressure indicator , 7 Nos.	7 nos.	Pending
	pressure transmitter , 7 Nos.	7nos.	Pending
	Inlet flow meter-1nos	1 nos.	Pending
Electrical & Related Works	Transformer 630 KVA -2nos	2 nos.	Completed
	DG set	2 nos.	Pending
	VFD Starter -7 nos	7 nos.	Pending
	Power Distribution board-3 nos.	3 nos.	Pending
	APFC Panel-2 nos	2 nos.	Pending

OTHER ISSUES AND STATUS

SN	Equipment	Status in May2023	Status in June 2023	Compliance / Remarks
1	Collection Chamber	<ul style="list-style-type: none"> Toe-guard is not Installed. 	<ul style="list-style-type: none"> Toe-guard is not installed. 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974
2	Fine screen chamber (Mechanical/Manual)	<ul style="list-style-type: none"> Mechanical Fine Screen no. 1 & 2 are operational but not serving its purpose. Automation System is not installed. 	<ul style="list-style-type: none"> Mechanical Fine Screen no. 1 & 2 are operational but not serving its purpose. Automation System is not installed. 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974
3	Grit Chamber	<ul style="list-style-type: none"> Installation of LPBS pending Grit classifier no. 2 not working properly. Grit Mechanism No. 3 torque switch was not in working condition. 	<ul style="list-style-type: none"> Installation of LPBS pending Grit classifier no. 2 not working properly. Grit Mechanism No. 3 torque switch was not in working condition. 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974
4	Inlet Flow Meter	<ul style="list-style-type: none"> Flow chart and level scale not installed. 	<ul style="list-style-type: none"> Flow chart and level scale not installed. 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974
5	Primary Sedimentation Tank	<ul style="list-style-type: none"> Overflow was observed in PST No. 1 & PST No.2. Scum box rectification Work pending. Installation of LPBS pending. Torque Switch not working properly for PST No.2. PST-1 Torque switch hooter alarm was not working properly. 	<ul style="list-style-type: none"> Overflow was observed in PST No. 1 & PST No.2. Scum box rectification Work pending. Installation of LPBS pending. Torque Switch not working properly for PST No.2. PST-1 Torque switch hooter alarm was not working properly. 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974
6	Sludge Thickener Tank	<ul style="list-style-type: none"> Sludge thickener no. 1 is operational but torque switch are not working properly & Thickener no.2 is under renovation 	<ul style="list-style-type: none"> Sludge thickener no. 1 is operational but torque switch are not working properly & Thickener no.2 renovation completed 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974
7	Blending Tank Agitator	<ul style="list-style-type: none"> Installation of LPBS pending 	<ul style="list-style-type: none"> Installation of LPBS pending 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974

8	Aeration Tank	<ul style="list-style-type: none"> 3 out of 3 Aeration tank operational. 	<ul style="list-style-type: none"> 3 out of 3 Aeration tank operational. 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974
9	Return Sludge PumpHouse	<ul style="list-style-type: none"> Out of 4 pumps only 2 pumps were operational. Renovation work for Pump no. 4 pending. Replacement of valves, NRVs and pipes are pending. Cable tray, LCS Panel, internal electrification work pending. 	<ul style="list-style-type: none"> Out of 4 pumps only 2 pumps were operational. Renovation work for Pump no. 4 pending. Replacement of valves, NRVs and pipes are pending. Cable tray, LCS Panel, internal electrification work pending. 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974
10	Treated Effluent PumpHouse	<ul style="list-style-type: none"> 8 nos. of pumps are found in operation & 1 nos. of pumps was not in working condition and balance 02 nos. is missing since handover. Cable tray, LCS Panel, internal electrification work pending. 	<ul style="list-style-type: none"> 8 nos. of pumps are found in operation & 1 nos. of pumps was not in working condition and balance 02 nos. is missing since handover. Cable tray, LCS Panel, internal electrification work pending. 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974
11	BFP System	<ul style="list-style-type: none"> 2 no BFP operational and 2 no installation pending 	<ul style="list-style-type: none"> 2 no BFP operational and 2 no installation Pending. BFP painting and shed work pending 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974
12	Supernatant Pumps	<ul style="list-style-type: none"> Supply of pumps & renovation work 	<ul style="list-style-type: none"> Pending 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974
13	Sludge Digester	<ul style="list-style-type: none"> Civil renovation work Supply of equipments 	<ul style="list-style-type: none"> Pending Pending 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974

14	Final Sedimentation Tank	<ul style="list-style-type: none"> FST-1 Torque switch is not working. FST-2 Torque switch hooter alarm was not working properly. Overflow was observed in FST-1 	<ul style="list-style-type: none"> FST-1 Torque switch is not working. FST-2 Torque switch hooter alarm was not working properly. Overflow was observed in FST-1. 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974
15	New CCT & TEPH	<ul style="list-style-type: none"> Wall construction for the TEPH-CCT in progress. TEPH pump foundation walkwayslab in progress. Chlorine building foundation work on progress. 	<ul style="list-style-type: none"> Wall construction for CCT in progress. TEPH pump lintel beam in progress. Chlorine building column work on progress. 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974
16	Power Backup (DGset & DFG)	All 5 out of 5 Nos.DFG sets are non functional, and only 2 no. 1250 KVA rental DG set are available at site for proper operation of plant during shutdown of Power	<ul style="list-style-type: none"> All 5 out of 5 Nos. DFG sets are non functional, and only 2 no. 1250 KVA rental DG set are available at site for proper operation of plant during shutdown of Power. 	<ul style="list-style-type: none"> Refer STC Letter No. 2012 and 1974
17	RTOLMS	<ul style="list-style-type: none"> Design, drawing still pending 	Submitted	Pending from KRMPL'send
18	Sludge disposal system	<ul style="list-style-type: none"> Mr. Madhav Kumarasked KRMPL to Submit the calculation of sludge generation & maintain the daily sludge removal record. NMCG Team directedKRMPL to remove sludge from STP site at the Earliest. 	<ul style="list-style-type: none"> Not complied by KRMPL Not complied by KRMPL 	Refer STC LetterNo. 2012 and 1974
19	New Laboratory	Established but not functional	Established but not functional	Refer STC Letter No. 2012 and 1974
20	Scrubbing & Flaring System	Civil foundationwork done	Installation in progress	Refer STC Letter No. 2012 and 1974

21	Combined Sewage Pumping Station (CSPS)	Pending Civil Work in progress	Pending Civil Work in progress	Refer STC Letter No. 2012 and 1974
22	Substation	HT & LT room civil construction work	Pending	Refer STC Letter No. 2012 and 1974

130MLD STP JAJMAU Site Pictures during renovation period



CCT-TEPH under construction 29.07.2023



HT-LT Panel building under construction



Renovation of Aeration 3 is in completed



Installation of 2 nos of BFP in progress

8. STATUS OF BEP & OTHER DETAILS

Status of BEPs & other detail are given in following table 8.1:

Table 8.1: BEPs and Design & Drawings detail

SN	STP Facility	Design & Drawing Status		Remarks
A	Construction of New STP Facilities			
1.	30 MLD STP Pankha	BEPs: Construction Plan: Structural Design Drawings: Sewer Network : O&M Plan:	Approved Approved All Approved Approved Under Review	Observations on Control philosophy has been sent vide STC letter no. 1923 dated 23.12.2022. KRMPL compliance is pending.
2.	15 MLD STP Unnao	BEPs: Construction Plan: Structural Design Drawings: Sewer Network : O&M Plan:	Approved Approved All Approved Approved Not Submitted	Observations on Control philosophy has been sent vide STC letter no. 1949 dated 08.01.2023. KRMPL compliance is pending.
3.	05 MLD STP Shuklaganj	BEPs: Construction Plan: Structural Design Drawings: Sewer Network : O&M Plan:	Approved Approved All Approved Approved Not Submitted	Observations on Control philosophy has been sent vide STC letter no. 1949 dated 08.01.2023. KRMPL compliance is pending.
B	Rehabilitation and O&M for 15 years			
4.	130 MLD STP Jajmau I	BEPs: Renovation Plan: Structural Design Drawings: O&M Plan:	Approved Approved All Approved Not Submitted	Control Philosophy Under Review.

ANNEXURE

Annexure 1: Milestone Progress of Pankha STP

(Attached Separately)

Annexure 2: Milestone Progress of 15 MLD STP Unnao

(Attached Separately)

Annexure 3: Milestone Progress of 05 MLD STP Shuklaganj

(Attached Separately)

Annexure 4.1: Milestone Progress Report Jajmau 130 MLD

(Attached Separately)

Annexure 4.2: Monthly Activity Report for 130 MLD STP Jajmau

(Attached Separately)

Annexure 5: Inspection Reports of Pankha, Unnao, Shuklaganj & Jajmau for July 2023

Annexure 6: IIT Lab report for July 2023

(Attached Separately)

Annexure 7: Timesheets of Experts

(Attached Separately)

ANNEXURE 8: Monthly Staff Activity – HAM Project Kanpur