

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



सत्यमेव जयते

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)**

(LOA File Number: Pr-12012/41/2018-PPP/NMCG dated 04.02.2019)

Monthly Progress Report

Of

Project Engineer

NOVEMBER-2019



Executing Agency

Uttar Pradesh Jal
Nigam
Benajhabar Road,
Kanpur
Uttar Pradesh -
208002



Funding Agency

National Mission for
Clean Ganga
MoWR, River
Development & Ganga
Rejuvenation,
New Delhi



Project Engineer

Shah technical Consultar
Pvt. Ltd.
7/426 14-O block,
Geeta Nagar
Kanpur
Uttar Pradesh - 208025



Concessionaire

Kanpur River Management
Pvt. Ltd.
Flat no 101,
1st Floor, 3/83, Vishnupuri,
Kanpur, Uttar Pradesh -
208002

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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 programme 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 programme 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 industrialisation and urbanisation 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 programme 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 (Pankha, Unnao & 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 (Jajmau Phase-II, Bingawan & 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 STPs at Unnao, Shuklaganj and Pankha rehabilitation of existing STPs with O&M for 15 years in Kanpur 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.

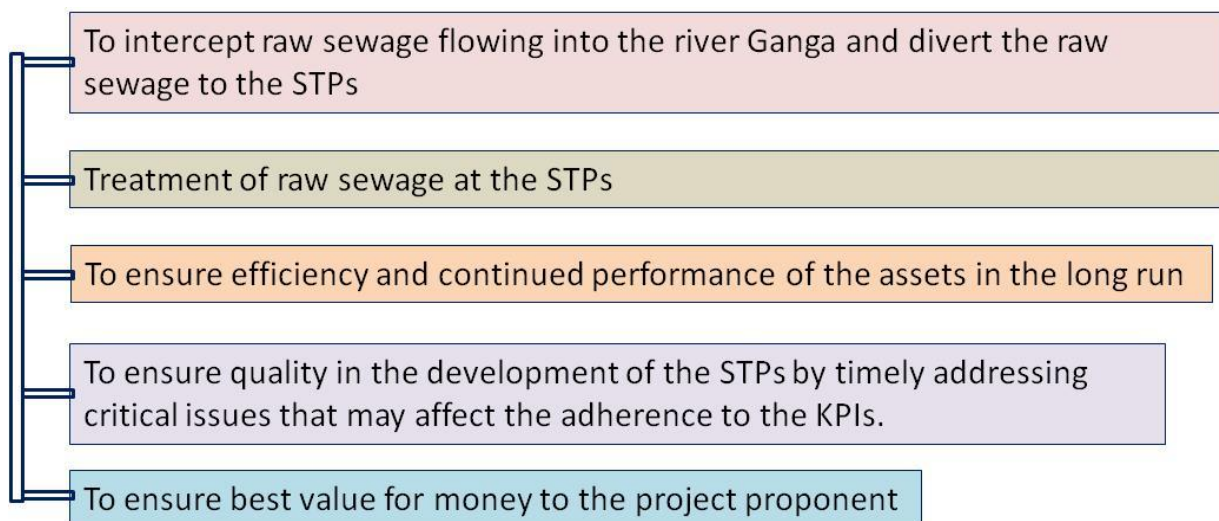


Figure 1: Objectives of NMCG and UP JAL NIGAM

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

Particulars	Description
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’
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 No.	: 14/GM/2018-19
Cost of Project (CAPEX+OPEX)	: ₹ 816.24 Cr
Effective Date	: 11.10.2019
Completion date (as per contract)	: 24 Months from effective date (21 months construction + 3 months running)
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, Renovation and 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 city – Pankha (District –III), Unnao & Shuklaganj – (District Unnao), Jajmau – (District I), Bingawan – (District II) and Sajari – (District IV). Under this project, development and O&M for 15 years of three new STP facilities based on SBR technology with associated infrastructure have been proposed for two districts – Pankha and Unnao & Shuklaganj.

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

5.1 PANKHA FACILITIES (DISTRICT-III)

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

Table 5.1: Pankha Facilities (District-III)

SN	STP Facilities	Capacity/dia. /size	No. of units/length
	Date of Start- Effective Date (11.10.2019)		
	Scope of Work- New Construction and O&M		
1.1	STP	30 MLD	1
1.2	MPS	115MLD	1
1.3	ICI Nala IPS	25 MLD	1
1.4	Sundar Nagar IPS	20 MLD	1
1.5	Thermal Nala (A)(tapping)	22 MLD	1
1.6	Thermal Nala (B)(tapping)	8 MLD	1
1.7	ICI Nala(tapping)	7.85 MLD	1
1.8	Common Collection chamber	-	1
1.9	Rising main (ICI Nala IPS to collection chamber)	800mm- ϕ	6.91km
1.10	Rising main (Sundar Nagar IPS to collection chamber)	800mm- ϕ	0.651km
1.11	Gravity main (Thermal Nala B Tapping to common collection chamber)		
1.12	Common Gravity main (collection chamber to MPS)	2000mm- ϕ	1.948Km
1.13	Sewage network	350mm- ϕ	2.771km
		400 mm- ϕ	1.359km
		450 mm- ϕ	1.272km
		500 mm- ϕ	1.243km
		600 mm- ϕ	1.778km
		700 mm- ϕ	1.487km
		800 mm- ϕ	1.012km

		900 mm- ϕ	2.170km
		1200 mm- ϕ	3.634km
		1600 mm- ϕ	1.596km
		2000 mm- ϕ	1.948km
		Total	20.74km
1.14	Milestones	Date	
	1 st Milestone	11-Oct-2019 to 25-Apr-2020	
	2 nd Milestone	26-Apr-2020 to 10-Jul-2020	
	3 rd Milestone	11-Jul-2020 to 24-Sep-2020	
	4 th Milestone	25-Sep-2020 to 09-Dec-2020	
	5 th Milestone	10-Dec-2020 to 13-Feb-2021	
	6 th Milestone	14-Feb-2021 to 21-Apr-2021	
	7 th Milestone	22-Apr-2021 to 22-Jun-2021	
	8 th Milestone	23-Jun-2021 to 25-Aug-2021	

5.2 UNNAO FACILITIES

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

Table 5.2: Unnao Facilities

SN	STP Facilities	Capacity/ dia. /size	No. of units/length
	Date of Start- Effective Date (11.10.2019)		
	Scope of Work- New Construction and O&M		
1.1	STP	15 MLD	1
1.2	Sump cum Pump house (MPS)	40 MLD	1
1.3	Trunk Sewer	1200mm ϕ	3.2Km
1.4	I&D works (Nala tapping)	40 MLD	1
1.5	Trash screen	7m-1.7m x 0.8m	1
1.6	Grit chamber	12m-4m x 1m	2
1.7	Collection chamber	3.4m-6.2m x 3m	1
1.8	Rising main (MPS to STP)	750mm ϕ	100m
1.9	Rising main (bypass)	750mm ϕ	100m
1.10	Effluent distribution chamber	-	1
1.11	Effluent gravity channel (STP to discharge point)	1.5m x 1.0m	300m
1.12	Effluent disposal drains	-	500m
1.13	Milestones	Date	
	1 st Milestone	12-Oct-2019 to 24-Feb-2020	

2 nd Milestone	25-Feb-2020 to 15-May-2020
3 rd Milestone	16-May-2020 to 30-Jul-2020
4 th Milestone	30-Jul-2020 to 14-Oct-2020
5 th Milestone	15-Oct-2020 to 24-Dec-2020
6 th Milestone	10-Dec-2020 to 01-Mar-2021
7 th Milestone	02-Mar-2021 to 05-May-2021
8 th Milestone	06-May-2021 to 10-Jul-2021

5.3 SHUKLAGANJ FACILITIES

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

Table 5.3: Shuklaganj Facilities*

SN	STP Facilities	Capacity/dia. /size	No. of units/length
	Date of Start- Effective Date (11.10.2019)		
	Scope of Work- New Construction and O&M		
1.1	STP	5 MLD*	1
1.2	Sump cum Pump house (MPS)	20 MLD	1
1.3	Connecting sewer	-	1
1.4	I&D works (Nala tapping)	-	1
1.5	Collection chamber	-	1
1.6	Rising main (MPS to STP)	500mm ϕ	50m
1.7	Rising main (bypass)	500mm ϕ	50m
1.8	Retaining wall		1
1.9	Effluent channel (STP to discharge point)	1.5m x 1m	100m
1.10	Milestones	Land not finalized	

*ABOVE PROPOSALS ARE UNDER REVISION

5.4 JAJMAU FACILITIES

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

Table 5.4: Jajmau Facilities

SN	STP Facilities	Capacity/dia. /size	No. of units/length
A	Phase-I		
	Date of Start- Effective Date (11.10.2019)		
	Scope of Work- Renovation and O&M		
1.1	STP 1 on ASP technology with power Generation	130 MLD	1
1.2	Sump cum Pump house (TEPS)	200 MLD	1
1.3	CCT	173 MLD	1

1.4	Nawabganj IPS	-	1
1.5	Parmat IPS	-	1
1.6	Baba Ghat/Muar mill IPS	-	1
1.7	Guptar Ghat IPS	-	1
1.8	Jajmau CSPS	-	1
B	Phase-II		
	Schedule Handing Over Date- 01.10.2019	Capacity/dia. /size	No. of units/length
	Scope of Work- O&M		
1.1	STP 2 on ASP technology with power Generation	43 MLD	1
1.2	Sanjaypuram IPS	-	1
1.3	Khalisa lane IPS	-	1
1.4	Jajmau MPS	-	1

5.5 BINGAWAN FACILITIES

Project wise components details of Bingawan are given in table 5.5:

Table 5.5: Bingawan Facilities

SN	STP Facilities	Capacity /dia. /size	No. of units/length
	Schedule Handing Over Date- 01.04.2019		
	Scope of Work- Renovation and O&M for 15 years		
1.1	STP on UASB Technology with power generation	210 MLD	1
1.2	Installation of online monitoring system (RTOLMS)		L.S.
1.3	Bingawan MPS	200 MLD	1
1.4	Rakhimandi IPS	100 MLD	1
1.5	Halwakhanda IPS	20 MLD	1
1.6	Munshipurwa IPS	67 MLD	1
1.7	Shisamau Nala (tapping)	8MLD	1

5.6 SAJARI FACILITIES

Project wise components details of Sajari is given in table 5.6

Table 5.6: Sajari Facilities

SN	STP Facilities	Capacity/dia. /size	No. of units/length
	Schedule Handing Over Date- 11.10.2019		
	Scope of Work- O&M for 15 years		
1.1	STP on ASP technology	42 MLD	1
1.2	MPS	42 MLD	1

1.3	Chakeri IPS	14 MLD	1
1.4	Sanigawan IPS	14 MLD	1

6 PRE CONSTRUCTION ACTIVITIES /CONDITION PRECEDENTS

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 i.e. Pankha, Unnao & Shuklaganj and renovation of existing facilities i.e. 130 MLD Jajmau & O&M of existing facilities i.e. 210 MLD Bingawan, 42 MLD Sajari and 43 MLD Jajmau (Phase II) started after effective date.

6.1 CONDITIONS PRECEDENT TO BE SATISFIED BY THE CONCESSIONAIRE

SN	Facilities that need to be constructed or renovated	Name of the Site	Status/Remarks
1	Submit the Phase I Designs and Drawings to the Jal Nigam for its approval in accordance with Article 7;	Pankha	Pankha STP BEP excluding structural and electrical incorporating STC comments approved by IITR. Stamped approval expected to be done in near future. Pankha Structure design & drawing- approved on 08.11.19 BEP Pankha Str. Design-vetted on 07.10.19 Pankha BEP (structure) - appraisal and discussion with KRMPL on 12/10/2019 Boundary wall drgs approved by UPJN by 31.08.19 Process design including GAs on Pankha Facilities approved by UPJN by 31.08.19.
		Unnao	BEP drawings excluding structural and electrical duly approved by IITR (16.08.19). To be approved by UPJN. BEP Unnao structure design-vetted on 03.10.19 Unnao Structure design- vetted by STC on 15.10.19 Boundary wall drgs approved by UPJN by 31.08.19. Rest in progress.
		Shuklaganj	BEP drawings excluding structural and

			<p>electrical duly approved by IITR (08.08.19). To be approved by UPJN.</p> <p>Shuklaganj site has been changed by UPJN on 19.08.19 in view of objection from UPPCB on the selected location by UPJN for its proximity to river Ganga</p>
		Jajmau STP 1	<p>Consensus compliance duly signed with hard copies of drawings submitted to UPJN on 23.07.19 for forwarding to IITR.</p> <p>IITR has indicated in writing that they would not be able to review any drawing and design beyond STPs at Shuklaganj, Unnao and Pankha till they receive advance or NMCG writes to Director of IITR. This constitutes only approx. 25% of the total estimated construction value wise.</p>
			Under process
i.	Prepare the Construction / renovation Plan for these Facilities within 30 days from the Appointed Date and submit the Construction Plan to the Jal Nigam for its approval in accordance with Article 7.3;	<p>Pankha</p> <p>Unnao</p> <p>Shuklaganj</p> <p>Jajmau STP 1</p>	Approved by UPJN for Pankha and Jajmau STP 1 on 30.08.19. Recommended by STP for approval on 30.08.19 for Unnao and Shuklaganj, under approval at UPJN, Lucknow.
ii.	Submit the ESHS Documents 45 days before the Effective Date to the Jal Nigam for its approval in accordance with Article 7.4;	<p>Pankha</p> <p>Unnao</p> <p>Shuklaganj</p> <p>Jajmau STP 1</p>	Approved for all Facilities by UPJN on 30.08.19. Recommended by STP on 30.08.19 for Shuklaganj and Unnao, under approval at UPJN Lucknow.
iii.	Execute and provide copy(ies) to the Jal Nigam of the technology license agreement(s) executed with the Selected Bidder or the third party technology supplier(s) for setting up the Pankha, Unnao and Shuklaganj Facilities;		Agreement executed.
iv.	Submit to the Jal Nigam a certificate, duly attested by a Director, certifying due and satisfactory		Contractors workers at Jajmau plant are not allowing concessionaire personnel to visit the plant for inspection and survey since

	inspection/verification Of Jajmau STP 1 to be renovated and expressing its unconditional undertaking to renovate/repair the same without any defects/defaults under this Agreement.		29.07.19 KRMPL informed that it Shall be provided by 4.09.19
B	For Jajmau Phase 1 Facilities and Sajari Facilities, before Effective Date	Submission	Status/Remarks
i.	Submit O&M Manual 30 days before the Effective Date for these facilities for obtaining Jal Nigam's written approval in accordance with Article 8.2;		
a	Jajmau	Not needed before effective date. Needed before COD	
b	Sajari	O&M Manual sent for approval to UPJN by STC on dated 28.05.19	Manual on Sajari approved on 10.06.19
c	Bingawan	Submitted on 31.05.19 by the Concessionaire. Comments by STC on 07.06.19. Reminders on 2nd July, 10th July and 14th Aug. Concessionaire committed to resubmit on 06.09.19	TSS at outlet was within limits other than 2 days since KRMPL took over independent operation of the Plant from 16.07.19. Those 2 days value was 60mg/l But COD not controlled. KRMPL is required to study the impact if any on the outlet COD and report improvement required, if any, by 15 th September, 2019
	Submit the ESHS Documents 45 days before the Effective Date to the Jal Nigam for its approval in accordance with Article 7.4;		

a	Jajmau	Submitted and principally found OK by STC with some comments.	Sent to UPJN
b	Sajari	Submitted and principally found OK by STC with some comments.	Sent to UPJN
		Submit to the Jal Nigam a certificate, duly attested by a Director, certifying due receipt of the above mentioned Facilities in a satisfactory condition latest by Effective Date;	
a	Jajmau	Awaited (Taken over for O&M wef 30.05.19 conditionally as per jointly signed mom)	
b	Sajari		Taken over for O&M wef 30.05.19 conditionally as per mom signed jointly
c	(Bingawan)*	Critical work including closing of boundary wall, construction of corridor for Mazar which is inside the plant and repair of DGF is pending. Trial run done on 18th and 19th June. TSS was not met within guaranteed level during	Submitted on 31.05.19 by the Concessionaire. Bingawan manual may be approved subject to incorporation of few points which has been complied and letter sent to UPJN on 17.08.19. Concessionaire committed to resubmit on 06.09.19.

		trial run. Plant conditionally taken over from 8.8.19 Certificate to be issued after completion of balance work. Currently the plant is under renovation.	
	Any other condition or obligation mutually agreed to be treated as Concessionaire's Condition Precedent;	-	
	Prepare the Construction/renovation Plan, if any, for these Facilities within 30 days from the Appointed Date and submit the Construction Plan to the Jal Nigam for its approval in accordance with Article 7.3.	-	
C	Additionally, for the overall infrastructure in Kanpur		Status/Remarks
i.	Execute the Substitution Agreement with the Jal Nigam, NMCG and the Lenders the agreed form set out at Schedule 3;		Submitted to NMCG on 02.09.19 for signature of NMCG and UPJN
ii.	Submit to the Jal Nigam certified true copies of all resolutions adopted by the board of directors of the Concessionaire, authorizing execution, delivery and performance of this Agreement, Substitution Agreement and the Escrow Agreement by the Concessionaire;		Submitted on 08.05.19
iii.	Any other condition or obligation mutually agreed to be treated as Concessionaire's Condition Precedent;		-do-
iv.	<p>Obtain all Concessionaire Applicable Permits that are required for achieving Financial Close and for commencement of construction/renovation of the Facilities at its own cost and expense and if such Concessionaire Applicable Permits are subject to any conditions, then, to the extent relevant, comply with all such conditions, such that the Concessionaire Applicable Permits are and shall be kept in full force and effect for the entire Construction Period, or such longer period as may be required under Applicable Laws;</p> <ul style="list-style-type: none"> • Temporary power supply • Consent for storage of hazardous material 		<ul style="list-style-type: none"> • Application to EB submitted. In the meantime, construction work is being planned to be

	<ul style="list-style-type: none"> Consent Fire fighting system 	<p>undertaken using DG sets.</p> <ul style="list-style-type: none"> Not applicable Not applicable
v.	Achieve Financial Close and submit a copy of the Financing Documents and the Financial Package to the Jal Nigam, duly certified by a director of the Concessionaire within 120 days of the Appointed Date;	Sanction letter from lender with T&C submitted on 18.04.19. Signed Agreement soft copy submitted on 30.08.19
vi.	Execute a Shareholders' Agreement amongst the shareholders of the Concessionaire, and deliver to the Jal Nigam a certified true copy of the Shareholders' Agreement (attested by a director of the Concessionaire);] 2	Submitted on 05.08.19
vii.	Execute the Escrow Agreement with the Jal Nigam, NMCG, and the Escrow Bank in the agreed form set out at Schedule 4;	Signed by Concessionaire on 04.07.19
viii.	Submit to the Jal Nigam certified true copies of the constitutional documents of the Concessionaire;	Submitted on 18.04.19
ix.	<p>Submit to the Jal Nigam a legal opinion stating that:</p> <ol style="list-style-type: none"> this Agreement, the Substitution Agreement and the Escrow Agreement have been duly executed and are legally valid, binding and enforceable in accordance with their terms against the Concessionaire; and all actions, conditions and things required by Applicable Laws to be taken, fulfilled and done (including the obtaining of any necessary Concessionaire Applicable Permits and resolutions of the board of directors) in order for the Concessionaire to enter into and comply with its obligations under this Agreement, the Substitution Agreement and the Escrow Agreement have been taken, fulfilled or done. 	Shall be submitted by 09.09.19 (after signing of Substitution Agreement)
x.	Submit to the Jal Nigam a certificate, duly attested by a director, certifying the shareholding pattern of the Concessionaire.	Submitted on 18.04.19

6.2 BASIC ENGINEERING PACKAGE (BEPs) AND OTHER DETAILS

Detail Status of BEPs & other are given in following table 6.2:

Table 6.2: BEPs and other details

SN	Particulars	Status
1.	BEPs (except structure design & drawings)	Shuklaganj BEP-Vetted & appraised on 08.08.19
	• Process	BEP Unnao Boundary wall-Vetted On 12.08.19
	• Mechanical	BEP Unnao-Vetted & sent for approval on 22.08.19
	• Electrical & instrumentation	Boundary wall, ESHS & Construction plan submissions-vetted & sent for approval to UPJN on 28.08.19
2.	BEP Structure Design & Drawings	Pankha structure boundary wall-Vetted & sent to UPJN for further action on 29.08.19
	Compound wall, MPS, PTU, C-Tech basin, CCT, Sludge Thickener, Supernatant sump, Centrifuge building, admin building, Staff quarters, Guard room)	BEP Unnao structure design-vetted on 03.10.19
		BEP Pankha Str. Design-vetted on 07.10.19
		Pankha Structure design & drawing- approved on 08.11.19
3.	Construction Plan	Revised project schedule for Pankha, Shuklaganj, Jajmau & Unnao-Submission vetted & sent to UPJN for approval on 10.07.19
4.	Sewer Network/Line Design	
5.	Topo, Geo tech & survey reports	ESHS approval-Already vetted by STC. Approved by UPJN on 26.09.19
6.	ESHS Plan	
7.	Scope of Work- O&M	O&M manual Jajmau- appraised on 13.05.19
		Sajari STP-Handed over to KRMPL on 29.05.19
		O&M manual Sajari- vetted on 01.06.19

7 PROGRESS OF WORK IN NOVEMBER 2019

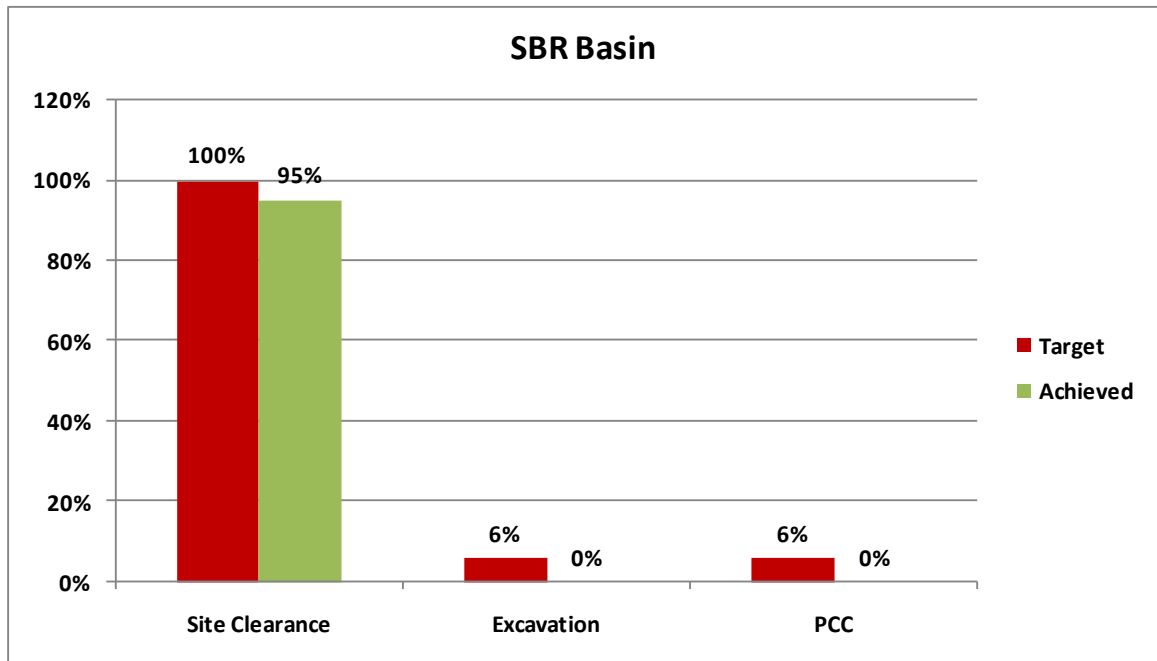
In the month of October 2019, only Unnao STP facility work execution was scheduled as per Construction Plan. In which site clearance activity was to be completed by 12th Oct. 19. Milestones and progress of work are given in following table 7.1:

Table 7.1: Milestones and Progress of Work - Pankha STP facility

SN	Description	Duration (days)	Start Date	Finish Date	1 st Milestone (due on 25.04.2020)	Proportionate Targets (as on 30.11.2019)	Achieved	Backlog	Remarks
A	STP								
1	SBR Basin Area								
i	Site Clearance	1	26-Nov-19	26-Nov-19	100.00%	100%	95%	5%	Electric pole is to be removed
ii	Excavation & PCC	70	27-Nov-19	04-Feb-20	100.00%	6 %	0% Excavation & 0% PCC	6% Excavation & 6% PCC	Excavation work started
19	Compound Wall								
i	Excavation & PCC	538	26-Nov-19	18-May-21	28.00%	1%	3% Excavation & 0% PCC	0% & 1% PCC	only 35 m out of 1010 m Excavation work done

7.1.1 SBR BASIN – PANKHA FACILITY

For SBR basin of Pankha facility, site clearance activity was to be completed in November 2019. This activity is almost completed except few electric poles need to be removed / shifted. Excavation work and PCC has not been done. Following graph shows the progress of work:



7.1.2 BOUNDARY WALL– PANKHA FACILITY

Following graph shows the progress of work compound wall at Pankha facility:

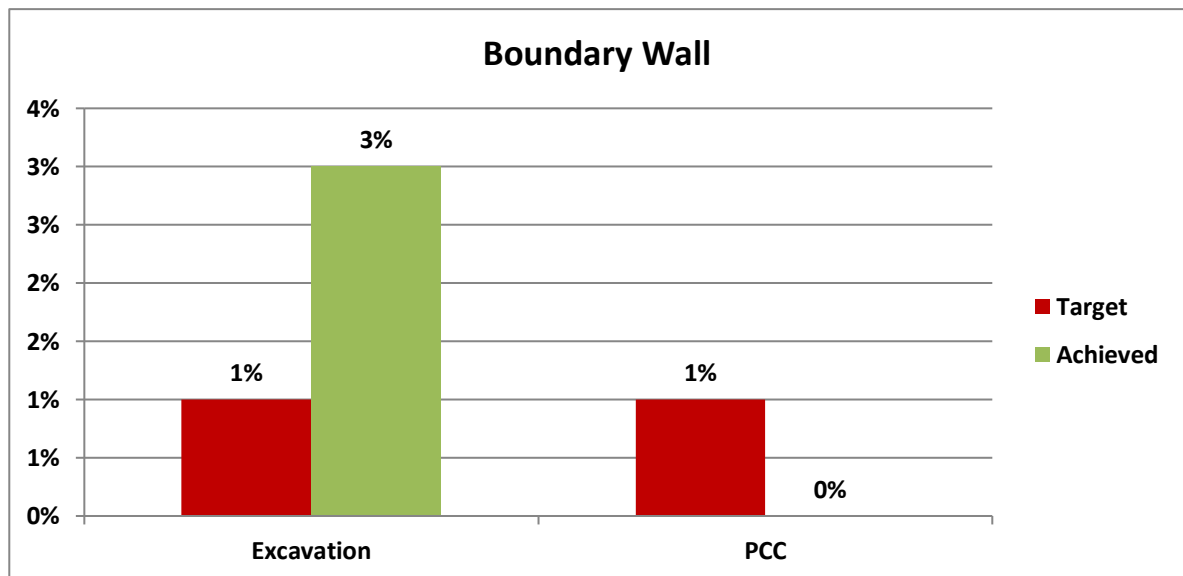
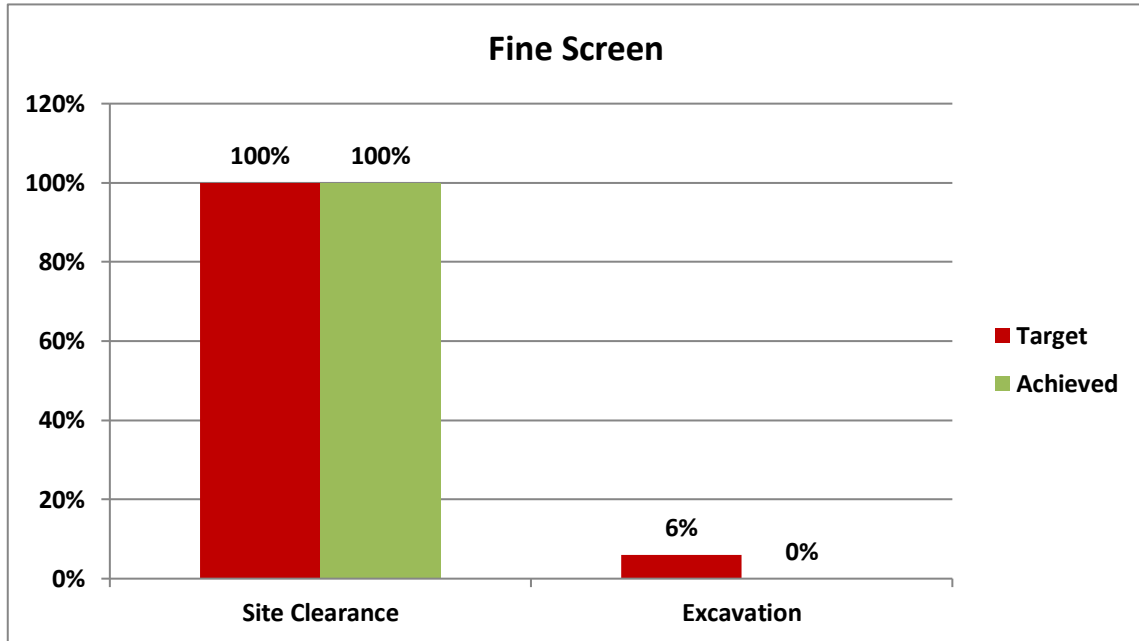


Table: 7.2 - UNNAO FACILITIES

SN	Description	Duration (days)	Start Date	Finish Date	First Milestone (due on 24.02.2020)	Proportionate Targets (as on 30.11.2019)	Achieved	Backlog	Remarks
1	STP								
A	Inlet chamber Area								
	Site Clearance	1	12-Oct-19	12-Oct-19	100.00%	100.00%	100.00%	0%	Completed
	Excavation	70	26-Oct-19	04-Jan-20	100.00%	6%	0%	6%	Geo-Tech report under review
B	Fine Screen Area								
	Site Clearance	1	01-Nov-19	01-Nov-19	100.00%	100.00%	100.00%	0%	Completed
	Excavation	70	02-Nov-19	10-Jan-20	100.00%	6%	0%	6%	Geo-Tech report under review
C	Grit Chamber Area								
	Site Clearance	1	11-Nov-19	11-Nov-19	100.00%	100.00%	100.00%	0%	Completed
	Civil work	104	12-Nov-19	24.Feb.20	100.00%	17%	0%	17%	Geo-Tech report under review
D	Parshall Flume Channel Area								
	Site Clearance	1	28-Nov-19	28-Nov-19	100.00%	100.00%	100.00%	0%	Completed
	PCC & Raft Work	104	29 Nov-19	12-Mar-20	84%	1%	0%	1%	Geo-Tech report under review
J	External Development								
	Boundary Wall	434	12-Oct-19	19-Dec-20	31.00%	11%	5.00%	6.00%	Stopped on 10.12.19 as increased water table was detected.

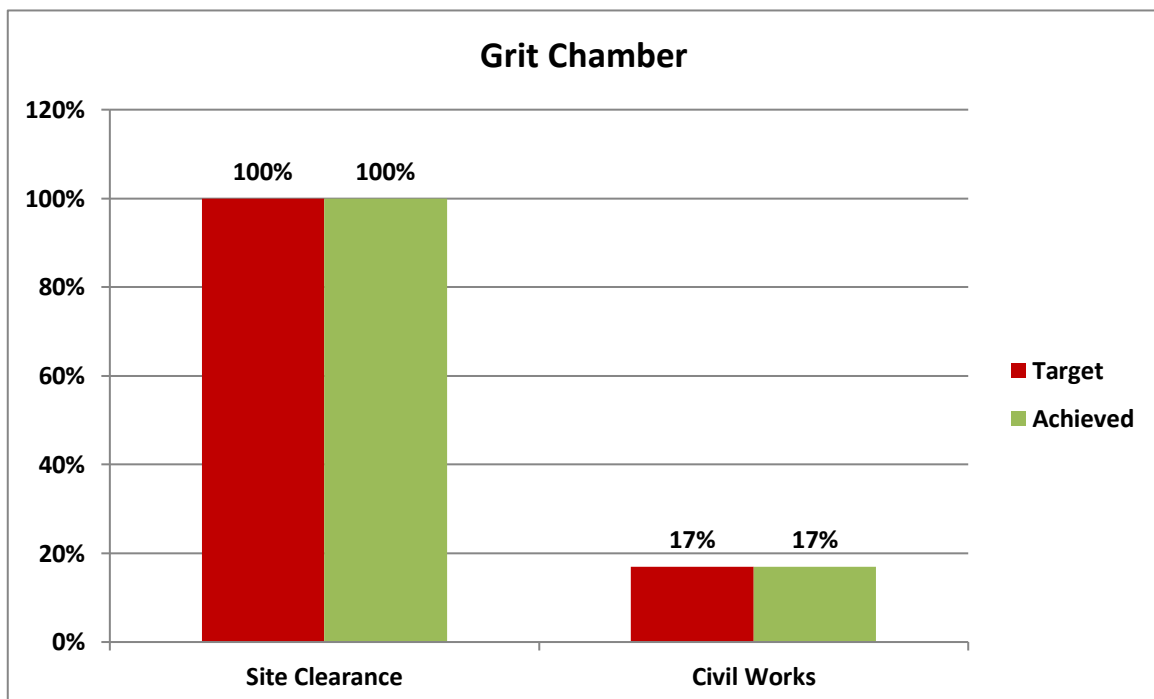
7.1.3 FINE SCREEN - UNNAO FACILITIES

The proportionate target of for fine screen of Unnao facility in the month of November 2019 was site clearance (100%) and excavation (6%). Excavation work has not been started. Following graph shows the backlog of work:



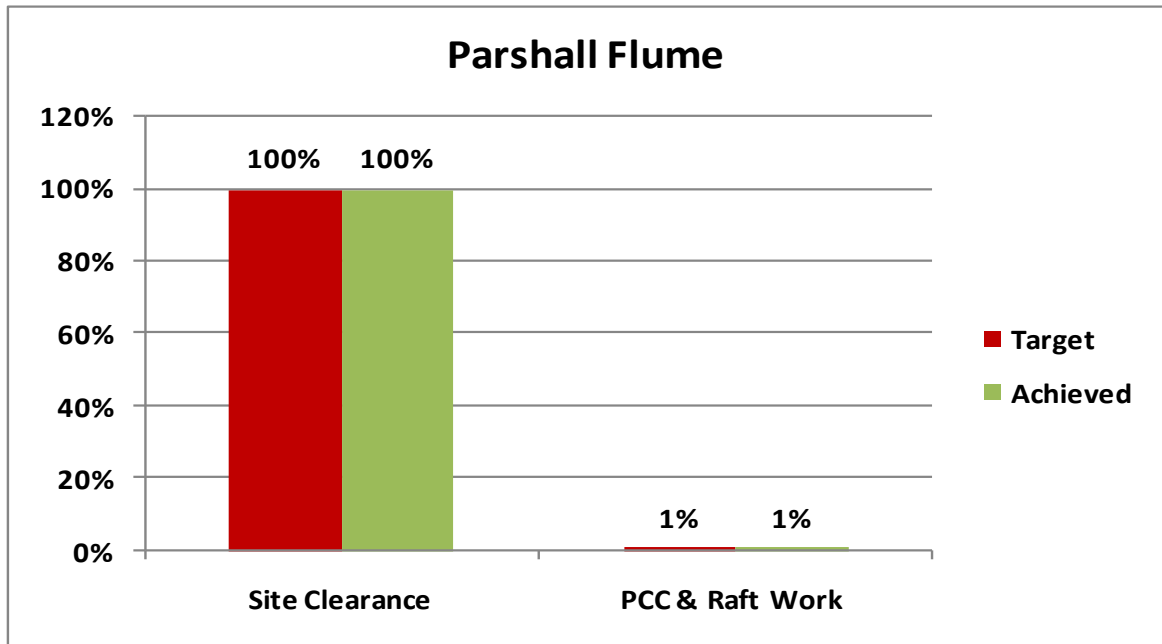
7.1.4 GRIT CHAMBER - UNNAO FACILITIES

The proportionate target of for grit chamber of Unnao facility in the month of November 2019 was civil works 17%. Following graph shows the progress of work:



7.1.5 PARSHALL FLUME - UNNAO FACILITIES

The proportionate target of for Parshall flume of Unnao facility in the month of November 2019 was PCC & Raft work 1%. Following graph shows the progress of work:



7.1.6 BOUNDARY WALL - UNNAO FACILITIES

The proportionate target of for Parshall flume of Unnao facility in the month of November 2019 was boundary wall 30%. Following graph shows the backlog of work:

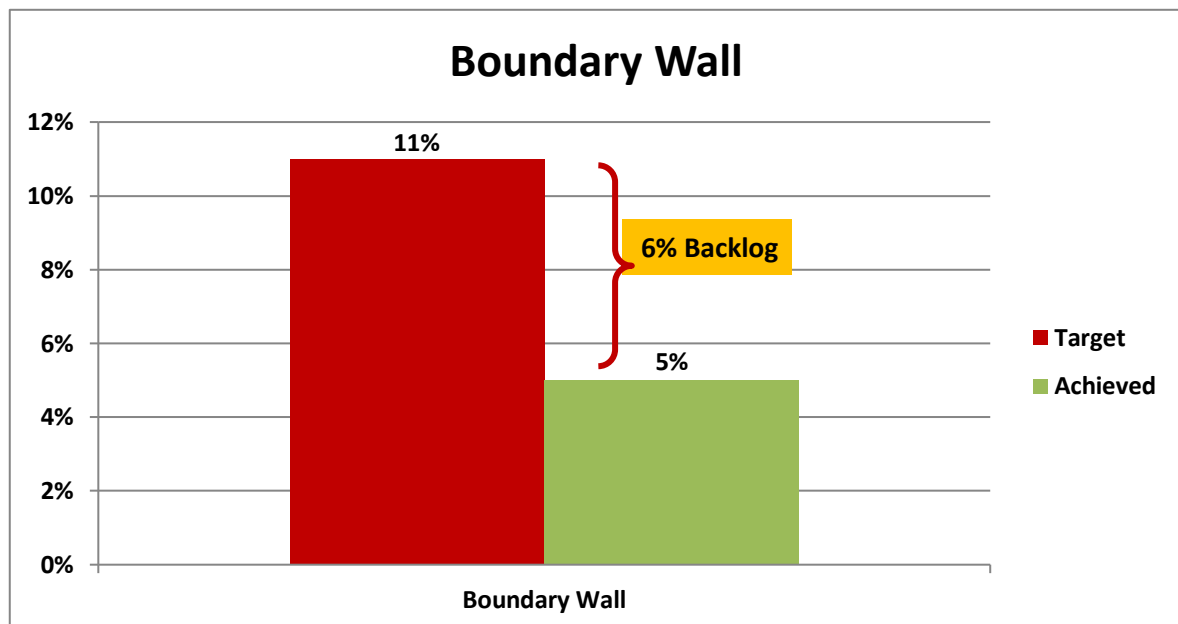


Table 7.2: Progress of Work – HAM Kanpur Project (on NMCG Performa)

Date	Name of Activity#	Date of Receipt	Date of Approval (Vet / Comment)	No. of day taken	Time as per contract (days)	Delay if any (No. of days) [7=6-5]	Reason for delay*	Key Personnel deployed	Man-days of each Key Personnel	Delay by Concessi onaire	Reason for delay	Step taken by PE to avoid such delays	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
01.11.19	Construction plan for Unnao	01.11.19 (K-220)	Already vetted by STC (S-150)	0	20	-	-	Mr. SP Tripathi	1+1+1	-	-	-	This is for information on this was comment by UPJN to be complied by KRMPL
	Scope Trunk sewer, I&D & Rising main - Bingawan	05.11.19 (K-219)	Comment sent on 08.11.19 (S-212)	3	20	-	-	Mr. JP Tripathi		-	-	-	For taking over -Action is to be taken by KRMPL
	Meeting / Appraisal by CE UPJN Kanpur	04.11.19	-	0	20	-	-	Mr. CM Dimri & Mr. JP Tripathi		-	-	-	GM directed to take legal advice about sub contract.
02.11.19	Construction plan / milestone of Unnao STP	02.11.19 (J-M-47/31)	Comment sent on 04.11.19 (S-209)	2	20	-	-	Mr. SP Tripathi	1	-	-	-	Asked to address KRMPL instead of Shapoorji Pallonji.
03.11.19	SUNDAY												
04.11.19	Monthly performance report of Sajari facility	04.11.19 (K-214)	Comment sent on 05.11.19 (S-210)	1	20	-	-	Mr. JP Tripathi	1	-	-	-	Asked to comply the comments for consideration of COD.

05.11.19	BEP of Unnao sewerage network	05.11.19 (K-222)	NA	0	20	-	-	Mr. SP Tripathi	1	-	-	-	For this STC already asked KRMPL for compliance.
	BEP Pankha sewerage network with I&D work	05.11.19 (K-221)	NA	0	20	-	-	Mr. SP Tripathi		-	-	-	For this STC already asked KRMPL for compliance.
06.11.19	BEP of Unnao for I&D work	06.11.19 (K-224)	NA	0	20	-	-	Mr. SP Tripathi	1+1+1	-	-	-	For this STC already asked KRMPL for compliance.
	Online monitoring (RTOLMS) Bingawan STP	06.11.19 (K-223)	Comment sent on 08.11.19 (S-213)	2	20	-	-	Mr. CM Dimri/Mr. Prasoon Bhardwaj		-	-	-	Requested GM to draw attention towards Clauses & contractual stipulations relevant to RTOLMS
07.11.19	Inspection Report of 200 MLD Bingawan facilities	05.12.19 (J-M-7/49)	Comment sent on 09.12.19 (S-244)	4	20	-	-	Mr. JP Tripathi	1	-	-	-	Requested GM (UPJN) to take action on 100% non availability of Bingawan facility
08.11.19	Regarding vetting and recommendation for approval of design &	13.11.19 (J-w-20/443)	Approved on 07.11.19 by UPJN	0	20	-	-	Mr. CM Dimri	1+1+1	-	-	-	Approved and closed.

	drawings of various components for Pankha												
	Proposal for improvement in performance of treated water quality for 42 MLD Sajari STP	13.11.19 (K-224)	Comment sent on 20.11.19 (S-227)	7	20	-	-	Mr. JP Tripathi Mr.Kamraju		-	-	-	Requested GM to Instruct the concessionaire to submit all the required design calculations/data
09.11.19	Signed soil test report	11.11.19 (K-226)	NA	0	20	-	-		1+1	-	-	-	Action already taken
10.11.19	SUNDAY												
11.11.19	Proposed STP at Dakari Unnao	11.11.19	Comment sent 15.11.19	4	20	-	-	Mr. Priyash Shukla	1 +1	-	-	-	New site for STP Unnao under investigation
	Scope of work of RTOLMS Bingawan facilities	11.11.19 (K-227)	Comment sent on 11.11.19 (S-215)	0	20	-	-	Mr. JP Tripathi		-	-	-	Asked concessionaire to resubmit the O&M manual of 210MLD Bingawan facilities at the earliest
12.11.19	Attended office	-	-	0	20	-	-	Mr. JP Tripathi Mr. Priyash Shukla	1+1	-	-	-	Review the BEPs and discussion
13.11.19	Commercial operation date for	13.11.19 (K-228)	NA	0	20	-	-	Mr. JP Tripathi	1	-	-	-	Action to be taken by Jalnigam

	Sajari facilities												
14.11.19	Scope Trunk sewer, I&D & Rising main	18.11.19 (J-W-20-445)	NA	0	20	N/A	-	Mr. JP Tripathi	1	-	-	-	UPJN write to KRMPL
15.11.19	For deployment of 2 engineer at STP	16.11.19 (w-s-97/316)	NA	0	20	-	-		1	-	-	-	Request by EE, Unnao
16.11.19	Structural drawing for Unnao facilities	16.11.19 (K-229)	Comment sent on 19.11.19 (S-221)	3	20	-	-	Mr. CM Dimri Mr. P.walunjkar	1	-	-	-	Requested SE to direct KRMPL to make necessary arrangement at earliest for Geo tech investigation on more points.
17.11.19	SUNDAY												
18.11.19	Re-demarcation & confirmation of level & HFL for Pankha STP	19.11.19 (K-230)	23.11.19 (S-231)	4	20	-	-	Mr. CM Dimri	1	-	-	-	Comments sent to KRMPL over concerning bench mark for Pankha STP.
19.11.19	Renovation at 130MLD STP at Jajmau	20.11.19 (J-w-30/26)	25.11.19 (S-233)	5	20	-	-		1	-	-	-	Summarizing our comments as sent on our earlier letter
20.11.19	Issue of COD letter for Sajari	20.11.19 (K-232)	NA	0	20	-	-	Mr. JP Tripathi	1	-	-	-	For information only

21.11.19	Sajari data analysis	-	NA	0	20	-	-	-	1	-	-	-	Data study and discussion
22.11.19	Sajari O&M manpower – revised list	25.11.19 (K-234)		0	20	-	-	Mr. JP Tripathi	1	-	-	-	Man power received.
	Insurance for Bingawan facilities	25.11.19 (K-237)	Comment sent 26.11.19 (S-235)	1	20	-	-	Mr. JP Tripathi		-	-	-	Requested GM to inform concessionaire about the present replacement value of Bingawan facility.
23.11.19	Land hand over for 30MLD at Pankha	25.11.19 (K-239)	NA	0	20	-	-		1	-	-	-	For information only
24.11.19	SUNDAY												
25.11.19	Revised BEP Unnao sewerage network with I&D	25.11.19 (K-242)	Comment sent 03.12.19 (S-237)	9	20	-	-	Mr. CM Dimri Mr. S. Patil	1	-	-	-	Comments sent to KRMPL on I&D works as per our experts observation
	Improvement proposed for Sajari COD level in treated effluent	25.11.19 (K-240)	Comments sent on 11.12.19 (S-251)	16	20	-	-	Mr. JP Tripathi	1	-	-	-	Concessionaire was directed to submit all the required design calculation.
26.11.19	O&M manual for 210 MLD Bingawan facilities	02.12.19 (J-w-49/74)	NA	1	20	-	-	Mr. JP Tripathi	1	-	-	-	Concessionaire was directed to resubmit the O&M manual for Bingawan

													facilities
27.11.19	Insurance policy Sajari	28.11.19 (K-245)	Comments sent on 29.11.19 (S-239)	1	20	-	-	Mr. JP Tripathi	1	-	-	-	Concessionaire was instructed to incorporate over the comments sent by STC.
28.11.19	Cross checking of Geo tech result at Shuklaganj original site	28.11.19 (K-247)	NA	0	20	-	-	Mr.CM Dimri/ Mr. Prasoan Bhardwaj	1+1	-	-	-	No action needed. Original Site has been changed. New site to be decided.
	Renovation of Bingawan: RTOLMS	28.11.19 (K-248)	06.12.19 (S-243)	8	10 days	-	-			-	-	-	Concessionaire was directed to provide a distinct document no. On each of their submission.
29.11.19	NMCG Meeting in New Delhi	-	-	0	20	-	-	Mr.CM Dimri	1	-	-	-	Meeting at NMCG New Delhi
30.11.19	General work	-	-	0	20	-	-	Mr.CM Dimri	1	-	-	-	General work / correspondence
Total									30+4+20 +27+24+ 30				

Abbreviation used: J-Jal Nigam letter no. /K-KRMPL letter no. /N- NMCG letter no. / S-STC letter no.

8 LIST OF LETTER

Details of letters during November 2019 are given in below table:

Table: Inward Letter

SN	DATE	LETTER NO.	SUBJECT	RECEIVED
1.	01.11.19	k/220	construction plan for Unnao	01.11.19
2.	01.11.19	M-2A/168	Meeting	02.11.19
3.	04.11.19	k/213	clarification on discrepancies regarding MPR of Sajari facility	04.11.19
4.	17.10.19	k/214	COD Sajari	05.11.19
5.	05.11.19	k/222	submission of BEP of Unnao sewerage network for approval	05.11.19
6.	05.11.19	k/221	submission of BEP of Pankha sewerage network for approval	05.11.19
7.	01.11.19	k/219	trunk sewer, I&D & rising main Pankha	05.11.19
8.	06.11.19	k/224	submission of BEP of Unnao I&D work for approval	06.11.19
9.	06.11.19	k/223	O&M manual Bingawan facility	06.11.19
10.	02.11.19	w-20/442	land use change order	06.11.19
11.	08.11.19	k/224	proposal for improvement in performance of treated water quality	08.11.19
12.	09.11.19	k/226	signed soil test report submission Unnao	11.11.19
13.	11.11.19	k/227	O&M manual Bingawan facility	11.11.19
14.	13.11.19	w-20/443	development of STP on HAM Kanpur	13.11.19
15.	13.11.19	k/228	COD for Sajari	13.11.19
16.	15.11.16	w-s-97/316	for deployment of 2 engineer at STP	16.11.19
17.	16.11.19	k/229	structural drawing for Unnao facility	16.11.19
18.	14.11.19	w-20/445	trunk sewer, I&D & rising main Pankha	18.11.19
19.	18.11.19	k/230	requesting for re-demarcation & confirming level & HFL for Pankha	18.11.19
20.	19.11.19	w-30/26	renovation at Jajmau STP	20.11.19
21.	20.11.19	k/232	issue for COD letter Sajari	20.11.19
22.	20.11.19	k/233	submission of electro mechanical items manufacturer list Unnao	20.11.19
23.	22.11.19	w-20/459	geo tech report for construction Pankha	22.11.19
24.	22.11.19	k/237	insurance for Bingawan facilities	25.11.19
25.	22.11.19	k/234	Sajari manpower revised list	25.11.19
26.	22.11.19	k/235	UPJN representative	25.11.19
27.	22.11.19	k/236	renovation of Bingawan & Jajmau facility	25.11.19
28.	22.11.19	k/238	structure design for Unnao & Pankha	25.11.19
29.	25.11.19	k/243	submission of revised electro mechanical item manufacturer, vendor list	25.11.19
30.	23.11.19	k/239	land handed over of site Pankha	25.11.19
31.	22.11.19	w-20/460	land handed over of site Pankha	27.11.19
32.	25.11.19	k/241	COD for Sajari	25.11.19
33.	25.11.19	k/240	improvement proposed for Sajari COD level treated effluent	25.11.19
34.	25.11.19	k/242	Revised BEP drawing for Unnao I&D work	25.11.19
35.	26.11.19	k/244	CP status as on 26.11.19 of UPJN	28.11.19
36.	27.11.19	k/246	CP status as on 26.11.19 of UPJN	28.11.19
37.	27.11.19	k/245	insurance policy Sajari	28.11.19
38.	28.11.19	k/247	cross checking of geo tech result at Shuklaganj	28.11.19
39.	28.11.19	k/248	renovation of Bingawan facility	28.11.19

Table: Outward Letter

SN	Date	To Whom Sent	Place	Subject
1.	04.11.19	PM IV, UPJN	Lucknow	Construction plan milestone of Unnao STP
2.	05.11.19	G.M, UPJN	Kanpur	COD for Sajari facility
3.	05.11.19	Rajat Gupta, NMCG	New Delhi	Status Issue
4.	08.11.19	G.M, UPJN	Kanpur	trunk sewer , I&D and Rising main Bingawan
5.	08.11.19	G.M, UPJN	Kanpur	online monitoring system Bingawan
6.	08.11.19	G.M, UPJN	Kanpur	instrumentation & control part Bingawan
7.	11.11.19	G.M, UPJN	Kanpur	O&M manual for 210 MLD Bingawan
8.	12.11.19	SE 3rd circle	Lucknow	str. Design Geo tech report Unnao
9.	13.11.19	SE 3rd circle	Lucknow	revised line design drawing of Unnao
10.	14.11.19	Madhava Kr. NMCG	New Delhi	submission of invoice & MPR
11.	15.11.19	G.M, UPJN	Kanpur	instrument & control part renovation Bingawan
12.	15.11.19	G.M, UPJN	Kanpur	comment over geo tech report of all site
13.	19.11.19	G.M, UPJN	Kanpur	str. Design Geo tech report Unnao
14.	20.11.19	EE CD	Unnao	project estimate
15.	20.11.19	PM I, UPJN	Kanpur	project estimate
16.	20.11.19	PM II, UPJN	Kanpur	project estimate
17.	20.11.19	PM III, UPJN	Kanpur	project estimate
18.	20.11.19	SE 3rd circle	Lucknow	revised line design & drawing of Unnao
19.	20.11.19	G.M, UPJN	Kanpur	improvement proposed in the performance of treated effluent in Sajari STP
20.	20.11.19	EE CD	Unnao	pendency in Unnao facilities
21.	21.11.19	G.M, UPJN	Kanpur	compliance report on str. Design BEP Shuklaganj, Pankha & Unnao
22.	21.11.19	SE 3rd circle	Lucknow	revised line design drawing of Pankha
23.	23.11.19	G.M, UPJN	Kanpur	concerning bench mark for Pankha STP
24.	23.11.19	G.M, UPJN	Kanpur	BEP for rehabilitation of Jajmau facility (IPS)
25.	25.11.19	G.M, UPJN	Kanpur	BEP Jajmau STP
26.	26.11.19	G.M, UPJN	Kanpur	status of CPs/ issues
27.	26.11.19	G.M, UPJN	Kanpur	insurance for Bingawan facility

9 MINUTES OF MEETING

N/A

10 MOBILIZATION PLAN

Mobilization plan for Oct 2019 is given below:

Present

Name	Designation	Joining Date
NA	NA	NA

Next Month

Name	Designation	Joining Date
NA	NA	NA

ANNEXURES

Annexure 1: Site Visit Photographs



Pankha STP Site



Pankha STP Site



Unnao STP Site



Unnao STP Site

Site Visit Photographs



Bingawan STP



Bingawan STP



Sajari STP



Sajari STP

STP facilities Site Photographs: Pankha

Pankha Boundary Wall



Excavation work of SBR

STP facilities Site Photographs: Unnao

Unnao Boundary Wall



