

**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**

**SEPTEMBER - 20**



**Executing Agency**  
Uttar Pradesh Jal  
Nigam  
Benajhabar Road,  
Kanpur  
Uttar Pradesh -  
208002



**Funding Agency**  
National Mission for  
Clean Ganga  
MoWR, River  
Development & Ganga  
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**Project Engineer**  
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**Concessionaire**  
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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

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## 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 (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)

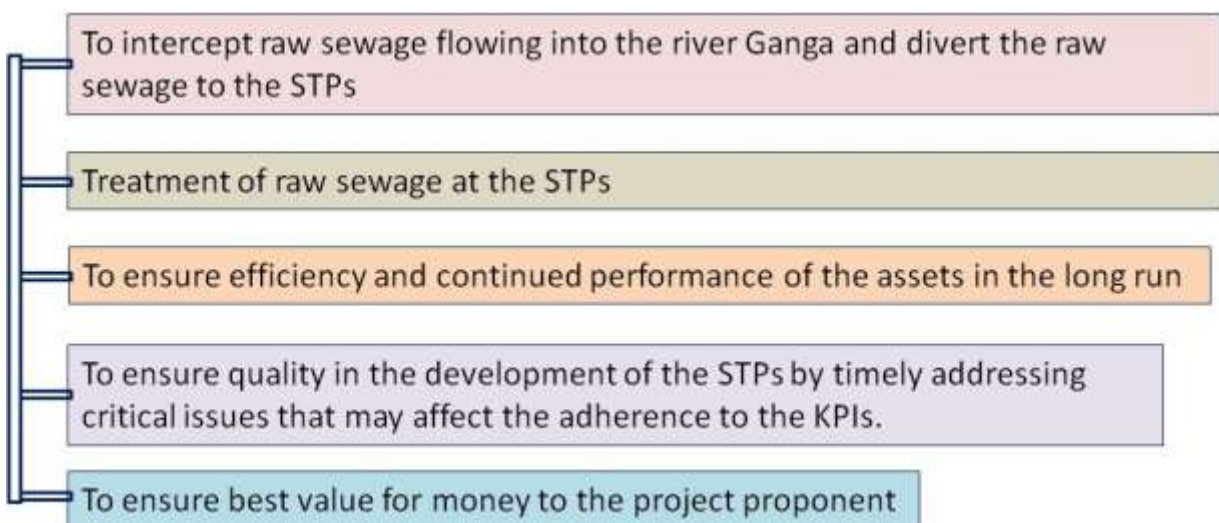
Government of India has approved the Namami Gange program as an integrated approach for effective abatement of pollution in river Ganga and Yamuna. As part of this and to ensure that no untreated domestic sewage flow into the river Ganga and Yamuna, various interventions are planned such as Interception & 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 4<sup>th</sup> February 2019 and agreement signed between the parties on 12<sup>th</sup> 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
<b>Name of Project</b>	: 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)
<b>Client</b>	: National Mission for Clean Ganga (NMCG), New Delhi and UP Jal Nigam
<b>Execution Agency</b>	: Uttar Pradesh Jal Nigam (UPJN)
<b>Consultant</b>	: Shah Technical Consultants (P) Ltd. as <b>‘Project Engineer’</b>
<b>Agreement &amp;LOA</b>	: STC Agreement dated 12.04.2019 & LOA: Pr-12012/41/2018-PPP/NMCG dated 04.02.2019
<b>Concessionaire</b>	: Kanpur River Management Private Limited (KRMPL) an SPV of Shapoorji Pallonji & Company Private Limited, Mumbai
<b>Concessionaire’s Agreement</b>	: 14/GM/2018-19 dated 21.12.2018
<b>Cost of Project (CAPEX+OPEX)</b>	: Rs. 816.25 Cr. (CAPEX 255.50 Cr. + OPEX 560.75 Cr.)
<b>Effective Date</b>	: 11.10.2019
<b>Completion date (as per contract)</b>	: 24 Months from effective date (21 months construction + 3 months trial run)
<b>O&amp;M period</b>	: 15 years after last Commercial Operation Date (COD)
<b>Description of Work</b>	: <ul style="list-style-type: none"> <li>➤ 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&amp;M;</li> <li>➤ Rehabilitation of 130 MLD (Phase-I) STP at Jajmau with construction of 200 MLD TEPS and 173 MLD CCT at Jajmau with O&amp;M for 15 years;</li> <li>➤ O&amp;M of 43 MLD (Phase-II) Jajmau facilities, O&amp;M of 210 MLD Bingawan facilities and O&amp;M of 42 MLD Sajari facilities for 15 years;</li> </ul>

## 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 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
<b>1.14</b>	<b>Milestones</b>	<b>Date</b>	<b>Amount in Rs.</b>
	1 <sup>st</sup> Milestone	12-Oct-2019 to 25-Apr-20	1248,39,750
	2 <sup>nd</sup> Milestone	26-Apr-20 to 10-Jul-20	1248,39,750
	3 <sup>rd</sup> Milestone	11-Jul-20 to 24-Sep-20	1248,39,750
	4 <sup>th</sup> Milestone	25-Sep-20 to 09-Dec-20	1248,39,750
	5 <sup>th</sup> Milestone	10-Dec-20 to 13-Feb-2021	1248,39,750
	6 <sup>th</sup> Milestone	14-Feb-2021 to 21-Apr-2021	1248,39,750
	7 <sup>th</sup> Milestone	22-Apr-2021 to 22-Jun-2021	1248,39,750
	8 <sup>th</sup> Milestone	23-Jun-2021 to 25-Aug-2021	1248,39,750

## 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		
<b>1.1</b>	STP		15 MLD	1
<b>1.2</b>	Sump cum Pump house (MPS)		40 MLD	1
<b>1.3</b>	Trunk Sewer		1200mm φ	3.2Km
<b>1.4</b>	I&D works (Nala tapping)		40 MLD	1
<b>1.5</b>	Trash screen		7m-1.7m x 0.8m	1
<b>1.6</b>	Grit chamber		12m-4m x 1m	2
<b>1.7</b>	Collection chamber		3.4m-6.2m x 3m	1
<b>1.8</b>	Rising main (MPS to STP)		750mm φ	100m
<b>1.9</b>	Rising main (bypass)		750mm φ	100m
<b>1.10</b>	Effluent distribution chamber		-	1
<b>1.11</b>	Effluent gravity channel (STP to discharge point )		1.5m x 1.0m	300m
<b>1.12</b>	Effluent disposal drains		-	500m
<b>1.13</b>	<b>Milestones</b>	<b>Date</b>	<b>Amount in Rs.</b>	
	1 <sup>st</sup> Milestone	12-Oct-2019 to 24-Feb-20	478,36,250	
	2 <sup>nd</sup> Milestone	25-Feb-20 to 15-May-20	478,36,250	
	3 <sup>rd</sup> Milestone	16-May-20to 30-Jul-20	478,36,250	

4 <sup>th</sup> Milestone	30-Jul-20to 14-Oct-20	478,36,250
5 <sup>th</sup> Milestone	15-Oct-20to 24-Dec-20	478,36,250
6 <sup>th</sup> Milestone	10-Dec-20 to 01-Mar-2021	478,36,250
7 <sup>th</sup> Milestone	02-Mar-2021 to 05-May-2021	478,36,250
8 <sup>th</sup> Milestone	06-May-2021to 10-Jul-2021	478,36,250

### 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 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 $\phi$	50m
1.7	Rising main (bypass)	500mm $\phi$	50m
1.8	Retaining wall		1
1.9	Effluent channel (STP to discharge point )	1.5m x1m	100m
1.10	<b>Milestones</b>	<b>To be submitted*</b>	

\*CTE for new land has been received in July 20. Geotech survey is in progress

### 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 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 (TEPH)	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	GuptarGhat IPS	-	1
1.8	Jajmau CPCS	-	1

### 5.5 JAJMAU PHASE II STP FACILITY

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

SN	STP Facilities	Capacity/ dia. /size	No. of units/length
	Schedule Handing Over Date- 01.10.2019		
	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

### 5.6 BINGAWAN FACILITIES

Project wise component detail of Bingawan is 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	ShisamauNala (tapping)	8MLD	1

### 5.7 SAJARI FACILITIES

Project wise component detail 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 PHYSICAL PROGRESS OF WORK

As per the provision of Concessionaire Agreement, effective date of the project was to be declared before 19<sup>th</sup> April 2019. Effective date for work execution under HAM Kanpur project was declared on 11<sup>th</sup> 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. Jajmau 130 MLD started after effective date.

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%*. The scheduled date of project completion is 10<sup>th</sup> October 2021 i.e. 24 months from the effective date.

### 6.1 MILESTONE WISE ACTIVITIES AND PROGRESS: PANKHA STP FACILITIES

Milestone wise activities and their progress of work for Pankha STP are given in table 6.1:

**Table 6.1: Pankha STP Facilities**

SN	Description	Milestone-1 (From 26th Nov.'19 to 25th Sep'20)		Achieved		Remarks
		Physical	Financial	Physical	Financial	
	<b>Design &amp; Drawings of STP Sewer Laying work</b>					
<b>A</b>	<b>Design &amp; Drawings of STP Sewer Laying work</b>					
i	Approved of BEP	100%	24967950	100%	0%	Completed
ii	On approval of Design & Drawings for civil & Sewerage work	100%	24967950	100%	0%	Completed
<b>B</b>	<b>STP ( 30 MLD )</b>					
<b>1</b>	<b>SBR Basin Area</b>					
i	Site Clearance	100%	250000	100%	0%	Completed
ii	Excavation	100%	9838400	100%	0%	Completed
iii	PCC	100%	14757600	100%	0%	Completed
iii	RCC Foundation/ Raft	40%	9838400	100%	0%	Completed
<b>2</b>	<b>Chlorine Contact Tank Area</b>					
i	Site Clearance	100%	150000	100%	0%	Completed
ii	Excavation	100%	737880	100%	0%	Completed
iii	PCC	100%	1106820	100%	0%	Completed
<b>3</b>	<b>Chlorination House Area</b>					
i	Site Clearance	100%	100000	100%	0%	Completed
ii	Excavation	100%	368940	100%	0%	Completed
iii	PCC	100.00%	553410	100%	0%	Completed
<b>5</b>	<b>Sludge Thickener Area</b>					
i	Site Clearance	100%	100000	100%	0%	Completed
ii	Excavation	100%	737880	100%	0%	Completed
iii	PCC	100%	1106820	100%	0%	Completed
<b>9</b>	<b>Admin Building Area</b>					

SN	Description	Milestone-1 (From 26th Nov.'19 to 25th Sep'20)		Achieved		Remarks
		Physical	Financial	Physical	Financial	
i	Site Clearance	100%	100000	100%	0%	Completed
ii	Excavation	100%	368940	100%	0%	Completed
iii	PCC	100%	553410	100%	0%	Completed
<b>18</b>	<b>External Development</b>					
<b>B</b>	<b>Compound Wall with Gate</b>					
i	Excavation & PCC	40%	2459600	100%	0%	Completed
ii	RCC Column Footing (220No.)	40%	2459600	100%	0%	Completed
iii	RCC Column & Beam (625 mt)	40%	2459600	100%	0%	Completed
<b>19</b>	<b>MPS-2 (115 MLD)</b>					
	<b>Civil</b>					
<b>A</b>	<b>Construction of Raw Sewage Sump</b>					
I	Site Clearance	100%	150000	100%	0%	Completed
ii	Excavation	15%	517760.1	100%	0%	Completed
<b>B</b>	<b>Construction of Inlet Chamber &amp; Screen channel</b>					
i	Site Clearance	100%	50000	100%	0%	Completed
<b>20</b>	<b>ICI Nala IPS</b>					
	<b>CIVIL</b>					
<b>A</b>	<b>Construction of Raw Sewage Sump</b>					
i	Site Clearance	100%	150000	100%	0%	Completed
<b>21</b>	<b>IPS-6 (Sundar Nagar- 20 MLD)-Pankha Area</b>					
	<b>CIVIL</b>					
<b>A</b>	<b>Construction of Raw Sewage Sump</b>					
i	Site Clearance	100%	150000	100%	0%	Completed

SN	Description	Milestone-1 (From 26th Nov.'19 to 25th Sep'20)	Amount	Achieved	Balance	Remarks
		Physical	Financial	Physical	Financial	
ii	Excavation	11%	168696	100%	0%	Completed
<b>24</b>	<b>Sewer System Area (RCC Pipes-NP3 Types)</b>					
i	Supply of pipes	16%	25670093.9	100%	0%	Completed
	<b>Total Achieved</b>		<b>124839750</b>	<b>12.50%</b>		
				<b>100.00%</b>		<b>1<sup>st</sup> milestone 100% completed</b>

**PHOTOGRAPHS OF PANKHA STP SITE**



**Boundary Wall work**



**Commissioner Visit on 24.09.20**





**Admin building Excavation work**



**Ongoing work of RCC Pipe laying**

## 6.2 MILESTONE WISE ACTIVITIES AND PROGRESS: UNNAO STP

Milestone wise activities and their progress of work for Unnao STP are given in table 6.2.

**TABLE 6.2: UNNAO FACILITIES (DISTRICT UNNAO)**

SN	Activity	Milestone 1 (12.5%)		Achieved		Remaining works	Remarks
		Due on 25.09.20		Till 25.09.20			
		Physical	Financial (Rs)	Physical	Financial (Rs)		
<b>I</b>	<b>Design &amp; Drawing &amp; STP &amp; Sewer Laying works</b>						
1	On approval of BEP	100%	191,34,500.00	100%	191,34,500.00		Completed
2	On approval of design & drawings for Civil & Sewerage works	25%	47,83,625.00	25%	47,83,625.00		Completed
<b>II</b>	<b>CONSTRUCTION OF 15 MLD UNNAO STP</b>						
<b>i</b>	<b>SBR Basin Area</b>						
1	Site Clearance	100%	5,00,000.00	100%	5,00,000.00	0%	Completed
2	Excavation wall footing	100%	22,46,137.60	100%	22,46,137.60	0%	Completed
3	PCC wall footing	100%	27,46,137.60	100%	27,46,137.60	0%	Completed
4	RCC Foundation/Raft of wall						
<b>ii</b>	<b>Sludge Thickener Area</b>						
1	Site Clearance	100%	1,50,000.00	100%	1,50,000.00	0%	Completed
2	Excavation	100%	3,64,900.80	100%	3,64,900.80	0%	Completed
3	PCC	100%	2,57,450.40	100%	2,57,450.40	0%	Completed
<b>iii</b>	<b>Supernatant Sump Area</b>						
1	Site Clearance	100%	1,00,000.00	100%	1,00,000.00	0%	Completed
2	Excavation	100%	1,14,422.40	100%	1,14,422.40	0%	Completed
3	PCC	100%	1,14,422.40	100%	1,14,422.40	0%	Completed
4	RCC Foundation wall/base slab	100%	1,28,844.80	100%	1,28,844.80	0%	Completed
<b>iv</b>	<b>Chlorine Contact Tank Area</b>						
1	Site Clearance	100%	1,50,000.00	100%	1,50,000.00	0%	Completed

SN	Activity	Milestone 1 (12.5%)		Achieved		Remaining works	Remarks
		Due on 25.09.20		Till 25.09.20			
		Physical	Financial (Rs)	Physical	Financial (Rs)		
2	Excavation	100%	4,22,112.00	100%	4,22,112.00	0%	Completed
3	PCC	100%	5,72,112.00	100%	5,72,112.00	0%	Completed
4	RCC Foundation / Raft	100%	9,15,000.00	100%	9,15,000.00	0%	
v	<b>Air Blower Room Area</b>						
1	Site Clearance	100%	2,50,000.00	100%	2,50,000.00	0%	Completed
2	Excavation	100%	3,43,267.20	100%	3,43,267.20	0%	Completed
3	PCC	100%	3,43,267.20	100%	3,43,267.20	0%	Completed
vi	<b>Staff Quarter Area (G+1)</b>						
1	Site Clearance	100%	50,000.00	100%	50,000.00	0%	Completed
2	Excavation	100%	71,000.00	100%	71,000.00	0%	Completed
3	PCC	100%	71,000.00	100%	71,000.00	0%	Completed
4	RCC Foundation/column footing	100%	92,000.00	100%	92,000.00	0%	Completed
vii	<b>Guard Room Area</b>						
1	Site Clearance	100%	50,000.00	100%	50,000.00	0%	Completed
2	Excavation	100%	82,211.20	100%	82,211.20	0%	Completed
3	PCC	100%	82,211.20	100%	82,211.20	0%	Completed
4	RCC Foundation/column footing	100%	1,14,422.40	100%	1,14,422.40	0%	Completed
5	Column & Beam	100%	1,14,422.40	100%	1,14,422.40	0%	Completed
6	RCC ground floor slab	100%	1,14,442.40	100%	1,14,442.40	0%	
viii	<b>Chlorination Room Area</b>						
1	Site Clearance	100%	1,50,000.00	100%	1,50,000.00	0%	Completed
2	Excavation	100%	4,57,689.60	100%	4,57,689.60	0%	Completed
3	PCC	50%	2,28,844.80	50%	2,28,844.80	0%	Completed
4	RCC Foundation/Column footing						
xviii	<b>EXTERNAL DEVELOPMENT</b>						

SN	Activity	Milestone 1 (12.5%)		Achieved		Remaining works	Remarks
		Due on 25.09.20		Till 25.09.20			
		Physical	Financial (Rs)	Physical	Financial (Rs)		
	<b>Boundary Wall with Gate</b>						
1	Site Clearance	100%	-		-		
2	Excavation	40%	1,33,900.00	51%	1,33,900.00	0%	Out of 665m, 336m completed
3	PCC	40%	2,00,850.00	71%	2,00,850.00	0%	Out of 158, 112 completed
4	RCC Column footing	40%	2,00,850.00	71%	2,00,850.00	0%	Out of 158, 112 completed
5	RCC Column & Beam	40%	2,00,850.00	44%	2,00,850.00	0%	Out of 158, 69 completed
6	Brickwork	15%	75,318.75	24%	75,318.75	0%	Out of 445 rmt, 84 rmt iscomple
C	<b>MPS-40 MLD</b>						
	<b>Civil Work</b>						
i	<b>Construction of Raw Sewage Sump</b>						
1	Site Clearance	100%	5,00,000.00	100%	5,00,000.00	0%	Completed
iii	<b>Construction of Inlet chamber and screen channel</b>						
1	Site Clearance	100%	1,50,000.00	100%	1,50,000.00	0%	Completed
2	Excavation						
ix	<b>SEWER SYSTEM AREA (3.2 Km)</b>						
1	Site Clearance	100%	-	100%		0%	Completed
2	Supply of pipes	20%	110,60,057.85	20%	110,60,057.85	0%	Completed
	<b>Total achieved out of 12.5%</b>		<b>478,36,270.00</b>	<b>12.5%</b>	<b>478,36,270.00</b>	<b>0%</b>	<b>100% Milestone-1 achieved</b>

**PHOTOGRAPHS OF UNNAO STP SITE**



**Site inspection by SMCG & SMEC**



**Concrete work of CCT**



**Supernatant sump wall correction & Funny bag wrapping and Curing**



**Concrete work of sludge thickener**

## 7 PRESENT STATUS AND ISSUES OF HAM PROJECT KANPUR

### 7.1 PANKHA 30 MLDSTP:

- Approval of design & drawings - completed;
- 1st milestone (12.5% of total work) completed on as per revised project schedule date i.e. 25.09.2020;
- 2<sup>nd</sup> milestone is to be completed by 25.11.2020 which will be cumulative 25% of the total work cost;
- Construction work for SBR, BW, CCT, MPS excavation, sludge thickener, admin building and laying of sewer are under progress;
- Manpower deployment by the Concessionaire has been done but is not sufficient. Total no. of workers deployed at site are 30-35 (as on 30.09.20) whereas 100-150 labours are required to speed up the works to attain targets.
- Construction work for SBR, BW, CCT, MPS and Sundar Nagar IPS works are under progress;

### 7.2 UNNAO 15 MLD STP FACILITIES:

- Approval of design & drawings completed;
- 1st milestone (12.5% of total work) completed as per revised project schedule date i.e. 25.09.2020;
- Manpower deployment by the Concessionaire has been done but is not sufficient. Total no. of workers deployed at site are 30-35 (as on 30.09.20) whereas 100-150 labours are required to speed up the works to attain targets.
- New land for I&D works has been identified and acquisition is in process;
- 2<sup>nd</sup> Milestone is to be completed by 25.11.2020 which will be cumulative 25% of the total work cost.
- Construction work for SBR, BW, CCT, sludge thickener, supernatant sump under progress;
- Electricity connection work in progress. Poles and electric line are being installed;

### 7.3 SHUKLAGANJ 5 MLD STP FACILITIES:

CTE was not granted by UPPCB on the previously allotted land. Now new site, about 400m away from previous site is selected. CTE has been obtained on 10.07.2020. At present, Geotech investigations and site layout finalization works are in progress.

### 7.4 JAJMAU (PHASE – 1) 130 MLD STP AND IPS REHABILITATION

- Handing over is planned by UPJN by 19.07.20 as agreed by concessionaire but could not materialised due to labour issue.
- CTO received on 10.06.20.
- **Drawing & Datasheet along with QAP for PST, SST, Surface Aerators, Grit Mechanism, Screen & Thickener:**

The submittals has been vetted by PE and recommended for conditional approval except screen vide STC letter no.488 dated 07.09.20.

After meeting with GM, GPCU, UP Jal Nigam dated 18.09.20; it was decided to use SS304 and IE2 instead of SS316 and IE3 resp. for Jajmau 130 MLD STP. As per meeting, drawing and datasheet along with QAP for PST, SST, Surface Aerators, Grit Mechanism & Thickener is recommended for approval vide STC letter no.505 dated 19.09.20 and the same has been approved by UPJN vide letter no. 1988/w-10/94 dated 19.09.20.

After that Concessionaire has submitted the compliance report and additional documents of Screen vide their letter no.641 dated 17.09.20 and the same has been vetted by PE and found ok and recommended for approval vide STC letter no.513 dated 22.09.20. The same has been approved by UPJN vide letter no. 2007/w-10/95 dated 25.09.20.

➤ **Structural rehabilitation & retrofit for 130 MLD STP:**

PE has submitted their comments on structural rehabilitation & retrofit vide their letter no.494 dated 10.09.20. Concessionaire has submitted the compliance report for Structural rehabilitation & retrofit vide their letter no.643 dated 18.09.20. The submittals and compliance report are reviewed by PE and found ok. Therefore, recommended for approval vide STC letter no.511 dated 22.09.20 and the same has been approved by UPJN vide letter no. 2602/w-30/34 dated 29.09.20.

➤ **Submission of BEP for 130 MLD STP:**

Concessionaire has submitted the hard copies of BEP for 130 MLD STP on 23.09.20 after approval from IIT Roorkee (along with IITR letter) without attaching any soft copy.

➤ **Electrical Load list and SLD for 130 MLD Jajmau:**

Concessionaire has submitted the revised electrical load list and SLD for the 130 MLD Jajmau vide their letter no.664 dated 29.09.20 without any attached enclosures.

## 7.5 43 MLD JAJMAU PHASE II

- The plant is ready to be handed over to the Concessionaire. UPJN has written to the Concessionaire to deploy adequate staff for operation of the plant immediately;
- CTO received on 10.08.2020.

## 7.6 210 MLD BINGAWAN FACILITIES

The schedule date of handover of 210 MLD Bingawan Facilities as per CA was 01/04/2019 but actually could be handed over on 08/07/2019. From handover date itself it was observed and informed from time to time to Concessionaire that the operation and maintenance of the plant was not up to the mark. **Commercial Operation Date of Bingawan facility declared by UPJN as 10.08.20 vide their letter no 2324/w-37/100 dated 10.09.20.**

Following points need to be addressed:

### i. **Compliance of Inspection Reports**

PE inspected 210 MLD Bingawan STP on 04.09.20 and issued inspection report on 5<sup>th</sup> September 20. Compliance report on Inspection note at Bingawan facilities on 05.09.20 has been submitted by KRMPPL on 15.09.20. Since 28<sup>th</sup> January 20 rectification of defects indicated in different inspection reports has not been done by the KRMPPL and they are extending dates continuously every month. Copy of Inspection report of Bingawan site is enclosed.



**ii. O&M Manual**

Revised O&M manual of Bingawan incorporating the points decided in the meeting dated 16.12.2019 has been submitted by the Concessionaire on 31.07.20 which is recommended for approval by PE on 17.08.20 and approved by UPJN on 24/08/20.

**iii. Insurance Policies**

Only All Risk Industrial Insurance Policy has been submitted and remaining policies are not submitted after so many reminders. Comprehensive General Liability Policies submitted by concessionaire is not acceptable. Notarized Industrial all risk policy for Bingawan has been submitted by KRMPL on 26.08.20 on which PE submitted the point-wise comments on 28.08.20. Compliance report has been submitted by KRMPL on 28.08.20. No action taken by concessionaire on STC's comments.

**iv. Performance of Plant****a. Cleaning and reactivation of UASB Reactors:**

All the KPIs are not being met during the month of September 2020. Out of 16 no's reactors, UASB reactor no. 1, 4 & 8 has been filled for reactivation after cleaning. Reactor no. 2 & 3 has been taken up for cleaning from 4.08.20 & 20.08.20. The Concessionaire has not submitted the action plan for cleaning and reactivation of UASB reactors but taking randomly for cleaning and reactivation. Performance report of September 2020 enclosed.

**b. BFP:** Out of 3, only 1 no. Bed filter press is operational during the month of September 2020. The Concessionaire has promised that one more BFP will be operational by 20<sup>th</sup> Sept. 2020 but only 1 no of BFP is operational till the end of Sept. 2020. Also, concessionaire ensures to put BFP no. 2 in operation by 15.10.20.

Only 1 no. tractor trolley has been found in working for disposal of dewatered sludge. It was always required to run 2 nos. filter press at a time. So, 2 nos. tractors and 3 nos. trolleys always needed at site for disposal of the dewatered sludge.

**v. Joint Sampling and Testing by IIT Kanpur**

It was decided in the meeting of GM GPCU UPJN on 16-12-2019 (MOM issued vide letter no. 3847/M-2A/116 dated 18-12-2019) that at least once in a month joint sampling of raw sewage and treated effluent will be done by UPJN and KRMPL and testing to be done by IIT Kanpur. KRMPL has taken the sample jointly on 29.09.20 for testing. Also, UPPCB Kanpur has taken the samples on 02.09.20 & 07.09.20 and testing reports submitted by UPJN vide their letter no. 2266/w-37/89 dated 04.09.20 and letter no. 2355/w-37/102 dated 15.09.20. Copy Enclosed. Testing report from Spectra research Lab ventures (P) Ltd. of the Joint sample taken on 30.08.20 has been submitted by concessionaire on 28.09.20. Copy attached.

**iv. Renovation Completion Certificate**

Renovation (Installation of RTOLMS and Rectification of Pumps) Completion Certificate has been issued by UPJN as 10.08.20 vide UPJN letter no. 2033/w-37/67 dated 18.08.20. Calibration certificate with witness certificate for RTOLMS is to be submitted by KRMPL.

**v. Gas Holder**

Out of 2 no's both are not in working condition.

**vi. Schedule Maintenance Works for the year 2020-21**

Schedule maintenance works as per approved O&M manual were to be started from 1/08/2020, but not started yet.

**7.7 42 MLD SAJARI STP**

As per CA, Schedule Handing over date for Sajari is effective date (11.10.2019) but plant was handed over to the KRMPL on 29.05.2019. O&M expenditure from 29.05.2019 until effective date 11.10.2019 has been paid to KRMPL separately which is not covered under CA. Till Dec. 2019 KPIs (especially COD) of treated effluent was not under control and KRMPL was asked by NMCG to suggest improvements for COD to be within prescribed limit. KRMPL proposed to add one additional Aeration Tank on 07.12.2019.

Mr. Madhav Kumar NMCG requested Mr. S. Kamaraju Process Expert STC to visit the Sajari Plant to give his recommendations. Mr. S. Kamaraju Process Expert visited the Sajari Plant on 27-28 Dec 2019 and concluded that the Sajari Plant is designed for all 12 aerators to run without any standby but the plant was being run with 8 aerators only keeping 4 aerators as stand by. He submitted calculations for available aeration on dated 28.12.2019 (in discussion with GM, UPJN Kanpur) and found that sufficient aeration is available to reduce COD from 250 to 100. Therefore there is no need for any improvement as suggested by KRMPL. **Commercial Operation Date of Sajari facility was declared by UPJN on 20.06.20.**

Following Points needs to be addressed:

**i. Compliance of Inspection Reports**

Compliance report of Inspection held at 42 MLD STP on 02.09.2020 and inspection report issued on 04.09.20 has not been submitted by the concessionaire. Rectification of defects indicated in different inspection reports from the start of the project has not been done by the KRMPL and they are extending dates continuously every month. Copy of Inspection report of Sajari Site is enclosed.

**ii. O&M Manual**

O&M Manual already approved by UP Jal Nigam.

**iii. Insurance Policies**

Only All Risk Industrial Insurance Policy has been submitted and remaining policies are not submitted after so many reminders. Comprehensive General Liability Policies submitted by concessionaire is not acceptable. Notarized Industrial all risk policy for Sajari has been submitted by KRMPL on 28.08.20 on which PE submitted the point-wise comments on 31.08.20. No action taken by concessionaire on STC's comments.

**iv. Performance of Plant:**

All KPIs are within prescribed limit for the month of September 20 except the dates when the parameters of raw sewage are beyond prescribed limit for which concessionaire is not responsible. Performance Report of September 20 enclosed.

**a) Mechanical Screens (Coarse & Fine Screens)**

Auto System of both Mechanical Screens need to be repaired.

**b) Gas Generators**

All 3 no's of Gas Generators installed are not operational since handover date. KRMPPL had promised previously to get all the 3 gas generators operational by 30.06.20 vide KRMPPL letter no. 453 dated 11.06.20, now KRMPPL has promised to get the Gas generators operational by 30.09.20 but no action has been taken by concessionaire till the end of Sept. 20.

**v. Joint Sampling and Testing by IIT Kanpur**

It was decided in the meeting of GM GPCU UPJN on 16-12-2019 (MOM issued vide letter no 3847/M-2A/116 dated 18-12-2019) that atleast once in a month joint sampling of raw sewage and treated effluent will be done by UPJN and KRMPPL and testing to be done by IIT Kanpur. KRMPPL has took the sample jointly on 15.09.20 and sent it for testing. Testing reports from NABL accredited Laboratory Spectro Research Lab Ventures (P) Ltd of joint samples taken on 01.07.20 and 28.07.20 has been received on 15.09.20. Both test reports are enclosed.

**vi. Power backup and Online Monitoring System**

DG set for power backup has been made operational by UPJN on 14.07.20. Online monitoring system has been installed and synchronised but to be calibrated.

**vii. Work plan For Sludge Disposal**

Work plan for sludge disposal on UPJN identified land to be submitted by the Concessionaire.

**viii. Submission of Schedule Maintenance Programme**

Submission of schedule maintenance programmes for the next year is still pending from the Concessionaire side.

**GENERAL ISSUES**

- 1) Power Back- up to be provided at all locations as per Article 8.7 (b) which is not being accepted by KRMPPL.
- 2) As per Article 8.8 (a): At each STP/Pumping Station (new or existing) of all locations, the Concessionaire shall install and maintain an online monitoring system, in accordance with the Technical Specifications and Applicable Laws (including specifically, the EPA) to monitor the volume, specifications and characteristics of the incoming Sewage and the Treated Effluent, as applicable.
- 3) As per Article 11.2: During the O&M Period of the Facilities, the Concessionaire shall obtain and maintain insurance policies including but not limited to the following:
  - (i) loss, damage or destruction of the Facilities, at replacement value;
  - (ii) comprehensive third party liability insurance including injury to or death of personnel of the Jal Nigam or NMCG or others caused by the Project;
  - (iii) the Concessionaire's general liability arising out of the Project;
  - (iv) liability to third parties for goods or property damage;
  - (v) workmen's compensation insurance; and

(vi) any other insurance that may be necessary to protect the Facilities, the Concessionaire and its employees, including for all Force Majeure Events that are insurable at commercially reasonable premiums and not otherwise covered in items (i) to (v) above.

## 8 STATUS OF BEP& OTHER DETAILS

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

**Table 6.2: BEPs and other details**

SN	Particulars	Status	
		Approved	Pending
1.	<b>BEPs (Process, Mechanical &amp; Electrical)</b>	GA, Data Sheet and QAP of centrifuge, submersible pump and mechanical grid collection system, Unnao- reviewed & recommended for approval on 25.02.20  GA, Data Sheet and QAP of centrifuge, submersible pump and mechanical grid collection system, Pankha- reviewed & recommended for approval on 28.02.20  130 MLD Jajmau - QAP for PST, SST, Surface Aerators, Grit Mechanism & Thickener approved.  Structural rehabilitation & retrofit for 130 MLD STP approved.	Concessionaire has submitted the hard copies of BEP for 130 MLD STP on 23.09.20 after approval from IIT Roorkee (along with IITR letter) without attaching any soft copy.  Concessionaire has submitted the revised electrical load list and SLD for the 130 MLD Jajmau vide their letter no.664 dated 29.09.20 without any attached enclosures.
2.	<b>BEP Structure Design &amp; Drawings</b>	SBR Rev Structural design drawing, Unnao- recommended for approval on 30.06.20  Guard Room design, Unnao- recommended for approval on 01.04.20  SBR REV-RCC design drawing, Unnao- recommended for approval on 11.04.20  PTU Rev Structural design drawing, Unnao- recommended for approval on 11.04.20  Staff Quarters Revised RCC design of Unnao STP- recommended for approval on 15.04.20  Rev Structure design of Blower Room of Unnao STP- recommended for approval on 16.04.20  ADMIN build drawing, Unnao- recommended for approval on 10.04.20  Sludge thickener & Sludge re-circulation Sump Rev. Structural drawing, Unnao- recommended for approval on 11.04.20  CCT Rev Structure design drawing, Unnao- recommended for approval on 10.04.20  Blower Room Structure drawing and design of Pankha STP- recommended for approval on 30.04.20	Acquisition of land for I&D works Unnao is under progress

		<p>Structure drawing of CCT &amp; TEPH, Jajmau- recommendations for approval on 06.03.20</p> <p>Electrical drawing, Pankha- recommendations for approval on 17.03.20</p> <p>Structure drawing, Unnao MPS- recommended for approval on 29.02.20</p> <p>Revised drawing of boundary wall, Unnao- recommended for approval on 29.02.20</p> <p>CTE for Shuklaganj STP received from UPPCB dated 10.07.2020</p> <p>GA, data sheet &amp; QAP - Fine screen, coarse screen and belt conveyor for Unnao vetted by letter no. 455 dated 13.08.2020</p> <p>GA, data sheet &amp; QAP - Centrifuge feed pump Unnao vetted by STC letter no. 463 dated 18.08.2020</p> <p>GA, data sheet &amp; QAP for Dosing Pump –Unnao Vetted by STC letter no. 482 dated 03.09.2020</p>	
3.	<b>Construction Plan</b>	<p>Revised construction plan Pankha-recommended for approval on 18.06.20 &amp; 29.07.20 without extending completion date.</p> <p>Revised construction plan Unnao-recommended for approval by STC letter vide on 441 dated 31.07.2020 without extending completion date</p>	
4.	<b>Sewer Network/Line Design</b>	<p>Design and drawings of sewer work Pankha- recommended for approval On 10.02.20</p> <p>Design and drawings of sewer work Unnao- recommended for approval On 20.02.20</p>	
5.	<b>ESHS Plan</b>	<p>ESHS approval-Already vetted by STC. Approved by UPJN on 26.09.19</p>	
6.	<b>O&amp;M</b>	<p>Bingawan RTOLMS - Reviewed &amp; found in order. Recommended for approval on 03.12.19/ 19.12.19 with some conditions</p> <p>Level transmitter &amp; flow metre - vetted &amp; approved on 27.12.19</p> <p>Bingawan O&amp;M manual - approved</p> <p>Sajari O&amp;M manual – Approved</p>	<p>Only All Risk Industrial Insurance Policy has been submitted and remaining policies are not submitted after so many reminders. Comprehensive General Liability Policies submitted by concessionaire is not acceptable.</p>

# ANNEXURE

**ANNEXURE 1: Progress of Work – HAM Project Kanpur**

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 Concessioneer	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
01.09.20	Submission of drawing & datasheet along with QAP for PST.	28.08.20  UPJN-2146/w-20/26	01.09.20  S-476	4	20-	-		C.M.Dimri  Linga Rao  Vikas Priyesh Satendra Lokesh Kapil	1+1+1+1+1 +1+1	-	-	-	Under vetting
02.09.20	Submission of compliance report on comments given on manhole for Pankha sewage facilities.	28.08.20  K-600	02.09.20  S-480	4	20			C.M.Dimri  J.P.Tripathi  Linga Rao Vikas Priyesh Satendra Lokesh Kapil	1+1+1+1+1 +1+1+1				Vetted & Recommended for approval

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 Concessionaire	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
03.09.20	Submission of GA Technical data sheet & QAP for centrifuge feed pump, fine and coarse screen, mechanical grid collection system Unnao.	20.07.20  K-528 & 18.08.20  S-463	03.09.20  S-481	16	20			C.M.Dimri S Basutkar Linga Rao Vikas Priyesh  Satendra Lokesh Kapil	1+1+1+1+1 +1+1+1				Vetted & Recommended for approval
03.09.20	Approval of GA, Datasheet and QAP of Dosing pump for 05 MLD, 15 MLD, 30MLD STP facilities.	01.09.20  By email of KRMPL	03.09.20  S-482	2	20			C.M.Dimri S Basutkar Linga Rao  Vikas Priyesh Satendra Lokesh Kapil	1+1+1+1+1 +1+1+1				Vetted & Recommended for approval
04.09.20	Pankha & Unnao facilities manhole	24.07.20	04.09.20	-	20	-	-	JP Tripathi	1+1+1+1+1 +1+1	-	-	-	



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 Concessionaire	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
	details.	S-429 Reminder	S-483 Reminder					Linga Rao Vikas  Priyesh Satendra Lokesh Kapil					
04.09.20	Inspection Report of 42 MLD Sajari STP.		04.09.20  S-484		20			JP Tripathi  Linga Rao Vikas Priyesh Satendra Lokesh Kapil	1+1+1+1+1 +1+1				
05.09.20	Submission of Quality control plan & work method statement for Approval.	29.08.20  K-606	05.09.20  S-485	6	20			C.M.Dimri  Linga Rao Vikas Priyesh	1+1+1+1+1 +1+1				

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 Concessioneer	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
								Satendra Lokesh Kapil					
05.09.20	Inspection Report of 210 MLD Bingawan STP.		05.09.20 S-486		20			C.M.Dimri Linga Rao Vikas Priyesh Satendra Lokesh Kapil	1+1+1+1+1 +1+1				
06.09.20	Sunday												
07.09.20	Submission of compliance report on comments given on Unnao and Pankha site for Brick Manholes MOC.	04.09.20 K-619	07.09.20 S-487	3	20			C.M.Dimri  Linga Rao Vikas Priyesh Satendra	1+1+1+1+1 +1+1+				

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 Concessionaire	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
								Lokesh Kapil					
07.09.20	Submission of drawing & data sheet along with Qap for PST,SST ,surface,aerator,grit machine,screen,thickner for 130 MLD STP Jajmau. Project.	31.08.20  K-608	07.09.20  S-488	7	20	-	-	C.M.Dimri  S Basutkar Linga Rao Vikas Priyesh Satendra Lokesh Kapil	1+1+1+1+1 +1+1+1	-	-	-	
08.09.20	Submission of drawing & data sheet along with QAP for PST,SST , surface, aerator, grit machine, screen, thickener for 130 MLD STP Jajmau. Project.	31.08.20  K-608	07.09.20  S-488	7	20			C.M.Dimri  Linga Rao Vikas Priyesh Satendra Lokesh Kapil	1+1+1+1+1 +1+1				Under Vetting

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 Concessionaire	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
09.09.20	Inspection Report of Unnao STP,15 MLD .		09.09.20 S-490		20			J.P. Tripathi  Linga Rao Vikas Priyesh Satendra Lokesh Kapil	1+1+1+1+1 +1+1				
09.09.20	Regarding sewer Bedding calculation latest revision R-02	03.09.20 K-615	09.09.20 S-491	6	20			C.M.Dimri  Linga Rao Vikas Priyesh Satendra Lokesh Kapil	1+1+1+1+1 +1+1				
09.09.20	Submission of Revised Network drawing for Pankha	29.08.20 K-607	09.09.20 S-492	11	20			C.M.Dimri  J.P.Tripathi  Linga Rao Vikas	1+1+1+1+1 +1+1+1				Vetted & Recommended for approval

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 Concessioneer	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
								Priyesh Satendra Lokesh Kapil					
09.09.20	Submission of piping GAD for 15 MLD Unnao & 30 MLD for Pankha Approval	27.08.20  K-538	09.09.20  S-493	13	20			C.M.Dimri  Linga Rao Vikas Priyesh Satendra Lokesh Kapil	1+1+1+1+1 +1+1				Vetted & Recommended for approval
10.09.20	Structural Rehabilitation & Retrofit report for 130 MLD Jajmau facilities.	19.08.20  K-574	10.09.20  S-494	19	20			C.M.Dimri  J.P.Tripathi  Linga Rao Vikas Priyesh Satendra Lokesh	1+1+1+1+1 +1+1+1+1				

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 Concessioneer	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
								Kapil Mahendra					
11.09.20	Structural Rehabilitation & Retrofit report for 130 MLD Jajmau facilities.	19.08.20  K-574	10.09.20  S-494	19	20			C.M.Dimri  Anil Seth Linga Rao Vikas Priyesh Satendra Lokesh Kapil Mahendra	1+1+1+1+1 +1+1+1+1		-	-	Under Vetting
16.09.20	Submission of Electrical drawing for 130 MLD Jajmau facilities Reminder - 03	24.08.20  S-470 Reminder-2	16.09.20  S-498		20			C.M.Dimri  Anil seth Vikas  Priyesh Satendra Lokesh Kapil	1+1+1+1+1 +1+1				Under Vetting

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 Concessionaire	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
16.09.20	Submission of drawing of valves along with QAP for Approval.	14.09.20 K-636	16.09.20 S-499	2	20	-	-	C.M.Dimri  Anil seth Vikas Priyesh Lokesh Kapil Mahendra	1+1+1+1+1+1+1	-	-	-	
16.09.20	Submission of RCC Design & Drawing-Pankha I&D structures.	20.08.20 K-578	16.09.20 S-500	27	20	-	-	C.M.Dimri  Anil seth Vikas Priyesh Kapil Lokesh Mahendra	1+1+1+1+1+1+1	-	-	-	
17.09.20	Inspection Report of Unnao STP 15 MLD dated 11.09.20		17.09.20 S-501		20			J.P.Tripathi  Anil seth Lokesh Kapil Mahendra	1+1+1+1+1	-	-	-	Inspection done by our engineers at Unnao STP

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 Concessionaire	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
17.09.20	Submission of sewerage Network design Pankha	20.08.20 K-578	17.09.20 S-502	28	20			J.P.Tripathi  Anil seth Lokeshl Mahendra	1+1+1+1+1	-	-	-	Comments
17.09.20	Undertaking for laying of sewerage network for 30 MLD STP Pankha.	14.09.20 K-635	17.09.20 S-503	3	20			J.P.Tripathi  Anil seth Lokeshl Mahendra	1+1+1+1+1	-	-	-	
17.09.20	Submission of QAP for RCC pipe- Manufacturer K.K Spun India Ltd.	01.09.20 K-612	17.09.20 S-504	16	20	-	-	J.P.Tripathi  Anil seth Lokesh Kapil Mahendra	1+1+1+1+1	-	-	-	
18.09.20	Submission of QAP for RCC pipe- Manufacturer K.K Spun India Ltd.	01.09.20 K-612	17.09.20 S-504					J.P.Tripathi  Anil seth Lokesh Kapil	1+1+1+1+1				Under Review



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 Concessionaire	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
								Mahendra					
19.09.20	Approval of drawing & datasheet along with QAP to PST,SST,surface aerator, grit mechanism,Thickner for 130MLD STP Jajmau.	29.08.2020  S-476(Reminder)	19.09.20 S-505	18	20	-	-	C.M.Dimri  Anil seth  Vikas Priyesh Satendra	1+1+1+1+1+1	-	-	-	
19.09.20	Rcc design & drawing-Pankha I&D structure	20.08.20  K-578	19.09.20 S-506	25	20	-	-	C.M.Dimri  Anil seth Vikas Priyesh Satendra	1+1+1+1+1+1	-	-	-	
20.09.20	Sunday												
21.09.20	Excel sheet of the BEP Shuklaganj.		21.09.20 S-507		20			C.M.Dimri O.P.Asati Kapil Ajay	1+1+1+1+1				Under review

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 Concessionaire	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
								Mahendra					
21.09.20	Process calculation for I&D work at Unnao.	09.09.20 K-627	21.09.20 S-508	12	20			C.M.Dimri O.P.Asati Kapil Ajay Mahendra	1+1+1+1+1				
21.09.20	Rcc drawing for supernatant sump for Unnao.	09.09.20 K-627	21.09.20 S-509	12	20			C.M.Dimri O.P.Asati Kapil Ajay Mahendra	1+1+1+1+1				
21.09.20	Design & drawing for gravity sewage network of Unnao.	09.09.20 K-627	21.09.20 S-510	10	20			C.M.Dimri O.P.Asati Kapil Ajay Mahendra	1+1+1+1+1				
22.09.20	Compliance report for Structural	18.09.20	22.09.20	4	20			C.M.Dimri	1+1+1+1+1 +1	-	-	-	

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 Concessionaire	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
	Rehabilitation & Retrofit report for 130 MLD Jajmau facilities.	K-643	S-511					J.P.Tripathi  O.P.Asati Vikas Ajay Mahendra					
22.09.20	Submission of Revised sewerage Network design Pankha.	29.08.20  K-607	22.09.20  S-512	19	20			C.M.Dimri  J.P.Tripathi  O.P.Asati Vikas Ajay Mahendra	1+1+1+1+1 +1				
22.09.20	Approval of drawing & datasheet along with QAP for screen for 130 MLD STP Jajmau.	17.09.20  K-641	22.09.20  S-513	5	20			C.M.Dimri  J.P.Tripathi  O.P.Asati Vikas Ajay Mahendra	1+1+1+1+1 +1				

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 Concessionaire	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
23.09.20	Submission of Valves along with QAP for approval for 15 MLD STP Unnao..	14.09.20  K-636	24.09.20  S-515	10	20			C.M.Dimri  J.P.Tripathi  O.P.Asati Anil seth Vikas Priyesh Satendra Lokesh Kapil Ajay Mahendra	1+1+1+1+1 +1+1+1+1+ 1+1				Under review
24.09.20	Submission of Valves along with QAP for approval for 15 MLD STP Unnao.	14.09.20  K-636	24.09.20  S-515	10	20			C.M.Dimri  J.P.Tripathi  O.P.Asati Anil seth Vikas Priyesh Satendra	1+1+1+1+1 +1+1+1+1+ 1+1				Under review

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 Concessionaire	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
								Lokesh Kapil Ajay Mahendra					
24.09.20	Development of sewerage treatment plant on hybrid annuity PPP basis at Kanpur, State of Uttar Pradesh-15 MLD STP Unnao.	17.09.20  Upjn-1824/m-47/63	24.09.20  S-514	8	20			C.M.Dimri  J.P.Tripathi  O.P.Asati Anil seth Vikas Priyesh Satendra Lokesh Kapil Ajay Mahendra	1+1+1+1+1 +1+1+1+1+1 1+1				
25.09.20	Submission of documents for 5 MLD STP at Shuklaganj.	16.09.20  K-640	26.09.20  S-517	10	20			C.M.Dimri  J.P.Tripathi	1+1+1+1+1 +1+1+1+1+1 1+1				

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 Concessionaire	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
								O.P.Asati Anil seth Vikas Priyesh Satendra Lokesh Kapil Ajay Mahendra					
26.09.20	Submission of documents for 5 MLD STP at Shuklaganj.	16.09.20  K-640	26.09.20  S-517	10	20			C.M.Dimri  J.P.Tripathi  O.P.Asati Anil seth Vikas Priyesh Satendra Lokesh Kapil Ajay	1+1+1+1+1 +1+1+1+1+1+1				Under Review

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 Concessionaire	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
								Mahendra					
27.09.20	Sunday												
28.09.20	Chief Engineer Kanpur meeting regarding Pankha site progress.		28.09.20					C.M.Dimri J.P.Tripathi  O.P.Asati Anil seth Vikas Priyesh Satendra Lokesh Kapil Ajay Mahendra	1+1+1+1+1 +1+1+1+1+1 1+1				We had prepared mom for Pankha site.
29.09.20	Chief Engineer Kanpur meeting regarding Pankha process discussion.		29.09.20					C.M.Dimri J.P.Tripathi  O.P.Asati Anil seth P. Walunjkar Vikas Priyesh	1+1+1+1+1 +1+1+1+1+1 1+1+1				We had prepared mom for Pankha site.

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 Concessionaire	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
								Satendra Lokesh Kapil Ajay Mahendra					
30.09.20	Email send to UPJN for update progress of Pankha Site		30.09.20 By mail		20			C.M.Dimri J.P.Tripathi  O.P.Asati Anil seth P. Walunjkar Vikas Priyesh Satendra Lokesh Kapil Ajay Mahendra	1+1+1+1+1 +1+1+1+1+1 1+1+1				



**Note:** Man-days and respective inputs of experts for the month of September 2020 are:

SN	Name	Designation	Total Man-days	Input
1.	Mr. Chandra Mauleshwar Dimri	Senior Civil Engineer	30	Timesheet attached
2.	Mr. Jai Prakash Tripathi	O&M Engineer	30	Timesheet attached
3.	Mr. Anil Kumar Seth	Senior Electrical Engineer	15	Timesheet attached
4.	Mr. Sunil Basutkar	Senior Mechanical Engineer	03	Timesheet attached
5.	Mr. S. Kamaraju	Senior Process Expert	03	Timesheet attached
6.	Mr. P Walunjkar	Structural Engineer	02	Timesheet attached
7.	Mr. Linga Krishna Rao	Safety expert	15	Timesheet attached
8.	Mr. OP Asati	O&M Engineer	08	Timesheet attached

## Annexure 2: Timesheets of Experts

Mr. C.M. Dimri (Senior Civil Engineer)

<b>Project Engineer</b>	<b>Shah Technical Consultants Pvt Limited</b>	
<b>NMCG-STP Projects at Kanpur under Hybrid Annuity based PPP Mode</b>		
<b>Daily Report</b>		
<b>Name :</b>	<b>Mr. Chandra Mauleshwar Dimri</b>	<b>Month/Year:</b>
<b>Position:</b>	<b>Senior Engineer Civil</b>	<b>Sep-20</b>
<b>Date</b>	<b>Description</b>	<b>Location</b>
1	New email created & Manhole chamber vetting	Kanpur
2	Retrofitting of jajmau vetting and discussion with CEK	Kanpur
3	Mismatch of layout of jajmau level & discussion	Kanpur
4	Discussion with GM, CEK about COD Bingawan	Kanpur
5	Sewer bedding design discussion & Manhole chamber <i>vetting</i>	Kanpur
6	<b>SUNDAY</b>	Kanpur
7	Network design pankha discussion	Kanpur
8	Work method statement appraisal	Kanpur
9	Sewer bedding calculation & network discussion	Kanpur
10	COD Bingawan declared & bedding calculation ok	Kanpur
11	Sever network design & bedding calculation discussed	Kanpur
12	Pankha network design discussed with Mr. Jha R.	Kanpur
13	<b>Sunday</b>	Kanpur
14	Meeting with CEK about Pankha progress	Kanpur
15	Inspection of Pankha & Bingawan with SMCG	Kanpur
16	Inspection of Jajmau and Unnao with SMCG	Kanpur
17	Discussion with KRMPPL about Jajmau 130 MLD	Kanpur
18	Meeting with GM, PM 3 and E&M about various approval	Kanpur
19	Meeting in office with PM and APM KRMPPL about approval	Kanpur
20	<b>Sunday</b>	Kanpur
21	Discussion with SE 3rd about I&D Unnao	Kanpur
22	Pankha sewerage network discussed & ok	Kanpur
23	office Meeting about pending vender list & COD Sajari	Kanpur
24	Discussion about compliance on Sajari	Kanpur
25	Meeting at GM office about sajari COD issues	Kanpur
26	First running milestone certificate issue for Pankha & Unnao	Kanpur
27	<b>Sunday</b>	Kanpur
28	Chief Engineer kanpur meeting Pankha STP Progress	Kanpur
29	Pankha Process discussion with jha & jajmau structure	Kanpur
30	Discussion with CEK on Pankha progress & Unnao construction Plan	Kanpur
<p>I hereby certify that the time report above is a true and complete statement of my working time for the</p>		
<b>Signature of Employee</b>	 <b>Signature of Team Leader</b>	

Mr. J. P. Tripathi (O&M Engineer)

Project Engineer		Shah Technical Consultants Pvt Limited	
NMCG-STP Projects at Kanpur under Hybrid Annuity based PPP Mode			
Daily Report			
Name :	JAI PRAKASH TRIPATHI	Month/Year:	
Position:	O & M ENGINEER	Sep-20	
Date	Description	Location	
1	Prepared Time sheet and Invoice for the Month of August 2020	Kanpur	
2	Discussed with PM (E & M) GPCU UPJN Kanpur regarding status of power back up and on line monitoring system of Sajari being installed by UPJN	Kanpur	
3	Discussed with CE UPJN Kanpur regarding Bingawan COD	Kanpur	
4	Wrote letter to GM GPCU UPJN forwarding inspection report of Sajari Facilities	Kanpur	
5	Wrote letter to GM GPCU UPJN forwarding inspection report of Bingawan Facilities	Kanpur	
6	Sunday		
7	Discussed with PM 2 GPCU UPJN Kanpur regarding performance of Sajari Facilities	Kanpur	
8	Finalized proforma of ID Card to be printed for the employees of STC Kanpur project	Kanpur	
9	Discussed with GM GPCU UPJN Kanpur regarding Bingawan COD	Kanpur	
10	Corrected draft letter to be sent by GM GPCU UPJN to KRMPL regarding Bingawan COD	Kanpur	
11	Discussed with Dr. Shaifali Env. Expert SMCG Lucknow regarding SMCG team visit of Kanpur HAM project from 14/09/2020 to 16/09/2020	Kanpur	
12	Second Saturday		
13	Sunday		
14	Attended meeting with CE & GM GPCU UPJN in the office of CE UPJN Kanpur	Kanpur	
15	Visit of Pankha and Bingawan Facilities with the team of SMCG lucknow	Kanpur	
16	Visit of Sajari Facilities with the team of SMCG lucknow	Kanpur	
17	Vishwakarma Pooja in office	Kanpur	
18	Helped in preparing of MPR of the month of Aug 2020	Kanpur	
19	Corrected and finalized MPR of the month of Aug 2020	Kanpur	
20	Sunday		
21	Received representation by KRMPL regarding preponement of COD for Sajari Facilities	Kanpur	
22	Received representation by KRMPL regarding preponement of COD for Sajari Facilities	Kanpur	
23	Discussed with UPJN officials regarding representation by KRMPL for preponement of COD for Sajari Facilities	Kanpur	
24	Received Daily performance reports submitted by KRMPL of Sajari Facilities	Kanpur	
25	Received Daily performance reports submitted by KRMPL of Bingawan Facilities	Kanpur	
26	Discussed with Mr. Priyesh Shukla Support Engineer regarding MPR	Kanpur	
27	Sunday		
28	Discussed with Mr. Ajai Goel Support Engineer(Mech) regarding Sajari and Bingawan	Kanpur	
29	Explained and instructed Mr. Ajai Goel Support Engineer(Mech) to inspect Sajari and Bingawan STPs	Kanpur	
30	Received compliance submitted by KRMPL regarding COD for Bingawan Facilities	Kanpur	
I hereby certify that the time report above is a true and complete statement of my working time for the payroll period.			
 Signature of Employee		 Signature of Team Leader	

Mr. A. K. Seth (Senior Electrical Engineer)

Project Engineer		Shah Technical Consultants Pvt Limited	
NMCG-STP Projects at Kanpur under Hybrid Annuity based PPP Mode			
Daily Report			
Name :	ANIL KUMAR SETH	Month/Year:	Sep-19
Position:	Senior Electrical Eng.	Location	
Date	Description		
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11	write up prepared for IE-1, IE-2 & IE-3 class of motors and handed over to TL.		Kanpur
12	SECOND SATURDAY		
13	SUNDAY		
14	Attended the visit of SMCA team with TL		Kanpur
15	Attended the visit of SMCA team with TL Pankha STP 30 mld.		Kanpur.
16	Attended the visit of SMCA team with TL, Ummao, safahi & Jajman STPs		Kanpur
17	visit of Pankha 30mld to check the progress of work		Kanpur
18	Preparation of Bill of materials for various STPs		Kanpur
19	Checking of electric circuit of Mechanical screen.		Kanpur
20	SUNDAY		
21	checking of control circuit of mechanical screen		Kanpur
22	checking of Submissions of mechanical screen - Bill of materials, 150 mld STP Jajman & approval letter prepared.		Kanpur.
23	Persuaded the approval of Transformer, DG set, STD & List of Pankha 30mld STP.		Kanpur.
24	checking of IPS-6 & IPS 7 for Pankha & dismissed.		Kanpur.
25	work connected with Shuklaadomy STP, working/		Kanpur.
26	work by quantities connection		
27	SUNDAY		
28	Ingress Protection of various utilities motors		Kanpur
29	IP-55 IP-65 etc.		Kanpur.
30	work connected with Jajman STP 150 MLD. Pole		Kanpur.
	cutting		

I hereby certify that the time report above is a true and complete statement of my working

Signature of Employee .

Signature of Team Leader 24/9/20

Mr. S. Kamaraju (Senior Process Expert)

Project				
<b>Shah Technical Consultants Pvt Limited</b>				
<b>NMCG- STP Projects at Kanpur under Hybrid Annuity based PPP Mode</b>				
<b>Daily Report for the Year 2020</b>				
Name :	Satish Kamaraju, Process Engineer			
Position:	Office Manager			
Date	Description	Duration (Days)	STP/Nalas	Work Performed Location
20/01/2020	Review of Sludge Handling System of 130 MLD Jajmau Facility - Responding to the request received via email dated 20/1/20 from TL	0.25	Jajmau STP	Home
22/01/2020	Review of Sludge Handling System of 130 MLD Jajmau Facility - Responding to the request received via email dated 20/1/20 from TL	0.25	Jajmau STP	Home
08/03/2020	Review Comments of ICI Nala & Sundemagar Nala - Responding to the request received via email dated 26/2/20 from TL	0.5	Nalas	Home
19/03/2020	Review Comments of ICI Nala & Sundemagar Nala - Responding to the request received via email dated 18/3/20 from TL	0.5	Nalas	Home
04/04/2020	Review of TEPs of Jajmau STP - Responding to the request received via email dated 04/04/20 from TL/Support Engineer (Mr. Priyesh Shukla)	1	Jajmau STP	Home
07/05/2020	Review of Process Calculations based on COD for Sajari STP - Responding to the request received via email dated 03/05/20 from TL	0.5	Sajari STP	Home
11/05/2020	Response drafted on KRMPL R3 Revision Jajmau STP 130 MLD Renovation	0.5	Jajmau STP	Home
21/05/2020	Response drafted on KRMPL Letter on Sajari Facilities - Responding to the request received via email dated 21/5/20 from TL	0.25	Sajari STP	Home
18/07/2020	Review Comments of I&D Work at Thermal Nala, IPS Sunder Nala & ICI Nala	1	Nalas	Home
20/07/2020	Review of IIT Comments on Jajmau STP 130 MLD and responding the comments by email	1	Jajmau STP	Home
26/07/2020	Review Comments given on new layout of Shuklaganj STP & Phone calls - Responding to the request received via email dated 25/7/20 from TL	1	Shuklaganj STP	Home
31/07/2020	Review of Pankha STP CCT Dwg - Responding to the request received via email dated 30/7/20 from TL	0.5	Pankha STP	Home
10/08/2020	Discussion over the phone with TL on Shuklaganj STP New Layout & Drafting an email response in this regard - Responding to the request received via email dated 10/08/20 from TL	0.5	Shuklaganj STP	Home
24/09/2020	Review of KRMPL/STC Letters on Shuklaganj BEP CIR Status - Responding to the request received via email dated 23/9/20 from TL	1	Shuklaganj STP	Home
28/09/2020	Review comments of process calculations for I&D Works at Unnao - Responding to the request received via email dated 28/09/20 from TL	1	Unnao	Home
29/09/2020	Review comments of process calculations for I&D Works at Unnao - Responding to the request received via email dated 26/09/20 from TL	1	Unnao	Home
04/10/2020	Detailed summary of the letters on Shuklaganj BEP regarding CRs - Responding to the request received via email dated 03/10/20 from TL	1	Shuklaganj STP	Home
12/10/2020	Client VC Meeting - NMCG, JN, STC & KRMPL	0.25	All Projects	Home
16/10/2020	Detailed summary of the letters on Jajmau BEP - Responding to the request received via email dated 14/10/20 from TL	1	Jajmau STP	Home
19/10/2020	Response given on CA Agreement clauses of CR Compliance for BEPs (Shuklaganj STP Review)	0.5	Shuklaganj STP	Home
05/11/2020	Review of Letters, drafting a detailed email on letters received on I&D Works for Unnao STP - Responding to the request received via email dated 04/11/20 from TL	1	Unnao I&D	Home

Mr. P Walunjkar (Structure Engineer)

**RAJASTHAN RURAL WATER SUPPLY & FLUOROSIS MITIGATION PROJECT (NAGOUR)  
PMSC: STC-NKI-AECOM JV  
MONTHLY ACTIVITY RECORD**

Name: / Preetam Walunjkar (Structural Specialist)

Month / Year: Sep 2020

Date	Package	Location	Details of Work
01-09-2020			Leave
02-09-2020			Leave
03-09-2020			Leave
04-09-2020			Leave
05-09-2020			Saturday Holiday
06-09-2020			Sunday Holiday
07-09-2020	Nagaur	Site	Site Visit to Deshnok CWR
08-09-2020	Nagaur	Office	Preparation of Site Visit Report for Deshnok & Study Window opening problem in ESR 100 KL
09-09-2020	Nagaur	Office	Meeting with SE & CE regarding CWR Deshnok Issue
10-09-2020	Nagaur	Office	CD5 As build Drawing ESR Checking
11-09-2020	Nagaur	Office	CD6 AS build Drawing ESR& Pump House Checked
12-09-2020			Saturday Holiday
13-09-2020			Sunday Holiday
14-09-2020	Nagaur	Office	Solve window problem of ESR Store room & Study Kanpoor Nala Drg
15-09-2020	Nagaur	Office	CD6 As build Drawing CWR Checking
16-09-2020	Nagaur	Office	CD6 As build Drawing PSP & VTC Checking
17-09-2020	Nagaur	Office	CD6 As build Drawing ESR Checking
18-09-2020	Nagaur	Office	CD6 As build Drawing Pump House Checking
19-09-2020			Saturday Holiday
20-09-2020			Sunday Holiday
21-09-2020	Nagaur	Office	CD6 As build Drawing Checking/Visit new Guest House
22-09-2020	Nagaur	Office	Excel Sheet preparation for Deshnok CWR work & meeting with CE
23-09-2020	Nagaur	Office	Preparation of Site visit Report CDS-05 Ladnu (DLP)
24-09-2020	Nagaur	Office	Preparation of Site visit Report CDS-05 Ladnu (DLP)
25-09-2020	Nagaur	Office	Preparation of Site visit Report CDS-05 Ladnu (DLP)
26-09-2020			Saturday Holiday
27-09-2020			Sunday Holiday
28-09-2020	Nagaur	Office	CD6 As build Drawing VTC & CWT Checking
29-09-2020	Kanpur	Office	Check Compliance report submitted by KRMP for Jajmau Retrofitting work
30-09-2020	Kanpur	Office	Rehabilitation Report Study for NMCG


SIGNATURE

TL/ DTL  
PMSC for RRWS&FMP (Nagaur)



Mr. L.K. Rao (Safety Expert)

Project Engineer		Shah Technical Consultants Pvt Limited	
NMCG-STP Projects at Kanpur under Hybrid Annuity based PPP Mode			
Daily Report			
Name :	Linga Krishna Rao	Month/Year:	Sep-20
Position:	Safety Expert	Location	
Date	Description		
1	Office work attended, Recent (Biphas) inspection copies collected from morning, outgoing files and office mails (UPJL, KRMPL and our STC) Correspondence for proposed site inspection purpose.	Kanpur	
2	Office work attended, Sajan 47 MLD Project work site inspection along with civil support engineer.	Kanpur	
3	Office work attended, Sajan 47 MLD site inspection report prepared and discussed with TL for final approval and sent to UPJN & other concerned personnel. An instruction by TL, Umrao Construction file, Method of statement & safety requirements reviewed and added the required points.	Kanpur	
4	Office work attended, Paraha 30 MLD Project work site inspection along with civil support engineer Mr. Sandra Sharma & Binagan 210 MLD Site inspection done along with site supervisor Mr. Lokesh.	Kanpur	
5	Office work attended, Paraha 30 MLD Site inspection report prepared and discussed with TL for final approval and Binagan 210 MLD STP Plant inspection report sent to UPJN and the concerned.	Kanpur	
6	SUMMARY		
7	Office work attended, Umrao 15 MLD Project work site inspection along with civil support engineer.	Kanpur	
8	Office work attended, Umrao 15 MLD Project inspection report prepared and shared to TL & sent to the UPJN and other concerned personnel.	Kanpur	
9	Office work attended, Paraha 30 MLD Site inspection report prepared and discussed with TL for final approval.	Kanpur	
10	Office work attended, Paraha 30 MLD Project inspection report prepared and shared to TL & sent to the UPJN and other concerned personnel.	Kanpur	
11	Office work attended, Bhoktagar 5 MLD and Umrao 15 MLD Projects site inspection along with civil support engineer.	Kanpur	
12	Secomi Saturday		
13	SUNDAY		
15	Visit to Paraha 30 MLD Construction site, Binagan 210 MLD (O&M) and Umrao 15 MLD and 45 MLD (O&M) plants along with SMCG officials.	Kanpur	
15	Visit to Sajan 42 MLD (RAW) plant Umrao 15 MLD STP construction site along with SMCG officials.	Kanpur	
30	Visit to Paraha 30 MLD construction site along with SMCG officials.	Kanpur	

  
Signature of Employee

  
Signature of Team Leader

Mr. O.P. Asati (O&M Engineer)

<b>Project Engineer</b>		<b>Shah Technical Consultants Pvt Limited</b>	
<b>NMCG-STP Projects at Kanpur under Hybrid Annuity based PPP Mode</b>			
<b>Daily Report</b>			
<b>Name :</b>	<b>Mr. O.P Asati</b>	<b>Month/Year:</b>	<b>Sep-20</b>
<b>Position:</b>	<b>O&amp;M Engineer</b>	<b>Location</b>	
<b>Date</b>	<b>Description</b>		
21	Relived from Haridwar	Kanpur	
22	Journey Period	Kanpur	
23	Joining at office & Study of Agreement	Kanpur	
24	Study of Concessionaire Agreement	Kanpur	
25	Study of case file of Jajmau	Kanpur	
26	Site Visit of jajmau	Kanpur	
27	<b>Sunday</b>	Kanpur	
28	Meeting in chief office for discussion about work progress of Pankha STP etc.	Kanpur	
29	Renew of BEP of jajmau.	Kanpur	
30	Study of correspondance with KRMPPL company.	Kanpur	
<p>I hereby certify that the time report above is a true and complete statement of my working time for the</p>			
 <b>Signature of Employee</b>		 <b>Signature of Team Leader</b>	



### Annexure 3: Monthly Performance Report of Bingawan

210 MLD SEWAGE TREATMENT PLANT, BINGAWAN, KANPUR															MONTH: SEPTEMBER-2020		REMARK
Date	INLET FLOW in MLD	Plant Run in HRS	RAW SEWAGE					FINAL OUTLET					POWER SHUTDOWN				
			Temp	TDS	PH (7-8)	COD (523mg/l)	BOD (322mg/l)	TSS (418mg/l)	Temp	TDS	PH (7-8)	COD (<100mg/l)	BOD (<30mg/l)	TSS (<50mg/l)	HRS	MINS	
°C	ppm	ppm	ppm	ppm	ppm	°C	ppm	ppm	ppm	ppm	ppm	HRS	MINS				
1-Sep-20	136.25	24.0	31	906	7.3	551	136	378	31	930	7.5	112	31	52	1	35	33kV HT Feeder Fault From KesCO side
2-Sep-20	120.81	24.0	31	870	7.3	560	188	394	31	900	7.5	120	31	50	8	19	33kV HT Feeder Fault From KesCO side
3-Sep-20	133.64	24.0	30	780	7.2	638	190	508	30	890	7.6	128	33	54			
4-Sep-20	130.66	24.0	31	770	7.2	588	192	400	31	880	7.4	136	32	54			
5-Sep-20	117.00	24.0	31	870	7.3	540	200	386	31	900	7.4	144	31	48			
6-Sep-20	109.34	24.0	32	960	7.4	632	205	409	32	950	7.4	152	32	46			
7-Sep-20	117.17	24.0	32	900	7.3	736	199	408	32	930	7.4	184	33	50	40		33kV HT Feeder Fault From KesCO side
8-Sep-20	65.80	24.0	32	900	7.4	620	190	380	32	920	7.6	168	32	44	5	46	33kV HT Feeder Fault From KesCO side
9-Sep-20	87.69	24.0	32	850	7.4	692	188	388	32	940	7.5	184	32	56	8	35	33kV HT Feeder Fault From KesCO side
10-Sep-20	128.25	24.0	32	880	7.4	624	240	400	32	970	7.6	176	33	52			
11-Sep-20	112.32	24.0	33	1000	7.3	592	190	436	33	980	7.5	188	31	52			
12-Sep-20	128.08	24.0	32	1010	7.4	584	195	424	32	1000	7.5	176	32	51			
13-Sep-20	118.39	24.0	33	980	7.3	592	178	360	33	1000	7.5	180	32	55	1	20	33kV HT Feeder Fault From KesCO side
14-Sep-20	116.81	24.0	33	970	7.3	608	150	380	33	1010	7.5	144	28	50			
15-Sep-20	131.56	24.0	33	960	7.2	620	164	368	33	990	7.4	152	30	57			
16-Sep-20	128.25	24.0	33	980	7.3	624	135	404	33	980	7.4	144	30	51			
17-Sep-20	121.32	24.0	32	990	7.2	680	150	388	32	1000	7.3	156	29	52			
18-Sep-20	120.97	24.0	32	940	7.3	630	145	440	32	995	7.4	160	30	54			
19-Sep-20	112.32	24.0	33	940	7.3	592	150	480	33	970	7.3	136	29	56			
20-Sep-20	130.70	24.0	33	980	7.3	640	165	528	33	972	7.3	120	30	58			
21-Sep-20	131.72	24.0	32	970	7.2	632	146	580	32	990	7.3	136	28	50			
22-Sep-20	122.38	24.0	30	980	7.2	632	164	528	30	1000	7.3	138	31	48			
23-Sep-20	128.62	24.0	30	960	7.2	560	160	508	30	980	7.5	120	29	52			
24-Sep-20	126.17	24.0	30	800	7.3	580	158	480	30	900	7.4	112	30	50			
25-Sep-20	123.05	24.0	32	900	7.2	604	162	522	32	928	7.3	136	31	54			
26-Sep-20	123.65	24.0	30	908	7.3	672	158	518	30	920	7.5	128	30	50			
27-Sep-20	130.00	24.0	30	910	7.2	712	155	510	30	930	7.5	136	31	56			
28-Sep-20	126.88	24.0	28	960	7.2	720	170	498	28	980	7.3	144	30	52			
29-Sep-20	103.48	24.0	29	940	7.2	688	155	522	29	990	7.4	136	30	53	6	18	33kV HT Feeder Fault From KesCO side
30-Sep-20	100.19	24.0	29	930	7.3	680	150	508	29	948	7.5	144	29	58	3	50	33kV HT Feeder Fault From KesCO side
TOTAL	3603.67														36	57	
AVG	120.12	24.00	31.4	921.1	7.3	624.8	173.0	448.2	31.4	954.0	7.4	144.7	30.7	52.2	Hrs	Mins	



### Annexure 4: Test Result of Joint Sampling Report of Treated Effluent (Bingawan)

**SPECTRO**  
Research Lab Ventures (P) Ltd.

CIN:U73200DL2006PTC355036

Format No:SRL/TRF/GEN  
Issue No:01, Issue Date:01-04-2017  
Page 1 of 2

## TEST REPORT

Test Report Issued To:

**KANPUR RIVER MANAGEMENT PVT. LTD.**

SHAPOORJI PALLONJI AND CO. PVT. LTD., U.P. JAL NIGAM, BENAHHABAR ROAD, KANPUR, UTTAR PRADESH, INDIA, 208002.

**Test Report No:** K200831007/K200831007-11

**Date of Issue:** 16-Sep-2020

**Sample Booking/Receipt Date:** 31-Aug-2020  
**Date of Start of Testing:** 31-Aug-2020  
**Date of Completion of Test:** 07-Sep-2020

Customer Relationship Number: 56524

Sample Description : TREATED SEWAGE

Customer Reference No: LETTER DATED - 31.08.2020

Kind Attention : MR. AMIT BHARAMBE

E-Mail: amit.bharambe@shapoorji.com

Sample Condition : AS PER RECEIVED

Sample Quantity (Approx) : 1

Contact No: 9833373179

Sample Size (Approx) : -

SAMPLE COLLECTED BY OUR LABORATORY. THE RESULTS RELATE ONLY TO THE ITEMS TESTED

**ULR-TC784520000006092F**

Authenticity of report can be verified by mail at [verification@spectrolab.in](mailto:verification@spectrolab.in)

This is a Digitally Signed Report and hence doesn't require Physical Signature.

**Spectro Research Lab Ventures (P) Ltd, G-3, Bajrang Bai Industrial Area, Near Panki Site-IV, Kanpur-208020(India)**  
**Phone :+91-9235503984/85 || Web: www.spectroresearchlabs.com|| Email: knp@spectro.in**  
 ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory  
 Please refer to our Website: <http://www.spectro.in/spectro-research-lab-ventures.html>

**SPECTRO**  
Research Lab Ventures (P) Ltd. **TEST REPORT**  
CIN:U73200DL2006PTC355034

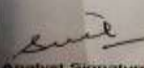
Format No: SRL/TRF/GEN  
Issue No: 01, Issue Date: 01.04.17  
Page 2 of 2  
Report No. K200831007/K200831007-11



ID- K200831007-1


Date of start of testing: 31.08.2020  
Date of completion of testing: 07.09.2020


Sl. No.	Test Parameter	Observed Value	Test Method
1.	Total Suspended Solids, mg/l	48	IS:3025(P-15)-1984 (RA-2019)
2.	C.O.D, mg/l	112	IS:3025(P-58)-2006 (RA-2017)
3.	B.O.D (5 days) at 20°C, mg/l	30	APHA 5210-B (23rd Edition): 2017

\*\*\*\*\*End of report\*\*\*\*\*

Analyst Signature 

  — End of Test Report —  
ULR-TC784520000006092F



  
Authorized Signatory

Spectro Research Lab Ventures (P) Ltd, G-3, Bajrang Ball Industrial Area, Near Pankaj Site-IV, Kanpur-208020 (India)  
Phone +91-9235503984/85 || Web: www.spectroresearchlabs.com || Email: knp@spectro.in

**SPECTRO**  
Analytical Labs Limited **TEST REPORT**  
74220DL1998PLC092698

Format No: SALL/TRF/GEN  
Issue No: 01, Issue Date: 01.04.17  
Page 2 of 2  
Report No. K200831007/K200831007-20

ID-K200831007-2

**Microbiological Testing**

S. No.	Test Parameters	Observed Results	PROTOCOL
1.	Faecal col., MPN/100 ml	5000	IS:1622:1981

— End of Test Report —


Analyst Signature 



  
Authorized Signatory

Spectro Analytical Labs Limited, E-41, Okhla Ind. Area, Phase-II, New Delhi-110020 (India)  
Phone +91-11-40522000, 41611000 || Web: www.spectro.in || Email: sll@spectro.in  
ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory

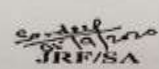

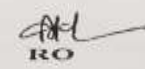
**Annexure 5: Test Result of Sampling Report of Influent & Effluent by UPPCB (Bingawan)**


  
**Regional Office,**  
**U.P. Pollution Control Board,**  
**Kanpur**  
Analysis Report of STP Bingawan, Kanpur

Method of Sampling: Grab  
 Date of Sampling : 02-09-2020  
 Representative : Mr. Ravindra Kumar, LA  
 Sample Collected by : Mr. Sarvesh Kumar (LA)

S.No.	Parameters	210 MLD (STP)	
		Inlet	Outlet
1	pH	7.03	7.16
2	BOD (mg/L)	270	54
3	COD (mg/L)	760	150
4	TSS (mg/L)	405	86

BOD- Bio-Chemical Oxygen Demand, COD- Chemical Oxygen Demand, TDS-Total Dissolved Solid, TSS- Total Suspended Solid, STP- Sewage Treatment Plant, MLD- Million Litre per Day.  
Note: The Test Report Pertains to the Sample as received in the lab.

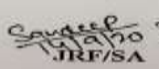






  
**Regional Office,**  
**U.P. Pollution Control Board,**  
**Kanpur**  
Analysis Report of STP Bingawan, Kanpur

Method of Sampling: Grab  
 Date of Sampling : 07-09-2020  
 Representative : Mr. Shailesh Yadav, Lab Incharge  
 Sample Collected by : Mr. Sarvesh Kumar (LA)

S.No.	Parameters	210 MLD (STP)	
		Inlet	Outlet
1	pH	7.18	7.26
2	BOD (mg/L)	228	43.5
3	COD (mg/L)	512	184
4	TSS (mg/L)	496	146

BOD- Bio-Chemical Oxygen Demand, COD- Chemical Oxygen Demand, TDS-Total Dissolved Solid, TSS- Total Suspended Solid, STP- Sewage Treatment Plant, MLD- Million Litre per Day.  
Note: The Test Report Pertains to the Sample as received in the lab.

## Annexure 6: Site Inspection Report for the Month of Sept. 2020 (Bingawan)

### Inspection report of 210 MLD STP Bingawan

Inspected on date 04-09-2020 Following were present

- Mr. Linga Krishna Rao, Safety Expert
- Mr. Lokesh Khandelwal, Support site supervisor Engineer
- Mr. Salesh Yadav, Lab Chemist, KRMPL

#### Observations:-

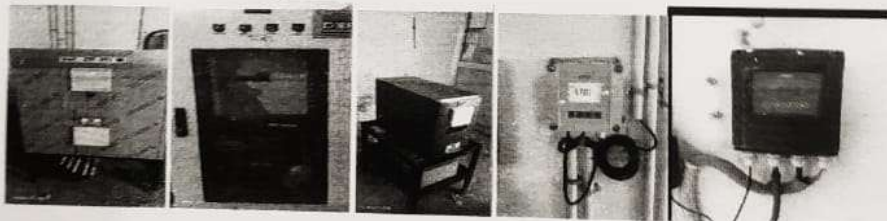
##### 1. Online Monitoring System :-

- Out of 2 no's Electro-Magnetic Flow meters in inlet, 1 no. has been installed at site and it has been synchronised with RTOLMS. At 12.30 PM, EFM reading has been found 1998.5 cum/hr and at the same time, reading by online system was 1992.5 cum/hr. There's difference between both the readings. Hence, EMF needs to be calibrated.
- Inlet sump 2 nos. level transmitters are installed and found in working condition and has been synchronised with RTOLMS. At 12.29 PM, Level Transmitter readings have been found (A&B) 13.816m and 13.814m and at the same time, online monitoring system was showing 13.76m & 13.88m. Please rectify the difference in readings.
- Online monitoring system, RTU, DNP & UPS installed at Inlet & Outlet, and it has been synchronised with RTOLMS and testing results (COD, BOD & TSS) are changing for every 15 minutes.

INLET Analyser readings have been found (COD-508.5mg/l, BOD-167.7mg/l & TSS-418.0mg/l) at 12.45 PM and at same time, online system readings were showing (COD-508.25mg/l, BOD167.72mg/l & TSS-418.03mg/l).

CUTLET Analyser readings have been found (COD-70.83mg/l, BOD-23.37mg/l & TSS-34.37mg/l) at 12.58 PM. At the same time, online system was also showing the same readings. Both feeding pumps are not placed at the fixed location.

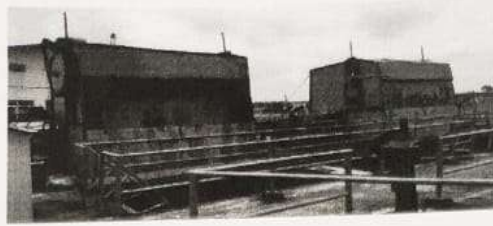
- It is also necessary to update the proper power consumption and timing of both Power supply and Power backup (DG set) in RTOLMS.
- Electromagnetic flow meter for treated effluent has not been installed yet. Installation of Flow meter at the Treated effluent channel of the STP is necessary and should be synchronised with RTOLMS.



- **Note:-**RTOLMS Instruments and equipments are installed & have been verified for installation at site. Technical parameters need to be ensured by the concessionaire.

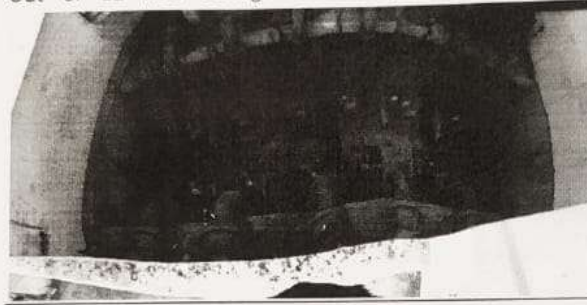
##### 2. Collection Chamber

- 2 no's of manual screen are in working condition.
- 2 no's of mechanical screen, 1 no. has been found in running condition. Both mechanical screens and conveyer belt structure has to be painted. Currently in corroded state.
- Chain cover has not been found in mechanical screen structure.



**3. Main Pumping Station**

- Out of 12 no's sewage transfer pump installed. All are in working condition.



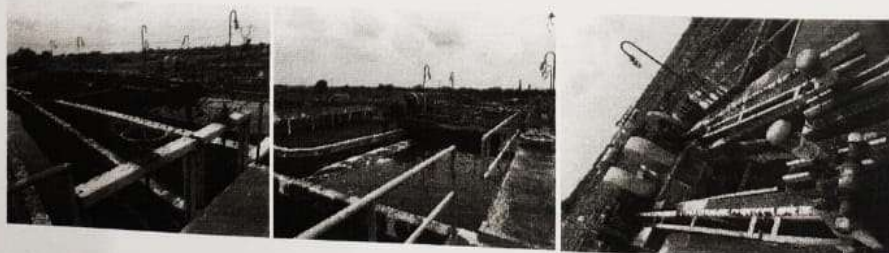
**4. Inlet chamber**

- 2 no's of manual screen are in working condition.
- 3 no's of mechanical fine screen including belt conveyer assembly are installed. One no mechanical fine screen has not been in running condition.



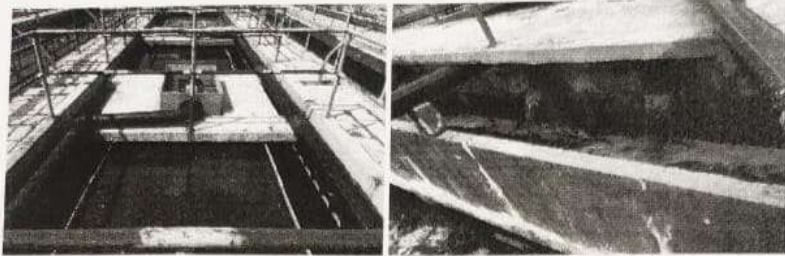
**5. Grit removal assembly**

- Out of 4 no's, all are in working condition. Coupling guard & Chain guards has yet to be placed
- Painting has to be carried out for all the gates.



#### 6. UASB reactor

- Out of 16 no's, Reactors, cleaning and maintenance works are completed reactor no. 1, 4 & 8 and working has been found satisfactory. Reactor no. 2 & 3 are under maintenance works from 4.08.2020 & 20.08.2020. KRMPL has not submitted work programme schedule of reactors cleaning, sludge removal and maintenance.

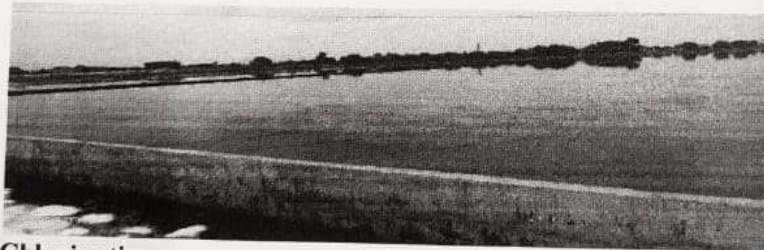


#### 7. Aeration pond

- Out of 18 no's of aerators 2 no's are under maintenance (electric motor maintenance).
- Painting of panels and hand railing has to be carried out.
- Most of the cable trays are in corroded condition.



#### 8. Final polishing pond



#### 9. Chlorination

- Chlorination system has been found ok and dosing of chlorine was providing 5 kg/hour.

#### 10. Gas holder

- Out of 2 no's both are not in working condition.

#### 11. DFG & DG set

- Out of 2 no's DFG, 1 no. DFG has found in working condition and another under maintenance.

**12. Belt filter press**

- Out of 3 no's, 1<sup>st</sup> no. Belt Filter Press has been found in working condition. 3<sup>rd</sup> no. Belt Filter Press maintenance works completed and in working from dated 4.09.2020 and 2<sup>nd</sup> no. BFP has found under maintenance. KRMPL ensures to repair the same completely before 20.09.2020.
- 1 no. tractor trolley has been found in working to disposal of dewatered sludge. It is always required to run 2 no. filter press at a time. So, 2 nos. Tractors and 3 nos. Trolley always needed at site for disposal of the dewatered sludge.

**13. COD Nala Screen**

- No person was available for screen cleaning. There is no arrangement for cleaning day and night.
- COD nala structure platform, hand railing and ladder got damaged due to corrosion or erosion. It must be rectified immediately.

**14. Miscellaneous**

- There is no proper road in plants approach and internal campus road. Balance boundary wall work is to be completed as earlier by upjn.
- Housekeeping works was found in plant campus. Grass cutting machine used in this work.
- IP camera is to be installed around the plant

**15. Safety points**

- Qualified compounder with First aid certificate holder to be mobilized. First aid facility like first air box, stretcher to be arranged immediately in the site.
- Chlorine safety system to be improved, required proper caution boards and safe operation procedure at outside and inside area of chlorine handling to provided, chlorine detector and emergency alarm system to be arranged for safety of operators and workers working in this plant area.
- SCBA (self contained breathing apparatus) which is not in good condition and required, good condition SCBA to be provided and training to be given all the chlorine handling workers.



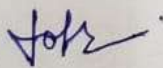
- Every month monthly safety committee meeting to be conducted along with the workers, staff, consultant representative and client representatives. The minutes of meeting to be circulated to all the concerned personnel and the compliance to done updated in next month meeting to all the personnel those who have attended meeting. Safety chairmen will be the Project Manager of KRMPL and Safety Secretary will be the Safety officer of KRMPL.
- Mock drills of Chlorine emergency, Incident, Fire, Poison, Fall from height etc., to be conducted once in a month each topic. Such mock drill report to be prepared and shared to the consultant and client and the gaps/short coming any to be discussed and implemented as lesson learning.
- Near mosque well top plate or grill to arrange in protection point of view.
- While entering in to "DARGA" in/out checking and monitoring to be done at entry gate in safety point of view. In case of any problem in this area then the Concessioner should take liability as per Factories Act.
- In plant all ladders hand railing supports to be arranged for avoiding the fall of persons while climbing and getting down from ladder.
- In plant entire platforms area toe boards with 100X6 mm plate to be arranged for avoiding fall of persons legs in down.
- Coupling guards and chain belt guards to be provided for all the pumps and motors in the site area.
- DG area cautions boards, do's and don'ts along with "no smoking" to be written on the DG fence gate.
- In entire plant safety cautions boards, slogans, pictorial message, and flexes to be arranged for creating safety awareness to the workers, staff and visitors of the plant.

#### 1. Covid 19 precautions followed at site

Thermal measuring and Nose masks providing is followed only 80%. Fogging is being done in labour camps; Sanitizer implementation, disinfection spray, personal screening and awareness programme are implemented.

#### 2. Covid-19 precautions to be followed

Some of the workers were found not wearing Nose masks, PPE's Ear Plugs, Goggles, Hand gloves and Goggles not provided to the workers, staff and visitors. Recent some of the KRMPL staff got Covid-19, But the KRMPL representatives not taken any initiative for informing the same to Consultant and Client.



Lokesh Khandelwal  
Support Engineer



Linga Krishna Rao  
Safety Expert

### Annexure 7: Summary of Monthly Performance Report of Sajari

42 MLD SEWAGE TREATMENT PLANT, SAJARIKANPUR																			
MONTHLY FLOW & LAB REPORT																			
Month: September 2020																			
Date	INLET FLOW in MLD	Plant Run in HRS	RAW SEWAGE						FINAL OUTLET						Aeration	POWER SHUTDOWNS		REMARK	
			Temp	TDS	PH (7-9)	COD (450 mg/l)	BOD (250 mg/l)	TSS (600 mg/l)	Temp	TDS	PH (7-8)	COD (<100mg/l)	BOD (<30mg/l)	TSS (<50mg/l)		DO	HRS		MINS
			°C	ppm		ppm	ppm	ppm	°C	ppm		ppm	ppm	ppm		ppm			
1-Sep-20	19.80	20.0	28	1380	7.5	496	168	303	28	892	7.9	104	24	30	1.6			2 STREAM IS UNDER OPERATION	
2-Sep-20	22.76	24.0	28	1005	7.5	384	155	261	28	839	7.9	96	21	25.0	1.8			2 STREAM IS UNDER OPERATION	
3-Sep-20	22.76	24.0	28	1318	7.5	512	174	316	28	908	7.9	104	23	33	1.7			2 STREAM IS UNDER OPERATION	
4-Sep-20	22.77	23.0	28	1256	7.5	416	160	291	28	883	7.9	88	22	28.0	1.9			2 STREAM IS UNDER OPERATION	
5-Sep-20	20.75	21.0	28	1349	7.5	440	154	309	28	841	7.9	92	23	26	1.8			2 STREAM IS UNDER OPERATION	
6-Sep-20	22.76	24.0	28	1402	7.5	448	162	318	28	854	7.9	96	25	32	1.8			2 STREAM IS UNDER OPERATION	
7-Sep-20	22.77	23.0	28	1508	7.5	528	175	321	28	918	7.9	104	22	34	1.8	15		2 STREAM IS UNDER OPERATION	
8-Sep-20	22.76	24.0	28	1405	7.5	440	158	296	28	810	7.9	88	21	27	1.9			2 STREAM IS UNDER OPERATION	
9-Sep-20	21.78	22.0	28	1296	7.5	384	145	264	28	827	7.9	96	22	29	1.7			2 STREAM IS UNDER OPERATION	
10-Sep-20	22.76	24.0	28	1500	7.5	576	180	316	28	902	7.9	104	24	31	1.8			2 STREAM IS UNDER OPERATION	
11-Sep-20	12.87	13.0	28	1519	7.5	560	175	319	28	931	7.9	112	26	33	1.1	21	58	2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage	
12-Sep-20	22.36	22.0	28	1310	7.5	512	165	293	28	898	7.9	104	23	28	1.3	20		2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage	
13-Sep-20	22.76	24.0	28	1291	7.5	432	150	267	28	847	7.9	96	21	26	1.8			2 STREAM IS UNDER OPERATION	
14-Sep-20	19.97	20.0	28	1318	7.5	416	142	294	28	811	7.9	88	22	29	1.7	3	45	2 STREAM IS UNDER OPERATION	
15-Sep-20	22.76	24.0	28	1390	7.5	440	160	297	28	829	7.9	96	24	33	1.6			2 STREAM IS UNDER OPERATION	
16-Sep-20	19.30	19.0	28	1381	7.5	552	175	319	28	905	7.9	104	26	31	1.8			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage	
17-Sep-20	21.29	21.0	28	1298	7.5	380	150	276	28	891	7.9	96	21	28	1.5			2 STREAM IS UNDER OPERATION	
18-Sep-20	22.28	22.0	28	1190	7.5	356	145	243	28	802	7.9	88	20	26	1.8			2 STREAM IS UNDER OPERATION	
19-Sep-20	20.46	21.0	28	1336	7.5	448	160	292	28	934	7.9	92	23	31	1.7			2 STREAM IS UNDER OPERATION	
20-Sep-20	19.80	20.0	28	1290	7.5	408	165	297	28	816	7.9	80	21	27	1.9			2 STREAM IS UNDER OPERATION	
21-Sep-20	22.28	22.0	28	1481	7.5	540	175	316	28	992	7.9	104	23	32	1.7			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage	
22-Sep-20	19.80	20.0	27	1503	7.5	608	182	323	27	1009	7.9	112	25	33	1.6			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage	
23-Sep-20	22.76	24.0	27	1480	7.5	440	155	291	27	911	7.9	96	22	28	1.8			2 STREAM IS UNDER OPERATION	
24-Sep-20	22.77	23.0	27	1310	7.5	394	140	286	27	805	7.9	88	21	26	1.9			2 STREAM IS UNDER OPERATION	
25-Sep-20	23.10	23.0	27	1419	7.5	496	165	311	27	916	7.9	104	23	31	1.2			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage	
26-Sep-20	22.76	24.0	27	1403	7.5	448	160	291	27	894	7.9	96	22	34	1.4			2 STREAM IS UNDER OPERATION	
27-Sep-20	22.28	23.0	27	1390	7.5	408	165	276	27	816	7.9	88	20	29	1.7			2 STREAM IS UNDER OPERATION	
28-Sep-20	18.65	19.0	27	1419	7.5	512	180	315	27	953	7.9	104	24	31	1.4			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage	
29-Sep-20	19.64	20.0	27	1343	7.5	440	160	294	27	829	7.9	96	22	27	1.7			2 STREAM IS UNDER OPERATION	
30-Sep-20	16.83	17.0	27	1218	7.5	336	150	243	27	801	7.9	80	21	25	1.8			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage	
TOTAL	645.39															26	18		
AVG	21.51	21.67	28	1364	7.5	458.0	161.7	294.6	28	875	7.9	96.5	22.6	29.4	1.7				

Note: There is ingress of Industrial Waste water (coloured) at STP from Sarigawan area, which was experienced on dates of 1,3,7,10,11,12,16,21,22,25,28 September 2020.

**ANNEXURE 8: Test Result of Joint Sampling Report of Treated Effluent (Sajari)**

**SPECTRO**  
Research Lab Ventures (P) Ltd.  
CIN: U73200UP2006PTC031472

Format No: SRL/TRF/GEN  
Issue No: 01, Issue Date: 01.04.17

Page 2 of 2

Report No. K200903005/K200903005-10

**ID- K200903005-1**

Date of start of testing: 01.07.2020  
Date of completion of testing: 08.07.2020

Sl. No.	Test Parameter	Observed Value	Test Method
1.	Total Suspended Solids, mg/l	34	IS:3025(P-15)-1984 (RA-2019)
2.	C.O.D, mg/l	92	IS:3025(P-58)-2006 (RA-2017)
3.	B.O.D (5 days) at 20°C, mg/l	20	APHA 5210-B (23rd Edition): 2017

\*\*\*\*\*End of report\*\*\*\*\*

Woy

-- End of Test Report --

*Sud*  
Analyst Signature

Authorised Signatory

Spectro Research Lab Ventures (P) Ltd, G-3, Bajrang Bali Industrial Area, Near Panki Site-IV, Kanpur-208020 (India)  
 Phone :+91-9235503984/85 || Web: www.spectroresearchlabs.com|| Email: knp@spectro.in  
 ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory

# TEST REPORT

ID- K200903006-1

Date of start of testing: 28.07.2020  
Date of completion of testing: 04.08.2020

Sl. No.	Test Parameter	Observed Value	Test Method
1.	Total Suspended Solids, mg/l	27	IS:3025(P-15)-1984 (RA-2019)
2.	C.O.D, mg/l	91	IS:3025(P-58)-2006 (RA-2017)
3.	B.O.D (5 days) at 20°C, mg/l	21	APHA 5210-B (23rd Edition): 2017

\*\*\*\*\*End of report\*\*\*\*\*



– End of Test Report –

*[Signature]*  
Analyst Signature



Authorised Signatory

**Annexure 9: Site Inspection Report for the Month of Sept. 20 (Sajari)****Inspection report of 42 MLD STP, Sajari**

Inspected on date 02-09-2020 Following were present,

1. Mr. Lokesh Khandelwal, Support Site Supervisor, STC
2. Mr. Linga Krishna Rao, Safety Expert, STC
3. Mr. Ram Khilawan, lab Chemist, KRMPL

**Observation****1. Collection chamber**

- 1 no. of Manual screen is in working condition.
- 2 no's of Mechanical screens are in working but one screen is not satisfactory in working due to proper alignment. Auto system of both mechanical screens are not rectified.

**2. Main Pumping Station**

- All 5 nos. sewage transfer pumps are checked and found in working condition.
- EOT crane (5T) is found well and all movements activates are working.
- Out of 5 no's pressure gauges are installed, 1no. Gauge is not working. Display glass of all pressure gauges to be changed with glasses for proper visibility.
- Platform already provided at location for operating gauges.

**3. Inlet Chamber**

- 1 no. of Manual screen is working.
- 2 no's of Mechanical fine screens are in working condition.
- Auto systems of both mechanical screens are not rectified.

**4. Grit Separator**

- 2 no's of Mechanical grit removal system are working.
- Screen control panel was found in rusted condition.

**5. Primary clarifier**

- 2 no's of Primary clarifier mechanism are working.

**6. Aeration system**

- 12 no's of aerators are working during our visit.

**7. Secondary clarifier**

- 2 no's of Secondary clarifier mechanism are working.

**8. Chlorination system**

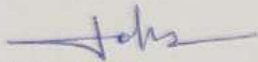
- Chlorination system has been found ok and dosing of chlorine was providing 3.5 kg/hour


**9. On-Line Monitor System**

- Inlet Analyser panel with censer installed at site. It has not been synchronised with RTOLMS. Analyser results are found at site (PH-7.63, COD-242 mg/l, BOD-121 mg/l, TSS- 165 mg/l).

- Out let Analyser panel with censer installed at site. It has not been synchronised with RTOLMS. Analyser results are found at site (PH-7.84, COD-76.9 mg/l, BOD-22.3 mg/l, TSS- 6 mg/l).
- 10. Primary Sludge pump**
- 2 no's of screw pump both are checked ok in running.
- 11. Thickener Sludge pump**
- Out of 2 no's of screw pump, both are checked ok in running.
- 12. Return Sludge pump**
- 3 no's of submersible pump are in working condition.
  - 1no. pressure gauge is not working. Display glass of all pressure gauges to be changed with glasses for proper visibility.
  - Manual chain pulley system provided at site.
- 13. Digester**
- Both of Sludge digester mixer are in working condition
  - EFM at outlet of digester was installed, but not working due to calibration.
- 14. Gas Holder/Gas Scrubber/Gas flaring units**
- 3 no's of Gas engine installation. Gas engine not working now, KRMPL told that GGE the manufacturer representative has suggested to overhauling of all the gas engines to be carried out. From KRMPL side there is no regular operator for the Gas generators.
  - Out of 6 no's of battery, 2 no's are in working condition in gas gen sets.
- 15. Power Back-up To DG Set**
- DG set has been procured, installed and put to use under trial run.
- 16. Miscellaneous**
- Painting of the outer civil structural's and hand railing in walkways & ladders have to be carried out.
  - Plant area housekeeping and grass cutting work are in progress.
  - Treated water colour is showing as a reddish (light pink) colour.
  - The dried sludge removed at sludge drying bed no. 1 in month of august and disposed at located site near sanigawan with in 10 KM. from STP Plant. One tractor-trolley has been used to disposal of sludge. Totally 22 nos. Trolley sludge disposed in the month of august. Each trolley weight is not mentioned in the record. In this month drying bed no. 3 is used as sludge filling.
  - Staff attendance register is not found at site office.
- 16. Safety Points**
- Gas unit area workers sleeping and storing their PPE's and uniforms. KRMPL must require providing rest room for workers.
  - Some of the workers not using safety shoes, nose masks while working in the plant.
  - Chlorine Self Contained Breathing Apparatus (SCBA) not in working condition. It is required to arrange immediately at work site for meeting chlorine emergency.

- Chlorine gas mock drills to be conducted at site once in 3 months.
- Chlorine neutralisation system is not in working condition.
- 1 no. of safety shower has been installed and found in working condition.
- Chlorine Self Contained breathing apparatus (SCBA) is not in working condition. In case of chlorine leak it is very difficult to control it. So the KRMPPL must arrange a new SCBA immediately.
- At Electrical panel room back side rubber mats to be arranged in safety point of view. In this area good house-keeping to be maintained.
- EOT crane chain pulleys and chain blocks third party testing and certification is to be get it done.

  
Lokesh Khandelwal (Civil)  
Supt. Engr.

  
Linga Krishna Rao  
Safety expert

