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

सत्यमेव जयते

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

JUNE- 2020

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

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

Project Engineer
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117/426 14-O block, Geeta Nagar
Kanpur
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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

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 4th February 2019 and agreement signed between the parties on 12th April 2019.

3 OBJECTIVES

To achieve above objectives effective development of STPs at Unnao, Shuklaganj and Pankha rehabilitation of existing STPs with O&M for 15 years in Kanpur are proposed under this program. The objectives that NMCG and the UP Jal Nigam wish to achieve through the Project are mentioned in Figure 1.

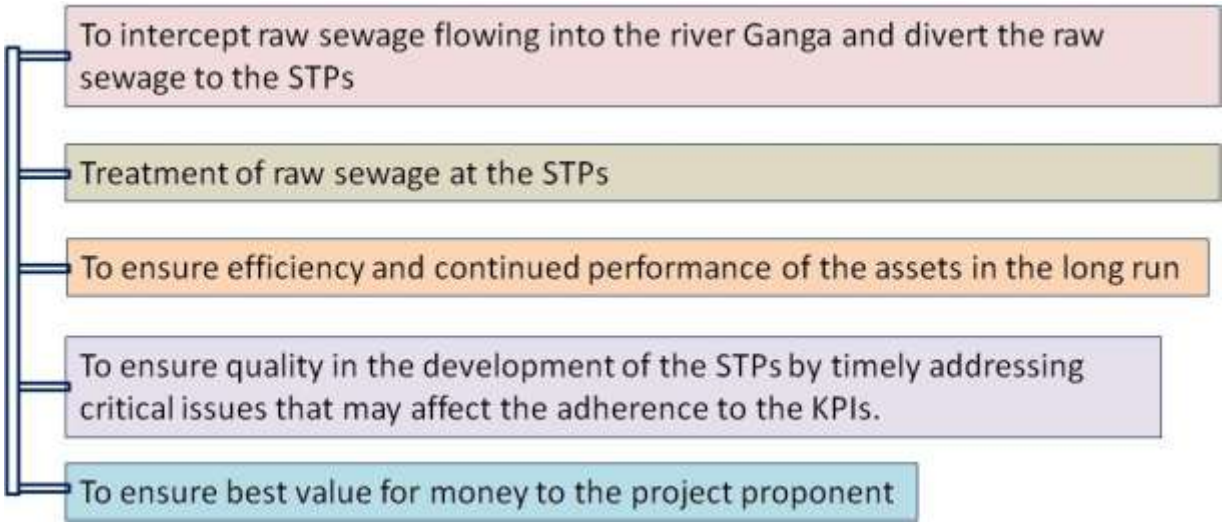


Figure 1: Objectives of NMCG and UP JAL NIGAM

4 HAM KANPUR PROJECT AT A GLANCE

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

Table 2.1: HAM Kanpur Project at a Glance

Particulars		Description
Name of Project	:	Development of new Sewage Treatment Plantsand O&M for 15 years, Rehabilitation of existing Sewage Treatment Infrastructure and O&M for 15 years in Kanpur under One City One Operator concept through Hybrid Annuity based PPP mode. (HAM – Kanpur)
Client	:	National Mission for Clean Ganga (NMCG), New Delhi and UP Jal Nigam
Execution Agency	:	Uttar Pradesh Jal Nigam (UPJN)
Consultant	:	Shah Technical Consultants (P) Ltd. as **'Project Engineer'**
Agreement &LOA	:	STC Agreement dated 12.04.2019 & LOA: Pr-12012/41/2018-PPP/NMCG dated 04.02.2019
Concessionaire	:	Kanpur River Management Private Limited (KRMPL) an SPV of Shapoorji Pallonji& Company Private Limited, Mumbai
Concessionaire's Agreement	:	14/GM/2018-19dated 21.12.2018
Cost of Project (CAPEX+OPEX)	:	₹ 816.24 Cr
Effective Date	:	11.10.2019
Completion date (as per contract)	:	24 Months from effective date (21 months construction + 3 months trial run)
O&M period	:	15 years after last Commercial Operation Date (COD)
Description of Work	:	➢ Construction of three new STPs (SBR) at different locations (30 MLD at Pankha, 15 MLD at Unnao and 5 MLD STP at Shuklaganj) and related infrastructure with 15 years of O&M; ➢ Rehabilitation of 130 MLD (Phase-I) STP at Jajmau with construction of 200 MLD TEPS and 173 MLD CCT at Jajmau with O&M for 15 years; ➢ O&M of 43 MLD (Phase-II) Jajmau facilities, O&M of 210 MLD Bingawan facilities and O&M of 42 MLD Sajari facilities for 15 years;

5 PROJECT WISE DETAILS OF COMPONENTS UNDER HAM KANPUR PROJECT

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

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

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

5.1 PANKHA FACILITIES

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

Table 5.1: Pankha Facilities

SN	STP 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 400 mm-ϕ 450 mm-ϕ 500 mm-ϕ 600 mm-ϕ 700 mm-ϕ 800 mm-ϕ	2.771km 1.359km 1.272km 1.243km 1.778km 1.487km 1.012km

		900 mm-ϕ	2.170km
		1200 mm-ϕ	3.634km
		1600 mm-ϕ	1.596km
		2000 mm-ϕ	1.948km
1.14	**Milestones**	**Date**	**Amount in Rs.**
	1st Milestone	12-Oct-2019 to 25-Apr-2020	1248,39,750
	2nd Milestone	26-Apr-2020 to 10-Jul-2020	1248,39,750
	3rd Milestone	11-Jul-2020 to 24-Sep-2020	1248,39,750
	4th Milestone	25-Sep-2020 to 09-Dec-2020	1248,39,750
	5th Milestone	10-Dec-2020 to 13-Feb-2021	1248,39,750
	6th Milestone	14-Feb-2021 to 21-Apr-2021	1248,39,750
	7th Milestone	22-Apr-2021 to 22-Jun-2021	1248,39,750
	8th 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		
1.1	STP	15 MLD	1
1.2	Sump cum Pump house (MPS)	40 MLD	1
1.3	Trunk Sewer	1200mm ϕ	3.2Km
1.4	I&D works (Nala tapping)	40 MLD	1
1.5	Trash screen	7m-1.7m x 0.8m	1
1.6	Grit chamber	12m-4m x 1m	2
1.7	Collection chamber	3.4m-6.2m x 3m	1
1.8	Rising main (MPS to STP)	750mm ϕ	100m
1.9	Rising main (bypass)	750mm ϕ	100m
1.10	Effluent distribution chamber	-	1
1.11	Effluent gravity channel (STP to discharge point)	1.5m x 1.0m	300m
1.12	Effluent disposal drains	-	500m
1.13	**Milestones**	**Date**	**Amount in Rs.**
	1st Milestone	12-Oct-2019 to 24-Feb-2020	478,36,250
	2nd Milestone	25-Feb-2020 to 15-May-2020	478,36,250
	3rd Milestone	16-May-2020to 30-Jul-2020	478,36,250

	4th Milestone	30-Jul-2020to 14-Oct-2020	478,36,250
	5th Milestone	15-Oct-2020to 24-Dec-2020	478,36,250
	6th Milestone	10-Dec-2020 to 01-Mar-2021	478,36,250
	7th Milestone	02-Mar-2021 to 05-May-2021	478,36,250
	8th 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 ϕ	50m
1.7	Rising main (bypass)	500mm ϕ	50m
1.8	Retaining wall		1
1.9	Effluent channel (STP to discharge point)	1.5m x1m	100m
1.10	**Milestones**	**Land not finalized***	

**ABOVE PROPOSALS ARE UNDER REVISION*

5.4 JAJMAU FACILITIES

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

Table 5.4: Jajmau Facilities

SN	STP Facilities	Capacity/dia. /size	No. of units/length
A	**Phase-I**		
	Date of Start- Effective Date (11.10.2019)		
	Scope of Work- Renovation and O&M		
1.1	STP 1 on ASP technology with power Generation	130 MLD	1
1.2	Sump cum Pump house (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 CSPS	-	1
B	**Phase-II**		
	Schedule Handing Over Date- 01.10.2019	**Capacity/dia. /size**	**No. of units/length**
	Scope of Work- O&M		
1.1	STP 2 on ASP technology with power Generation	43 MLD	1
1.2	Sanjaypuram IPS	-	1
1.3	Khalisa lane IPS	-	1
1.4	Jajmau MPS	-	1

5.5 43 MLD JAJMAU PHASE II STP FACILITY

Project wise components details of Jajmau Phase IIare 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

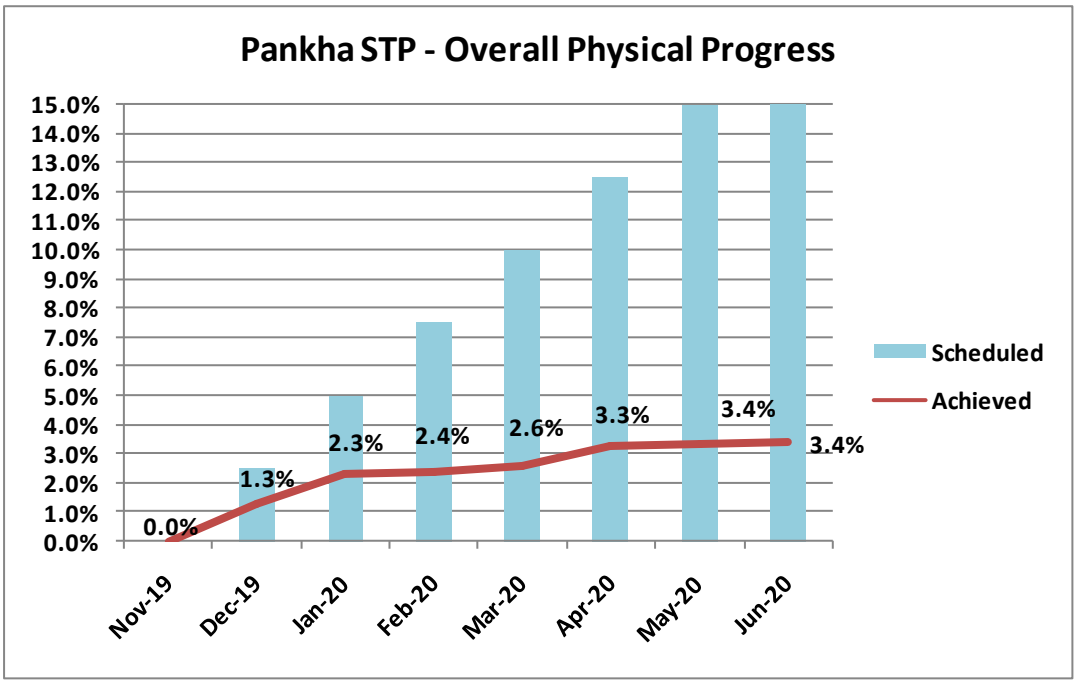
SN	STP Facilities	Capacity/dia. /size	No. of units/length
	Schedule Handing Over Date- 11.10.2019		
	Scope of Work- O&M for 15 years		
1.1	STP on ASP technology	42 MLD	1
1.2	MPS	42 MLD	1
1.3	Chakeri IPS	14 MLD	1
1.4	Sanigawan IPS	14 MLD	1

6 PHYSICAL PROGRESS OF WORK

As per the provision of Concessionaire Agreement, effective date of the project was to be declared before 19th April 2019. Effective date for work execution under HAM Kanpur project was declared on 11th October 2019. Hence, work related to construction / execution of new STP facilities and related infrastructure i.e. Pankha, Unnao & Shuklaganj and renovation of existing facilities i.e. 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 has been divided in eight milestones each having progress of 12.5%. Therefore month wise schedule of progress is divided equally in the tenure of the milestones. For example; first milestones tenure is 5 months i.e. from 26th November 2019 to 25th April 2020 and per month progress works out to 2.5% per month (12.5% ÷ 5 months). In the same way overall progress has been derived by assigning equal weight to each activity as shown in the following graphs.

Progress of Pankha STP



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	Activity Name	Duration	Start	Finish	2nd Milestone targets (due on 10.07.2020)	Proportionate Targets (as on 31.05.2020)	Achieved	Backlog	Remarks
A	**STP (30 MLD)**								
1	**SBR Basin Area**								
	Excavation & PCC (516 m3)	69	27-Nov-19	04-Feb-20	100%	100%	95% excavation 36% PCC	64% PCC & 5% of excavation	186 m^3 of PCC was done. Electric pole shifting is still pending
	RCC Foundation/Raft	107	05-Feb-20	22-May-20	100%	100%	0%	100%	Delayed at KRMPL
	Wall 50% of total lift work	200	23-Mar-20	09-Oct-20	54.50%	50%	0%	50%	Delayed at KRMPL
	Walls (balance 50% of total lift work)	291	27-Jan-20	13-Nov-20	56.70%	53%	0%	53%	Delayed at KRMPL
2	**SBR Splitter Box Area**								
	Excavation & PCC	34	18-Feb-20	23-Mar-20	100%	100%	0%	100%	Delayed at KRMPL
	RCC Foundation/Raft	69	24-Mar-20	01-Jun-20	100%	100%	0%	100%	Delayed at KRMPL
	Wall 50% of total lift work	221	02-Jan-20	10Aug-20	85.97%	81%	0%	81%	Delayed at KRMPL
3	**Chlorine Contact Tank Area**								
	Excavation & PCC	69	10-Mar-20	18-May-20	100%	100%	100% excavation	100% PCC	Delayed at KRMPL
	RCC Foundation/Raft	69	19-May-20	27-Jul-20	75.36%	61%	0%	61%	Delayed at KRMPL
4	**Chlorination House Area**								
	Excavation & PCC	52	04-Apr-20	26-May-20	100%	100%	0%	100%	Delayed at KRMPL
	RCC Foundation/Column footing	69	27-May-20	04-Aug-20	63.77%	49%	0%	49%	Delayed at KRMPL
5	**Sludge Thickener Area**								
	Excavation & PCC	51	20-Apr-20	10-Jun-20	100%	100%	0%	100%	Delayed at KRMPL
	RCC Foundation wall/base slab	69	11-Jun-20	19-Aug-20	42.03%	28%	0%	28%	Delayed at KRMPL
19	**EXTERNAL DEVELOPMENT**								
	Compound Wall with Gate								

SN	Activity Name	Duration	Start	Finish	2nd Milestone targets (due on 10.07.2020)	Proportionate Targets (as on 31.05.2020)	Achieved	Backlog	Remarks
	Excavation & PCC	539	26-Nov-19	18-May-21	42.12%	40%	40%	0%	Excavation 698 m completed and 140 nos. PCC Completed
	RCC Column footing (337No.)	541	15-Jan-20	09-Jul-21	32.72%	31%	31%	0%	101 no. footings completed
	RCC Column and Beam	538	01-Feb-20	23-Jul-21	29.74%	28%	28%	0%	69 nos. columns completed.
	Brick work and plaster	130	02-Apr-20	10-Aug20	76.15%	68%	0%	68%	Delayed at KRMPL
B	**MPS-2 (11MLD)**								
20	**CIVIL**								
20A	**Construction of Raw Sewage Sump**								
	Excavation & PCC	69	16-Jan-20	25-Mar-20	100%	100%	10% excavation done.	100%PCC & 90% of excavation	Delayed at KRMPL
	RCC Foundation/Raft	69	26-Mar-20	03-Jun-20	100%	100%	0%	100%	Delayed at KRMPL
	Wall 50% of total lift work	69	04-Jun-20	12-Aug-20	52.17%	38%	0%	38%	Delayed at KRMPL
	Column and beam	142	04-Jun-20	24-Oct-20	25.35%	18%	0%	18%	Delayed at KRMPL
20B	**Construction of Raw Inlet chamber and screen channel**								
	Excavation & PCC	417	05-Jun-20	27-Jul-21	8.39%	6%			
C	**ICI Nala IPS**								
22	**CIVIL**								
22A	**Construction of Raw Sewage Sump**								
	Excavation & PCC	68	03-Feb-20	11-Apr-20	100%	100%	0%	100%	Delayed at KRMPL
	RCC Foundation/Raft	68	13-Apr-20	20-Jun-20	100%	100%	0%	100%	Delayed at KRMPL
	Wall 50% of total lift work	68	22-Jun-20	29-Aug-20	26.47%	12%	0%	12%	Delayed at KRMPL
	Column and beam	142	22-Jun-20	11-Nov-20	12.68%	6%	0%	6%	Delayed at KRMPL
D	**IPS-6 (Sundar Nagar- 20MLD)**								
25	**CIVIL**								
25A	**Construction of Raw Sewage Sump**								
	Excavation & PCC	69	04-Feb-20	13-Apr-20	100%	100%	0%	100%	Delayed at KRMPL
	RCC Foundation/Raft	69	14-Apr-20	22-Jun-20	100%	100%	0%	100%	Delayed at KRMPL
	Wall 50% of total lift work	69	23-Jun-20	31-Aug-20	24.64%	10%	0%	10%	Delayed at KRMPL
	Column and beam	142	23-Jun-20	12-Nov-20	11.97%	5%	0%	5%	Delayed at KRMPL

SN	Activity Name	Duration	Start	Finish	2nd Milestone targets (due on 10.07.2020)	Proportionate Targets (as on 31.05.2020)	Achieved	Backlog	Remarks
G	**Sewer System Area (RCC Pipes-NP3 Types)**								
	Site Clearance	332	03-Feb-20	31-Dec-20	47.59%	45%	0%	45%	Delayed at KRMPL
	Excavation and lying of RCC pipes including bed preparation & backfilling	538	04-Feb-20	26-Jul-21	29.18%	27%	0%	27%	Delayed at KRMPL
	Manholes	118	07-Apr-20	03-Aug-20	79.66%	71%	0%	71%	Delayed at KRMPL
H	**Design, Supply, Testing & Commissioning of Sewer line (crossing national highway-2 & railway track)**								
	Statutory approvals from Railway & Road Dept.	104	03-Mar-20	15-Jun-20	100%	100%	0%	100%	Delayed at KRMPL
	Construction of Pit	34	16-Jun-20	20-Jul-20	70.59%	41%	0%	41%	Delayed at KRMPL

PHOTOGRAPHS OF PANKHA STP SITE

Boundary Wall work

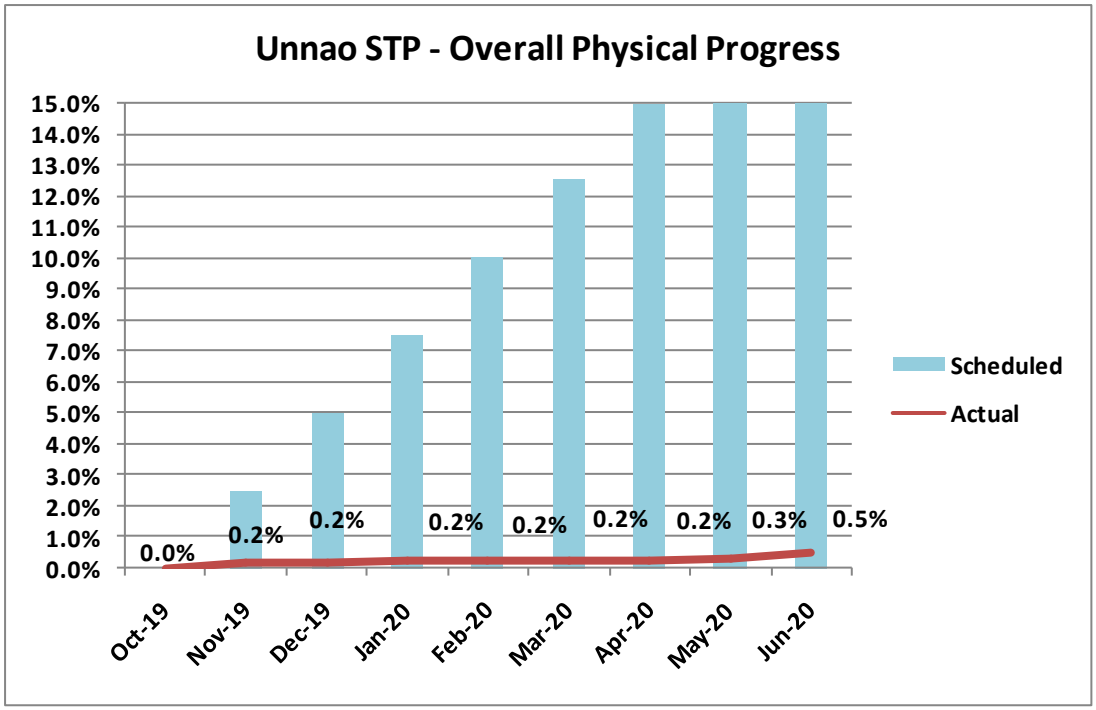
PCC work of SBR

Sewerage line inspection

Ongoing work of Labour Kitchen

6.2 MILESTONE WISE ACTIVITIES AND PROGRESS: UNNAO STP

Progress of 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	Description	Duration	Start	Finish	3rd Milestone Targets (due on 30.07.2020)	Proportionate Targets (as on 30.06.2020)	Achieved	Backlog	Remarks
1	**STP**								
A	**Inlet chamber Area**								
	Excavation	70	26-Oct-19	04-Jan-20	100%	100%	0%	100.00%	Delayed at KRMPL
	PCC	121	06-Jan-20	06-May-20	100%	100%	0%	100.00%	Delayed at KRMPL
	Foundation / RCC work	121	07-May-20	05-Sep-20	69.42%	45%	0%	45%	Delayed at KRMPL
B	**Fine Screen Area**								
	Excavation	69	02-Nov-19	10-Jan-20	100%	100%	0%	100.00%	Delayed at KRMPL
	PCC, raft with misc work	122	11-Jan-20	12-May-20	100%	100%	0%	100.00%	Delayed at KRMPL
	final Finishing including painting shades	121	13-May-20	11-Sep-20	64.46%	40%	0%	40%	Delayed at KRMPL
C	**Grit Chamber Area**								
	Civil work	104	12-Nov-19	24-Feb-20	100%	100%	0%	100.00%	Delayed at KRMPL
	Supply and installation- grit scrapper mechanism	86	25-Feb-20	21-May-20	100%	100%	0%	100.00%	Delayed at KRMPL
	Finishing Work	87	22-May-20	17-Aug-20	79.31%	45%	0%	40%	Delayed at KRMPL
D	**Parshall Flume Channel Area**								
	PCC & Raft Work	104	29-Nov-19	12-Mar-20	100%	100%	0%	100.00%	Delayed at KRMPL
	Finishing Work	86	09-Jun-20	03-Sep-20	59.30%	24%	0%	24%	Delayed at KRMPL
E	**SBR Basin Area**								
	Excavation	104	17-Dec-19	30-Mar-20	100%	100%	20%	80.00%	50m excavation is done
	PCC	104	17-Dec-19	30-Mar-20	100%	100%	20%	80.00%	Out of 230, 52 completed

SN	Description	Duration	Start	Finish	3rd Milestone Targets (due on 30.07.2020)	Proportionate Targets (as on 30.06.2020)	Achieved	Backlog	Remarks
	RCC foundation/Raft Work	104	17-Dec-19	30-Mar-20	100%	100%	0%	100%	Delayed at KRMPL
	Walls (50 % of Total Lift) work	104	31-Mar-20	13-Jul-20	100%	88%	0%	88.00%	Delayed at KRMPL
	Baffle walls work	108	19-Jun-20	05-Oct-20	37.96%	10%	0%	10%	Delayed at KRMPL
	Walls (balance 50 % of Total Lift) Work	83	14-Jul-20	05-Oct-20	19.28%	-	-	-	-
F	**Chlorination Tank Area**								
	PCC & Raft Work	86	26-Dec-19	21-Mar-20	100%	100%	0%	100.00%	Delayed at KRMPL
	Foundation (columns and wall work)	121	23-Mar-20	22-Jul-20	100%	82%	0%	82.00%	Delayed at KRMPL
G	**Sludge Thickener Area**								
	PCC & Raft Work	86	26-Dec-19	21-Mar-20	100%	100%	0%	100.00%	Delayed at KRMPL
	Sludge Raft Work	121	23-Mar-20	22-Jul-20	100%	82%	0%	82.00%	Delayed at KRMPL
H	**Supernatant Sump Area**								
	PCC & Raft Work	69	04-Jan-20	13-Mar-20	100%	100%	0%	100.00%	Delayed at KRMPL
	Sump Raft Work	157	14-Mar-20	18-Aug-20	87.90%	69%	0%	69.00%	Delayed at KRMPL
I	**Sludge Sump Area**								
	Civil work	121	14-Jan-20	14-May-20	100%	100%	0%	88.00%	Delayed at KRMPL
	finishing Works	104	15-May-20	27-Aug-20	73.08%	44%	0%	44%	Delayed at KRMPL
J	**Centrifuge House & Feed Pump House Area**								
	Excavation	39	27-Jan-20	06-Mar-20	100%	100%	0%	100.00%	Delayed at KRMPL
	Column footing	87	07-Mar-20	02-Jun-20	100%	100%	0%	100%	Delayed at KRMPL
	RCC Walls	89	03-Jun-20	31-Aug-20	64.04%	30%	0%	30%	Delayed at KRMPL
K	**Air Blower Room Area**								

SN	Description	Duration	Start	Finish	3rd Milestone Targets (due on 30.07.2020)	Proportionate Targets (as on 30.06.2020)	Achieved	Backlog	Remarks
	Excavation	35	08-Feb-20	14-Mar-20	100%	100%	0%	100.00%	Delayed at KRMPL
	Column footing	88	16-Mar-20	12-Jun-20	100%	100%	0%	100%	Delayed at KRMPL
	Plinth, Grid slab & Cable Trench work	108	13-Jun-20	29-Sep-20	43.52%	16%	0%	16%	Delayed at KRMPL
L	**Chlorination Room Area**								
	Excavation	87	21-Feb-20	18-May-20	100%	100%	0%	100%	Delayed at KRMPL
	Columns footing work & RCC Wall	121	19-May-20	17-Sep-20	59.50%	35%	0%	35%	Delayed at KRMPL
M	**Admin Bldg Area (G+1)**								
	Excavation	68	02-Mar-20	09-May-20	100%	100%	0%	100%	Delayed at KRMPL
	Columns footing	121	11-May-20	09-Sep-20	66.12%	41%	0%	41%	Delayed at KRMPL
N	**Staff Quarter Area (G+1)**								
	Excavation, columns footing	52	14-Mar-20	05-May-20	100%	100%	0%	100%	Delayed at KRMPL
	Plinth Beam,Brick Walls work	69	06-May-20	14-Jul-20	100%	80%	0%	80%	Delayed at KRMPL
	First slab works	69	15-Jul-20	22-Sep-20	21.74%	-	-	-	-
O	**Guard Room Area**								
	Excavation, columns footing	52	14-Mar-20	05-May-20	100%	100%	0%	100%	Delayed at KRMPL
	Plinth Beam, Brick Walls work	51	06-May-20	26-Jun-20	100%	100%	0%	100%	Delayed at KRMPL
	slab works	52	27-Jun-20	18-Aug-20	63.46%	6%	0%	6%	Delayed at KRMPL
P	**Transformer Yard Area**								
	Excavation & foundation	121	24-Mar-20	23-Jul-20	100%	81%	0%	81%	Delayed at KRMPL
Q	**DG Shed Area**								

SN	Description	Duration	Start	Finish	3rd Milestone Targets (due on 30.07.2020)	Proportionate Targets (as on 30.06.2020)	Achieved	Backlog	Remarks
	Excavation & foundation	133	02-Apr-20	13-Aug-20	89.47%	67%	0%	67%	Delayed at KRMPL
R	**External Development**								
	Boundary Wall (234)	434	12-Oct-19	19-Dec-20	67.28%	60%	50%	10%	PCC and RCC of 112 column and column footing are completed
2	**I & D WORK**								
	Construction of I& D Work / Tapping of Drain	87	21-Feb-20	18-May-20	100%	100%	0%	100%	Delayed at KRMPL
	Construction of Grit Chamber	86	19-May-20	13-Aug-20	83.72%	49%	0%	49%	Delayed at KRMPL
3	**MPS-40 MLD**								
S	**CIVIL**								
	Construction of Inlet Chamber	139	12-Dec-19	29-Apr-20	100%	100%	0%	100%	Delayed at KRMPL
	Construction of Screen Channels	139	26-Mar-20	12-Aug-20	90.65%	69%	0%	69%	Delayed at KRMPL
	Construction of Raw Sewerage Pump House	141	07-Jul-20	25-Nov-20	16.31%	-	-	-	-
4	**SEWER SYSTEM AREA (3.2 Km)**								
U	**LAYING OF PIPELINES**								
	Supplying of pipes, Cutting, Excavation, Laying of Pipes, backfilling (3.2 Km)	291	27-Dec-19	13-Oct-20	74.23%	64%	4.4%	60%	Only supplying work is done i.e. out of 3495 rmt 10% comes 350. Out of 350, 110 rmt received

SN	Description	Duration	Start	Finish	3rd Milestone Targets (due on 30.07.2020)	Proportionate Targets (as on 30.06.2020)	Achieved	Backlog	Remarks
	Manholes	290	18-Feb-20	04-Dec-20	56.21%	46%	0%	46%	Delayed at KRMPL
	Flow Testing	240	01-Jun-20	27-Jan-21	24.58%	12%	0%	12%	Delayed at KRMPL
V	**RISING MAIN PIPING WORK (100 m)**								
	Cutting, Excavation, Laying of Pipes, backfilling	103	06-Jan-20	18-Apr-20	100%	100%	0%	100.00%	Delayed at KRMPL
	Testing	15	26-May-20	10-Jun-20	100%	100%	0%	100.00%	Delayed at KRMPL

PHOTOGRAPHS OF UNNAO STP SITE

Boundary Wall

Boundary Wall

Labours at site (BW – 20 labours, Hutment - 9labours)

Steel / RMC plant unloading

7 PRESENT STATUS AND ISSUES OF HAM PROJECT KANPUR

7.1 PANKHA 30 MLDSTP:

- Approval of design & drawings completed except IPS;
- Revised project schedule submitted by Concessionaire is under vetting. Six months time extension is proposed by the Concessionaire;
- Manpower deployment by the Concessionaire has been done but is not sufficient at all STP facilities. Total no. of workers deployed at site are22 (as on 30.06.20).
- Construction work for SBR, BW, CCT, MPS and Sundar Nagar IPS works are under progress;
- Electric poles to be shifted;
- Quality analysis report from HBTU to be submitted;

7.2 UNNAO 15 MLD STP FACILITIES:

- Approval of design & drawings is in process. Drawing of boundary wall approved;
- Approval of I&D design work is in process. Pending at Irrigation department due to land issue;
- Recovery plan to be submitted by the Concessionaire;
- Manpower deployment by the Concessionaire has been done but is not sufficient. Total nos. of workers deployed at site are29 (as on 30.06.20).
- Construction work for SBR, BW, labour hutment facilities and lab establishment under progress;
- Electricity connection yet not obtained by Concessionaire;
- Quality analysis report from HBTU to be submitted;
- I&D design and drawings need to be submitted after incorporating the changes discussed with STC.

7.3 SHUKLAGANJ 5 MLD STP FACILITIES:

Due to inclusion of some villages in the Unnao town area the STP capacity is enhanced up to 20 MLD. UPPCB has not given CTE for the proposed site in the project. Therefore site has been selected 10 km away for the changes permission / approval of UPJN / NMCG is awaited.

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

- All design and drawings approved except Instrumentation part. Instrumentation part design not submitted by the Concessionaire;
- Latest observation of IITR on sludge handling system has been addressed by UPJN and now need to be complied by the Concessionaire;
- Handing over is planned by UPJN by 19.07.20 as agreed by Concessionaire;
- CTO received on 10.06.2020.

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;
- All designs & drawings and other documents has been provided to the Concessionaire;
- Joint inspection and hand over activities are planned by 19.07.2020.
- CTO applied.

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. Following points need to be addressed:

i. Compliance of Inspection Report

Compliance report on inspection done by PM-III GPCU, UPJN on 30.05.2020 has been submitted by KRMPL on 03.06.2020.

ii. O&M Manual

Revised O&M manual of Bingawan incorporating the points decided in the meeting dated 16.12.2019 has not been submitted by the Concessionaire after so many reminders and discussions with CE, Kanpur Zone dated 05.02.2020

iii. Insurance Policies

Only All Risk Industrial Insurance Policy has been submitted remaining policies are not submitted after so many reminders. Comprehensive General Liability Policies submitted by concessionaire is not acceptable.

iv. Performance of Plant

a. Cleaning and reactivation of UASB Reactors

All the KPIs are not being met during the month of May 2020. UASB reactor no. 8 has been filled on 30.05.2020 for reactivation after cleaning and reactor no. 4 & 1 have been taken up for cleaning. The Concessionaire has not submitted the action plan for cleaning and reactivation of UASB reactors but take in randomly for cleaning and reactivation. Performance report of June 2020 enclosed.

b. BFP: Only one filter press is operational, remaining two are still not in working order.

v. Joint Sampling and Testing by IIT Kanpur

It was decided in the meeting of GM GPCU UPJN on 16-12-2020 (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 30.05.2020 first time and after that no joint sample has been taken in the month of June 2020 for testing. Testing report from IIT Kanpur of the Joint sample taken on 30.05.2020 is still awaited.

7.7 42 MLD SAJARI STP

As per CA, Schedule Handing over date for Sajari is effective date (11.10.2019) but plant was handing 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 20.06.2020**. Following Points needs to be addressed:

i. Compliance of Inspection Report

Compliance reports of the Inspections done by Safety Expert STC on 26.05.2020 and issued inspection report on 28.05.2020 has been submitted by the Concessionaire on 01.06.2020. Inspection held on 23.06.2020 by PE, STC on Sajari 42 MLD STP and issued inspection report on 04.07.2020. Copy of Inspection report 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.

iv. Performance of Plant:

All KPIs are within prescribed limit for the month of May 2020 except the dates when the parameters of raw sewage are beyond prescribed limit for which concessionaire is not responsible. Performance Report of June 2020 Enclosed.

a) Mechanical Screens

Auto System of Both Mechanical Screens still not repaired.

v. Joint Sampling and Testing by IIT Kanpur

It was decided in the meeting of GM GPCU UPJN on 16-12-2020 (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 took the sample jointly on 25.06.2020 and sent it to IIT Kanpur for

testing. Testing reports from IIT Kanpur of the Joint sample taken on 20.05.2020 & 25.06.2020 are still awaited.

General Issues:

1) Power Back- up to be provided at all locations as per Article 8.7 (b) which is not being accepted by KRMPL.
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.	**BEPs (Process, Mechanical & Electrical)**	GA, Data Sheet and QAP of centrifuge, submersible pump and mechanical grid collection system, Unnao- reviewed & recommended for approval on 25.02.2020 GA, Data Sheet and QAP of centrifuge, submersible pump and mechanical grid collection system, Pankha- reviewed & recommended for approval on 28.02.2020	BEP of Jajmau STP rehabilitation, waiting for KRMPL compliance BEP of Jajmau IPS rehabilitation, waiting for KRMPL compliance
2.	**BEP Structure Design & Drawings**	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	RCC drawing 20MLD, IPS Sundar Nagar, Pankha. Geo tech report is not proper. RCC drawing 25 MLD IPS ICI Nala, Pankha. KRMPL is not compliance to STC comments.

		Blower Room Structure drawing and design of Pankha STP- recommended for approval on 30.04.20 structure drawing of CCT & TEPH, Jajmau- recommendations for approval on 06.03.2020 Electrical drawing, Pankha- recommendations for approval on 17.03.2020 Structure drawing, Unnao MPS- recommended for approval on 29.02.2020 Revised drawing of boundary wall, Unnao- recommended for approval on 29.02.2020	
3.	**Construction Plan**	Revised construction plan Pankha- recommended for approval on 18.06.20 Revised construction plan Unnao-recommended for approval on 18.06.20	
4.	**Sewer Network/Line Design**	Design and drawings of sewer work Pankha- recommended for approval On 10.02.20 Design and drawings of sewer work Unnao- recommended for approval On 20.02.20	
5.	**Topo, Geo tech & survey reports**		Geo tech report for Unnao STP (except BW& MPS) is rejected by STC/UPJN. **KRMPL need to obtained new SBC report from HBTU**
6.	**ESHS Plan**	ESHS approval-Already vetted by STC. Approved by UPJN on 26.09.19	
7.	**O&M**	Bingawan RTOLMS - Reviewed & found in order. Recommended for approval on 03.12.19 RTU Bingawan - Reviewed & found in order. Recommended for approval on 19.12.19 Level transmitter & flow metre - vetted & approved on 27.12.19 Sajari, O&M manual – Approved	

9 MEETINGS HELD / MINUTES OF MEETING

i. Video conference meeting was held by NMCG on dated 04.06.2020 to discuss progress of HAM Project Kanpur during nationwide lockdown due to COVID-19 pandemic.

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 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)
01.06.20	Attended Office	-	-	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr Vivek Mr LK Rao	1+1+1+1 +1+1	-	-	-	Discussion on KRMPL Letter no. K-430
02.06.20	Jajmau Rehabilitation Status	-	02.06.20 S-370	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr Vivek Mr LK Rao	1+1+1+1 +1+1	-	-	-	Enclosing the concerned letters for kind perusal
03.06.20	Jajmau STP for renovation, Rev. BEP	20.05.20 K-429	03.06.20 S-371	13	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr Vivek Mr LK Rao	1+1+1+1 +1+1	-	-	-	requested UPJN to direct KRMPL to submit control philosophy for early vetting
03.06.20	List of Manufacturer for Approval	22.05.20 K-430	03.06.20 S-372	11	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr Vivek Mr LK Rao	1+1+1+1 +1+1	-	-	-	Credentials of Vendor for manual/mech. Screen needs satisfactory certificates
04.06.20	Attended Office	K-Mail dated 04.04.20	-	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr Vivek Mr LK Rao	1+1+1+1 +1+1	-	-	-	Forwarded the monthly report May2020 of Sajari to NMCG New Delhi on same date after detailed study

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)
04.06.20	Attended office	K-mail dated 04.06.20	-	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr Vivek Mr LK Rao	1+1+1+1+1+1	-	-	-	Study the daily report of Sajari and Bingawan STP dated 03.06.20
05.06.20	Present status of issues of HAM Project Kanpur		S- mail dated 05.06.20	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr Vivek Mr LK Rao	1+1+1+1+1+1	-	-	-	Point-wise issues of all sites under Ham Project Kanpur
06.06.20	Site visit at Pankha with safety experts	-	-	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr Vivek Mr LK Rao	1+1+1+1+1+1	-	-	-	Visited site and found no compliance from KRMPL side regarding quality control and safety measures
07.06.20	SUNDAY												
08.06.20	Attended office	22.05.20 K-357	-	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr Vivek Mr LK Rao Mr S.Rajan Mr kapil Mr Lokesh	1+1+1+1+1+1+1+1	-	-	-	Study of KRMPL letter no. 357 and compare it with norms of CA
09.06.20	Attended office	K-mail dated 09.06.20	-	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr Vivek Mr LK Rao	1+1+1+1+1+1+1+1	-	-	-	Study the daily report of Sajari and Bingawan STP dated 08.06.20

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)
								Mr S.Rajan Mr kapil Mr Lokesh					
10.06.20	Inspection note on Pankha site dated 06.06.20	-	10.06.20 S-376	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr Vivek Mr LK Rao Mr S.Rajan Mr kapil Mr Lokesh	1+1+1+1+1+1+1+1+1	-	-	-	This report shows KRMPL has not complied for Quality control & Safety Measures
11.06.20	Current status for ongoing Maintenance work at Sajari	22.05.20 K-357	11.06.20 S-377	19	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr Vivek Mr LK Rao Mr S.Rajan Mr kapil Mr Lokesh	1+1+1+1+1+1+1+1+1	-	-	-	It is requested UPJN to direct KRMPL to submit Insurance policies as per Article 11.2 Immediately
12.06.20	Attended Office	12-06-20 K-455	-	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr Vivek Mr LK Rao Mr S.Rajan Mr kapil Mr Lokesh	1+1+1+1+1+1+1+1+1	-	-	-	Review of KRMPL letter no. 455 and forwarded it to NMCG New Delhi for kind information
13.06.20	SECOND SATURDAY												
14.06.20	SUNDAY												
15.06.20	Attended Office	09.06.20 K-449	-	-	20	-	-	Mr. CM Dimri Mr JP Tripathi	1+1+1+1+1+1+1	-	-	-	Comments on KRMPL letter 449 by our Instrumentation

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)
								Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh					expert
16.06.20	Inspection note on Pankha site dated 11.06.20	-	16.06.20 S-379	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	1+1+1+1 +1+1+1+ 1	-	-	-	TL Mr. CM Dimri himself visited site along with Support Engineer in charge
16.06.20	Technical Datasheet & QIP for EMF 1200 dia at Bingawan	09.06.20 K-449	16.06.20 S-380	7	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	1+1+1+1 +1+1+1+ 1	-	-	-	Our Instrumentation Expert comments regarding the same has been enclosed
17.06.20	Pankha STP Revised Project Schedule	12.06.20 K-459	17.06.20 S-382	5	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	1+1+1+1 +1+1+1+ 1	-	-	-	It is advised KRMPL to submit revised construction plan for vetting of Pankha facility
18.06.20	Construction plan Unnao facility	11.06.20 K-458	18.06.20 S-383	7	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan	1+1+1+1 +1+1+1+ 1	-	-	-	Recommending construction plan for Approval for Unnaofacility

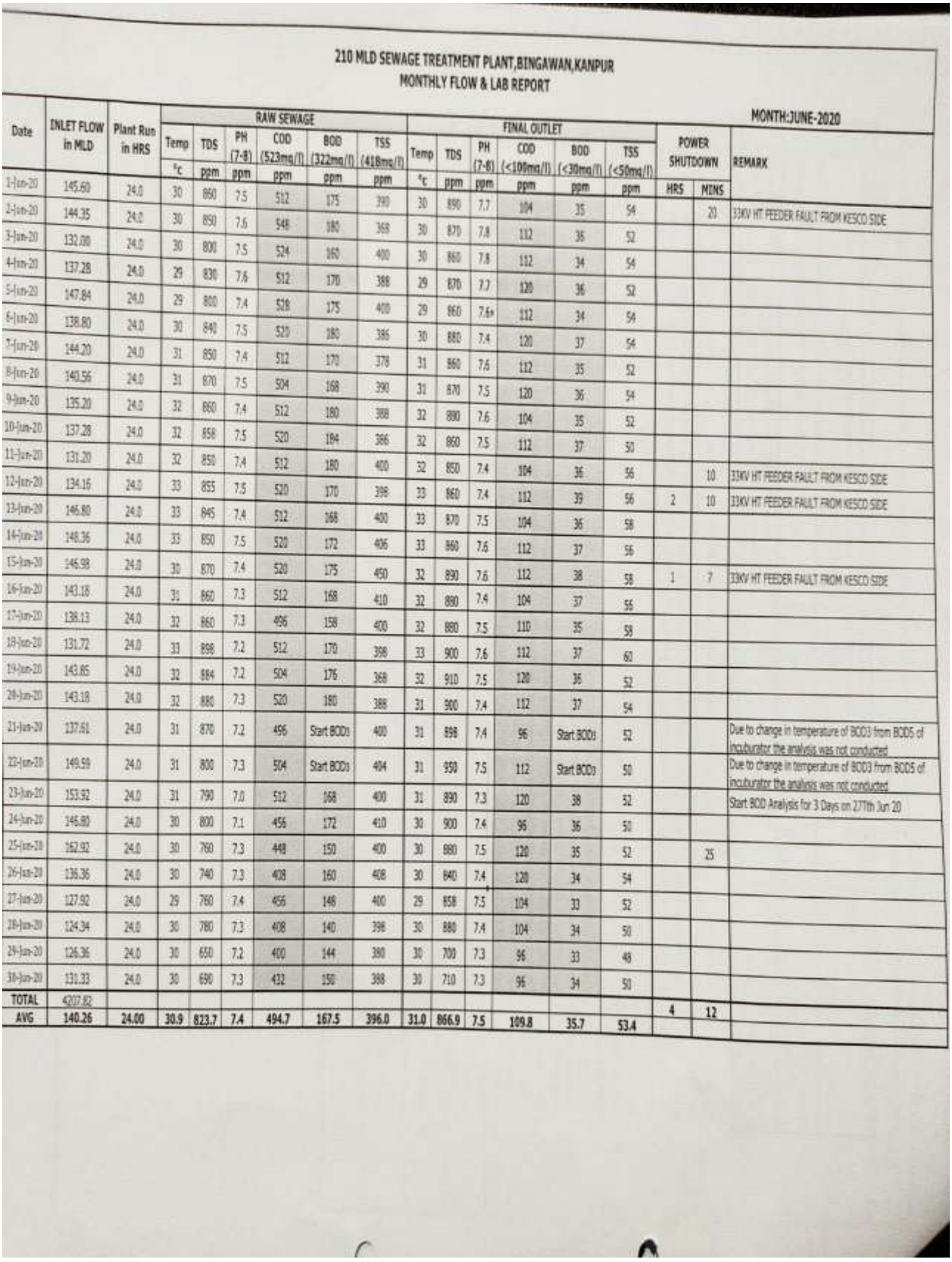
Date	Name of Activity	Date of Receipt	Date of Approval (Vet / Comment)	No. of day taken	Time as per contract (days)	Delay if any (No. of days) [7=6-5]	Reason for delay*	Key Personnel deployed	Man-days of each Key Personnel	Delay by Concessionaire	Reason for delay	Step taken by PE to avoid such delays	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
								Mr kapil Mr Lokesh Mr Vivek					
18.06.20	Construction plan Pankha facility	12.06.20 K-459	18.06.20 S-384	6	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	1+1+1+1+1+1+1+1	-	-	-	Recommending construction plan for Approval for Pankha facility
19.06.20	Bingawan RTOLMS report format	-	19.06.20 S-385	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	1+1+1+1+1+1+1+1	-	-	-	Advised KRMPL to consider any specific requirement by CPCB for incorporating in the report formats
20.06.20	Attended Office	17.06.20 K-463	-	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	1+1+1+1+1+1+1+1	-	-	-	Internal office discussion regarding the KRMPL letter 463
21.06.20	SUNDAY												
22.06.20	Bingawan Performance	17.06.20 K-463	22.06.20 S-386	4	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil	1+1+1+1+1+1+1+1	-	-	-	Instructed KRMPL to inform UPJN with a copy to PE of any event at any site location

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)
								Mr Lokesh Mr Vivek					
23.06.20	BEP rehabilitation of JajmauPh-I facility	22.06.20 K-472	-	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	1+1+1+1 +1+1+1+ 1	-	-	-	Inter-office detailed discussion regarding KRMPL letter no 472
24.06.20	Inspection note of Pankha STP dated 11.06.20	-	24.06.20 S-387	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	1+1+1+1 +1+1+1+ 1	-	-	-	It is requested to propose the land of 40*150Mt for KDA
24.06.20	O&M Manual for Bingawan facilities	05.06.20 w-37/40	24.06.20 S-388	19	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	1+1+1+1 +1+1+1+ 1	-	-	-	Instructed KRMPL to send a copy of O&M manual to this PE office (Reminder 3)
25.06.20	Commercial Operation Declaration on Sajari Facilities	22.06.20 K-471	25.06.20 S-389	3	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	1+1+1+1 +1+1+1+ 1	-	-	-	Comments given by O&M in charge regarding the mentioned subject

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)
26.06.20	Status of approval of 130 MLD STP Renovation- IPS-Reminder	15.06.20 w-10/57	26.06.20 S-390	11	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	1+1+1+1 +1+1+1+ 1	-	-	-	requested UPJN to direct KRMPL to reply on our letter ASAP
26.06.20	Inspection note on Pankha STP dated 25.06.20	-	26.06.20 S-392	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	1+1+1+1 +1+1+1+ 1	-	-	-	Inspected site and comments / Instructions are enclosed with this letter
27.06.20	Attended Office	27.06.20 K-476	-	-	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	1+1+1+1 +1+1+1+ 1	-	-	-	Review of Unnao STP-Revised RCC design & Drawing- SBR Basin
28.06.20	SUNDAY												
29.06.20	Approval for panel of vendors for procurement	23.06.20 w-21/10 w-21/11	29.06.20 S-393	6	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	1+1+1+1 +1+1+1+ 1	-	-	-	It is requested UPJN to direct KRMPL to obtain the performance certificates
30.06.20	O&M manual for 43	-	30.06.20	-	20	-	-	Mr. CM Dimri	1+1+1+1	-	-	-	It is requested UPJN directed

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)
	MLD STP JajmauPh-II		S-394					Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	+1+1+1+1				to KRMPL to submit O&M manual for 43 MLD STP Jajmau on priority basis
30.06.20	Unnao STP-Revised RCC design & Drawing- SBR Basin	27.06.20 K-476	30.06.20 S-396	3	20	-	-	Mr. CM Dimri Mr JP Tripathi Mr Priyesh Mr Satyendra Mr S.Rajan Mr kapil Mr Lokesh Mr Vivek	1+1+1+1+1+1+1+1	-	-	-	Unnao STP-SBR Basin drawings has been vetted by PE office and found ok.
Total									30+30+30+30+29+23+23+23+12				

Annexure 2: Monthly Performance Report of Bingawan

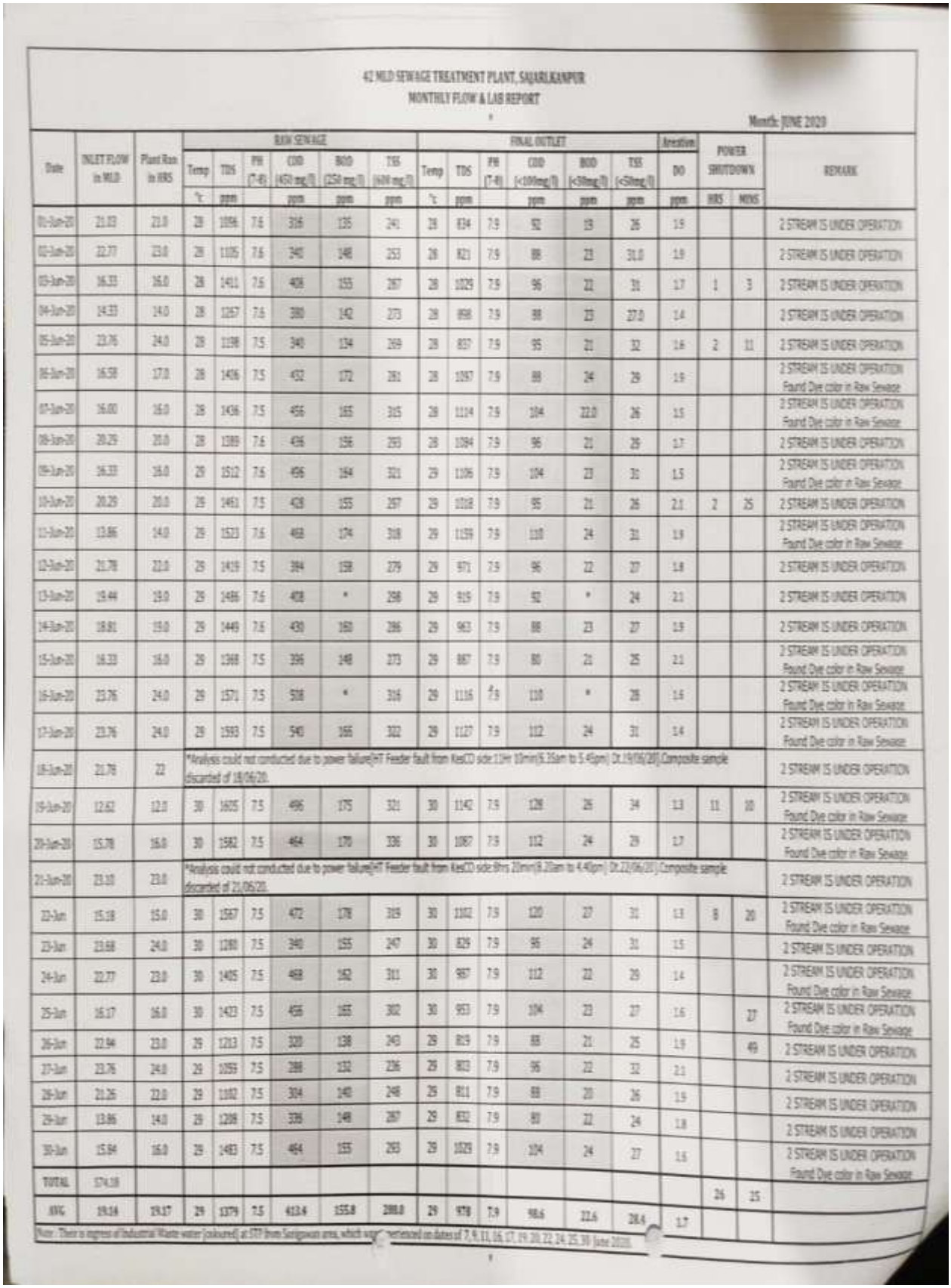


210 MLD SEWAGE TREATMENT PLANT,BINGAWAN,KANPUR
MONTHLY FLOW & LAB REPORT

MONTH:JUNE-2020

Date	INLET FLOW in MLD	Plant Run in HRS	RAW SEWAGE						FINAL OUTLET						POWER SHUTDOWN		REMARK
			Temp	TDS	PH (7-8)	COD (523mg/l)	BOD (322mg/l)	TSS (418mg/l)	Temp	TDS	PH (7-8)	COD (<109mg/l)	BOD (<30mg/l)	TSS (<50mg/l)			
			°c	ppm	ppm	ppm	ppm	ppm	°c	ppm	ppm	ppm	ppm	ppm	HRS	MINS	
1-Jun-20	145.60	24.0	30	860	7.5	512	175	390	30	890	7.7	104	35	54		20	33KV HT FEEDER FAULT FROM KESCO SIDE
2-Jun-20	144.35	24.0	30	850	7.6	548	180	368	30	870	7.8	112	36	52			
3-Jun-20	132.00	24.0	30	800	7.5	524	160	400	30	860	7.8	112	34	54			
4-Jun-20	137.28	24.0	29	830	7.6	512	170	388	29	870	7.7	120	36	52			
5-Jun-20	147.84	24.0	29	800	7.4	528	175	400	29	860	7.6	112	34	54			
6-Jun-20	138.80	24.0	30	840	7.5	520	180	386	30	880	7.4	120	37	54			
7-Jun-20	144.20	24.0	31	850	7.4	512	170	378	31	860	7.6	112	35	52			
8-Jun-20	140.56	24.0	31	870	7.5	504	168	390	31	870	7.5	120	36	54			
9-Jun-20	135.20	24.0	32	860	7.4	512	180	388	32	880	7.6	104	35	52			
10-Jun-20	137.28	24.0	32	858	7.5	520	184	386	32	860	7.5	112	37	50			
11-Jun-20	131.20	24.0	32	850	7.4	512	180	400	32	850	7.4	104	36	56		10	33KV HT FEEDER FAULT FROM KESCO SIDE
12-Jun-20	134.16	24.0	33	855	7.5	520	170	398	33	860	7.4	112	39	56	2	10	33KV HT FEEDER FAULT FROM KESCO SIDE
13-Jun-20	146.80	24.0	33	845	7.4	512	168	400	33	870	7.5	104	36	58			
14-Jun-20	148.36	24.0	33	850	7.5	520	172	406	33	860	7.6	112	37	56			
15-Jun-20	146.98	24.0	30	870	7.4	520	175	450	32	890	7.6	112	38	58	1	7	33KV HT FEEDER FAULT FROM KESCO SIDE
16-Jun-20	143.18	24.0	31	860	7.3	512	168	410	32	890	7.4	104	37	56			
17-Jun-20	138.13	24.0	32	860	7.3	496	158	400	32	880	7.5	110	35	58			
18-Jun-20	131.72	24.0	33	898	7.2	512	170	398	33	900	7.6	112	37	60			
19-Jun-20	143.85	24.0	32	864	7.2	504	176	368	32	910	7.5	120	36	52			
20-Jun-20	143.18	24.0	32	880	7.3	520	180	388	31	900	7.4	112	37	54			
21-Jun-20	137.61	24.0	31	870	7.2	496	Start BOD3	400	31	898	7.4	96	Start BOD3	52			Due to change in temperature of BOD3 from BOD5 of incuburator the analysis was not conducted
22-Jun-20	149.59	24.0	31	800	7.3	504	Start BOD3	404	31	950	7.5	112	Start BOD3	50			Due to change in temperature of BOD3 from BOD5 of incuburator the analysis was not conducted
23-Jun-20	153.92	24.0	31	790	7.0	512	168	400	31	890	7.3	120	38	52			Start BOD Analysis for 3 Days on 27Th Jun 20
24-Jun-20	146.80	24.0	30	800	7.1	456	172	410	30	900	7.4	96	36	50			
25-Jun-20	162.92	24.0	30	760	7.3	448	150	400	30	880	7.5	120	35	52		25	
26-Jun-20	136.36	24.0	30	740	7.3	408	160	408	30	840	7.4	120	34	54			
27-Jun-20	127.92	24.0	29	760	7.4	456	148	400	29	858	7.5	104	33	52			
28-Jun-20	124.34	24.0	30	780	7.3	408	140	398	30	880	7.4	104	34	50			
29-Jun-20	126.36	24.0	30	650	7.2	400	144	380	30	700	7.3	96	33	48			
30-Jun-20	131.33	24.0	30	690	7.3	432	150	388	30	710	7.3	96	34	50			
TOTAL	4207.82														4	12	
AVG	140.26	24.00	30.9	823.7	7.4	494.7	167.5	396.0	31.0	866.9	7.5	109.8	35.7	53.4			

Annexure 3: Summary of Monthly Performance Report of Sajari



42 MLD SEWAGE TREATMENT PLANT, SAJARI,KANPUR
MONTHLY FLOW & LAB REPORT

Month: JUNE 2020

Date	INLET FLOW in MLD	Plant Run in HRS	RAW SEWAGE						FINAL OUTLET						Aeration	POWER SHUTDOWN		REMARK
			Temp	TDS	PH (7-8)	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			
01-Jun-20	21.03	23.0	28	1056	7.6	316	135	241	28	834	7.9	92	19	26	1.9			2 STREAM IS UNDER OPERATION
02-Jun-20	22.77	23.0	28	1105	7.6	340	148	253	28	821	7.9	88	23	31.0	1.9			2 STREAM IS UNDER OPERATION
03-Jun-20	16.33	16.0	28	1411	7.6	408	155	267	28	1029	7.9	96	22	31	1.7	1	3	2 STREAM IS UNDER OPERATION
04-Jun-20	14.33	14.0	28	1257	7.6	380	142	273	28	898	7.9	88	23	27.0	1.4			2 STREAM IS UNDER OPERATION
05-Jun-20	23.76	24.0	28	1198	7.5	340	134	269	28	857	7.9	95	21	32	1.6	2	11	2 STREAM IS UNDER OPERATION
06-Jun-20	16.58	17.0	28	1406	7.5	432	172	281	28	1057	7.9	88	24	29	1.9			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage
07-Jun-20	16.00	16.0	28	1436	7.5	456	165	315	28	1114	7.9	104	22.0	26	1.5			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage
08-Jun-20	20.29	21.0	28	1389	7.6	436	156	293	28	1084	7.9	96	21	29	1.7			2 STREAM IS UNDER OPERATION
09-Jun-20	16.33	16.0	29	1512	7.6	456	164	321	29	1106	7.9	104	23	31	1.5			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage
10-Jun-20	20.29	21.0	29	1461	7.5	428	155	297	29	1018	7.9	95	21	26	2.1	2	25	2 STREAM IS UNDER OPERATION
11-Jun-20	13.86	14.0	29	1523	7.6	468	174	318	29	1159	7.9	118	24	31	1.9			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage
12-Jun-20	21.78	22.0	29	1419	7.5	384	158	279	29	971	7.9	96	22	27	1.8			2 STREAM IS UNDER OPERATION
13-Jun-20	15.44	15.0	29	1486	7.6	408	*	298	29	915	7.9	92	*	24	2.1			2 STREAM IS UNDER OPERATION
14-Jun-20	18.81	19.0	29	1449	7.6	430	160	286	29	963	7.9	88	23	27	1.9			2 STREAM IS UNDER OPERATION
15-Jun-20	16.33	16.0	29	1368	7.5	396	148	273	29	887	7.9	80	21	25	2.1			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage
16-Jun-20	23.76	24.0	29	1571	7.5	508	*	316	29	1116	7.9	110	*	28	1.6			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage
17-Jun-20	23.76	24.0	29	1593	7.5	540	166	322	29	1127	7.9	112	24	31	1.4			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage
18-Jun-20	21.78	22	*Analysis could not conducted due to power failure(HT Feeder fault from KesCO side 11Hr 10min(5.15am to 5.45pm) Dt.19/06/20)Composite sample discarded of 18/06/20.															2 STREAM IS UNDER OPERATION
19-Jun-20	12.62	12.0	30	1605	7.5	496	175	321	30	1142	7.9	128	26	34	1.3	11	10	2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage
20-Jun-20	15.78	16.0	30	1582	7.5	464	170	336	30	1087	7.9	112	24	29	1.7			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage
21-Jun-20	23.10	23.0	*Analysis could not conducted due to power failure(HT Feeder fault from KesCO side 8hrs 10min(8.20am to 4.40pm) Dt.22/06/20)Composite sample discarded of 21/06/20.															2 STREAM IS UNDER OPERATION
22-Jun	15.18	15.0	30	1567	7.5	472	178	319	30	1102	7.9	120	27	31	1.3	8	20	2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage
23-Jun	23.68	24.0	30	1288	7.5	340	155	247	30	829	7.9	96	24	31	1.5			2 STREAM IS UNDER OPERATION
24-Jun	22.77	23.0	30	1405	7.5	468	162	311	30	987	7.9	112	22	29	1.4			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage
25-Jun	16.17	16.0	30	1423	7.5	456	165	302	30	953	7.9	104	23	27	1.6		27	2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage
26-Jun	22.94	23.0	29	1213	7.5	320	138	243	29	819	7.9	88	21	25	1.9		49	2 STREAM IS UNDER OPERATION
27-Jun	23.76	24.0	29	1059	7.5	288	132	236	29	803	7.9	96	22	32	2.1			2 STREAM IS UNDER OPERATION
28-Jun	21.26	22.0	29	1102	7.5	304	140	248	29	811	7.9	88	20	26	1.9			2 STREAM IS UNDER OPERATION
29-Jun	13.86	14.0	29	1208	7.5	336	148	267	29	832	7.9	80	22	24	1.8			2 STREAM IS UNDER OPERATION
30-Jun	15.84	16.0	29	1483	7.5	464	155	293	29	1029	7.9	104	24	27	1.6			2 STREAM IS UNDER OPERATION Found Dye color in Raw Sewage
TOTAL	574.18															26	25	
AVG	19.14	19.17	29	1379	7.5	413.4	155.8	288.0	29	978	7.9	98.6	22.6	28.6	1.7			

Note : There is ingress of Industrial Waste water (coloured) at STP from Sarojpuram area, which was [illegible] witnessed on dates of 7, 9, 11, 16, 17, 19, 20, 22, 24, 25, 30 June 2020.

ANNEXURE 4: Site Inspection Report for the Month of June 2020 (Sajari)

Inspection report of 42 MLD STP, Sajari

Inspected the 42 MLD STP, Sajari site on 23-06-2020 Following were present,

1. Mr. Lokesh Khandelwal, Support Engineer, STC
2. Mr. Sundarrajan, Support Engineer, STC
3. Mr. Shriram Saste, Plant in-charge, KRMPL
4. 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 manual working. Auto system panel rectification work is not completed.

2. Main Pumping Station

- 5 no's of sewage transfer pump are erected and all are in working condition.
- Cables from pump to starter are not properly dressed on cable tray.
- In Panel room, Push buttons has been replaced and found in working condition.

3. Inlet Chamber

- 1 no. of Manual screen are in working condition.
- 2 no's of Mechanical fine screens are in working condition.

4. Grit Separator

- 2 no's of Mechanical grit removal system are in working condition.
- Chain covers have been fixed.

5. Primary clarifier

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

6. Aeration system

- 12 no's of aerators are working. However as discussed with KRMPL, the Sewage inflow is maximum upto 15 MLD.

7. Secondary clarifier

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

8. Chlorination system

- Out of 6 no's of tonners 3 no's has been installed and in working condition remaining 3 no's has been sent for refilling of chlorine gas.
- 1 no. of safety shower has been installed and found in working condition.
- 1 no. of Tube well pump is under maintenance and will be ready within two days.
- OHT cleaning work is in progress.

9. Primary Sludge pump

- 2 no's of screw pump are in working condition.

10. Sludge thickener

- 2 no's of Sludge thickener mechanism are in working condition.

11. Thickener Sludge pump

- Out of 2 no's of screw pump 1 no's has been installed and in working condition and other in maintenance due to shaft problem & KRMPL informed that the same will be ready by 05-07-2020.

12. Return Sludge pump

- 3 no's of submersible pump are in working condition.

13. Digester

- Out of 2 no's of Sludge digester mixer, 1 no. is in working condition and another is having vibration in arms and the same has to be rectified. KRMPL is waiting for service engineers from Achme Engineers to sort out the issue.

14. Gas Holder/Gas Scrubber/Gas flaring units

- 3 no's of Gas engine are installed which have not been operated since hand over. 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.

15 .Sludge drying bed

- Sludge disposal location has been identified by UPJN about 6.5 kms from Sajari 42 MLD STP and shown to KRMPL. Work plan for sludge disposal is yet to submit by KRMPL.

16. Electrical & Instrumentation works

- DG set has been procured by UPJN and installation work is in progress.
- Online monitoring system works is yet to be initiated.
- Calibration certificates for 3 no's of Electro-magnetic flow meters are yet to be submitted.

17. Miscellaneous

- Painting of the outer civil structural's and hand railing in walkways & ladders has to be carried out.
- Housekeeping being done properly
- For the month of June 2020 Joint sampling will be carried out on 26-06-2020. Last sampling results from IIT Kanpur have not been received to STC till date.

Lokesh Khandelwal (Civil)
Supt. Engr.

Sundar Rajan (Mech.)
Supt. Engr.