

**National Mission for Clean Ganga (NMCG)
Ministry of Water Resources, River
Development & Ganga Rejuvenation,
Govt. of India**

**The development of sewage treatment
plant and associated infrastructure
under Hybrid Annuity based PPP mode
at Varanasi in the State of Uttar Pradesh**

(LoA File Number: Rd-63014/1/2017/PPP/NMCG)

**Monthly Progress Report
of
Project Engineer**

February - 2019



Executing Agency

**Uttar Pradesh Jal
Nigam,
Varanasi - 221 005**



Funding Agency

**National Mission for
Clean Ganga
MoWR, River
Development & Ganga
Rejuvenation,
New Delhi - 110002**



Project Engineer

**Mahindra Consulting
Engineers Limited
Mahindra Towers, No.
17/18, Pattullous Road,
Chennai - 600 002,
Tamil Nadu, India**



Concessionaire

**Varanasi STP Project
Private Limited
6th Floor, Plot No. 19,
Film City, Sector 16 A,
Gautam Buddha Nagar,
Noida,
Uttar Pradesh - 201 301**

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MONTHLY PROGRESS REPORT

1.0. INTRODUCTION

The GoI, 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.

In the Ganga basin approximately 12,000 million litres per day (MLD) sewage is generated, for which presently there is a treatment capacity of only around 4,000 MLD. Approximately 3000 MLD of sewage is discharged into the mainstream of the river Ganga from the Class I & II towns located along the banks, against which treatment capacity of about 1000 MLD has been created till date.

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, the Jal Nigam, in association with the NMCG, has decided to undertake the development of an STP with a proposed capacity of 50 MLD along with other Facilities and Associated Infrastructure at Varanasi on a PPP basis, through a hybrid annuity model. 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.

The objectives that NMCG and the UP Jal Nigam wish to achieve through the Project is mentioned in **Figure 1**.

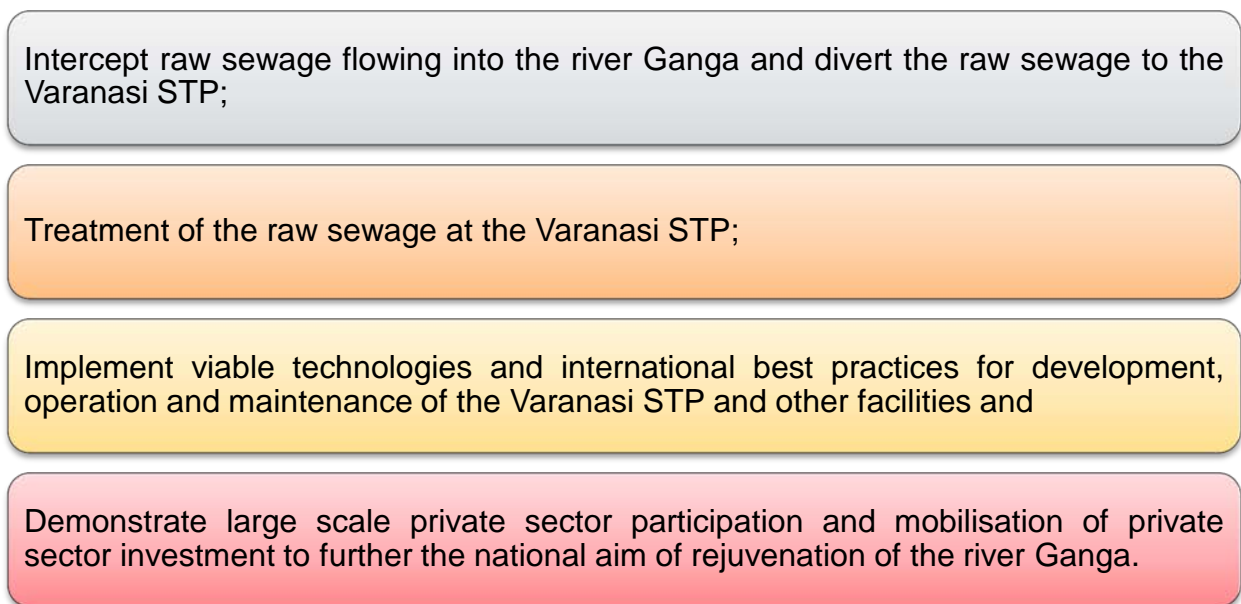


Figure 1: Objectives of NMCG and UP JAL NIGAM

Government of India, has approved the Namami Gange program as an integrated approach for effective abatement of pollution in river Ganga. As part of this and to ensure that no untreated domestic sewage flow into the river Ganga, 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, operate and transfer the asset (STP) to the Project Executing Agency/Jal Nigam/Jal Sansthan / Urban Local body at the end of the Concession Period (say 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. It is also envisaged to explore the possibility of recycle/ reuse of the treated waste water for non-potable purpose.

NMCG & UPJN appointed M/s. Mahindra Consulting Engineers Limited, Chennai as Project Engineer for this project through tendering process. Letter of Award is issued dated 5th January 2018 and agreement signed between the parties on 16th February 2018.

1.1. Project components

1.1.1. New construction units

- Inlet structure
- Grit chambers & Parshall flume
- SBR tanks
- Chlorine contact tank
- Overhead treated water tank
- Air blower room
- Belt filter press building
- Chlorination building
- Electrical building and control room
- Admin building, laboratory room
- Transformer yard, internal roads & drainage
- Treated water pump house
- Treated effluent disposal line
- Bund wall
- Staff quarters
- Approach road

1.1.2. Rehabilitation works

- Rehabilitation of Main Pumping Station (MPS)
- Construction of Weir
- Strengthening & Pipe protection of Rising main
- Construction of Control room
- Rerouting the raising main near Samne Ghat

1.2. Executing agency

- Uttar Pradesh Jal Nigam (UPJN)

1.3. Implementation agency

- Uttar Pradesh Jal Nigam (UPJN)

1.4. Consulting services

- **Project Engineer**
 - Mahindra Consulting Engineers Ltd, Chennai

1.5. Concessionaire

- Varanasi STP Project Private Limited

2.0. STATUS OF PROJECT

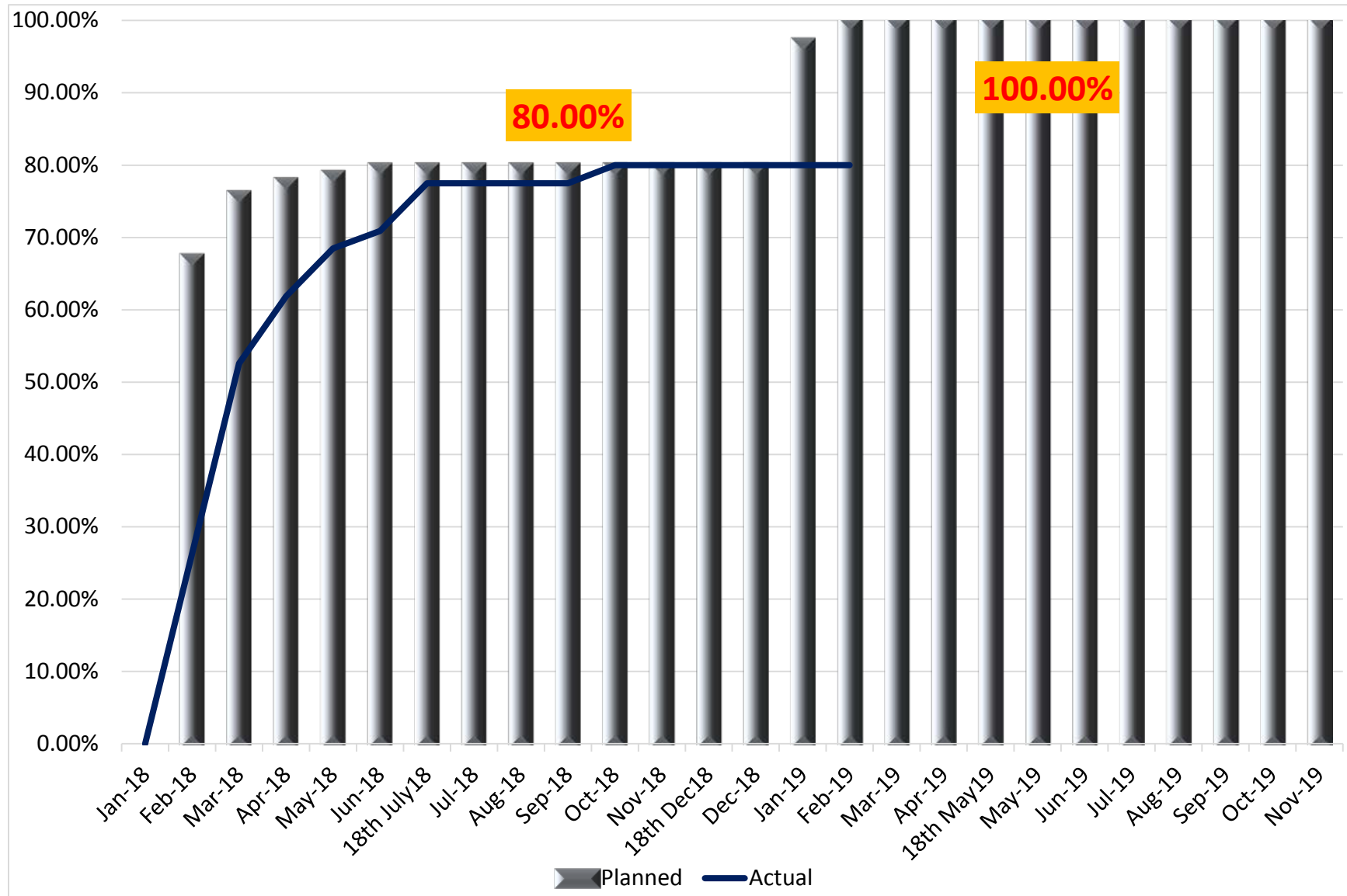
STATUS	:	CONSTRUCTION STAGE
Concessionaire Contract Agreement No.	:	SUBIN-DL80840374672746341531P
Name of the Concessionaire	:	Varanasi STP Project Pvt. Ltd.
Commencement date	:	19 th February 2018
Completion date (as per contract):	:	18 th November 2019

2.1. Physical status

2.1.1. Pre-execution activities

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Pre - Execution Activities	12-Oct-17	04-Feb-19	100%	80.00%		80.00%
Temporary Power Connection (During Construction Period)	12-Oct-17	30-Apr-18	100%	100%		100%
Permanent Power Connection	06-Jan-18	04-Feb-19	100%			
Submission of Resource Plan including Mobilization plan	12-Oct-17	19-Feb-18	100%	100%		100%
Setting up of temporary site office	11-Nov-17	18-Feb-18	100%	100%		100%
Removal of debris & Shrubs	11-Nov-17	19-Feb-18	100%	100%		100%
Bore well construction	11-Nov-17	19-Feb-18	100%	100%		100%
Other temporary execution	20-Feb-18	11-Mar-18	100%	100%		100%
Topographical / Soil Investigation	11-Nov-17	20-Dec-17	100%	100%		100%
Condition Precedent required to be satisfied by Concessionaire	12-Oct-17	19-Feb-18	100%	100%		100%
Condition Precedent required to be satisfied by Jal Nigam	12-Oct-17	19-Feb-18	100%	100%		100%
Condition Precedent required to be satisfied by NMCG	12-Oct-17	19-Feb-18	100%	100%		100%
Appointment of Design Consultant	12-Oct-17	09-Jan-18	100%	100%		100%
Submission & Approval of Sub Contracts from UPJN	01-Feb-18	30-Jun-18	100%	100%		100%

2.1.2. Pre-execution activities - Physical progress graph



2.1.3. Design detailed engineering

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Design Detailed Engineering	11-Oct-17	30-Oct-18	100%	93%	2%	95%
PHASE-1 Design, drawings and documentation for basic engineering package	11-Oct-17	07-Feb-18	100%	100%		100%
Basic engineering package	11-Oct-17	08-Jan-18	100%	100%		100%
Approval (BEP)	09-Jan-18	07-Feb-18	100%	100%		100%
Topographical / soil investigation	11-Nov-17	20-Dec-17	100%	100%		100%
Phase-II D&E (civil, mechanical, electrical, inst. drawings)	10-Jan-18	25-Sep-18	100.000%	97.600%	1.000%	98.600%
Plant layout / site layout	11-May-18	23-May-18	100%	90%		90%
Disposal pipe layout plan	02-Feb-18	20-Mar-18	100%	100%		100%
Bund Wall	10-Jan-18	18-Feb-18	100%	100%		100%
Inlet chamber with fine screens, grit removal and Parshall flume	20-Mar-18	08-Apr-18	100%	100%		100%
Administrative & security building	09-Apr-18	13-May-18	100%	100%		100%
Air blower & MCC room	15-Mar-18	02-Jun-18	100%	100%		100%

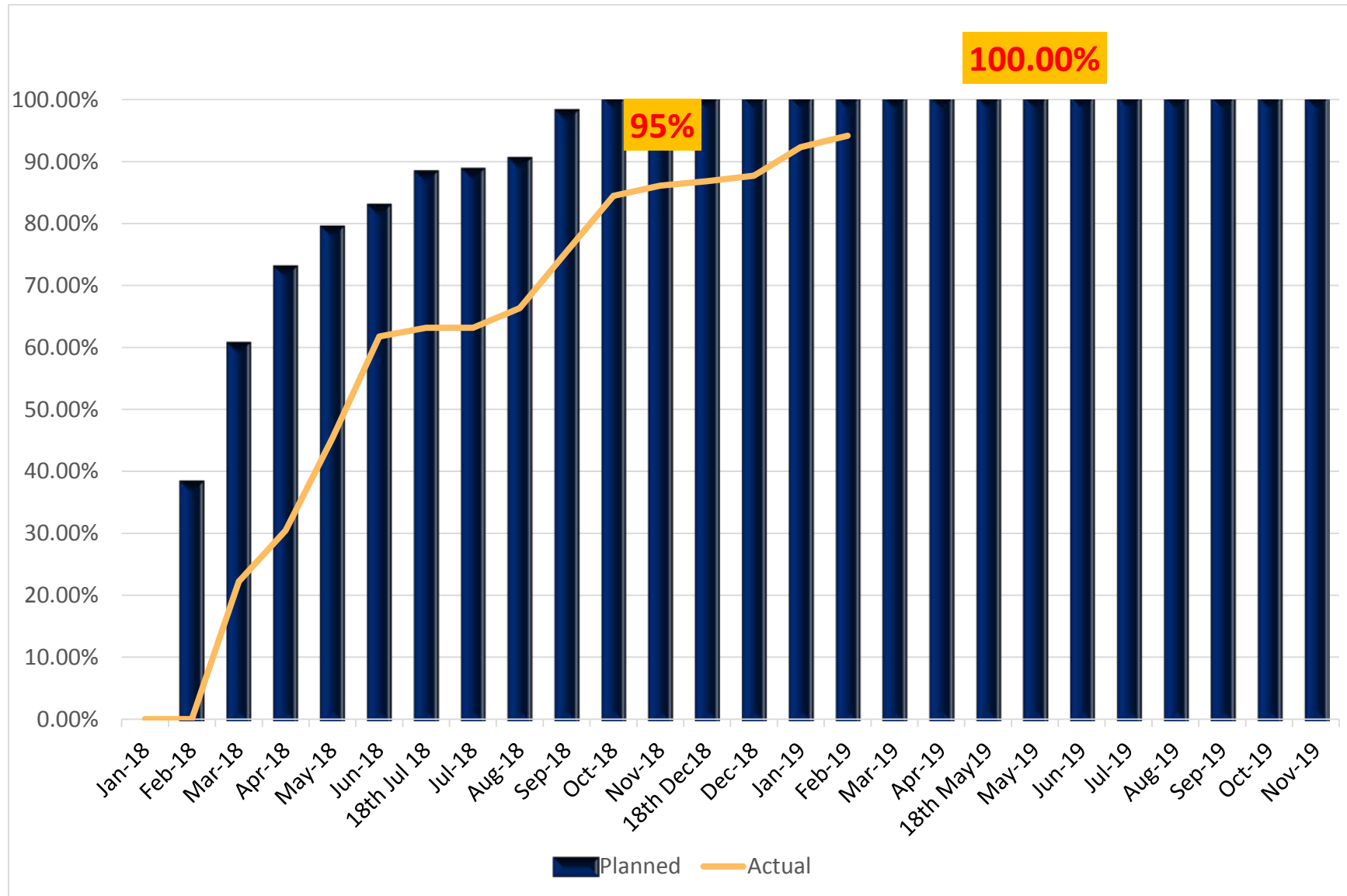
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Staff quarters	09-Apr-18	23-May-18	100%	100%		100%
SBR basins & SBR outlet chamber	05-Mar-18	29-Mar-18	100%	100%		100%
Chlorine contact tank & treated water collection tank	25-Mar-18	25-Apr-18	100%	100%		100%
Treated water overhead tank	04-Apr-18	28-May-18	100%	100%		100%
Sludge treatment building / BFP	10-Sep-18	25-Sep-18	100%	100%		100%
Weir across Assi Nalla	05-Mar-18	14-Mar-18	100%	60%		60%
Final outfall chamber	01-Jul-18	18-Jul-18	100%	80%	20%	100%
Raw water receiving chamber	01-Jul-18	18-Jul-18	100%	80%	20%	100%
Electrical control room	01-Jul-18	18-Jul-18	100%	80%	20%	100%
Structural drawings submissions & approvals	02-Feb-18	30-Sep-18	100.00%	96.80%	2.40%	99.20%
Disposal pipe layout plan	02-Feb-18	20-Mar-18	100%	100%		100%
Inlet chamber with fine screens, grit removal and Parshall flume	20-Mar-18	08-Apr-18	100%	100%		100%
Administrative & security building	09-Apr-18	13-May-18	100%	100%		100%
Air blower & MCC room	15-Mar-18	02-Jun-18	100%	100%		100%
Staff quarters	09-Apr-18	23-May-18	100%	100%		100%
SBR basins & SBR outlet chamber	05-Mar-18	29-Mar-18	100%	100%		100%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Chlorine contact tank & treated water collection tank	25-Mar-18	25-Apr-18	100%	100%		100%
Treated water overhead tank	04-Apr-18	28-May-18	100%	100%		100%
Sludge treatment building / BFP	10-Sep-18	30-Sep-18	100%	100%		100%
Weir across Assi Nalla	05-Mar-18	14-Mar-18	100%		60%	60%
Final outfall chamber	01-Jul-18	18-Jul-18	100%	80%	20%	100%
Raw water receiving chamber	06-Sep-18	15-Sep-18	100%	80%	20%	100%
Electrical control room	06-Sep-18	15-Sep-18	100%	80%	20%	100%
Design, drawings and documentation for mechanical GAD	13-Feb-18	15-Sep-18	100.00%	86.40%	4.00%	90.40%
Inlet chamber with fine screens, grit removal and Parshall flume	23-Feb-18	19-Mar-18	100%	100%		100%
SBR basins & SBR outlet Chamber	13-Feb-18	04-Mar-18	100%	100%		100%
Chlorine contact tank & treated water collection tank	05-Mar-18	24-Mar-18	100%	100%		100%
Treated water overhead tank	15-Mar-18	03-Apr-18	100%	80%		80%
Sludge treatment building / BFP	28-Jul-18	16-Aug-18	100%	100%		100%
Air blower & MCC room	05-Sep-18	15-Sep-18	100%	100%		100%
Weir across Assi nalla	13-Feb-18	04-Mar-18	100%	40%	20%	60%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Final outfall chamber	01-Jul-18	18-Jul-18	100%	80%	20%	100%
Overall piping drawings	30-May-18	05-Sep-18	100%	40%		40%
Design, drawings and documentation for electrical & instrumentation works	10-Mar-18	08-Oct-18	100%	83%	3%	87%
Transformer	10-Mar-18	08-Apr-18	100%	100%		100%
DG set	10-Mar-18	08-Apr-18	100%	100%		100%
Electrical load list	10-Mar-18	08-Apr-18	100%	100%		100%
PCC MCC panels	10-Mar-18	18-Jul-18	100%	80%		80%
Cables / earthing/ lightning - layout plan, sizing, schedule	15-Sep-18	05-Oct-18	100%	70%		70%
Cable trays	01-May-18	18-Jul-18	100%	80%	20%	100%
Flow meters	15-Sep-18	05-Oct-18	100%	80%		80%
Analysers	15-Sep-18	05-Oct-18	100%	80%		80%
SLD	19-Mar-18	18-Jun-18	100%	80%		80%
Design calculation	10-Mar-18	18-Jul-18	100%	40%		40%
Electrical & instrumentation control philosophy	25-Sep-18	08-Oct-18	100%	60%		60%
Plant lighting layout plan	25-Sep-18	05-Oct-18	100%	40%	20%	60%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Gauges	25-Sep-18	05-Oct-18	100%	60%	20%	80%
Instrumentation document submissions & approvals	01-Jun-18	30-Oct-18	100.0%	60.0%		60.0%
Instrument index / alarm list	01-Jun-18	18-Jul-18	100%	80%		80%
Instrument hook - up diagram	01-Jun-18	18-Jul-18	100%	80%		80%
PLC - I/O list, loop wiring diagram, design of SCADA	05-Oct-18	30-Oct-18	100%	80%		80%
Cause & effect diagram	01-Jun-18	18-Jul-18	100%			

2.1.4. Design detailed engineering - Physical progress graph



2.1.5. Equipment procurement, logistics and receipt of equipment at site

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Equipment Procurement, Logistics and receipt of equipment at Site			40%	29%	7%	36%
Fine Screen / Coarse Screen / Belt Conveyors	24-May-18	18-Dec-18	100.0%	30.4%		30.4%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	24-May-18	18-Jul-18	100%	100%		100%
Manufacturing of Equipment	17-Sep-18	10-Dec-18	100%	59%		59%
Inspection / Logistics	08-Dec-18	10-Dec-18	100%			
Receipt of equipment at site	11-Dec-18	18-Dec-18	100%			
Grit Removal Mechanism	24-May-18	10-Mar-19	75.0%	18.0%		18.0%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	24-May-18	18-Jul-18	100%	100%		100%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Manufacturing of Equipment	01-Sep-18	10-Feb-19	100%	33%		33%
Inspection / Logistics	12-Feb-19	27-Feb-19	100%			
Receipt of equipment at site	28-Feb-19	10-Mar-19				
SBR System (Decanters)	19-May-18	16-May-19	43.0%	75.0%	25.0%	100.0%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	19-May-18	18-Jul-18	100%	100%		100%
Manufacturing of Equipment	01-Sep-18	31-Mar-19	85%	100%		100%
Inspection / Logistics	01-Apr-19	16-Apr-19		100%		100%
Receipt of equipment at site	17-Apr-19	16-May-19			100%	100%
Submersible (SAS / RAS/ Filtrate / BFP feed)	31-May-18	18-Dec-18	100.0%	62.5%		62.5%
Submission & Approval of Drgs / Docs & data sheets including release	31-May-18	18-Jul-18	100%	100%		100%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
of purchase order						
Manufacturing of Equipment	03-Sep-18	13-Dec-18	100%	100%		100%
Inspection / Logistics	01-Dec-18	10-Dec-18	100%	50%		50%
Receipt of equipment at site	14-Dec-18	18-Dec-18	100%			
Horizontal centrifugal pumps (Treated water pumps)	31-May-18	18-Dec-18	100.0%	2.2%		2.2%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	31-May-18	25-Jul-18	100%	100%		100%
Manufacturing of Equipment	10-Sep-18	15-Dec-18	100%			
Inspection / Logistics	01-Dec-18	10-Dec-18	100%			
Receipt of equipment at site	16-Dec-18	18-Dec-18	100%			
Air Blowers	01-May-18	18-May-19	43.2%	50.0%		50.0%
Submission & Approval of	01-May-18	18-Jul-18	100%	100%		100%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Drgs / Docs & data sheets including release of purchase order						
Manufacturing of Equipment	01-Sep-18	30-Mar-19	86%	100%		100%
Inspection / Logistics	31-Mar-19	29-Apr-19				
Receipt of equipment at site	30-Apr-19	18-May-19				
Chlorination System	05-Sep-18	18-May-19	42.0%	62.5%		62.5%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	05-Sep-18	29-Sep-18	100%	100%		100%
Manufacturing of Equipment	01-Oct-18	30-Mar-19	83%	100%		100%
Inspection / Logistics	01-Apr-19	11-May-19		50%		50%
Receipt of equipment at site	12-May-19	18-May-19				
Sluice Gates	05-Mar-18	18-Dec-18	100%	2%		2%
Submission & Approval of	05-Mar-18	18-Jul-18	100%	100%		100%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Drgs / Docs & data sheets including release of purchase order						
Manufacturing of Equipment	25-Sep-18	12-Dec-18	100%			
Inspection / Logistics	01-Dec-18	10-Dec-18	100%			
Receipt of equipment at site	13-Dec-18	18-Dec-18	100%			
MS/CS/SS/GI/CI/DI Piping	01-Jan-19	12-Aug-19	2.2%			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-Jan-19	15-Feb-19	100%			
Manufacturing of Equipment	01-Mar-19	30-Jul-19				
Inspection / Logistics	31-Jul-19	10-Aug-19				
Receipt of equipment at site	11-Aug-19	12-Aug-19				
Valves	01-Jan-19	12-Aug-19	2%			
Submission & Approval of	01-Jan-19	17-Jan-19	100%			

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Drgs / Docs & data sheets including release of purchase order						
Manufacturing of Equipment	01-Mar-19	30-Jul-19				
Inspection / Logistics	31-Jul-19	10-Aug-19				
Receipt of equipment at site	11-Aug-19	12-Aug-19				
Motorized Gates at Inlet of SBR	01-May-18	18-May-19	30%	2%	0%	2%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-May-18	30-Aug-18	100%	80%	20%	100%
Manufacturing of Equipment	11-Jan-19	05-Apr-19	57%			
Inspection / Logistics	07-Apr-19	07-May-19				
Receipt of equipment at site	08-May-19	18-May-19				
Diffusers	12-May-18	23-Apr-19	57%	50%		50%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	12-May-18	14-Jul-18	100%	100%		100%
Manufacturing of Equipment	01-Sep-18	15-Feb-19	100%	100%		100%
Inspection / Logistics	16-Feb-19	02-Apr-19	27%			
Receipt of equipment at site	03-Apr-19	23-Apr-19				
Volute press	15-Oct-18	13-Jul-19	18%	11%		11%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	15-Oct-18	29-Nov-18	100%	100%		100%
Manufacturing of Equipment	29-Dec-18	30-Jun-19	33%	18%		18%
Inspection / Logistics	30-May-19	28-Jun-19				
Receipt of equipment at site	01-Jul-19	13-Jul-19				
PE Dosing Tanks	15-Oct-18	13-Jul-19	18%			

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	15-Oct-18	29-Nov-18	100%			
Manufacturing of Equipment	29-Dec-18	30-Jun-19	33%			
Inspection / Logistics	30-May-19	28-Jun-19				
Receipt of equipment at site	01-Jul-19	13-Jul-19				
Agitators	01-May-18	23-Jul-19	33%	1%		1%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-May-18	18-Jul-18	100%	60%		60%
Manufacturing of Equipment	01-Sep-18	08-Jun-19	64%			
Inspection / Logistics	09-Jun-19	08-Jul-19				
Receipt of equipment at site	09-Jul-19	23-Jul-19				
Transformers	02-Jul-18	21-Jul-19	21.3%	50.0%		50.0%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	02-Jul-18	18-Jul-18	100%	100%		100%
Manufacturing of Equipment	19-Dec-18	15-Jun-19	40%	100%		100%
Inspection / Logistics	25-Jun-19	30-Jun-19				
Receipt of equipment at site	01-Jul-19	21-Jul-19				
HT cables	29-Sep-18	26-Jul-19	2.2%	1.8%		1.8%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	29-Sep-18	09-Nov-18	100%	80%		80%
Manufacturing of Equipment	01-Mar-19	30-Jun-19				
Inspection / Logistics	05-Jul-19	15-Jul-19				
Receipt of equipment at site	16-Jul-19	26-Jul-19				

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
MCC panel	23-Jun-18	16-Aug-19	18%	2%		2%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	23-Jun-18	27-Jul-18	100%	80%		80%
Manufacturing of Equipment	01-Jan-19	30-Jun-19	32%			
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
HT Panel	07-Sep-18	16-Aug-19	18%	50%		50%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	100%		100%
Manufacturing of Equipment	01-Jan-19	30-Jun-19	32%	100%		100%
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at	01-Aug-19	16-Aug-19				

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
site						
PLC Panel	07-Sep-18	16-Aug-19	18%	1%	59%	60%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	60%		60%
Manufacturing of Equipment	01-Jan-19	30-Jun-19	32%		60%	60%
Inspection / Logistics	01-Jul-19	31-Jul-19			60%	60%
Receipt of equipment at site	01-Aug-19	16-Aug-19			60%	60%
SCADA System	07-Sep-18	16-Aug-19	18%			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%			
Manufacturing of Equipment	01-Jan-19	30-Jun-19	32%			
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at	01-Aug-19	16-Aug-19				

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
site						
MLDB, LDB & SLDBS	07-Sep-18	16-Aug-19	18%			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%			
Manufacturing of Equipment	01-Jan-19	30-Jun-19	32%			
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
Push Button Stations / Plant lighting / Buildings lighting	07-Sep-18	16-Aug-19	18%			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%			
Manufacturing of Equipment	01-Jan-19	30-Jun-19	32%			
Inspection / Logistics	01-Jul-19	31-Jul-19				

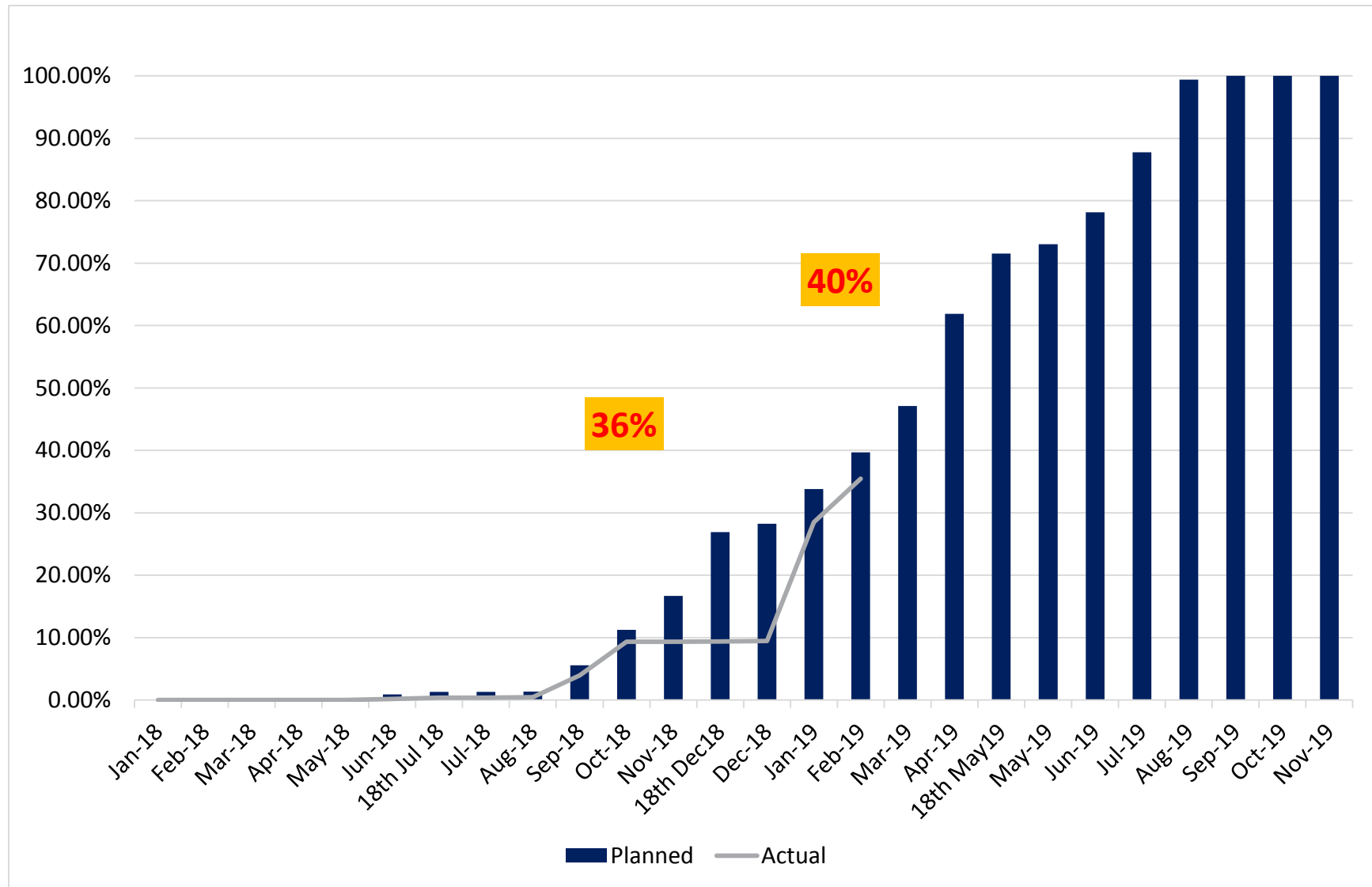
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Receipt of equipment at site	01-Aug-19	16-Aug-19				
Power, Control & lighting Cables	07-Sep-18	16-Aug-19	18%	1%		1%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	40%		40%
Manufacturing of Equipment	01-Jan-19	30-Jun-19	32%			
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
Cable trays/Lighting JB	07-Sep-18	16-Aug-19	18%	2%	0%	2%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	80%	20%	100%
Manufacturing of	01-Jan-19	30-Jun-19	32%			

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Equipment						
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
DG Set	07-Sep-18	16-Aug-19	18%	2%		2%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	100%		100%
Manufacturing of Equipment	01-Jan-19	30-Jun-19	32%			
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
Plant Earthing	07-Sep-18	16-Aug-19	19%	2%		2%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	80%		80%
Manufacturing of	01-Jan-19	20-Jun-19	34%			

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Equipment						
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
Instruments (Flow meter / Analyser)	20-Nov-18	16-Aug-19	2%	1%		1%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	20-Nov-18	15-Dec-18	100%	60%		60%
Manufacturing of Equipment	18-Mar-19	30-Jun-19				
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
Instruments (Temperature, Pressure & Level transmitter / Level, Temperature and Pressure switches)	20-Nov-18	05-Sep-19				
Submission & Approval of	20-Nov-18	15-Dec-18	100%	60%		60%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Drgs / Docs & data sheets including release of purchase order						
Manufacturing of Equipment	18-Mar-19	30-Jul-19				
Inspection / Logistics	01-Aug-19	30-Aug-19				
Receipt of equipment at site	31-Aug-19	05-Sep-19				

2.1.6. Equipment procurement, logistics and receipt of equipment at site - Physical progress graph
Procurement - Physical progress



2.1.7. New construction units

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Civil Executions	19-Feb-18	16-Nov-19	72%	72%	4%	76%
Bund Wall / Earthen Embankment	19-Feb-18	30-Aug-19	87.5%	80.6%	1.3%	81.9%
Excavation	19-Feb-18	8-May-18	100%	100%		100%
Filling & Compaction of Bund Wall up to 1.0 Mtr Height	10-Apr-18	8-Jul-18	100%	100%		100%
Filling & Compaction of Bund Wall from 1.0 to 2.0 Mtr Height	9-Jul-18	25-Oct-18	100%	100%		100%
Filling & Compaction of Bund Wall from 2.0 to 3.0 Mtr Height	1-Oct-18	29-Nov-18	100%	92%		92%
Filling & Compaction of Bund Wall from 3.0 to 4.5 Mtr Height	7-Nov-18	18-Dec-18	100%	54%	8%	62%
Stone Pitching work, Side Drain Work & Fencing work	20-May-19	30-Aug-19			2%	2%
Construction of Inlet Structure, Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for SBR	3-Jun-18	30-Jun-19	76.7%	60.7%	2.3%	62.9%
Excavation	3-Jun-18	12-Jun-18	100%	100%		100%
PCC & RCC of Footing	13-Jun-18	18-Jul-18	100%	100%		100%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Inlet Chamber Slab with Column, Wall	20-Sep-18	15-Dec-18	100%	48%	4%	52%
Grit Chamber Slab with Column	1-Dec-18	28-Feb-19	100%	4%	4%	8%
Parshall flume slab with Column	1-Mar-19	30-Mar-19		29%	9%	38%
Hydrotesting including finishing works	1-Jun-19	30-Jun-19				
SBR Basins & SBR outlet Chamber	9-Apr-18	15-Jul-19	76.8%	81.9%	5.9%	87.9%
Excavation	9-Apr-18	7-Jun-18	100%	100%		100%
PCC & Raft RCC at 72.00 level	10-Apr-18	29-Jul-18	100%	100%		100%
Wall 1st Lift	5-Jun-18	30-Aug-18	100%	94%	2%	96%
Wall 2nd Lift	7-Jun-18	5-Sep-18	100%	93%	3%	96%
Wall 3rd Lift	24-Sep-18	15-Jan-19	100%	70%	27%	97%
Wall Final Lift	7-Feb-19	6-Apr-19	36%	78%	20%	97%
Walkways and Channels	6-Apr-19	11-May-19		58%		58%
Hydrotesting	20-May-19	15-Jul-19				
Construction of CCT including Chlorination room & Treated water pump House	26-Apr-18	24-Aug-19	63.3%	72.0%	1.6%	73.6%
Excavation	26-Apr-18	4-Jul-18	100%	100%		100%
PCC & Raft RCC	15-May-18	25-Jul-18	100%	100%		100%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
50% RCC of Structure	20-Jun-18	10-Oct-18	100%	100%		100%
50% RCC of Structure	20-Jan-19	18-May-19	33%	48%	6%	54%
Completion of Brick work and Plaster	6-Apr-19	30-Jul-19				
Hydrotest including finishing works	9-Aug-19	24-Aug-19		100%		100%
Final Outfall Chamber	19-May-19	3-Aug-19				
Excavation, Dressing, Filling G & PCC	19-May-19	23-May-19				
Foundation and Raft	29-May-19	17-Jun-19				
Wall & Super Structure	18-Jun-19	18-Jul-19				
Hydrotesting & finishing works	19-Jul-19	3-Aug-19				
Overhead Treated Water Tank	1-Jun-18	1-Aug-19	61.3%	33.3%	0.1%	33.3%
Excavation	1-Jun-18	5-Jun-18	100%	100%		100%
PCC & Raft RCC	11-Jun-18	18-Jul-18	100%	100%		100%
50% RCC of Structure	9-Oct-18	18-Dec-18	100%	11%	0%	11%
50% RCC of Structure	25-Feb-19	6-May-19	4%			
Finishing Works	19-Jun-19	1-Aug-19				
Construction of BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank	15-Oct-18	13-Jul-19	47.4%	30.3%		30.3%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Excavation	15-Oct-18	30-Oct-18	100%	100%		100%
PCC & Raft RCC	1-Nov-18	18-Dec-18	100%	100%		100%
50% RCC of Structure	18-Jan-19	18-Mar-19	69%	1%		1%
50% RCC of Structure	19-Mar-19	17-May-19				
Completion of Brick work and Plaster	19-Apr-19	18-May-19				
Finishing Works	20-May-19	13-Jul-19				
Administrative Building including lab and workshop	3-Feb-18	11-Jul-19	71.9%	79.4%	2.6%	82.1%
Excavation	8-Jun-18	17-Jun-18	100%	100%		100%
PCC & Raft RCC	18-Jun-18	18-Jul-18	100%	100%		100%
50% RCC of Structure	16-Oct-18	18-Dec-18	100%	100%		100%
50% RCC of Structure	3-Feb-19	7-Apr-19	40%	64%	3%	67%
Completion of Brick work and Plaster	8-Apr-19	17-May-19		4%	35%	39%
Finishing Works	28-May-19	11-Jul-19				
Staff Quarters	8-Jun-18	16-Nov-19	30.0%	41.8%	3.4%	45.1%
Excavation	8-Jun-18	17-Jun-18	100%	100%		100%
PCC & Raft RCC	11-Jun-18	18-Jul-18	100%	100%		100%
50% RCC of Structure	20-May-19	9-Jul-19		53%	15%	68%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
50% RCC of Structure	9-Jul-19	28-Aug-19				
Completion of Brick work and Plaster	28-Aug-19	27-Sep-19		5%	2%	7%
Finishing Works	27-Sep-19	16-Nov-19				
Roads, Drainage & Fire Fighting system	3-Jun-19	31-Aug-19				
Roads work & Fire fighting	3-Jun-19	1-Aug-19				
Drainage Works	18-Jun-19	22-Aug-19				
Landscaping & Finishing	18-Jun-19	31-Aug-19				
Construction of Blower room, HT, MCC, Transformer Yard, DG set Area	3-Jun-18	29-Aug-19	77.3%	49.6%	3.2%	52.8%
Excavation	3-Jun-18	2-Jul-18	100%	100%		100%
PCC & RCC of Footing	3-Jul-18	18-Jul-18	100%	100%		100%
RCC up to Plinth	15-Sep-18	11-Oct-18	100%	100%		100%
RCC up to Lintel Beams	15-Oct-18	15-Nov-18	100%	96%	4%	100%
RCC Roof Slab	16-Nov-18	18-Dec-18	100%		14%	14%
Brick Work	1-Jan-19	21-Mar-19	73%			
Plastering	22-Mar-19	15-May-19				
Painting & Finishing	15-Jun-19	29-Aug-19				

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Mechanical Installation	1-Aug-19	30-Aug-19				
Erection of Mechanical Equipment	1-Aug-19	30-Aug-19				
Electrical & Instrumentation Installation	1-Aug-19	31-Aug-19				
Pre – Commissioning	1-Sep-19	30-Sep-19				
Trail Run – COD	1-Oct-19	21-Oct-19				
Commissioning	21-Oct-19	18-Nov-19				

2.1.8. New construction units - progress in terms of Physical Quantity

Item of work	Estimate		Physical status			
	Quantity	Unit	Previous month completion	Completion during this month	Total completion	Total completion in %
Civil Executions						
Bund Wall / Earthen Embankment						
Excavation	14182	Cum	14182		14182	100%
Filling & Compaction of Bund Wall up to 1.0 Mtr Height	24061	Cum	24061		24061	100%
Filling & Compaction of Bund Wall	22140	Cum	15891	6249	22140	100%

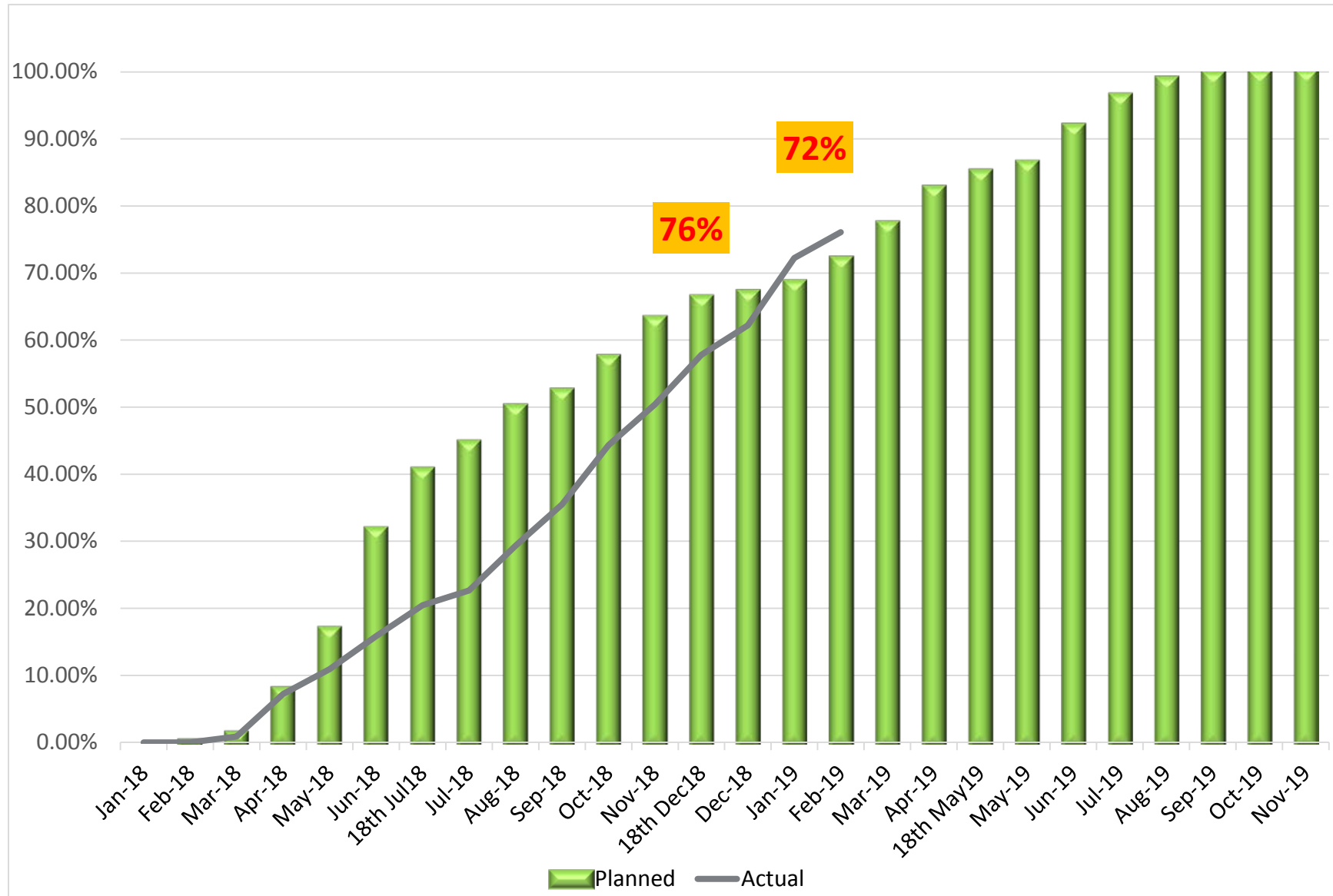
Item of work	Estimate		Physical status			
	Quantity	Unit	Previous month completion	Completion during this month	Total completion	Total completion in %
from 1.0 to 2.0 Mtr Height						
Filling & Compaction of Bund Wall from 2.0 to 3.0 Mtr Height	19056	Cum	13971		13971	92%
Filling & Compaction of Bund Wall from 3.0 to 4.5 Mtr Height	16154	Cum	7487	2566	10053	62%
Stone Pitching	6720	Cum		243	243	4%
Construction of Inlet Structure, Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for SBR						
Excavation	600	Cum	600		600	100%
PCC	72	Cum	72		72	100%
RCC for footing	173	Cum	173		173	100%
Inlet Chamber Slab with Column, Wall	159	Cum	76		83	52%
Grit Chamber Slab with Column	159	Cum	7		13	8%
Parshall flume slab with Column	79	Cum	23		30	38%
SBR Basins & SBR outlet Chamber						
Excavation	2210	Cum	2210		2210	100%
PCC	1424	Cum	1412		1424	100%
Raft RCC	4169	Cum	4169		4169	100%
Wall 1st Lift	560	Cum	528	10	538	96%

Item of work	Estimate		Physical status			
	Quantity	Unit	Previous month completion	Completion during this month	Total completion	Total completion in %
Wall 2nd Lift	390	Cum	363	10	373	96%
Wall 3rd Lift	291	Cum	204	77	281	97%
Wall Final Lift	462	Cum	322	80	402	97%
Walkways and Channels	306	Cum	62		62	21%
Construction of CCT including Chlorination room & Treated water pump House						
Excavation	1023	Cum	1023		1023	100%
PCC	140	Cum	140		140	100%
Raft RCC	266	Cum	266		266	100%
50% RCC of Structure	146.50	Cum	146.50		146.50	100%
50% RCC of Structure	146.50	Cum	71	8	79	54%
Brick work	71	Cum				
Plastering works	1342	Sqm				
Overhead Treated Water Tank						
Excavation	549	Cum	549		549	100%
PCC	18	Cum	18		18	100%
Raft RCC	61	Cum	61		61	100%
50% RCC of Structure	79	Cum	10		10	11%
50% RCC of Structure	79	Cum				
Finishing Works						

Item of work	Estimate		Physical status			
	Quantity	Unit	Previous month completion	Completion during this month	Total completion	Total completion in %
Construction of BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank						
Excavation	720	Cum	720		720	100%
PCC	39	Cum	39		39	100%
Raft RCC	167	Cum	167		167	100%
50% RCC of Structure	194	Cum	2.10		2.10	1%
50% RCC of Structure	194	Cum				
Brick work	35	Cum				
Plastering work	290	Sqm				
Administrative Building including lab and workshop						
Excavation	656	Cum	656		656	100%
PCC	27	Cum	27		27	100%
Raft RCC	101	Cum	101		101	100%
50% RCC of Structure	107	Cum	100.70		100.70	100%
50% RCC of Structure	107	Cum	68	4	72	67%
Brick work	172	Cum	30	103	133	77%
Plastering work	2230	Sqm		33	33	1%
Finishing Works						
Staff Quarters						

Item of work	Estimate		Physical status			
	Quantity	Unit	Previous month completion	Completion during this month	Total completion	Total completion in %
Excavation	1502	Cum	1502		1502	100%
PCC	70	Cum	70		70	100%
Raft RCC	260	Cum	260		260	100%
50% RCC of Structure	215	Cum	115	31	146	68%
50% RCC of Structure	215	Cum				
Brick work	551	Cum	58	19	77	14%
Plastering work						
Finishing Works						
Construction of Blower room, HT, MCC, Transformer Yard, DG set Area						
Excavation	587	Cum	587		587	100%
PCC	39	Cum	39		39	100%
RCC of Footing	160	Cum	160		160	100%
RCC up to Plinth	35	Cum	35		35	100%
RCC up to Lintel Beams	35	Cum	33	2	33	100%
RCC Roof Slab	136	Cum		19	19	14%
Brick Work	165	Cum				
Plastering	2000	Sqm				
Finishing works						

2.1.9. New construction units - Physical progress graph

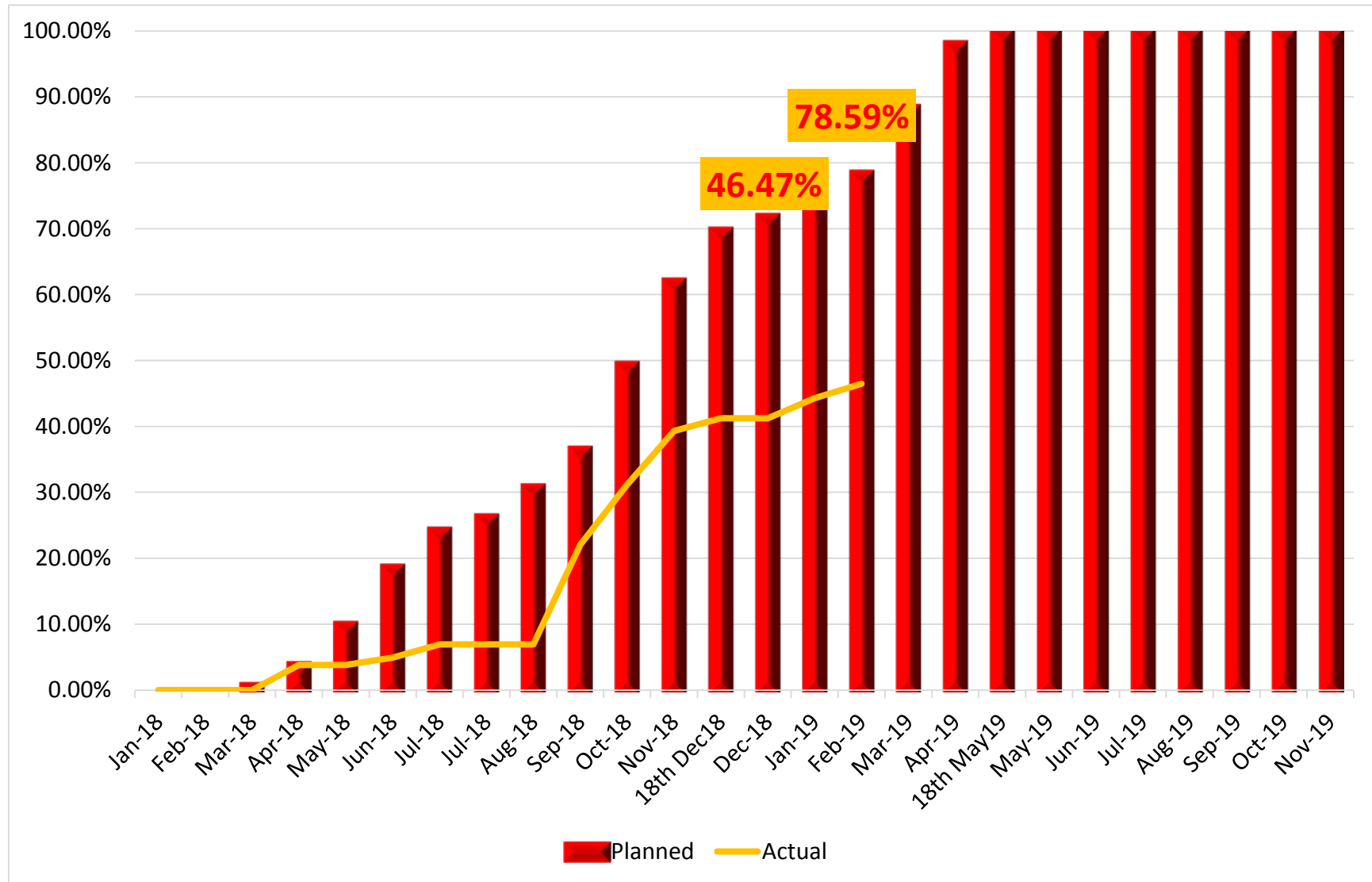


2.1.10. Associated works

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Associated	20-Mar-18	18-May-19	78.59%	44.28%	2.19%	46.47%
MPS Pumping Station	15-May-18	30-Apr-19	72.88%	33.50%		33.50%
Rehabilitation of MPS	15-May-18	30-Apr-19	83%	52%		52%
Construction of Weir across Assi Nalla & Control room	13-Oct-18	30-Jan-19	100%			
Desilting of the MPS	15-May-18	28-Aug-18	100%	75%		75%
Repair of Equipment	1-Jan-19	30-Mar-19	66%			
Raising of height of Nalla tapping structure upto HFL	1-Apr-19	30-Apr-19				
Rising Main	15-Jun-18	25-Mar-19	90.13%	7.00%		7.00%
Desilting & CCTV inspection	15-Jun-18	18-Jul-18	100%			
Strengthening and Pipe protection of Rising main Extension of existing Rising main to the Inlet point at the STP site	10-Oct-18	30-Jan-19	100%			
Shifting & laying of Pipe near Samne Ghat bridge	13-Jul-18	15-Jan-19	100%	20%		20%
Hydrotesting of the PSC	15-Feb-19	25-Mar-19	34%			

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Treated Effluent disposal line	20-Mar-18	18-May-19	77.43%	50.95%	2.74%	53.69%
Procurement - supply of pipes including inspection, transportation and delivery at site	20-Mar-18	26-Dec-18	100%	57%	2%	59%
Pipe laying - 20% including excavation and backfilling	9-May-18	18-Jul-18	100%	100%		100%
Pipe laying - 20% including excavation and backfilling	25-Sep-18	5-Nov-18	100%	100%		100%
Pipe laying - 20% including excavation and backfilling	6-Nov-18	18-Dec-18	100%	59%	17%	76%
Pipe laying - 20% including excavation and backfilling	20-Feb-19	29-Mar-19	22%			
Pipe laying - 20% including excavation and backfilling	30-Mar-19	6-May-19				
Hydrotesting & finishing works	14-Jun-18	18-May-19	77%	5%		5%

2.1.11. Associated works - Physical progress graph



2.1.12. Overall physical progress : 53.31%

Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
57.10%	48.97%	4.34%	53.31%

2.2. Financial status for construction work

- Contract amount : Rs. 153.15 crores (Rs. 102 crores for construction + Rs. 51.15 crores for O&M)

Financial progress in % as on 28.02.2019

Scheduled / Planned completion as on January 2019 in %	Up to previous month (January 2019) completion in %	Completion during this month (February 2019) in %	Total completion up to February 2019 in %
57.10%	48.44%	4.34%	52.78%

Status of financial expenditure as on 28.02.2019

Sl. No	Description	Total expenditure incurred (NMCG & VSPPL) Rupees in crore	Expenditure incurred by VSPPL in Rupees in crore	Expenditure incurred by NMCG in Rupees in crore	Expenditure incurred as per site progress Rupees in crore
1	Mobilization advance (10% of Rs.102 Cr)	10.20		10.20	53.84
2	First mile stone payment (25% of Rs.110.47 Cr) as per price index	27.62	16.57	11.05	
3	Deduction of mobilization advance for first milestone (25% of mobilization of advance)	-2.55		-2.55	
4	Deduction of interest on mobilization advance upto first milestone (25% of mobilization of advance)	-0.46		-0.46	

Sl. No	Description	Total expenditure incurred (NMCG & VSPPL) Rupees in crore	Expenditure incurred by VSPPL in Rupees in crore	Expenditure incurred by NMCG in Rupees in crore	Expenditure incurred as per site progress Rupees in crore
5	Deduction of delay damage on first milestone	-0.89		-0.89	
6	Second milestone payment (25% of Rs.110.16 Cr) as per price index	27.54	16.52	11.02	
7	Deduction of mobilization advance for second milestone (25% of mobilization of advance)	-2.55		-2.55	
8	Deduction of interest on mobilization advance upto second milestone (25% of mobilization of advance)	-0.19		-0.19	
9	Deduction of delay damage on second milestone	-0.49		-0.49	
	Total	58.23	33.09	25.13	

2.3. The issues, the action taken, and status are provided after obtaining the views from UPJN

S. No.	Issues identified during this month	
1)	As per the concession agreement the first milestone (At least 50% of both physical and financial progress) should have been achieved on or before 18th December 2018. Concessionaire yet to initiate the activities in the MPS, rising main by deploying additional resources to achieve the third milestone within the targeted date including the delay occurred, same is not reflected in the field.	
2)	2 nd Recovery plan submitted by the concessionaire on 12 th February 2019 is not accompanying the resource plan (material, man power & machineries). Concessionaire agreed to submit the same on or before 28 th February 2019	

S. No.	Issues identified	Action Taken	Status
1)	Extent of progress of the rehabilitation and/or upgradation activities performed by the concessionaire for the associated infrastructure.	Partially submitted for approval	Most of the drawings are approved by the project engineer, work shall start by 10 th March 2019
2)	Monthly Environmental Monitoring Reports to the Jal Nigam providing overview of compliance with EHS Plan.	In progress.	Due, till date
3)	Action to be taken to start the trenchless pipe line work near Samne Ghat as the Concerned authority already provided their acceptance orally and necessary approval will be issued shortly	Permission from Traffic Dept. is still awaited.	Trenchless work will be started after receiving official permission from PWD, expected to start by 10 th March 2019
4)	Action to be taken for carrying out the desilting and CCTV inspection of existing rising main as the activity should have been completed as per construction plan.	Concessionaire is confirmed to start the desilting after 10 th March 2019	Concessionaire informed that the desilting and CCTV inspection work will start latest by 15 th March 2019.

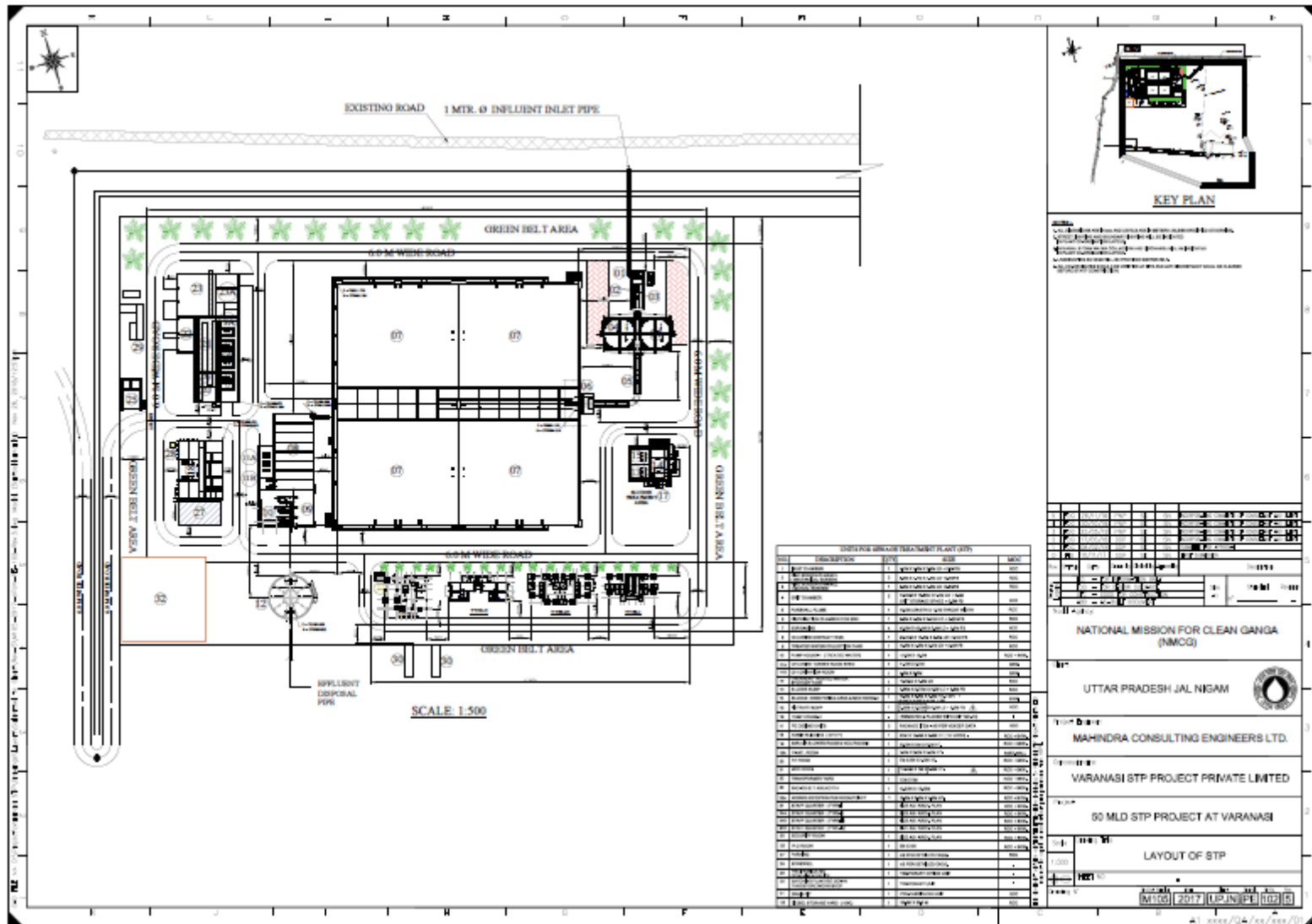


Figure 2: Development of sewage treatment plant and associated infrastructure under Hybrid Annuity based PPP mode at Varanasi

3.0. PROJECT ENGINEER ACTIVITIES

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month - February 2019	Expected for next month March 2019
4.1 (i)	Review, analysis and qualifying assessment of field investigations carried out and reported by the Concessionaire in respect of topographical surveys, hydraulic & hydrologic data verification, sub-surface investigation including laboratory testing and reports of geologists wherever applicable, investigation of construction material including lab testing.	Yes	Yes	Review of construction material testing
4.1 (ii)	Review, analysis and qualifying assessment of design memorandums, specifications and construction drawings prepared and submitted by the concessionaire.	Yes	Yes	Review of construction drawings
4.1 (iii)	Conduct kick off meetings			

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
4.1 (iv)	Review of the submissions of the Concessionaire such as a. Work schedule b. Detailed survey report c. Basic engineering d. Detailed design and drawings for i) Civil works 1. Geo-tech reports 2. Lab testing reports 3. Third Party Inspection report ii) Mechanical & Electrical Works iii) Automation & Instrumentation works iv) Any other allied works e. QA/QC plans f. Safety plan	Yes	<ul style="list-style-type: none"> • Recommended for approval with comments for control philosophy for MPS, Rev.0 • Recommended for approval with comments on Civil GA & Details of outfall structures revision 6 • Recommended for approval with comments for Instrument cable data sheets for STP and MPS Rev. 0 • Recommended to issue dispatch 	<ul style="list-style-type: none"> • Delay analysis • Remaining GA & structural drawings of civil structures • QAP & data sheet for remaining mechanical, electrical & instrumentation items. • PSC pipe inspection • Mechanical and Electrical equipment inspection

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month - February 2019	Expected for next month March 2019

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
			parshall flume • Recommended for approval with comments on civil GA and structural drawing of Raw water receiving chamber. • Recommended for approval with comments on Mechanical GA drawing of overhead tank • Recommended for approval with comments for road design calculation. Rev. 0 • Recommended	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month - February 2019	Expected for next month March 2019

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month - February 2019	Expected for next month March 2019

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
			<ul style="list-style-type: none"> • Recommended for approval with comments for Instrumentation documents – Analysers for STP, Flow measuring instrument for MPS and STP • Recommended for approval for Electrical drawing and document – fault level calculation for MPS Rev. 0 • Observation on revised schedule • Delay in submission of revised recover 	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
			plan • Delay in supplying PSC Pipes • Observations on GA and structural drawing of weir across Assi nalla • Recommended for approval with comments on agitator for sludge storage tank. Rev.1 • Recommended to issue dispatch clearance for 11kV Metal Enclosed Switchboard for MPS & STP	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
			<ul style="list-style-type: none"> Approval for technical specification of Lighting fixture / fitting for internal & external lighting for STP Rev.1 Lighting calculation for STP and lighting layout for STP Outdoor for STP Recommended to issue dispatch clearance for Chlorination System and Leak Absorption system for STP Submission of Monthly Inspection report 	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
			for the month of February 2019 • Approval for Chlorine Analyzer for STP Rev.3	
4.1 (v)	Review of the drawings and documents	Yes	As mentioned above	As mentioned above
4.1 (vi)	Identification of milestones & verifications		Regular review and monitoring	Regular review and monitoring
4.1 (vii)	To Assist NMCG for getting statutory permissions		NA	NA
4.1 (viii)	Ensure compliance with statutory provisions under various applicable laws		Yes	Yes
4.1 (ix)	Review, inspection, supervision and monitoring of construction works conducting tests on completion of construction and issuing completion / provisional certificate	Yes	Day to day monitoring of construction activities by site personnel and Monthly inspection by Key experts	Day to day monitoring of construction activities by site personnel and Monthly inspection by

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
				Key experts
4.1 (x)	Review, inspection and monitoring of O&M	NA	NA	NA
4.1 (xi)	Determining, as required under the Concession Agreement, the costs of any works or services and/or their reasonableness	NA	NA	NA
4.1 (xii)	Determining, as required under the Concession Agreement, the period or any extension thereof, for performing any duty or obligation	NA	NA	NA
4.1 (xiii)	Determining the events of default and guidance on consequent termination notices and payment as detailed in clauses 16.1 to 16.5 of the Concession Agreement	NA	NA	NA
4.1 (xiv)	Determine deficiencies in the commissioning & trial runs; prepare the final acceptance document for acceptance of commissioning & trial runs. Prepare & Issue Commercial Operation certificate through Uttar Pradesh Jal Nigam	NA	NA	NA
4.1 (xv)	Any other matter which is not specified in ((vi), (vii), or (viii) above and which creates an	NA	NA	NA

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	obligation or liability on the Employer / NMCG beyond the provisions of the Concession Agreement			
4.1 (xvi)	The Project Engineer shall submit regular periodic reports, as specified in the Concession Agreement to Uttar Pradesh Jal Nigam and NMCG, in respect of its duties and functions under the Concession Agreement	Monthly progress report	Monthly progress report	Preparation and review of monthly progress report
4.1 (xvii)	The Project Engineer shall aid and advise the Employer on any proposal for variation under Article 20 of the Concession Agreement	NA	NA	NA
4.1 (xviii)	Assisting the Parties in resolution of Disputes	NA	NA	NA
4.1 (xix)	Assisting the employer in the fulfilment of Hand back requirements as detailed in clause 19.3 of the Concession Agreement		NA	NA
4.1 (xx)	Undertaking all other duties and functions in accordance with this agreement	As mentioned above	As mentioned above	As mentioned above
4.2	The Project Engineer shall discharge its duties in an efficient manner, consistent with the highest standards of professionalism and	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	Good Industry Practice			
4.3(i)	The Project Engineer must function in a manner to assist & equip the employer to ascertain that the Concessionaire shall operate and maintain the Facilities and the Associated Infrastructure in a manner that: Is in compliance with the Technical Specifications, Applicable Laws, Applicable Permits and Good Industry Practice; Results in the Facilities and the Associated Infrastructure achieving the KPIs as detailed in schedule 10 of the Concession Agreement & certify within 7 days the KPI adherence Report as per clause 8.12 of the Concession Agreement;	Yes	Yes	Yes
4.3(ii)	Ensures that the Varanasi STP are capable of treating Sewage up to the Design Capacity on a daily basis;	Yes	Yes	Yes
4.3(iii)	Ensures efficient treatment of Sewage and handling and disposal of STP By- Products and the Treated Effluent	NA	NA	NA

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
4.3(iv)	STPs are safe and reliable, subject to normal wear and tear of the Facilities and the Associated Infrastructure;	NA	NA	NA
4.3(v)	Is in compliance with the technology license agreement executed by the Concessionaire for the technology, processes, know-how and systems used or incorporated into the Facilities and/or the Associated Infrastructure	Yes	NA	NA
4.3(vi)	Maintains the safety and security of personnel, material and property at the Site, in accordance with the approved EHS Plan, Applicable Laws and Applicable Permits.	Yes	Yes	Yes
4.3(vii)	Ensures that all waste materials and hazardous substances are stored and/or disposed in accordance with the EHS Plan, Applicable Laws and Applicable Permits.	Yes	Yes	Yes
4.4	Overall, The Project Engineer shall assist the Uttar Pradesh Jal Nigam in supervising the construction, rehabilitation, operation & maintenance of the Facilities and the Associated Infrastructure and shall work	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	closely with the Uttar Pradesh Jal Nigam and NMCG to monitor compliance with the KPIs.			
5.1	During the Development Period, the Project Engineer shall undertake a detailed review of the basic engineering Designs, furnished by the Concessionaire along with supporting data, including the geo-technical and hydrological investigations, characteristics of materials from borrow areas and quarry sites, topographical surveys and Sewage Flow Analysis. The Project Engineer shall complete such review and send its comments / observations to the NMCG / Name of the Employer (i.e. State Institution) and the Concessionaire within 10 (ten) days of receipt of such Drawings. In particular, such comments shall specify the conformity or otherwise of such Drawings with the Scope of the Project and Specifications and Standards	Yes	Review of construction drawings submitted by concessionaire	Review of construction drawings submitted by concessionaire
5.2	The Project Engineer shall review and assist the (Name of the Employer) in	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	approval of the submissions by the concessionaire relating to the “ design and Construction Plan ” so as to confirm to the scope as per Schedule 1 of the Concession Agreement.			
5.3	<p>The basic engineering drawings in the above case shall mean the designs and documents to be submitted by the Concessionaire & approved by the Uttar Pradesh Jal Nigam as a Condition Precedent & shall include but not limited to:</p> <ul style="list-style-type: none"> a) Conduct kick off meeting, scrutiny of contractors submittals b) Process description, process calculations and hydraulic calculations; c) List of design codes and standards; d) Master drawing schedule; e) Drainage design; f) STP Facilities layout; g) Process flow diagram; h) Hydraulic flow diagram; 	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	i) Mass balance diagram; j) Process and instrumentation diagram; k) Single line diagram; l) Electrical load list; and m) General arrangement diagrams of all units of facilities and associated infrastructure			
5.4	The project engineer shall review any modified Drawings or supporting documents sent to it by the Concessionaire and furnish its comments within 10 (ten) days of receiving such drawings or documents.	Yes	Yes	Yes
5.5	The project engineer shall review the detailed design, construction methodology, quality assurance procedures and the procurement, engineering and construction time schedule sent to it by the Concessionaire and furnish its comments within 10 (ten) days of receipt thereof.	Yes	Yes	Yes
5.6	Upon reference by the NMCG/Uttar Pradesh Jal Nigam, the Project Engineer shall review and; comment on the EPC Contract or any	NA	NA	NA

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	other contract for construction, operation and maintenance of the Project, and furnish its comments within 10 (ten) days from receipt of such reference from the NMCG/Uttar Pradesh Jal Nigam.			
6.1	In respect of the designs drawing & documents received by the project engineer for its review and comments during the construction period, the provisions of paragraph 4 shall also apply, mutatis mutandis	Yes	Yes	Yes
6.2	The Project Engineer shall review, and assist the Uttar Pradesh Jal Nigam in reviewing the submissions by the concessionaire, the Construction plan as defined in clause 7.3 of the Concession Agreement including Phase 1 and Phase II drawings, as well as the 'As Built' drawings on completion and EHS plans as defined in clause 7.4 of the Concession Agreement	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
6.3	The Project Engineer shall assist the Uttar Pradesh Jal Nigam submit their comments on effectiveness or otherwise of the Work plan submitted for meeting the specified payment milestones and completion of the work on or before the scheduled construction completion date	Yes	Yes	Yes
6.4	The Project Engineer shall review, in particular, the submissions by the Concessionaire as per Schedule 1 of the Concession Agreement, and assist Uttar Pradesh Jal Nigam in assessing the effectiveness them	Yes	Yes	Yes
6.5	The Project Engineer shall review the monthly progress report furnished by the Concessionaire and send its comments thereon to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 7 (seven) days of receipt of such report	Yes	Concessionaire submitted progress report on 28th Feb 2019 for the month of February 2019. However, the report was prepared by Project	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
			Engineer	
6.6	The Project Engineer shall inspect the Construction Works and the Project as and when necessary and submit a report of such inspection (the “Inspection Report”), preferably after receipt of the monthly progress report from the Concessionaire, but before the 20th (twentieth) day of each month in any case. The report shall contain, an overview of the status, progress, quality and safety of construction, including the work methodology adopted, the materials used and their sources, and conformity of Construction Works with the Scope of the Project and the Specifications and Standards. In a separate section of the Inspection Report, the Project Engineer shall describe in reasonable detail the lapses, defects or deficiencies observed by it in the construction of the Project. The Project Engineer shall send a copy of its	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	Inspection Report to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 3 (three) days of the inspection			
6.7	However serious lapses, defects and/or deficiencies shall be reported to the Uttar Pradesh Jal Nigam/NMCG immediately without waiting for the monthly progress submissions as mentioned in the previous paragraph	Yes	Yes	Yes
6.8	For determining that the Construction Works conform to Specifications and Standards, the Project Engineer shall require the Concessionaire to carry out, or cause to be carried out, tests on a sample basis, to be specified by the Project Engineer in accordance with approved norms/Good Industry Practice for quality assurance. The Project Engineer shall issue necessary directions to the Concessionaire for ensuring that the tests are conducted in a fair and efficient manner, and shall monitor and review	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	the results thereof			
6.9	The timing of tests referred to in Paragraph 6.8, and the criteria for acceptance/ rejection of their results shall be determined by the Project Engineer in accordance with the norms /rules and Good Industry Practice. The tests shall be undertaken on a random sample basis and shall be in addition to, and independent of, the tests that may be carried out by the Concessionaire for its own quality assurance in accordance with Good Industry Practice	Yes	Yes	Yes
6.10	In the event that the Concessionaire carries out any remedial works for removal or rectification of any defects or deficiencies, the Project Engineer shall require the Concessionaire to carry out, or cause to be carried out, tests to determine that such remedial works have brought the Construction Works into conformity with the Specifications and Standards, and the provisions of this	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	Paragraph 5 shall apply to such tests			
6.11	In the event that the Concessionaire fails to achieve any of the Project Milestones, the Project Engineer shall undertake a review of the progress of construction and identify potential delays, if any. If the Project Engineer identifies that completion of the Project is not feasible within the time specified in the Concession Agreement, it shall require the Concessionaire to indicate within 15 (fifteen) days the steps proposed to be taken to expedite progress, and the period within which COD shall be achieved. Upon receipt of a report from the Concessionaire, the Project Engineer shall review the same and send its comments to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire forthwith.	Yes	Yes	Yes
6.12	If at any time during the construction period, the Project Engineer determines that the Concessionaire has not made adequate arrangements for the safety of workers and	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	common public in the zone of construction or that any work is being carried out in a manner that threatens the safety of the workers and the common public, it shall make a recommendation to the NMCG/ Uttar Pradesh Jal Nigam forthwith, identifying the whole or part of the Construction Works that should be suspended for ensuring safety in respect thereof.			
6.13	In the event that the Concessionaire carries out any remedial measures to secure the safety of suspended works and common public, it may, by notice in writing, require the Project Engineer to inspect such works, and within 3 (three) days of receiving such notice, the Project Engineer shall inspect the suspended works and make a report to the NMCG/ Uttar Pradesh Jal Nigam forthwith, recommending whether or not such suspension may be revoked by the NMCG/ Uttar Pradesh Jal Nigam.	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
6.14	If suspension of Construction Works is for reasons not attributable to the Concessionaire, the Project Engineer shall determine the extension of dates set forth in the project completion schedule, to which the Concessionaire is reasonably entitled, and shall notify the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire of the same	NA	NA	
6.15	Upon reference from the NMCG/ Uttar Pradesh Jal Nigam, the Project Engineer shall make a fair and reasonable assessment of the costs of providing information, works and services and certify the reasonableness of such costs for payment by the NMCG/ Uttar Pradesh Jal Nigam to the Concessionaire	NA	NA	
6.16	The Project Engineer shall aid and advise the Concessionaire in preparing the Operation & Maintenance Manual	NA	NA	
6.17	Upon reference from the NMCG/ Uttar Pradesh Jal Nigam the Project Engineer shall undertake the assessment of cost of civil	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	works, as per applicable schedule of rates, for the reduction of Scope of work if any as per Article 20.			
6.18	The Project Engineer shall review the construction progress as per payment milestones proposed by the concessionaire and provide necessary recommendation/s to Uttar Pradesh Jal Nigam for issuance of 'Milestone Construction Certificates'	NA	Yes	
6.19	The Project Engineer shall support the employer in ensuring that the provisions specified in Clause 7, of the Concession Agreement including those for liquidated damages and Bonus, are being complied with.	Yes	NA	
6.20	On completion of construction and at behest of Employer, the Project Engineer may review the work done as per 'as built' drawings and identify defects and suggest changes as per clause 7.13(v) of the Concession Agreement	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
6.21	Similarly, the Project Engineer may inspect the trial process and may point out the defects and cause changes or retrial of the process as per clause 7.14(d) of the Concession Agreement	NA	NA	
7.1	In respect of the Designs, Drawings, and Documents received by the Project Engineer for its review and comments during the Operation Period, the provisions of Paragraph 4 shall apply, mutatis mutandis	NA	NA	
7.2	The Project Engineer shall review the O&M Manual (Clause 8.2) and the Scheduled Maintenance Programme submitted by the concessionaire and provide its recommendations on the same, including suggestions for change, if any. The O&M Manual shall cover: a) O&M Procedures; b) O&M Plan; c) Provision of Spare Parts; d) Sampling and Testing Methodologies;	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	e) Storage and control of Inventory; f) Arrangements for data security and Integrity; g) Procedures for recording and disposal of complaints; h) Operational Contingencies Plans; i) Human Resources Plans; j) EHS Plans; k) Emergency procedures; l) Management of Assets Plans. And m) Annual Scheduled Maintenance programme.			
7.3	The Project Engineer shall review the annual Maintenance Program furnished by the Concessionaire and send its comments thereon to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 10 (ten) days of receipt of the Maintenance Program	NA	NA	
7.4	The Project Engineer shall review the reports generated from online monitoring systems to assess adherence to KPIs and submit the	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	monthly KPI Adherence Report to Uttar Pradesh Jal Nigam			
7.5	The Project Engineer shall verify the daily reports submitted by the concessionaire regarding the volume of sewage and its quality re influent standards and monitor and record the same on regular basis	NA	NA	
7.6	The Project Engineer shall monitor, review and advise the Uttar Pradesh Jal Nigam on the reports submitted by the concessionaire as per clause 8.8(b)(iii) (A) to (G) of the Concession Agreement	NA	NA	
7.7	The Project Engineer shall regularly verify the report submitted by the concessionaire on the tests conducted at the Inlet Point, the Outlet Point or at any other point at the Varanasi STP for the Digested Sludge. Separately, the Project Engineer shall also have the right to take random samples of the incoming Sewage, the Digested Sludge and the Treated Effluent at any time during the O&M	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	Period to test compliance with the Influent Standards and the Discharge Standards.			
7.8	The Project Engineer shall review the monthly status report furnished by the Concessionaire (as required under clause 812(c)) of the Concession Agreement) and send its comments thereon to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 7 (seven) days of receipt of such report	NA	NA	
7.9	The Project Engineer shall inspect the Project once every month, preferably after receipt of the monthly status report from the Concessionaire, but before the 20th (twentieth) day of each month in any case, And make out an O&M Inspection Report setting forth an overview of the status, quality and safety of O&M including its conformity with the Maintenance Requirements and Safety Requirements. In a separate section of the O&M Inspection Report, the Project Engineer shall describe in reasonable detail	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	the lapses, defects or deficiencies observed by it in O&M of the Project. The Project Engineer shall send a copy of its O&M Inspection Report to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 7 (seven) days of the inspection			
7.10	The Project Engineer may inspect the project more than once in a month, if any lapses, defects or deficiencies require such inspections.	NA	NA	
7.11	The Project Engineer shall in its O&M Inspection Report specify the tests, if any, that the Concessionaire shall carry out, or cause to be carried out, for the purpose of determining that the project is in conformity with the Maintenance Requirements. It shall monitor and review the results of such tests and the remedial measures, if any, taken by the Concessionaire in this behalf.	NA	NA	
7.12	The Project Engineer shall determine if any delay has occurred in completion of repair or	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	remedial works in accordance with the Concession Agreement, and shall also determine the Damages, if any, payable by the Concessionaire to the NMCG/ Uttar Pradesh Jal Nigam for such delay.			
7.13	The Project Engineer shall monitor and review the curing of defects and deficiencies by the Concessionaire.	NA	NA	
7.14	In the event that the Concessionaire notifies the Project Engineer of any modifications that it proposes to make to the project, the Project Engineer shall review the same and send its comments to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 15 (fifteen) days of receiving the proposal.	NA	NA	
7.15	The Project Engineer shall undertake sewage flow sampling, as and when required by the NMCG/ Uttar Pradesh Jal Nigam, under and in accordance with the provisions of this agreement	NA	NA	
7.16	The Project Engineer shall review and report	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	to the employer on all the reports (Daily, Monthly, Quarterly and Annual), including monthly Environmental Monitoring Reports as detailed in Schedule 11(Part G) of the Concession Agreement.			
7.17	The Project Engineer shall provide necessary training/capacity building to the operators/technicians of the STP, as and when required, so as to address the gap in skill sets of the manpower deployed by the Concessionaire	NA	NA	
9.1	The Project Engineer shall determine the costs, and/or their reasonableness, that are required to be determined by it under the Concession Agreement	NA	NA	
9.2	The Project Engineer shall determine the period, or any extension thereof, that is required to be determined by it under the Concession Agreement	NA	NA	
10.1	When called upon by either Party in the event of any Dispute, the Project Engineer shall	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	mediate and assist the Parties in arriving at an amicable settlement			
10.2	In the event of any disagreement between the Parties regarding the meaning, scope and nature of Good Industry Practice, as set forth in any provision of the Concession Agreement, the Project Engineer shall specify such meaning, scope and nature by issuing a reasoned written statement relying on good industry practice and authentic literature	NA	NA	
11.0	As and when requested by NMCG/ Uttar Pradesh Jal Nigam, the Project Engineer shall provide its opinion and assessment on the events related to Emergency, Change in Law, Force Majure, Minor or total Casualties, Variation and unforeseen Site conditions etc	NA	NA	
12.1	The Project Engineer shall notify its programme of inspection to the NMCG/ Uttar Pradesh Jal Nigam and to the Concessionaire, who may, in their discretion, depute their respective representatives to be	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	present during the inspection.			
12.2	A copy of all communications, comments, instructions, Drawings or Documents sent by the Project Engineer to the Concessionaire pursuant to this TOR, and a copy of all the test results with comments of the Project Engineer thereon shall be furnished to the NMCG/ Uttar Pradesh Jal Nigam forthwith.	Yes	Yes	Yes
12.3	The Project Engineer shall retain at least one copy each of all Drawings and Documents received by it, including ‘as-built’ Drawings, and keep them in its safe custody.	Yes	Yes	Yes
12.4	Upon completion of its assignment hereunder, the Project Engineer shall duly classify and list all Drawings, Documents, results of tests and other relevant records, and hand them over to the NMCG/ Uttar Pradesh Jal Nigam or such other person as the NMCG/ Uttar Pradesh Jal Nigam may specify, and obtain written receipt thereof. Two copies of the said documents shall also be furnished in their	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	editable digital format or in such other medium or manner as may be acceptable to the NMCG/Uttar Pradesh Jal Nigam			
12.5	Wherever no period has been specified for delivery of services by the Project Engineer, the Project Engineer shall act with the efficiency and urgency necessary for discharging its functions in accordance with Good Industry Practice.	Yes	Yes	Yes
12.6	Project Engineers shall be expected to fully comply with all the provisions of the “Terms of Reference”, and shall be fully responsible for supervising the Design, Construction and maintenance and operation of the Facility in accordance with the provisions of the Concession Agreement and other schedules. Any failure of the Project Engineer in notifying to the Employer and the Concessionaire on non-compliance of the provisions of the Concession Agreement and other schedules by the Concessionaire, non-adherence to the	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	provision of this ToR and non-adherence to the time schedule prescribed under this ToR shall amount to non-performance.			
12.7	The project Engineer shall develop & maintain a project website and with the approval of NMCG/UPJN post from time to time, information (textual and Audio- Visual) on project progress on a continuous basis. On completion of services as per this RFP document, the website with all necessary technical information shall be handed over to UPJN.	Yes	Yes	Yes
14.1	Uttar Pradesh Jal Nigam may review with the Project Engineer, any or all of the documents and advice forming part of the Consultancy, in meetings and conferences which will be held at the office of the Uttar Pradesh Jal Nigam / NMCG. Uttar Pradesh Jal Nigam / NMCG may, in its discretion, require the Project Engineer to participate in extended meetings and/ or work from the offices of Uttar Pradesh	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	Jal Nigam /NMCG and the Project Engineer shall, on a best endeavor basis and without unreasonable delay, provide such services at the offices of the Uttar Pradesh Jal Nigam/NMCG.			
15.1	The Project Engineer may prepare Issue Papers highlighting issues that could become critical for the timely completion of the Project and that require attention from Uttar Pradesh Jal Nigam/NMCG. The Project Engineer shall report to UPJN for routine activities and deliverables. All major and critical issues shall be reported to NMCG and UPJN simultaneously.	Yes	Yes	Yes
15.2	The Project Engineer will make a presentation on the inception report for discussion with the Uttar Pradesh Jal Nigam / NMCG at a meeting. This will be a working document. Regular communication with Uttar Pradesh Jal Nigam / NMCG is required in addition to all key communications. This may take the form of telephone/ teleconferencing, emails,	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: January 2019 to March 2019		
		Undertaken till previous month - January 2019	Undertaken during this month – February 2019	Expected for next month March 2019
	and occasional meetings.			
15.3	The Deliverables will be submitted as per schedule provided in this RFP	Yes	Yes	Yes

4.0. MEETINGS

Project Engineer undertaken and planned services.

Sl. No.	Services	Undertaken by	Period: February 2019	Period: March 2019
			Description	Expected for next month
1	Site inspection & Review of progress	1) Mr. S. K. Barman Project Manager, GPPU, UPJN 2) Mr. A. Srinivasan, General Manager, MACE 3) Mr. T. Sathyamoorthy, Senior Manager, MACE	20 th February 2019	Project review meeting and site inspection

5.0. STAFF DEPLOYMENT

The work had commenced on 15.02.2018 the same has been communicated to NMCG vide letter number P968:8230 dated 05.03.2018.

The Project Engineer office shifted on 20/06/2018 at the following address in Varanasi:

Mahindra Consulting Engineers Limited

"K Lion Enclave",
"A "Block,
Flat No: 118, 1st Floor,
Opposite to Vishal Mega Mart,
Nevada, Sundarpur,
Varanasi – 221005,
Uttar Pradesh.

The position of staff deployment since beginning of the project till end of May 2019 is given in the following table:

Staff deployed on site at Ramana, Varanasi			Date of deployment	
Sl. No.	Designation	Name of staff	From	To
1	Team Leader	Jiut Bundhan Rai (Additional deployment)	07/05/2018	
2	Project Manager	G. Sathiskumar (As per agreement)	19/02/2018	21/05/2018
3	Civil Engineer	M. Sivapriyan (Additional deployment)	15/02/2018	
4	Civil Engineer	T. Sathyamoorthy (As per agreement)	20/04/2018	07/05/2018
5	Senior Engineer (Electrical & Instrumentation)	R. Satish (As per agreement)	20/04/2018	28/05/2018
6	Civil Engineer	P. Ramasubramanian (Additional deployment)	20/04/2018	27/11/2018
7	Civil Engineer	Imran Khadhar Mohideen	20/04/2018	

Staff deployed on site at Ramana, Varanasi			Date of deployment	
Sl. No.	Designation	Name of staff	From	To
		(Additional deployment)		
8	Structural Engineer	S. Varun Athithiya (Additional deployment)	20/04/2018	
9	Liaison Officer	O. B. Shivakumar (Additional deployment)	20/04/2018	08/07/2018
10	QA QC Expert /Safety	L. Selva Kumar (Additional deployment)	29/05/2018	
11	Structural Engineer	M. Vishnukumar (As per agreement)	24/09/2018	
12	Electrical Engineer	K. Ganesh (As per agreement)	11/10/2018	13/10/2018

ANNEX - 1

PROJECT PROGRESS (PHYSICAL)

ANNEX 1 - PROJECT PROGRESS (PHYSICAL)

Sl. No.	Component / Package	Physical Progress in Percentage			Remarks
		Up to Previous month	During month	Total	
1	2	3	4	5	6
1	Development of sewage treatment plant and associated infrastructure under Hybrid Annuity based PPP mode at Varanasi	48.97%	4.34%	53.31%	Physical progress observed to be very slow and needs to be accelerated by Concessionaire.

ANNEX - 2

FINANCIAL STATEMENTS

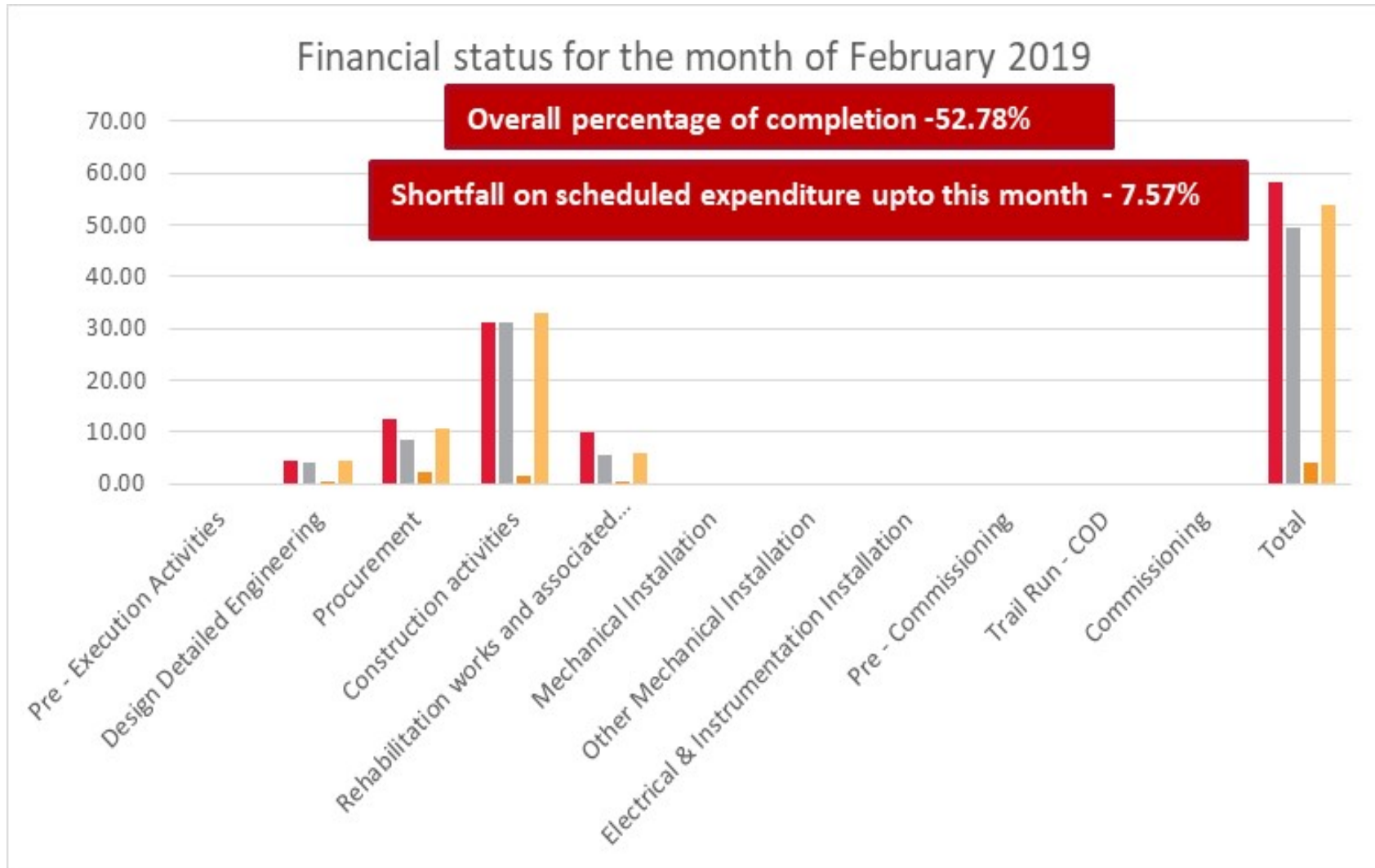
ANNEX 2 - FINANCIAL STATEMENTS

Item of work	Scheduled expenditure in Rs	Completed amount till previous month in Rs	Completed amount during this month in Rs	Total completed amount in Rs
Design detailed engineering				
Phase - I D&E (BEP)	76,50,000	76,50,000	-	76,50,000
Phase - II D&E (Civil, Mechanical, Electrical, Inst. drawings)	5,100,000	4,977,600	51,000	5,028,600
Topographical / Soil Investigation	51,00,000	51,00,000	-	51,00,000
Structural drawings submissions & approvals	12,750,000	12,342,000	306,000	12,648,000
Mechanical & piping drawings submissions & approvals	10,200,000	8,812,800	408,000	9,220,800
Electrical drawings submissions & approvals	2,550,000	2,126,700	81,600	2,208,300
Instrumentation document submissions & approvals	2,550,000	1,530,000	-	1,530,000
Associated				
MPS pumping station	7,433,416	3,417,000	-	3,417,000
Rising Main	13,790,132	1,071,000	-	1,071,000
Treated Effluent disposal line	78,974,475	51,970,066	2,794,800	54,764,866
Equipment procurement, logistics and receipt of equipment at Site				
Fine Screen / Coarse Screen / Belt Conveyors	10,200,000	226,667	-	226,667
Grit Removal Mechanism	7,650,000	226,667	-	226,667
SBR System (Decanters)	21,920,063	38,250,000	12,750,000	51,000,000
SAS / RAS pumps/booster pumps / treated water pumps / drain pumps	10,200,000	6,375,000	-	6,375,000
Horizontal centrifugal pumps (Treated water pumps)	20,400,000	453,333	-	453,333
Air blowers	17,615,238	20,400,000	-	20,400,000
Chlorination system	4,287,778	6,375,000	-	6,375,000

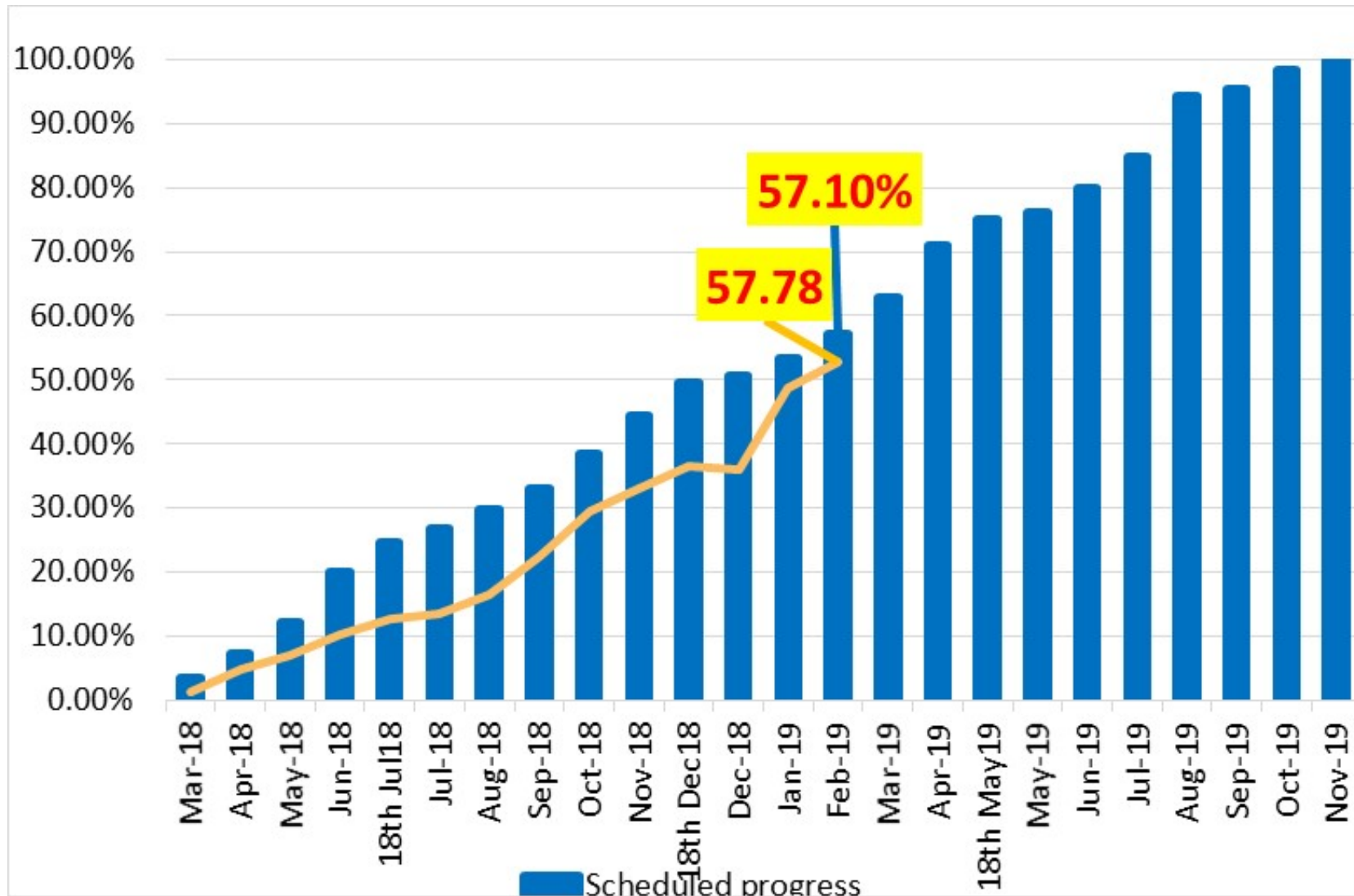
Item of work	Scheduled expenditure in Rs	Completed amount till previous month in Rs	Completed amount during this month in Rs	Total completed amount in Rs
Sluice Gates	5,100,000	113,333	-	113,333
MS/CS/SS/GI/CI/DI Piping	226,667			
Valves	226,667			
Motorized Gates at Inlet Of SBR	3,011,429	181,333	45,333	226,667
Diffusers	5,780,000	5,100,000	-	5,100,000
Volute press	1,851,111	226,667	-	226,667
PE Dosing Tanks	462,778	-	-	-
Agitators	2,519,643	102,000	-	102,000
Transformers	1,085,262	2,550,000	-	2,550,000
HT cables	56,667	45,333	-	45,333
MCC panel	898,481	90,667	-	90,667
HT Panel	898,481	2,550,000	-	2,550,000
PLC Panel	2,695,444	204,000	8,976,000	9,180,000
SCADA System	1,796,963	-	-	-
MLDB, LDB,& SLDBS	898,481	-	-	-
Push Button Stations/Plant lighting / Buildings lighting	449,241	-	-	-
Power, Control & lighting Cables	898,481	45,333	-	45,333
Cable trays/Lighting JB	449,241	45,333	11,333	56,667
DG Set	898,481	113,333	-	113,333
Plant Earthing	472,333	45,333	-	45,333
Instruments (Flow meter / Analyzer)	170,000	102,000	-	102,000
Instruments (Temperature, Pressure & Level transmitter / Level, Temperature and Pressure switches)	170,000	102,000	-	102,000
Civil Executions				

Item of work	Scheduled expenditure in Rs	Completed amount till previous month in Rs	Completed amount during this month in Rs	Total completed amount in Rs
Bund Wall / Earthen Embankment	71,400,000	65,807,850	1,020,000	66,827,850
Construction of Inlet Structure, Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for SBR	19,550,000	15,472,763	578,000	16,050,763
SBR Basins & SBR outlet Chamber	172,432,759	183,845,310	13,303,350	197,148,660
Construction of CCT including Chlorination room & Treated water pump House	19,358,390	22,033,224	489,600	22,522,824
Overhead Treated Water Tank	1,562,786	847,875	2,066	849,941
Construction of BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank	4,832,034	3,090,090	-	3,090,090
Administrative Building including lab and workshop	7,334,286	8,102,574	267,750	8,370,324
Staff Quarters	4,590,000	6,388,617	512,550	6,901,167
Construction of Blower room, HT, MCC, Transformer Yard, DG set Area	11,833,291	7,595,287	489,600	8,084,887
Total	582,440,591	494,112,256	44,305,482	538,417,738
	Percentage completion of overall project		52.78%	

Financial status for the month of February 2019



Progress status scheduled vs Actual - February 2019



ANNEX - 3

QUALITY ASSURANCE / QUALITY CONTROL

ANNEX 3 - QUALITY ASSURANCE / QUALITY CONTROL

1. Bund wall

S. No.	Description	IS Code	Till previous month				February 2019				Remarks
			As per IS No of test required	No. of Test conducted	No. of Acceptance	No. of Rejects	As per IS No of test required	No. of Test conducted	No. of Acceptance	No. of Rejects	
1	Soil compaction test at source (Borrow pit) - MDD, OMC & Soil characteristics	2720 Part VIII	22	22	12	0	-	-	-	-	10 samples taken and sent to third party testing. Waiting for test report.
2	Soil compaction test at site - OMC & Degree of compaction	2720 Part II	1024	1024	915	109	52	52	51	1	109 samples rejected till previous month. The same as been recompacted and re tested finally results are acceptable. This month one sample rejected the same as advised to recompacting & retest.

2. New constructions

S. No.	Description	IS Code	Till previous month				February 2019				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No. of Test conducted	No. of Acceptance	No. of Rejects	
1	Concrete ingredients coarse-aggregate 20mm down	IS 383-2001	49	91	74	17*	-	-	-	-	The result found acceptable. Witnessed by UPJN & MACE. 17 samples are rejects due to oversize the same as been removed from site.
2	Concrete ingredients coarse-aggregate 10mm down	IS 383-2001	36	52	47	*5	1	1	1		The result found acceptable. Witnessed by UPJN & MACE. 5 samples are rejects due to oversize the same as been removed from site
3	Concrete ingredients fine aggregate 4.75 mm down	IS 383-2001	29	47	42	5*	3	3	3		The result found acceptable. Witnessed by UPJN & MACE. 17 samples are rejects due to oversize the same as been removed from site.
4	Combined Grading as	IS 383-2001	whenever	4	4		whenever required				As per approved mix 60% of 20mm and

S. No.	Description	IS Code	Till previous month				February 2019				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No. of Test conducted	No. of Acceptance	No. of Rejects	
	per approved IIT Mix design		required								40% of 10mm is being used.
5	Hardened concrete Compressive strength	IS 516 & IS 456	Every 50m ³ or part thereof	962	962	0	Every 50m ³ or part thereof	69	69	0	CTM at site under repair. 69 cubes are sent to third party testing and waiting for their testing report.
6	OPC Cement 43 Grade	IS 8112-2013	Every batch or whenever required	1	1	0	Every batch or whenever required	0	0	0	Ultra Tech MTC available.
7	Reinforcement TMT Bars	IS 456-2001, IS 1786-1987 & IS 800-2007	one sample for each size per 50 MT	18	18	0	one sample for each size per 50 MT	0	0	0	Tata Steel MTC available at site for all consignment as on date.
8	Admixture	IS 9103-1979	Every new lot	1	1	0	Every new lot	0	0	0	Fosroc conplast MTC available at site for all consignment as of date
9	Water	IS 456 -	Once in	2	2	0	Once in	0	0	0	Tested at IIT BHU,

S. No.	Description	IS Code	Till previous month				February 2019				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No. of Test conducted	No. of Acceptance	No. of Rejects	
		2001	six months				six months				results found acceptable
10	Concrete Mix design	IS 10262-2000	whenever source of material changes	M10, M15, M20, M25, M30	Approved IIT BHU & accepted by client	0	whenever source of material changes	M10, M15, M20, M25, M30	Approved IIT BHU & accepted by client	0	As per approved mix 60% of 20mm and 40% of 10mm is being used.
11	Field control test: Slump /Concrete temperature / unit weight	IS 456, SP 23 & IS 516	Every alternate truck	428	415	13	Every alternate truck	27	27	0	13 under / over slump concrete re altered as per norms and re tested finally results are acceptable.
12	Bricks	IS1077&I S5454	Every new lot. 20 bricks to be selected from a lot of	40	40		Every new lot. 20 bricks to be selected from a lot of 2000-10000.				20nos of bricks are tested at site laboratory. Result found satisfactory. 20nos bricks sent to third party testing. Result found satisfactory.

S. No.	Description	IS Code	Till previous month				February 2019				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No. of Test conducted	No. of Acceptance	No. of Rejects	
			2000-10000.								

3. Treated Effluent disposal line

S. No.	Description	IS Code	Till previous month				February 2019				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	
1	PSC Pipes 1200mm dia – characteristics Test (Dimension, Straightness, Thickness, Hydrostatic & Permeability)	IS 784 & IS 3597	594	594	577	17	113	113	100	13	13 Pipes are repaired, and retested result found acceptable
2	Soil Test – SBC of soil	IS 6403	4	4	4						
3	EPDM Gasket	IS 5389-1979	545	545	545		20	20	20	0	

4. Raising main

S. No.	Description	IS Code	Till previous month				February 2019				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	
1	MS Pipes 1000mm dia - characteristics Test (Dimension, Thickness, Hydro testing, Epoxy coating, Anti corrosive coating & Marking)	IS 3589:2001	246.72 Mtr (48 nos)	246.72 Mtr (48 nos)	246.72 Mtr (48 nos)						Inspection done along with UPJN at Bamrah Pipes, Noida.

5. Construction Running Materials / Equipment's

S. No.	Description	IS Code	Till previous month				February 2019				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	
1	Auto level (SBR / Pipe lines / bund wall)	BIS 1492	Yearly once	3	3		Yearly once				Cube testing machine was repaired on 25 th Jan 2019. Now the cube testing machine was recalibrated and awaiting for the third party testing report.
2	Cube testing Machine	IS 516-2001	Yearly once	2	2		Yearly once				
3	Laboratory weighing machine	IS 460-1980	Yearly once	2	2		Yearly once				
4	Ready Mix Concrete plant	IS 4926-2013	Whenever required	3	3		Whenever required				

ANNEX - 4 PHOTOGRAPHS

SBR basin



Side view near CCT



Basin 2



Basin 3



Basin 1

Inlet chamber, Fine screens, Grit Basin & Parshall
Flume



Side view

Bund wall



Stone pitching work



North side wall



West side wall



Stone pitching

Administrative Building





Front side view



Rear side view

SBR air blower room, HT room, MCC room,
Transformer Yard & DG set area



Roof level

Staff Quarters



Type 2 (Front side)



Type – 2 (Rear Side)

Treated Effluent disposal line



PSC Pipe laying

ANNEX - 5
OUTWARD CORRESPONDENCE LIST
OF FEBRUARY 2019

ANNEX 5 - OUTWARD CORRESPONDENCE LIST OF FEBRUARY 2019

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
1.	MACE: P968:8837	01-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval with comments for control philosophy for MPS, Rev.0
2.	MACE: P968:8838	01-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval with comments on Civil GA & Details of outfall structures revision 6
3.	MACE: P968:8840	02-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval with comments for Instrument cable data sheets for STP and MPS Rev. 0
4.	MACE: P968:8842	04-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended to issue dispatch clearance for SBR PLC panel.
5.	MACE: P968:8843	02-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for dispatch clearance with comments for decanter core parts
6.	MACE: P968:8844	04-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Approval for PLC I/O schedule for MPS and STP, Rev. 1 and PLC panel and control desk general arrangement & wiring diagram for MPS & STP
7.	MACE: P968:8847	04-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Observation on the proposal of vendor approval for the supply of totalizer for parshall flume.
8.	MACE: P968:8848	04-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval with comments on civil GA and structural

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
						drawing of Raw water receiving chamber.
9.	MACE: P968:8851	04-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Achievement of second milestone interim certificate
10.	MACE: P968:8852	05-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval with comments on Mechanical GA drawing of overhead tank.
11.	MACE: P968:8853	05-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval with comments for road design calculation. Rev. 0
12.	MACE: P968:8854	05-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval on Civil GA & Det. Of Outfall structures Rev. 7
13.	MACE: P968:8859	06-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for second milestone certificate.
14.	MACE: P968:8862	07-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval with comments on MS pipe thickness calculation (Rising Main)
15.	MACE: P968:8863	07-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval with comments on MS pipe thickness calculation (Effluent disposal pipe).
16.	MACE: P968:8865	08-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Observation on Civil GA & Details of rehabilitation of rising main 1000 mm dia pipe Rev.01
17.	MACE: P968:8866	08-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval for

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
						electrical documents capacitor sizing calculation (R2), HT & LT cable sizing (R1), key SLD (R3) for STP & MPS and fault level calculation (R2) for STP.
18.	MACE: P968:8870	09-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Interim Observations on second milestone completion.
19.	MACE: P968:8878	13-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for with comments for Elec. Documents for Switchgear room & Transformer yard layout for STP – Rev.0, GA & SLD drawing of 415 V PMCC, MCC & PDB for STP and MPS – Rev 1. And datasheet, GA drawings and complete details of the 415 v Non-segregated busduct.
20.	MACE: P968:8879	13-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval for cable routing layout – external for STP, Rev.0
21.	MACE: P968:8881	13-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval for Electrical Drawings for cable routing layout – Internal for STP, Rev.0
22.	MACE: P968:8882	13-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval for System configuration for MPS and STP-Rev. 1

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
23.	MACE: P968:8884	13-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Observation on Invoice against 2 nd Milestone payment raised by concessionaire.
24.	MACE: P968:8886	14-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval with comments for Instrumentation documents – Analysers for STP, Flow measuring instrument for MPS and STP
25.	MACE: P968:8887	14-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval for Electrical drawing and document – fault level calculation for MPS Rev. 0
26.	MACE: P968:8888	14-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Observation on revised schedule
27.	MACE: P968:8890	15-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Delay in submission of revised recover plan.
28.	MACE: P968:8894	15-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Delay in supplying PSC Pipes
29.	MACE: P968:8901	20-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Observations on GA and structural drawing of weir across Assi nalla.
30.	MACE: P968:8903	20-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended for approval with comments on agitator for sludge storage tank. Rev.1
31.	MACE: P968:8910	23-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended to issue dispatch clearance for 11kV Metal Enclosed Switchboard for MPS & STP.

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
32.	MACE: P968:8916	26-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Approval for technical specification of Lighting fixture / fitting for internal & external lighting for STP Rev.1 Lighting calculation for STP and lighting layout for STP Outdoor for STP.
33.	MACE: P968:8922	26-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Recommended to issue dispatch clearance for Chlorination System and Leak Absorption system for STP
34.	MACE: P968:8921	26-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Submission of Monthly Inspection report for the month of February 2019.
35.	MACE: P968:8929	28-02-2019	GM-UPJN	NMCG/ PM-UPJN	NA	Approval for Chlorine Analyzer for STP Rev.3

ANNEX - 6
INWARD CORRESPONDENCE LIST OF
FEBRUARY 2019

ANNEX 6 - INWARD CORRESPONDENCE LIST OF FEBRUARY 2019

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
1.	EIL/VSPPL/2018-19/401	04-02-2019	VSPPL	Amit B Ghorpade	Y	1	Submission of revised Technical Specification of Lighting Fixture / Fitting for Internal & External Lighting for STP and Lighting Calculation for STP, Rev. 1 along with comment response sheet.
2.	EIL/VSPPL/2018-19/402	04-02-2019	VSPPL	Amit B Ghorpade	Y	1	Regarding Manufacturing clearance issued and confirmation received from Vendor – Kishor Pumps.
3.	EIL/VSPPL/2018-19/403	04-02-2019	VSPPL	Amit B Ghorpade	Y	1	Submission of Monthly Progress Report for the month of January 2019
4.	EIL/VSPPL/2018-19/404	04-02-2019	VSPPL	Amit B Ghorpade	Y	1	Submission of Revised of Civil GA Drawing of Final Outfall Chamber, Rev. 7 and Design Calculation, Rev. 2 along with compliance.
5.	EIL/VSPPL/2018-19/405	05-02-2019	VSPPL	Amit B Ghorpade	Y	1	Notice to inspection of work against completion of 2nd Payment Milestone.
6.	EIL/VSPPL/2018-19/406	05-02-2019	VSPPL	Amit B Ghorpade	Y	12	Submission of Approved Electrical Documents for STP & MPS- Data Sheet, GA Drawings, Synchronization Panel Drawing & QAP of 625 DG Set; DG Sizing Calculations; Earthing & Lightning Protection Calculation; Earthing Design Calculation for STP; GA, SLD & Control Schematic Drawing of 11kV Metal Enclosed Switchboard; Key SLD (Part: 1; HT SLD) and Transformer Sizing Calculation.
7.	EIL/VSPPL/2018-19/407	07-02-2019	VSPPL	Amit B	Y	1	Request for permission of Road Side Cutting

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
				Ghorpade			for Laying of PSC Pipe Line.
8.	EIL/VSPPL/2018-19/408	12-02-2019	VSPPL	Amit B Ghorpade	Y	3	Submission of Invoice against 2nd Milestone Payment as per CA Clause no.9.3 (e).
9.	EIL/VSPPL/2018-19/409	12-02-2019	VSPPL	Amit B Ghorpade	Y	3	Varanasi STP – Submission of Mechanical GA (Rev. 1) and Structural Drawing (Rev. 0) for Weir Across Nalla.
10.	EIL/VSPPL/2018-19/410	12-02-2019	VSPPL	Amit B Ghorpade	Y	1	Submission of revised Schedule.
11.	EIL/VSPPL/2018-19/411	14-02-2019	VSPPL	Amit B Ghorpade	Y	1	Request for Dispatch Clearance – 11kV HT Panel Board for STP and MPS - M/s. Hitachi
12.	EIL/VSPPL/2018-19/412	14-02-2019	VSPPL	Amit B Ghorpade	Y	1	Submission of revised Data Sheet, G.A. Drawing, QAP and Design Calculation of Agitator Rev. 1 along with the Comments Resolution Sheet.
13.	EIL/VSPPL/2018-19/413	16-02-2019	VSPPL	Amit B Ghorpade	Y	2	Submission of Revised Recovery/Completion Schedule.
14.	EIL/VSPPL/2018-19/414	19-02-2019	VSPPL	Amit B Ghorpade	Y	9	Submission of Approved Civil Documents for Outfall Chamber & Electrical Control Room (MPS AREA).
15.	EIL/VSPPL/2018-19/415	25-02-2019	VSPPL	Amit B Ghorpade	Y	6	Request for Dispatch Clearance – Chlorination System and Leak Absorption System- M/S Supreme Technology
16.	EIL/VSPPL/2018-19/416	26-02-2019	VSPPL	Amit B Ghorpade	Y	1	Inspection call for Motor 160 KW, 2P, 50Hz, VFD, 451V for Air blowers
17.	EIL/VSPPL/2018-19/417	26-02-2019	VSPPL	Amit B Ghorpade	Y	3	Instrumentation Documents for STP & MPS, Rev.1 – Instrument Index, & Instrumentation Design Philosophy

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
18.	EIL/VPPL/2018-19/418	26-02-2019	VSPPL	Amit B Ghorpade	Y	2	Submission of Electrical Document for STP-LIGHTING LAYOUT- INDOOR
19.	EIL/VPPL/2018-19/419	28-02-2019	VSPPL	Amit B Ghorpade	Y	1	Submission of Monthly Progress report for the month of February 2019.
20.	EIL/VPPL/2018-19/420-IC	28-02-2019	VSPPL	Amit B Ghorpade	Y	1	Inspection call for transformer for STP & MPS

ANNEX - 7

DELAY ANALYSIS & RECOVERY PLAN

ANNEX 7 – DELAY ANALYSIS & RECOVERY PLAN

Delay analysis and recovery plan:

The following activities are delayed as per the approved construction plan beyond 15 days from the targeted the completion date. The reason for the delay is analyzed in all aspects and the possible recovery plan also arrived to complete the pending activities within 30 days. It is to be noted that the recovery plan is provided only for the delayed activities and hence the concessionaire should plan and provide the additional manpower, Machinery and equipment in addition to the resources available at site for regular activities as per construction plan.

1. Summary of delay analysis

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
Design Detailed Engineering	11-Oct-17	30-Oct-18	Drawing submitted by the concessionaire after the due date, indicates the lack of planning. Approval from IIT is pending for some of the items.	However, concessionaire started the works
			Instrumentation drawing of the following component is pending due to lack of planning. <ul style="list-style-type: none"> • Cause & Effect Diagram 	Concessionaire to plan the submission and approval on or before 15 th March 2019
Associated infrastructure works	20-Mar-18	18-May-19	Delay in receipt for existing structure as built drawings. and delay in site investigation are the main reason	UPJN not provided existing structure as built drawings Concessionaire to submit the

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
				<p>condition assessment report along with drawings on or before 15th March 2019</p> <p>Concessionaire yet to finalise the vendor for CCTV inspection of existing rising main</p> <p>Work not yet started for carrying out the trenchless cutting method near Samneghat bridge</p> <p>Manufacturing delay of PSC pipes for treated effluent disposal line. Only 3385 m of pipe inspection completed.</p> <p>Problem with local villagers to be sorted out by UPJN. Transportation of inspected pipe from manufacturer to site is delayed</p>
			Hydro testing of	Concessionaire to expedite to start the same by 10 th March 2019
				Concessionaire to expedite to start the same by 10 th March 2019
				Concessionaire to instruct the manufacturers to speed up the progress or else need to identify one more supplier and place the work order to expedite the delivery as per schedule
				UPJN to sort out the issue of local villagers.
				Concessionaire to expedite the transportation of PSC pipes within 10 days from the date of inspection

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
			pipes already laid is delayed unduly due to lack of planning, manpower, equipment.	plan to complete the hydro testing within 30 days from the date of laying.
Equipment Procurement, Logistics and receipt of equipment at Site	24-May-18	5-Sep-19	Data sheet and GA drawings for the following items are pending due to lack of planning <ul style="list-style-type: none"> • MS/CS/SS/GI/CI /DI Piping • Valves • PE dosing tanks • SCADA • MLDB, LDB & SLDBS • Push button stations / plant lighting / building lightings 	Concessionaire to expedite the Submission of the same by 15 th March 2019
Civil Executions				
Bund Wall / Earthen Embankment	19-Feb-18	30-Aug-19	Lack of planning and lack of full utilization of equipment & manpower	Full utilization of the available equipment shall increase the output and mitigate the delay occurred
Inlet Chamber Manual & Mechanical Screen Chamber, Grit Chamber & Outlet Channel of Grit Chamber &	03-June-18	30-Jun-19	Drawing submitted by the concessionaire after the due date indicates the lack of planning Delay occurred for getting from	Concessionaire started the works. Full utilization of the available equipment shall increase the output and mitigate the delay

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
Parshall Flume (I) & Distribution Chamber of SBR Basin			approval from IIT and lack of full utilization of equipment & manpower	occurred.
Overhead treated water tank	1-Jun-18	1-Aug-19	Concessionaire recently submitted structural drawing i.e after the target date. Delay occurred for getting from approval from IIT and lack of full utilization of equipment & manpower	Concessionaire started the work. Full utilization of the available equipment shall increase the output and mitigate the delay occurred.
Construction of BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank	15-Oct-18	13-Jul-19	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Delay occurred for getting from approval from IIT and lack of full utilization of equipment & manpower	Full utilization of the available equipment shall increase the output and mitigate the delay occurred.
Construction of Blower room, HT, MCC, Transformer Yard, DG set Area	03-Jun-18	29-Aug-19	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Delay occurred for getting from approval from IIT	Full utilization of the available equipment shall increase the output and mitigate the delay occurred.

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
			and lack of full utilization of equipment & manpower	

2. Recovery plan - Additional equipment, manpower and material required to meet the target within 30 days

S. No.	Description	Status	Remarks
1	Bund wall / earthen embankment	Work is in progress	
2	Construction of Inlet Structure, Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for SBR	Work is in progress	
3	SBR basins & SBR outlet Chamber	Work is in progress	
4	Chlorination building & Chlorine contact tank & Treated water collection tank, treated water pumps	Work is in progress	
5	Construction of BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank	Work is in progress	
6	Administrative Building	Work is in progress	
7	Overhead tank for effluent disposal	Work is in progress	
8	SBR air blower room, HT room, MCC room, Transformer yard & DG set area	Work is in progress	
9	MPS, inlet structure, weir, control room and rising main	Drawings partially submitted	
10	Staff quarters	Work is in progress	

2.1. Inlet structure, SBR, CCT, Administrative building, Blower room, HT, MCC, Transformer Yard & DG set area, OHT and Staff quarters

S. No.	Description	Estimate		As per construction plan up to 28 th February 2019		Actual work done up to 28 th February 2019		Shortfall as on 28 th February 2019	
		Quantity	Unit	Quantity	Unit	Quantity	Unit	Quantity	Unit
1	PCC & RCC	11311	Cum	9682	Cum	9508	Cum	174	Cum

The following available equipment are sufficient however the same is not being utilised properly to increase the output. Concessionaire to plan to utilise the equipment to its full utilisation level to mitigate the delay

Sl. No.	Description	Quantity	Unit	Capacity	Unit
1	JCB – Excavator	2	No		
2	Transit mixer	2	Nos	7	Cum
3	Tipper	2	Nos	5.5	Cum
4	Tractor	1	Nos	2.8	Cum
5	Batching Plant	1	No	20	Cum/Hr
6	Concrete Pump	2	No	40	Cum/Hr
7	Chipping machine	1	No		
8	Auto level	2	Nos		
9	Wood cutting machine	2	Nos		
10	Drilling machine	2	Nos		
11	DG	2	Nos	62 & 125	KVA
12	Bar bending Machine	1	No		
13	Bar cutting Machine	1	No		
14	Welding Machine	6	Nos		
15	Curing Pump	2	Nos		
16	Vibrator	6	Nos		

Sl. No.	Description	Quantity	Unit	Capacity	Unit
17	Dewatering pump	3	Nos		
18	Labour (Skilled & Un skilled)	128	Nos		

2.2. Bund Wall / Earthen Embankment

S. No.	Description	Estimate		As per construction plan up to 28 th February 2019		Actual work done up to 28 th February 2019		Shortfall as on 28 th February 2019	
		Quantity	Unit	Quantity	Unit	Quantity	Unit	Quantity	Unit
1	Earth filling & Compaction of Bund Wall	81411	Cum	81411	Cum	73747	Cum	7664	Cum

The following available equipment are sufficient however the same is not being utilised properly to increase the output. Concessionaire to plan to utilise the equipment to its full utilisation level to mitigate the delay.

S. No.	Description	Quantity	Unit	Capacity	Unit
1	JCB	1	Nos		
2	Tractor	8	Nos	2.8	Cum
3	Auto Level	2			
4	Water tanker	2	Nos	5000	Litters
5	Grader	1	No	17	Tonne
6	Roller	1	No	11	Tonne
7	Labour (Skilled & Un skilled)	28	Nos		

2.3. Treated Effluent disposal line

S. No.	Description	Estimate		As per construction plan up to on 28 th February 2019		Actual work done up to on 28 th February 2019		Shortfall as on on 28 th February 2019	
		Quantity	Unit	Quantity	Unit	Quantity	Unit	Quantity	Unit
1	Procurement of PSC Pipe	4800	Mtr	4800	Mtr	2832	Mtr	1968	Mtr
2	PSC pipe laying	4800	Mtr	2880	Mtr	2650	Mtr	440	Mtr

The following available equipment are sufficient however the same is not being utilised properly to increase the output. Concessionaire to plan to utilise the equipment to its full utilisation level to mitigate the delay.

S. No.	Description	Quantity	Unit	Capacity	Unit
1	JCB	1	No		
2	Hydra	1	No		
3	Excavator	1	No		
4	Tractor	1	No		
5	Auto Level	1	No		
6	Water tanker	1	No		
7	Labour (Skilled & Un skilled)	2	Nos		

1. Item wise Detailed analysis

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 28 th February 2019	Total completion in % 28 th February 2019	Delay analysis	Recovery / Mitigation plan
Design Detailed Engineering	11-Oct-17	30-Oct-18	100%	95%		
Civil GA	10-Jan-18	25-Sep-18	100%	98.60%		
Plant Layout / Site layout	11-May-18	23-May-18	100%	90%	Concessionaire yet to submit the revised drawing after incorporating the OHT	Concessionaire to submit the on or before 15 th March 2019
Weir Across Assi Nalla	05-Mar-18	14-Mar-18	100%	60%		
Structural Drawings Submissions & Approvals	02-Feb-18	30-Sep-18	100%	99.20%		
Weir Across Assi Nalla	05-Mar-18	14-Mar-18	100%	60%		
Design, Drawings & Documentation for Mechanical GAD	13-Feb-18	15-Sep-18	100%	90.40%		
Overall Piping Drawings	30-May-18	05-Sep-18	100%	40%	Concessionaire yet to submit the revised drawing after incorporating the observations	Concessionaire to submit the drawing on or before 15 th March 2019
Design, Drawings and Documentation	10-Mar-18	08-Oct-18	100.00%	87.00%		

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 28 th February 2019	Total completion in % 28 th February 2019	Delay analysis	Recovery / Mitigation plan
for Electrical & Instrumentation works						
Plant Lighting Layout Plan	25-Sep-18	05-Oct-18	100%	60%		
Instrumentation Document submissions & Approvals	01-Jun-18	30-Oct-18	100%	60%		
Cause & Effect Diagram	01-Jun-18	18-Jul-18	100%		Concessionaire yet to submit the drawings indicates the lack of planning and lack of engineering team strength	Concessionaire to submit the drawing on or before 15 th March 2019
Associated infrastructure works	20-Mar-18	18-May-19	78.59%	46.47%		
MPS Pumping Station	15-May-18	10-Apr-19	72.88%	33.50%		
Rehabilitation of MPS	15-May-18	30-Apr-19	83%	52%		
Construction Of weir across assi nalla & control room	13-Oct-18	30-Jan-19	100%		Concessionaire yet to submit the drawings indicates the lack of planning and lack of engineering team strength	Concessionaire to submit the drawing on or before 15 th February 2019

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 28 th February 2019	Total completion in % 28 th February 2019	Delay analysis	Recovery / Mitigation plan
Desilting of the MPS	15-May-18	28-Aug-18	100%	75%	Desilting is held up due to non-start of CCTV inspection and non-finalization of drawings	
Repair of Equipment	01-Jan-19	30-Mar-19	66%			
Rising Main	15-Jun-18	25-Mar-19	90.13%	7%		
Desilting & CCTV inspection	15-Jun-18	18-Jul-18	100%		Concessionaire yet to finalize the vendor and carry out the investigation	Concessionaire to expedite to start the same by 10 th March 2019
Strengthening and Pipe protection of Rising main Extension of existing Rising main to the Inlet point at the STP site	10-Oct-18	30-Jan-19	100%			
Shifting & laying of pipe near samne ghat	13-Jul-18	15-Jan-19	100%	20%		
Hydro testing	15-Feb-19	25-Mar-19	34%			
Treated Effluent disposal line	20-Mar-18	18-May-19	74.42%	53.69%		
Procurement - supply of pipes including	20-Mar-18	26-Dec-18	100%	59%	Only 3385 m of pipe inspection completed. Delay in procurement	Concessionaire to instruct the manufacturers to

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 28 th February 2019	Total completion in % 28 th February 2019	Delay analysis	Recovery / Mitigation plan
inspection, transportation and delivery at site					of pipes by the concessionaire.	speed up the progress or else need to identify one more supplier and place the work order to expedite the delivery as per schedule
Pipe laying - 20% including excavation and backfilling (3 rd 20%)	06-Nov-18	18-Dec-18	100%	76%		
Pipe laying - 20% including excavation and backfilling (4 th 20%)	20-Feb-19	29-Mar-19	22%			
Hydrotesting & finishing works	14-Jun-18	18-May-19	59%	5%	Hydro testing of pipes already laid is delayed unduly due to lack of planning, manpower, equipment.	Concessionaire to ensure the hydrotesting of already laid pipes on or before 15 th March 2019. Concessionaire to plan to complete the hydrotesting within 20 days from the date of laying.
Equipment Procurement,			40 %	36 %		

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 28 th February 2019	Total completion in % 28 th February 2019	Delay analysis	Recovery / Mitigation plan
Logistics and receipt of equipment at Site						
Fine Screen/Coarse Screen/Belt Conveyors	24-May-18	18-Dec-18	100.0%	30.40%		
Manufacturing of Equipment	17-Sep-18	10-Dec-18	100%			
Inspection / Logistics	08-Dec-18	10-Dec-18	100%			
Receipt of equipment at site	11-Dec-18	18-Dec-18	100%			
Grit Removal Mechanism	24-May-18	10-Mar-19	75%	18%		
Manufacturing of Equipment	01-Sep-18	10-Feb-19	100%			
Inspection / Logistics	12-Feb-19	27-Feb-19	100%			
Submersible (SAS / RAS/ Filtrate / BFP feed)	31-May-18	18-Dec-18	100%	62.50%		
Inspection / Logistics	01-Dec-18	10-Dec-18	100%	50%		
Receipt of equipment at site	14-Dec-18	18-Dec-18	100%			
Horizontal centrifugal	31-May-18	18-Dec-18	100%	2.2%		

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 28 th February 2019	Total completion in % 28 th February 2019	Delay analysis	Recovery / Mitigation plan
pumps (Treated water pumps)						
Manufacturing of Equipment	10-Sep-18	15-Dec-18	100%		Manufacturing clearance is delayed due to delay in approval of data sheet	Concessionaire to expedite the manufacturing process within the scheduled time
Inspection / Logistics	01-Dec-18	10-Dec-18	100%			
Receipt of equipment at site	16-Dec-18	18-Dec-18	100%			
Sluice Gates	05-Mar-18	18-Dec-18	100%	2%		
Manufacturing of Equipment	25-Sep-18	12-Dec-18	100%		Manufacturing clearance is delayed due to delay in approval of data sheet	Concessionaire to expedite the manufacturing process within the scheduled time
Inspection / Logistics	01-Dec-18	10-Dec-18	100%			
Receipt of equipment at site	13-Dec-18	18-Dec-18	100%			
MS/CS/SS/GI/CI/D I Piping	01-Jan-19	12-Aug-19	2.2%			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-Jan-19	15-Feb-19	100%			

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 28 th February 2019	Total completion in % 28 th February 2019	Delay analysis	Recovery / Mitigation plan
Valves	01-Jan-19	12-Aug-19	2%			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-Jan-19	17-Jan-19	100%			
PE Dosing Tanks	15-Oct-18	13-Jul-19	18%			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	15-Oct-18	29-Nov-18	100%			
Manufacturing of Equipment	29-Dec-18	30-Jun-19	33%			
Agitators	01-May-18	23-Jul-19	33%	1%		
Manufacturing of Equipment	01-Sep-18	08-Jun-19	64%		Manufacturing clearance is delayed due to delay in approval of data sheet	
SCADA System	07-Sep-18	16-Aug-19	18%			
Submission & Approval of Drawings / Documents & data sheets including release of	07-Sep-18	09-Nov-18	100%			

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 28 th February 2019	Total completion in % 28 th February 2019	Delay analysis	Recovery / Mitigation plan
purchase order						
Manufacturing of Equipment	01-Jan-19	30-Jun-19	32%			
MLDB, LDB & SLDBS	07-Sep-18	16-Aug-19	18%			
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%			
Manufacturing of Equipment	01-Jan-19	30-Jun-19	32%			
Push Button Stations/Plant lighting / Buildings lighting	07-Sep-18	16-Aug-19	18%			
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%			
Manufacturing of Equipment	01-Jan-19	30-Jun-19	32%			
Civil Executions	6-Apr-18	15- Aug-19	72%	76%		
Bund Wall /	19-Feb-18	30-Aug-19	87.50%	81.90%		

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 28 th February 2019	Total completion in % 28 th February 2019	Delay analysis	Recovery / Mitigation plan
Earthen Embankment						
Filling & Compaction of Bund Wall from 2.0 to 3.0 Mtr Height	01-Oct-18	29-Nov-18	100%	92%	Lack of planning and efficient utilisation of available manpower and equipment	Full utilization of the available equipment shall increase the output and mitigate the delay occurred.
Filling & Compaction of Bund Wall from 3.0 to 4.5 Mtr Height	07-Nov-18	18-Dec-18	100%	62%	Lack of planning and efficient utilisation of available manpower and equipment	Full utilization of the available equipment shall increase the output and mitigate the delay occurred.
Construction of Inlet Structure, Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for SBR	03-Jun-18	30-Jun-19	76.70%	62.90%	Lack of planning and efficient utilisation of available manpower and equipment	Full utilization of the available equipment shall increase the output and mitigate the delay occurred.
Inlet Chamber Slab with Column, Wall	20-Sep-18	15-Dec-18	100%	52%		
Grit Chamber Slab with Column	01-Dec-18	28-Feb-19	69%	8%		
Overhead Treated Water Tank	01-Jun-18	01-Aug-19	61.3%	33.30%	Lack of planning and efficient utilization of available manpower and equipment	Full utilization of the available equipment shall increase the output and mitigate the

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 28 th February 2019	Total completion in % 28 th February 2019	Delay analysis	Recovery / Mitigation plan
						delay occurred.
50% RCC of Structure	09-Oct-18	18-Dec-18	100%	11%		
50% RCC of Structure	25-Feb-19	06-May-19	4%			
Construction of BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank	15-Oct-18	13-Jul-19	47.4%	30.30%	Lack of planning and efficient utilization of available manpower and equipment	Full utilization of the available equipment shall increase the output and mitigate the delay occurred.
50% RCC of Structure	18-Jan-19	18-Mar-19	69%	1%		
Construction of Blower room, HT, MCC, Transformer Yard, DG set Area	03-Jun-18	29-Aug-19	73.80%	52.80%	Lack of planning and efficient utilization of available manpower and equipment	Full utilization of the available equipment shall increase the output and mitigate the delay occurred.
RCC Roof slab	16-Nov-18	18-Dec-18	100%	14%		
Brick Work	01-Jan-19	21-Mar-19	38%	73%		

ANNEX - 8

ESHS TARGET & ACHIEVEMENT

1. ESHS target and achievement

Health & Safety Targets and Goals

Sl. No.	Goals	Till previous month	During the month of February 2019
1	Zero total recordable injuries	Achieved	Achieved
2	All personnel Health and Safety inducted	Inducted	Inducted
3	100% incident reporting and investigation	No incident occurred	No incident occurred
4	100% adherence of usage of appropriate PPE's at work	Ensured	Ensured
5	Executing construction work with least disturbance to the environment, adjoining road users and traffic	Achieved	Achieved

HSE Training and competence adherence

Sl. No.	Description	Till previous month	During the month of February 2019
1	Issue of a photo identity card duly signed by the authorized representative of the company / subcontractor before they are engaged for any work	Issued	In progress
2	HSE induction training at the first day of their joining explaining the nature of the work for all the personnel working at site on the following topics <ul style="list-style-type: none"> • Hazard identification procedure - Hazards on site <ul style="list-style-type: none"> • Falls • Slip trip • Electricity • Working at height • Excavation • Drop objects • Machinery • Material handling (Manual and mechanical) • Transportation 	Inducted	Inducted

Sl. No.	Description	Till previous month	During the month of February 2019
	<ul style="list-style-type: none"> • Site housekeeping • Fire • Personnel protective equipment <ul style="list-style-type: none"> • What is available • How to obtain it? • Correct use and care • Health <ul style="list-style-type: none"> • Site welfare facilities • Potential health hazards • First Aid / CPR • Duties of contractor <ul style="list-style-type: none"> • Brief outline of the responsibilities of the contractor by law • Details of accident prevention policy • Building and other constructions welfare law • Employer's duties <ul style="list-style-type: none"> • Brief outline of responsibilities of employee • Site safety rules 		
3	Tool box meetings Key issues discussed at Daily Tool Box meetings includes <ul style="list-style-type: none"> • The job to be done • Awareness of hazards, risks & control measures associated with specific activity, review safe work practices • Active involvement of crew and open discussion on any concerns and commitment to work safely 	Conducted	Conducted
4	Behavior modification and disciplinary action	None	None
5	Post-accident or near miss meeting	No accident occurred	No accident occurred

HSE Inspections and submission of reports

Sl. No.	Description	Till previous month	During the month of January 2019
1	Planned General inspection	Conducted	Conducted
2	Routine inspection		
2.1	Daily inspection of plant and equipment by operator	Conducted	Conducted
2.2	Weekly inspection of scaffold by scaffolding supervisor	Conducted	Conducted
2.3	Monthly inspection of electrical hand tools by competent electrical supervisor	Conducted	Conducted
2.4	Quarterly inspection of temporary electrical systems by competent electrical supervisor	Conducted	Conducted
2.5	Yearly inspection of lifting machinery, lifting appliances, equipment and gears by Government approved competent person	NA	NA
2.6	Half yearly inspection of pressure vessels by Govt approved competent person	NA	NA
3	Specific inspection		
	Inspection performed before a heavy lifting operation	Conducted on regular basis before starting the jobs	Conducted on regular basis before starting the jobs
	Inspection performed before and after the entry of person into a confined space	01 No. Conducted on 27 th May 2018 (MPS desilting)	Work yet to start
	Inspection performed before and after welding and gas cutting operation	NA	NA
	Inspection of formwork before concreting by formwork erector	Conducted	Conducted
4	Other inspection		
	Inspections by labour department of government	Nil	Nil
	Client site HSE management team	Nil	Nil
5	Monthly HSE Report submission covering <ul style="list-style-type: none"> Monthly minor accident, serious incident details 	Submitted	Submitted

Sl. No.	Description	Till previous month	During the month of January 2019
	<ul style="list-style-type: none"> Average manpower details, man-hours works Lost time (no of working days) Number of training / tool box talk Number of people trained HSE committee minutes of meeting HSE inspection, etc 		
6	HSE Bulletin board indicating <ul style="list-style-type: none"> Safety promotions / awards Safety meeting dates and times Emergency phone numbers QHSE policies Safety alerts 	Available	Available except safety award
7	Risk assessment prior to start of any new work – Report	Conducted by HSE manager	Conducted by HSE manager
8	Availability of method statement for operational control of significant occupational health & safety risk levels	Available at site office	Available at site office except method statement
9	Statement of confirming the medical examination of all employees and workmen	Conducted	Conducted
10	Availability of first aid box with each crew (mention the number of first aid box availability)	Available	Available
11	Statement of confirming the welfare measures for workers		
	One latrine for every 20 workers upto 100 workers and thereafter one for every additional 50 workers	03 number of latrines provided	03 number of latrines provided
	In addition one urinal accommodation provided for every 100 workers	03 number of urinals provided	03 number of urinals provided
	Separate latrine and urinals accommodation similar to above for ladies	01 number of urinals Provided	01 number of urinals Provided
	Drinking water facility within a distance of 200 m from the place of	Provided at 04	Provided at 04

Sl. No.	Description	Till previous month	During the month of January 2019
	work for all workers	locations	locations
	Provision of labour accommodation	Provided for 120 labour	Provided for 120 labour
	Provision of creche (if female workers are more than 50)	NA	NA
	Measures to prevent mosquito breeding	Taken	Taken
	Permit to work system (if applicable)	Provided	Provided
12	PPE adherence		
	Head protection for VSPPL employees, All sub-contractors, Electricians, Safety professionals, All workmen and Visitors Safety helmet color code (every helmet having the logo)	Provided	Provided
	Hearing protection	Provided	Provided
	Eye protection	Provided	Provided
	Foot protection	Provided	Provided
	Fall arresting system	Provided	Provided
	Hand protection	Provided	Provided
	Respiratory protection	Provided	Provided
	Other PPE – 10% spares availability	Provided	Provided
13	Qualification of operator of lifting appliances and of signaler etc Above 21 years of age and possesses a valid heavy transport driving license as per motor vehicle act and rules Competent and reliable Possesses the knowledge of inherent risks involved in the operation of lifting appliances Periodical medical examination conducted	Adhered	Adhered
14	Sufficient lighting especially during night work	Provided	Provided
15	Fire prevention and fighting system availability	Available	Available
16	Adherence of environment management system – Air quality, Water quality, Wastewater handling, waste handling, hazardous waste handling and energy management	Adhered as per the applicable law	Adhered as per the applicable law

HSE communication and awareness campaign conducted

Sl. No.	Description	Status	Planned
1	4 th March 2018 – National safety day	Conducted	
2	7 th April 2018 – World health day		
3	14 th April 2018 – First safety day		
4	5 th June 2018 – World environmental day	Conducted	
5	15 th August 2018 – Independence Day celebration and Planting of saplings	Conducted	