

**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**

July - 2018



Executing Agency

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



Funding Agency

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

Mahindra
Consulting Engineers

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 Gol, 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 Gol approved the flagship Namami Gange programme for cleaning, rejuvenation, and protection of the river Ganga. In January 2016, the Gol 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 Gol 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**.

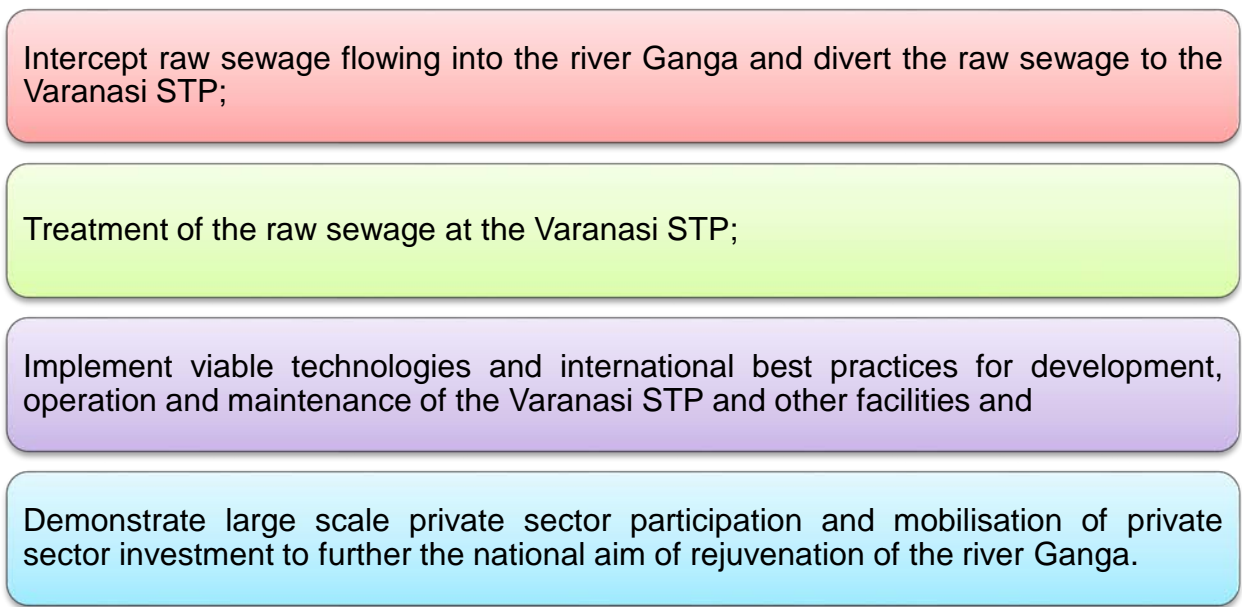


Figure 1: Objectives of NMCG and UP JAL NIGAM

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

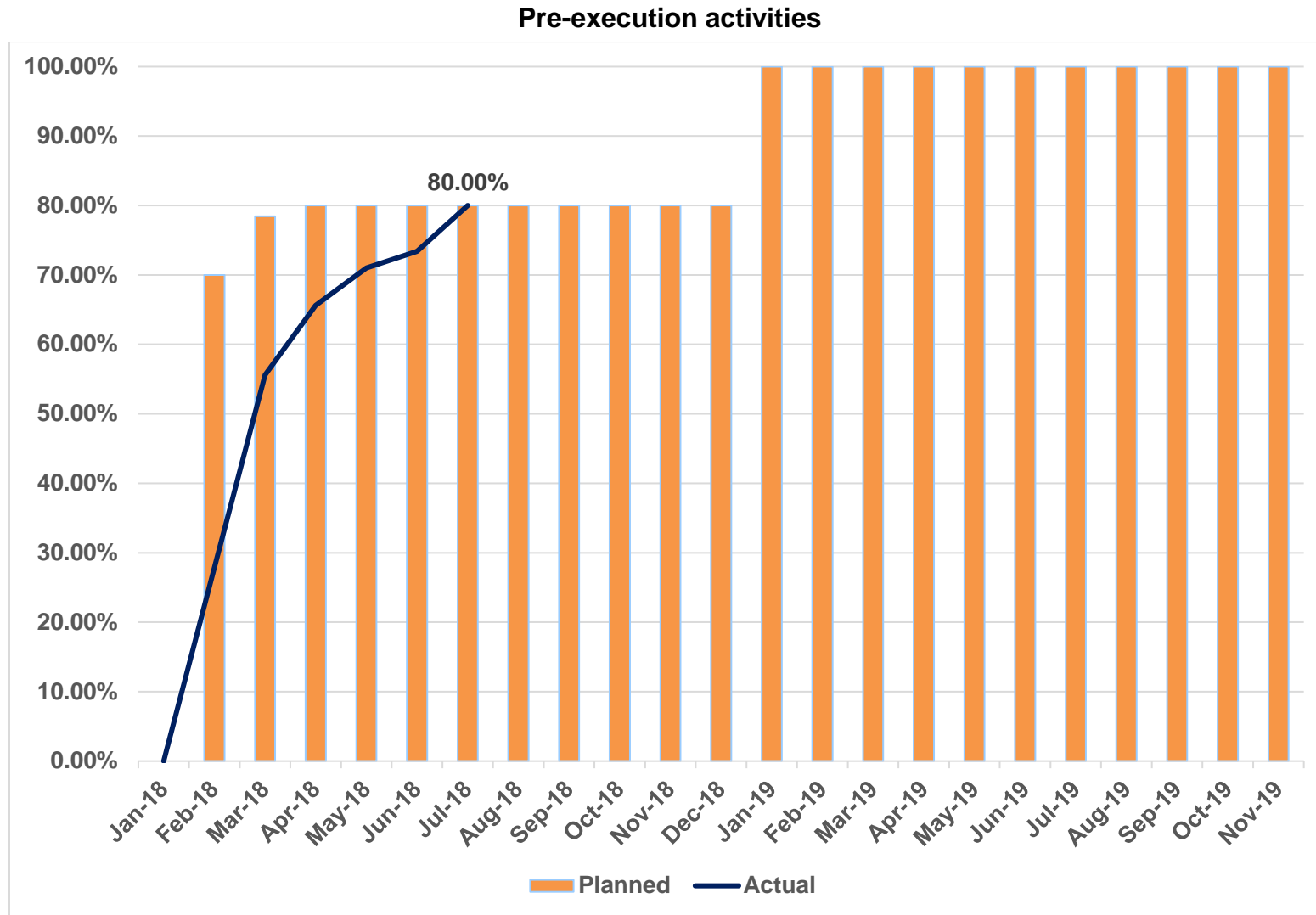
STATUS	:	CONSTRUCTION STAGE
Concessionaire Contract Agreement No.	:	SUBIN-DLDDL80840374672746341531P
Name of the Concessionaire	:	Varanasi STP Project Pvt. Ltd.
Commencement date	:	19 th February 2018
Completion date (as per contract):	:	18 th November 2019

2.1. Physical status

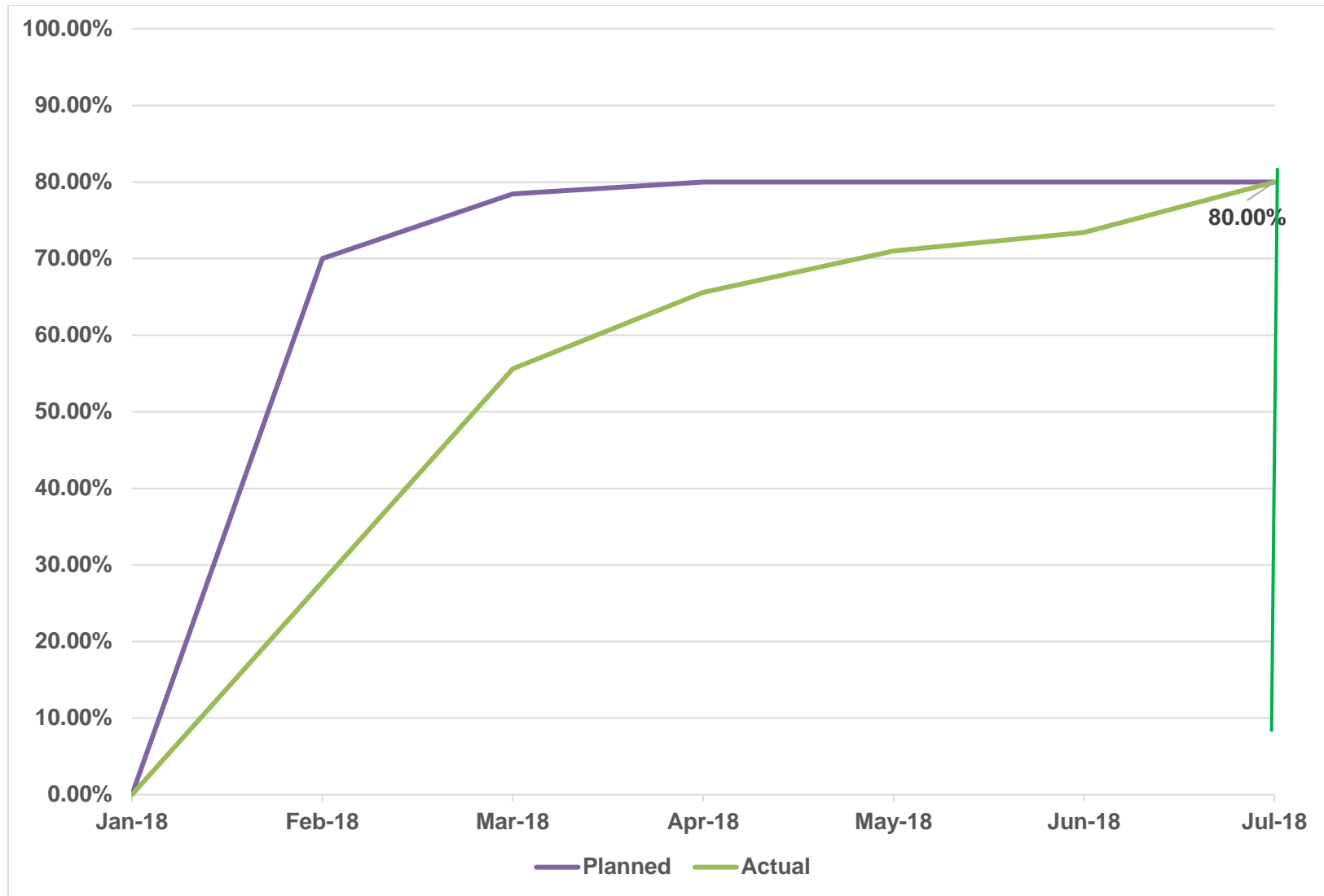
2.1.1. Pre-execution activities

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	11-Nov-17	4-Feb-19	80.00%	73.40%	6.60%	80.00%
Setting up of temporary site office	11-Nov-17	19-Feb-18	100%	75%	25%	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%	70%	30%	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	9-Jan-18	100%	100%		100%
Submission & approval of sub contracts from UPJN	1-Feb-18	30-Jun-18	100%	80%		80%
Permanent power connection	6-Jan-19	4-Feb-19				

2.1.2. Pre-execution activities - Physical progress graph



Pre-execution activities for first & second milestone



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 %
PHASE-1 D&E (BEP)	11-Oct-17	8-Jan-18	100.00%	100.00%		100.00%
Basic engineering package	11-Oct-17	8-Jan-18	100%	100%		100%
Approval (BEP)	9-Jan-18	7-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)	9-Jan-18	15-May-18	100.00%	65.200%	3.10%	68.300%
Plant layout	9-Jan-18	8-Mar-18	100%	80%		80%
Site layout	8-Mar-18	12-May-18	100%	50%	25%	75%
Bund wall	10-Jan-18	12-Jan-18	100%	100%		100%
Inlet chamber	20-Feb-18	5-Apr-18	100%	80%	20%	100%
Automatic / manual screens	20-Feb-18	5-Apr-18	100%	80%	20%	100%
Grit removal chamber	20-Feb-18	5-Apr-18	100%	80%	20%	100%
Parshall flume(I, II) and SBR distribution chamber)	20-Feb-18	5-Apr-18	100%	80%	20%	100%
SBR basins & SBR outlet chamber	20-Feb-18	5-Apr-18	100%	100%		100%
Chlorine contact tank & treated water collection tank	20-Feb-18	5-Apr-18	100%	100%		100%
Overhead portable tank incl. tube well	20-Feb-18	15-May-18	100%			

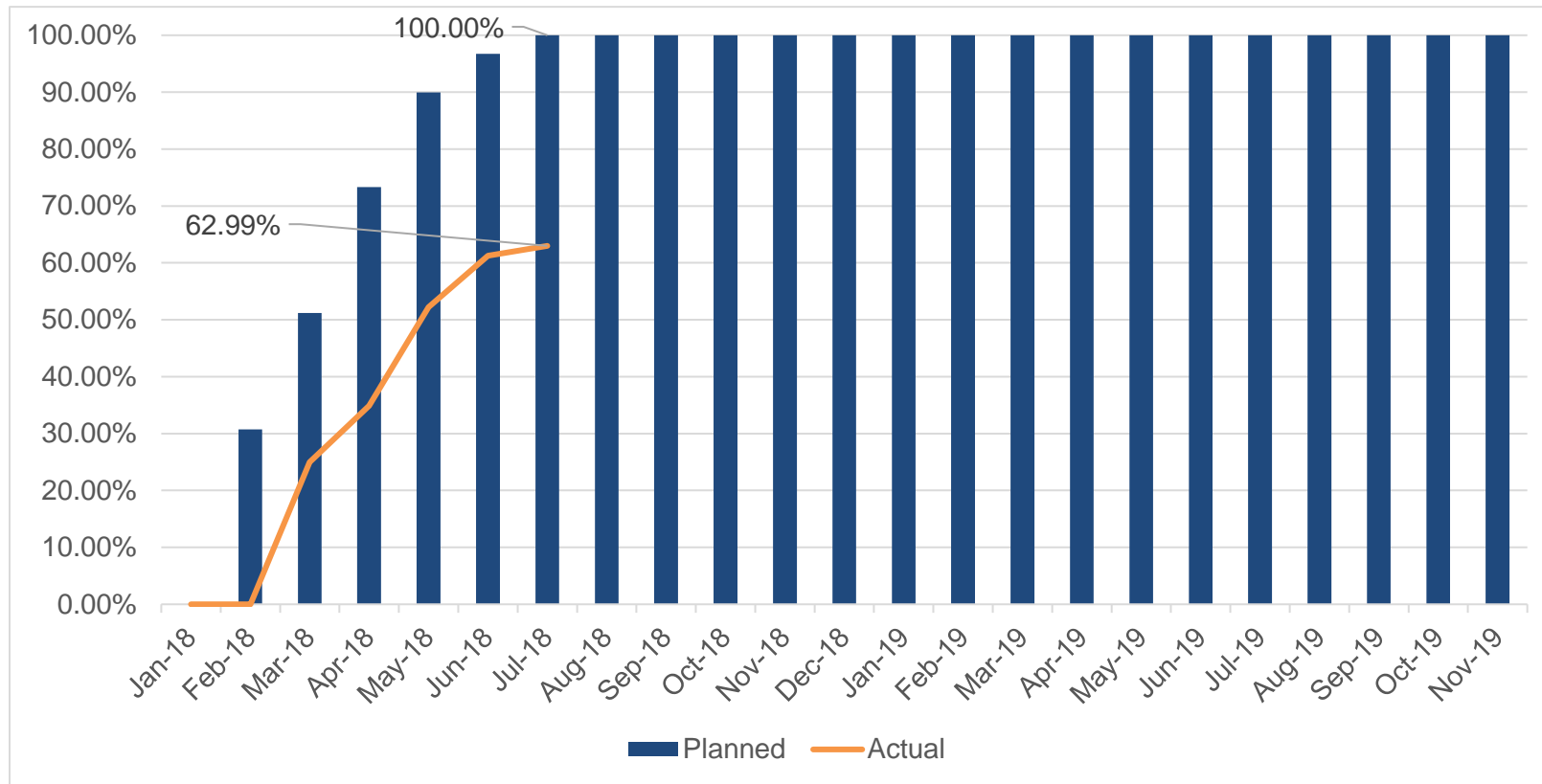
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Foundation drawings of pumps, belt Filter press & air blowers	20-Feb-18	15-May-18	100%			
Miscellaneous drawings	20-Feb-18	15-May-18	100%	10%		10%
Structural drawings submissions & approvals	20-Feb-18	15-May-18	100.00%	50.00%	5.00%	55.00%
Bund wall	20-Feb-18	5-Apr-18	100%	100%		100%
Inlet chamber	2-Mar-18	30-Apr-18	100%	75%	25%	100%
Grit removal chamber	2-Mar-18	30-Apr-18	100%	75%	25%	100%
Parshall flume(I, II) and SBR distribution chamber	2-Mar-18	30-Apr-18	100%	75%	25%	100%
SBR basins & SBR outlet chamber	2-Mar-18	5-Apr-18	100%	100%		100%
Chlorine contact tank & treated water collection tank	2-Mar-18	30-Apr-18	100%	75%	25%	100%
Overhead portable tank incl. tube well	2-Mar-18	15-May-18	100%			
Foundation drawings of pumps, belt filter press & air blowers	2-Mar-18	15-May-18	100%			
Miscellaneous drawings	12-Mar-18	15-May-18	100%			
Mechanical & piping drawings submissions & approvals	11-Apr-18	25-May-18	100.00%	52.80%		52.80%
Inlet chamber	11-Apr-18	25-May-18	100%	80%		80%
Automatic / manual screens	11-Apr-18	25-May-18	100%	80%		80%

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 %
Grit removal chamber	11-Apr-18	25-May-18	100%	80%		80%
Parshall flume(I, II) and SBR distribution chamber	11-Apr-18	25-May-18	100%	80%		80%
SBR basins & SBR outlet chamber	11-Apr-18	25-May-18	100%	80%		80%
Chlorine contact tank & treated water collection tank	11-Apr-18	25-May-18	100%	80%		80%
Overhead portable tank incl. tube well	11-Apr-18	25-May-18	100%			
Foundation drawings of pumps, belt filter press& air blowers	11-Apr-18	25-May-18	100%			
Overall piping drawings	11-Apr-18	25-May-18	100%			
Electrical drawings submissions & approvals	11-Apr-18	14-Jul-18	100.0%	11.3%		11.3%
Electrical load list	11-Apr-18	25-May-18	100%	75%		75%
SLD	11-Apr-18	25-May-18	100%			
Cable layout plan	31-May-18	14-Jul-18	100%			
Cable layout drawing	31-May-18	14-Jul-18	100%			
Cable sizing calculations	31-May-18	14-Jul-18	100%			
Earthing size calculations	31-May-18	14-Jul-18	100%			
Cable schedule	31-May-18	14-Jul-18	100%			
Earthing layout	31-May-18	14-Jul-18	100%			
Plant lighting layout plan	31-May-18	14-Jul-18	100%			

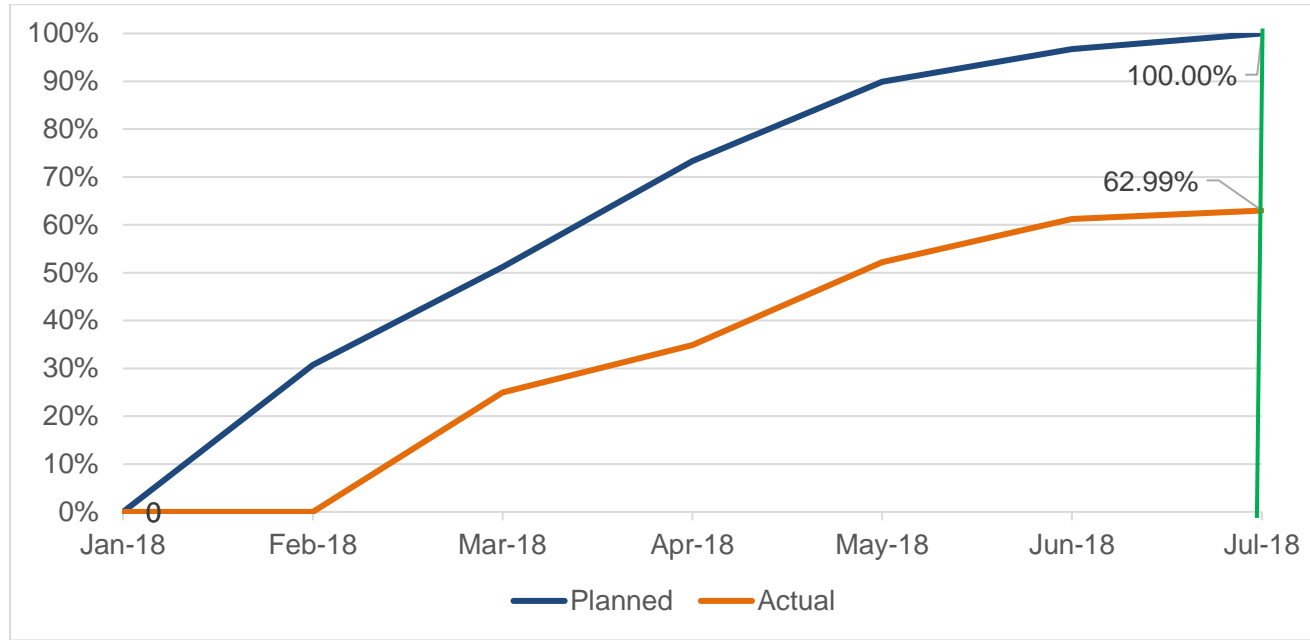
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Miscellaneous documents & drawings	26-May-18	9-Jul-18	100.0%	10.5%		10.5%
Design calculation - electrical components	26-May-18	4-Jul-18	100%	30%		30%
Electrical control philosophy	26-May-18	4-Jul-18	100%			
Miscellaneous drawings	26-May-18	9-Jul-18	100%			
Instrumentation document submissions & approvals	1-Jun-18	20-Jul-18	100.0%			
Instrument index / alarm list	1-Jun-18	15-Jul-18	100%			
Instrument hook - up diagram	1-Jun-18	15-Jul-18	100%			
PLC - I/O list	1-Jun-18	15-Jul-18	100%			
Loop wiring diagram	1-Jun-18	15-Jul-18	100%			
Instrument cable layout plan	1-Jun-18	15-Jul-18	100%			
Instrument cable schedule / JB wiring detail	1-Jun-18	15-Jul-18	100%			
Cause & effect diagram	1-Jun-18	20-Jul-18	100%			
Miscellaneous drawings	6-Jun-18	20-Jul-18	100.0%			
Instrumentation control & philosophy	6-Jun-18	16-Jul-18	100%			
Design SCADA	6-Jun-18	16-Jul-18	100%			
Miscellaneous drawings	10-Jul-18	20-Jul-18	100%			

2.1.4. Design detailed engineering - Physical progress graph

Design detailed engineering - Physical progress



Design detailed engineering for first & second milestone



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	6-Apr-18	7-Mar-19	12.9%	10.3%		10.3%

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 %
Fine screen / coarse screen/belt conveyors	6-Apr-18	6-Dec-18	29.1%			
Procurement (including submission & approval of drgs / documents)	6-Apr-18	22-Oct-18	58%			
Inspection / logistics	23-Oct-18	21-Nov-18				
Receipt of equipment at site	22-Nov-18	6-Dec-18				
Grit removal mechanism	26-May-18	25-Jan-19	16.6%	5.0%		5.0%
Procurement (including submission & approval of drgs / documents)	26-May-18	11-Dec-18	33%	10%		10%
Inspection / logistics	12-Dec-18	10-Jan-19				
Receipt of equipment at site	11-Jan-19	25-Jan-19				
SBR system	26-May-18	25-Jan-19	16.6%	25.0%		25.0%
Procurement (including submission & approval of drgs / documents)	26-May-18	11-Dec-18	33%	50%		50%
Inspection / logistics	12-Dec-18	10-Jan-19				
Receipt of equipment at site	11-Jan-19	25-Jan-19				
SAS / RAS pumps / booster pumps / treated water pumps / drain pumps	26-May-18	25-Jan-19	16.6%			
Procurement (including submission & approval of drgs / documents)	26-May-18	11-Dec-18	33%			
Inspection / logistics	12-Dec-18	10-Jan-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	11-Jan-19	25-Jan-19				
Air blowers	16-May-18	15-Jan-19	19.1%	25.0%		25.0%
Procurement (including submission & approval of drgs / documents)	16-May-18	1-Dec-18	38%	50%		50%
Inspection / logistics	2-Dec-18	31-Dec-18				
Receipt of equipment at site	1-Jan-19	15-Jan-19				
Chlorination system	6-Apr-18	6-Dec-18	29.15%	25.0%		25.0%
Procurement (including submission & approval of drgs / documents)	6-Apr-18	22-Oct-18	58%	50%		50%
Inspection / logistics	23-Oct-18	21-Nov-18				
Receipt of equipment at site	22-Nov-18	6-Dec-18				
Tube well	16-May-18	15-Jan-19	19.1%			
Procurement (including submission & approval of drgs / documents)	16-May-18	1-Dec-18	38%			
Inspection / logistics	2-Dec-18	31-Dec-18				
Receipt of equipment at site	1-Jan-19	15-Jan-19				
Piping & Fittings, Valves, Flanges, other associated connections	26-May-18	10-Jan-19	17.9%			
Procurement (including submission & approval of drgs / documents)	26-May-18	26-Nov-18	36%			
Inspection / logistics	27-Nov-18	26-Dec-18				

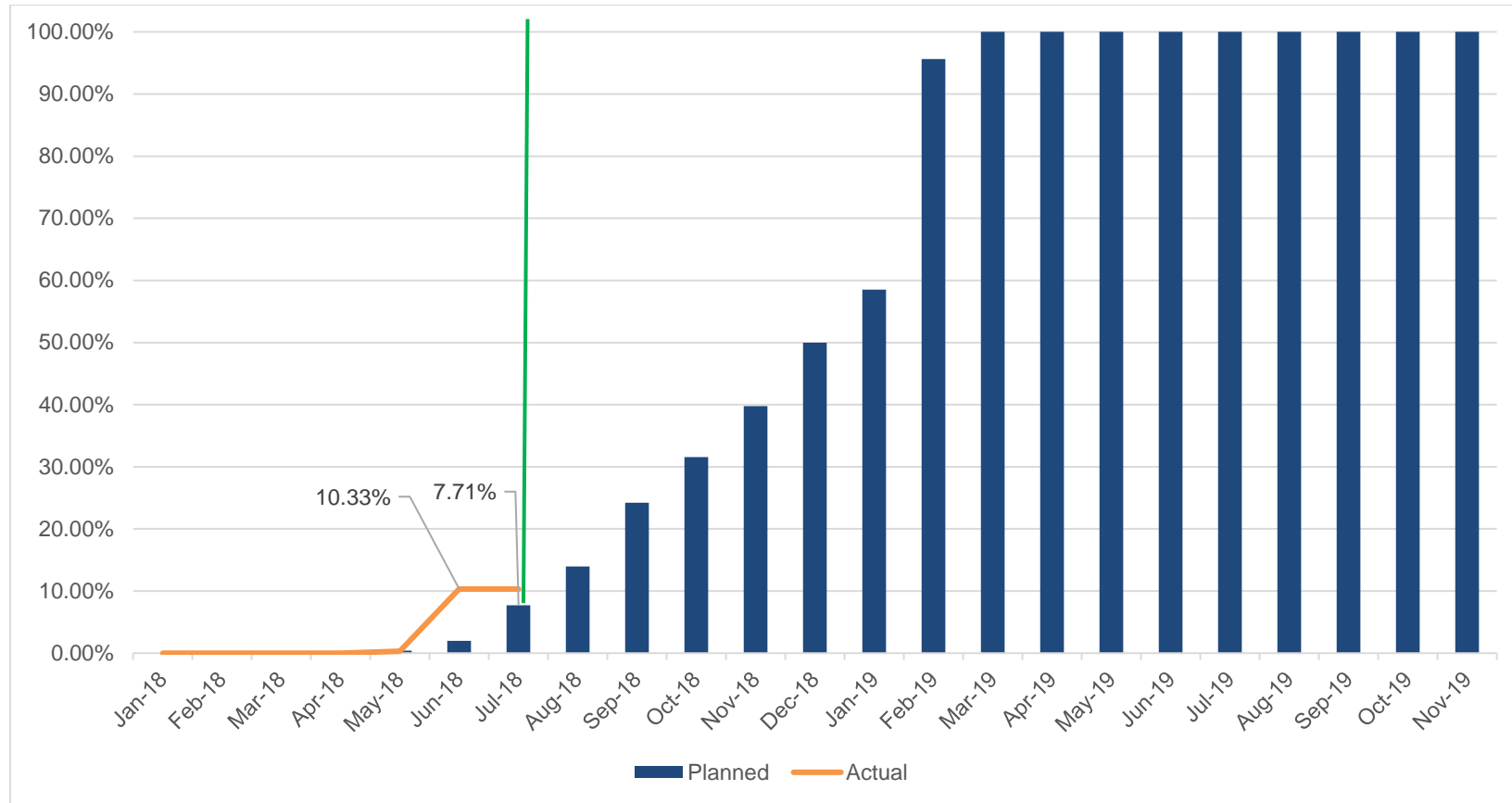
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Receipt of equipment at site	27-Dec-18	10-Jan-19				
Miscellaneous	11-Jan-19	24-Feb-19				
Procurement (including submission & approval of drgs / documents)	11-Jan-19	9-Feb-19				
Inspection / logistics	10-Feb-19	19-Feb-19				
Receipt of equipment at site	20-Feb-19	24-Feb-19				
VCB Panel / APFC Panel / Transformer / DG Set / PMCC / Synchronizing Panel	21-Jul-18	7-Mar-19	1.1%	5.0%		5.0%
Procurement (including submission & approval of drgs / documents)	22-Jan-19	21-Jan-19		10%		10%
Inspection / logistics	21-Feb-19	20-Feb-19				
Receipt of equipment at site	21-Jul-18	7-Mar-19	4%			
Power, control, lighting cables / plant lighting / Cable trays / other electrical accessories	21-Jul-18	7-Mar-19	2.7%			
Procurement (including submission & approval of drgs / documents)	21-Jul-18	21-Jan-19	5%			
Inspection / logistics	22-Jan-19	20-Feb-19				
Receipt of equipment at site	21-Feb-19	7-Mar-19				
Analysers – TDS / Total Nitrogen /	21-Jul-19	7-Mar-19	2.7%			

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 %
TSS / COD-BOD / pH / Total phosphorus						
Procurement (including submission & approval of drgs / documents)	21-Jul-18	21-Jan-19	5%			
Inspection / logistics	22-Jan-19	20-Feb-19				
Receipt of equipment at site	21-Feb-19	7-Mar-19				
Flow meters-Magnetic Flow meters / Differential LT / Weir Type Flowmeter	21-Jul-18	7-Mar-19	2.3%			
Procurement (including submission & approval of drgs / documents)	21-Jul-18	21-Feb-19	5%			
Inspection / logistics	22-Jan-19	20-Feb-19				
Receipt of equipment at site	21-Feb-19	7-Mar-19				
Motorized-Gate Valves & Butterfly valves & Pressure Release Valves	21-Jul-18	7-Mar-19	2.7%			
Procurement (including submission & approval of drgs / documents)	21-Jul-18	21-Jan-19	5%			
Inspection / logistics	22-Jan-19	20-Feb-19				
Receipt of equipment at site	21-Feb-19	7-Mar-19				
Transmitter-Temp / Level / Temperature	21-Jul-18	7-Mar-19	2.7%			

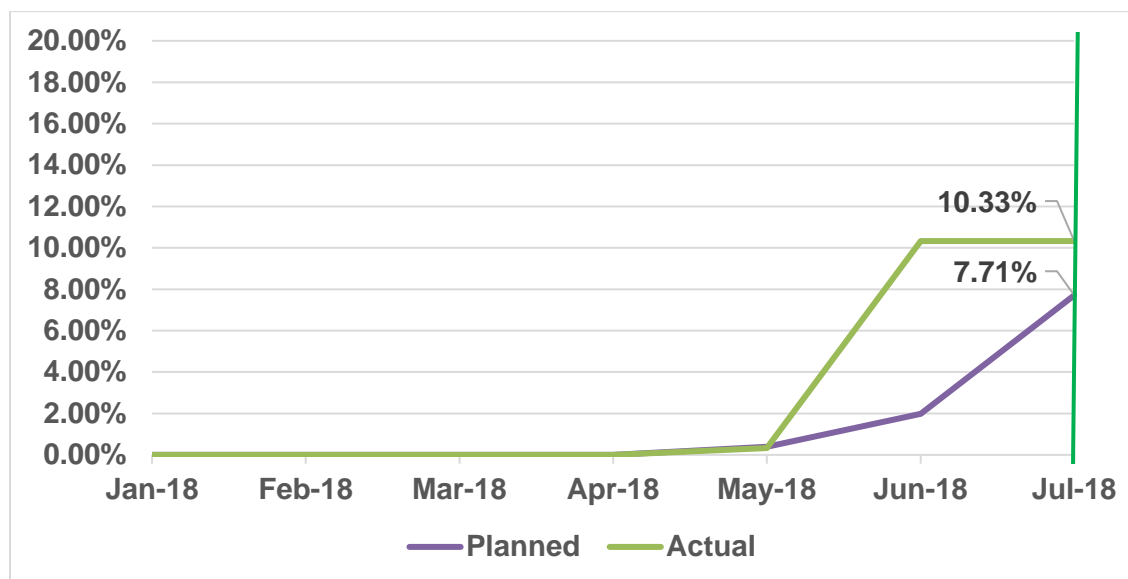
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Procurement (including submission & approval of drgs / documents)	21-Jul-18	21-Jan-19	5%			
Inspection / logistics	22-Jan-19	20-Feb-19				
Receipt of equipment at site	21-Feb-19	7-Mar-19				
Level switches	21-Jul-18	7-Mar-19	2.7%			
Procurement (including submission & approval of drgs / documents)	21-Jul-18	21-Jan-19	5%			
Inspection / logistics	22-Jan-19	20-Feb-19				
Receipt of equipment at site	21-Feb-19	7-Mar-19				
Pressure & temperature gauges	21-Jul-18	7-Mar-19	2.7%			
Procurement (including submission & approval of drgs / documents)	21-Jul-18	21-Jan-19	5%			
Inspection / logistics	22-Jan-19	20-Feb-19				
Receipt of equipment at site	21-Feb-19	7-Mar-19				
Other Accessories- Cables, Cable Trays, SCADA, PLC system / GPRS system	21-Jul-18	10-Jan-19	3.1%			
Procurement (including submission & approval of drgs / documents)	21-Jul-18	27-Dec-18	6%			
Inspection / logistics	28-Dec-18	6-Jan-19				
Receipt of equipment at site	7-Jan-19	10-Jan-19				

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

Procurement - Physical progress



Procurement for first & second milestone



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	06-Apr-18	15-Aug-19	41.70%	11.0%	4.1%	15.1%
Bund wall / earthen embankment	6-Apr-18	10-Oct-18	89.8%	39.4%	2.6%	42.0%
Excavation filling & compaction	6-Apr-18	11-Jul-18	100%	45%	3%	48%
Stone pitching	11-Jun-18	10-Sep-18	55%			

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 %
Side drain works	12-Aug-18	10-Oct-18				
Fencing works	12-Aug-18	10-Oct-18				
Inlet chamber manual & mechanical screen chamber	16-Apr-18	26-Jul-18	100.0%			
Excavation, dressing, filling G & PCC	16-Apr-18	25-Apr-18	100%			
Foundation and raft	26-Apr-18	5-May-18	100%			
Wall & super structure	6-May-18	4-Jul-18	100%			
Hydro testing	5-Jul-18	11-Jul-18	100%			
Misc. works	12-Jul-18	21-Jul-18	100%			
Finishing & landscaping	22-Jul-18	26-Jul-18	100%			
Grit chamber & outlet channel of Grit chamber	21-Apr-18	8-Aug-18	98.1%			
Excavation, dressing, filling G & PCC	21-Apr-18	30-Apr-18	100%			
Foundation and raft	1-May-18	10-May-18	100%			
Wall & super structure	11-May-18	9-Jul-18	100%			
Hydro testing	10-Jul-18	14-Jul-18	100%			
Misc. works	15-Jul-18	24-Jul-18	100%			
Finishing & landscaping	25-Jul-18	8-Aug-18	43%			
Parshall flume (I) & distribution chamber of SBR basin	21-Apr-18	16-Jul-18	100.0%			
Excavation, dressing, filling G & PCC	21-Apr-18	30-Apr-18	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 %
Foundation and raft	1-May-18	15-May-18	100%			
Wall & super structure	16-May-18	14-Jun-18	100%			
Hydro testing	15-Jun-18	21-Jun-18	100%			
Misc. works	22-Jun-18	1-Jul-18	100%			
Finishing & landscaping	2-Jul-18	16-Jul-18	100%			
SBR basins & SBR outlet chamber	6-Apr-18	10-Jan-19	18.4%	7.0%	6.0%	13.0%
Excavation, dressing, filling G & PCC	6-Apr-18	24-Jun-18	100%	74%	6%	80%
Foundation and raft	15-Jul-18	28-Aug-18	36%	3%	18%	21%
Wall & super structure	29-Aug-18	16-Nov-18		2%		2%
Hydro testing	17-Nov-18	1-Dec-18				
Misc. works	2-Dec-18	11-Dec-18				
Finishing & landscaping	12-Dec-18	10-Jan-19				
Chlorination building	1-May-18	3-Aug-18	99.5%		9.5%	9.5%
Excavation, dressing, filling G & PCC	1-May-18	15-May-18	100%		95%	95%
Foundation and raft	16-May-18	9-Jun-18	100%			
Wall & super structure	26-May-18	24-Jun-18	100%			
Misc. works	25-Jun-18	4-Jul-18	100%			
Finishing & landscaping	5-Jul-18	3-Aug-18	90%			
Chlorine contact tank & treated water collection tank, treated water pumps	1-May-18	28-Aug-18	92.8%	0.3%	6.7%	7.0%

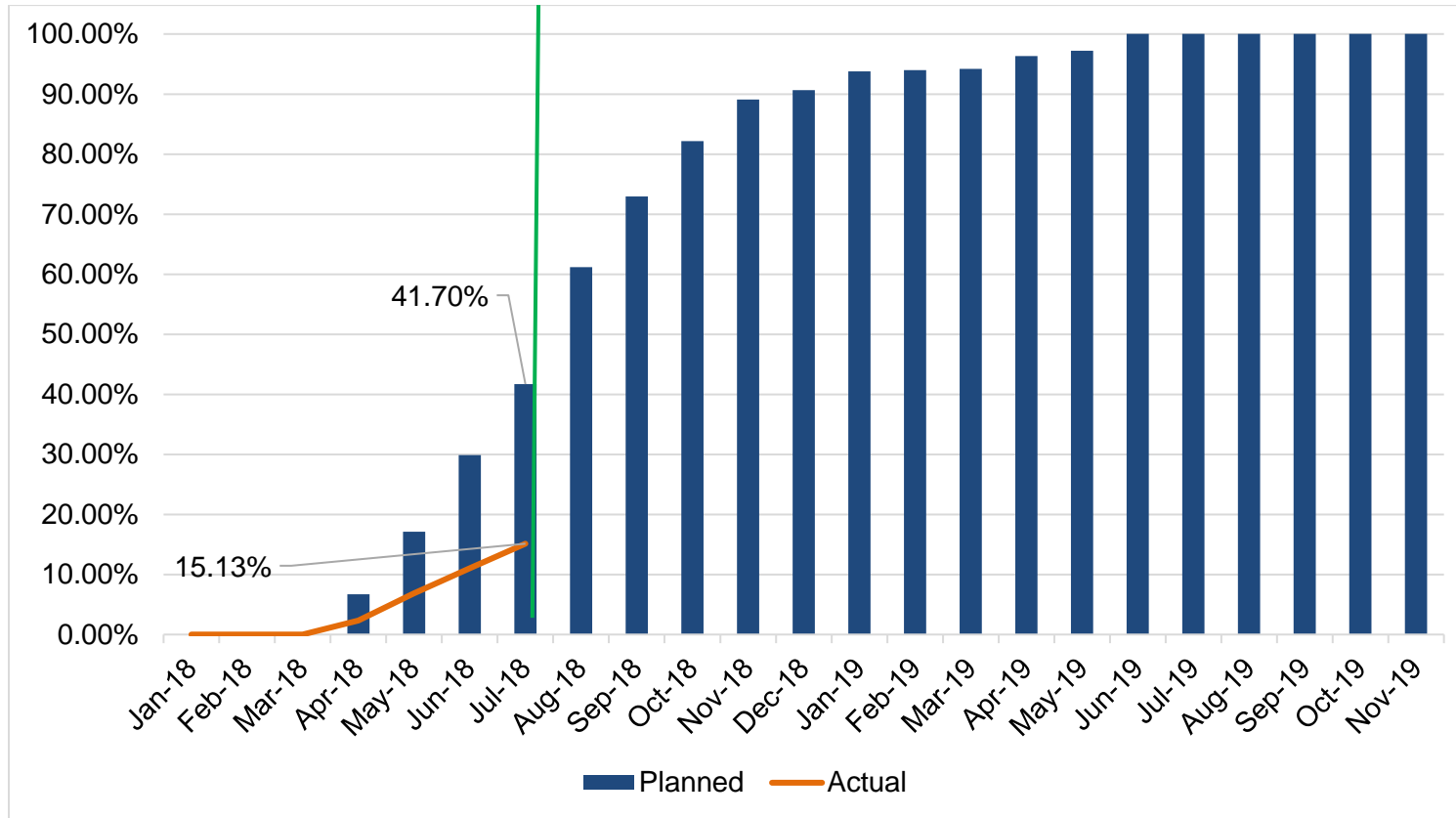
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Excavation, dressing, filling & PCC	1-May-18	15-May-18	100%	3%	67%	70%
Foundation and raft	16-May-18	9-Jun-18	100%			
Wall & super structure	10-Jun-18	9-Jul-18	100%			
Hydro testing	10-Jul-18	19-Jul-18	100%			
Misc. works	20-Jul-18	29-Jul-18	100%			
Finishing & landscaping	30-Jul-18	28-Aug-18	3%			
Overhead treated water tank	5-Jul-18	12-Oct-18	38.2%			
Wall & super structure	5-Jul-18	8-Aug-18	76%			
Hydro testing	9-Aug-18	28-Aug-18				
Misc. works	29-Aug-18	17-Sep-18				
Finishing & landscaping	18-Sep-18	12-Oct-18				
Administrative building & overhead Tank	16-May-18	7-Oct-18	69.6%		3.5%	3.5%
Excavation, dressing, filling G & PCC	16-May-18	25-May-18	100%		23%	23%
Foundation and raft	26-May-18	9-Jun-18	100%			
Wall & super structure	10-Jun-18	8-Aug-18	86%			
Misc. works	9-Aug-18	7-Sep-18				
Finishing & landscaping	8-Sep-18	7-Oct-18				
SBR air blower room	5-Jun-18	22-Sep-18	63.3%	0.1%	1.4%	1.5%
Excavation, dressing, filling G & PCC	5-Jun-18	14-Jun-18	100%	1%	14%	15%
Foundation and raft	10-Jun-18	19-Jun-18	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 %
Wall & super structure	15-Jun-18	23-Aug-18	67%			
Misc. works	24-Aug-18	12-Sep-18				
Finishing	13-Sep-18	22-Sep-18				
HT room	5-Jun-18	8-Aug-18	95.8%	0.1%	1.4%	1.5%
Excavation, dressing, filling G & PCC	5-Jun-18	6-Jun-18	100%	1%	14%	15%
Foundation and raft	7-Jun-18	11-Jun-18	100%			
Wall & super structure	10-Jun-18	9-Jul-18	100%			
Misc. works	10-Jul-18	19-Jul-18	100%			
Finishing	20-Jul-18	8-Aug-18	58%			
MCC room	5-Jun-18	2-Oct-18	56.3%	0.1%	1.4%	1.5%
Excavation, dressing, filling G & PCC	5-Jun-18	14-Jun-18	100%	1%	14%	15%
Foundation and raft	20-Jun-18	14-Jul-18	100%			
Wall & super structure	30-Jun-18	28-Aug-18	53%			
Misc. works	29-Aug-18	17-Sep-18				
Finishing	18-Sep-18	2-Oct-18				
Transformer yard	5-Jun-18	13-Jul-18	100.0%	0.1%	1.4%	1.5%
Excavation, dressing, filling G & PCC	5-Jun-18	8-Jun-18	100%	1%	14%	15%
Foundation and raft	9-Jun-18	18-Jun-18	100%			
Wall & super structure	14-Jun-18	28-Jun-18	100%			
Misc. works	29-Jun-18	3-Jul-18	100%			
Finishing	4-Jul-18	13-Jul-18	100%			

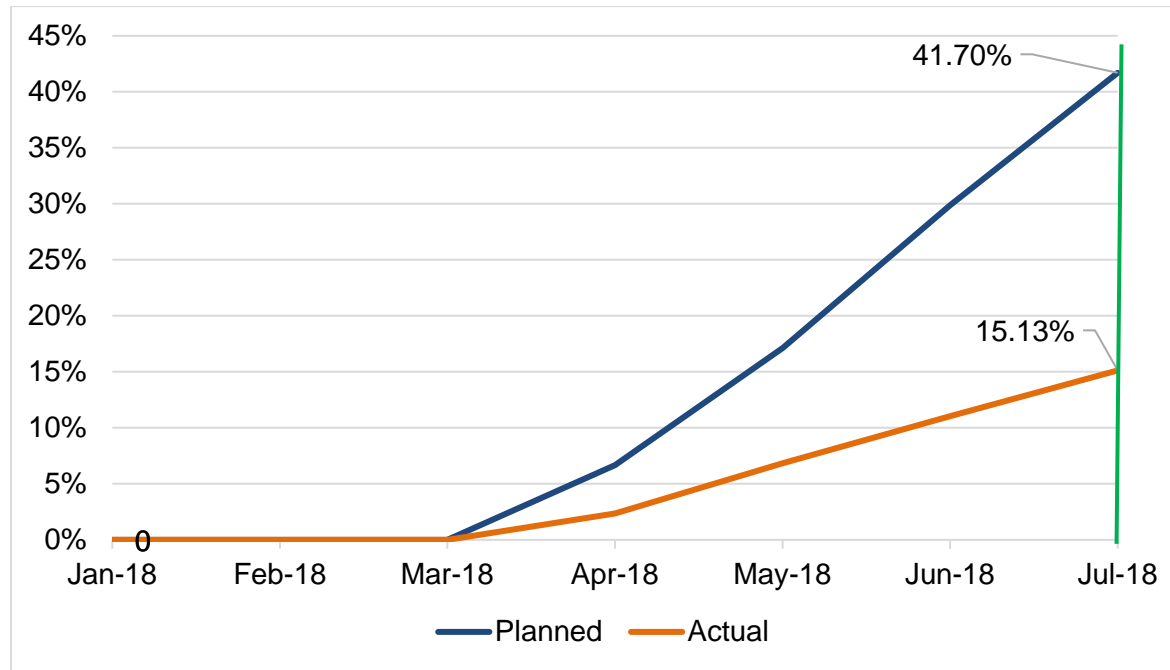
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
DG set area	5-Jun-18	29-Jun-18	100.0%	0.1%	0.014	1.5%
Excavation, dressing, filling G & PCC	5-Jun-18	9-Jun-18	100%	1%	14%	15%
Foundation and raft	10-Jun-18	19-Jun-18	100%			
Misc. works	20-Jun-18	24-Jun-18	100%			
Finishing	25-Jun-18	29-Jun-18	100%			

2.1.8. New construction units - Physical progress graph

Construction activities – Physical progress



Construction activities - first & second milestone



2.1.9. Associated works

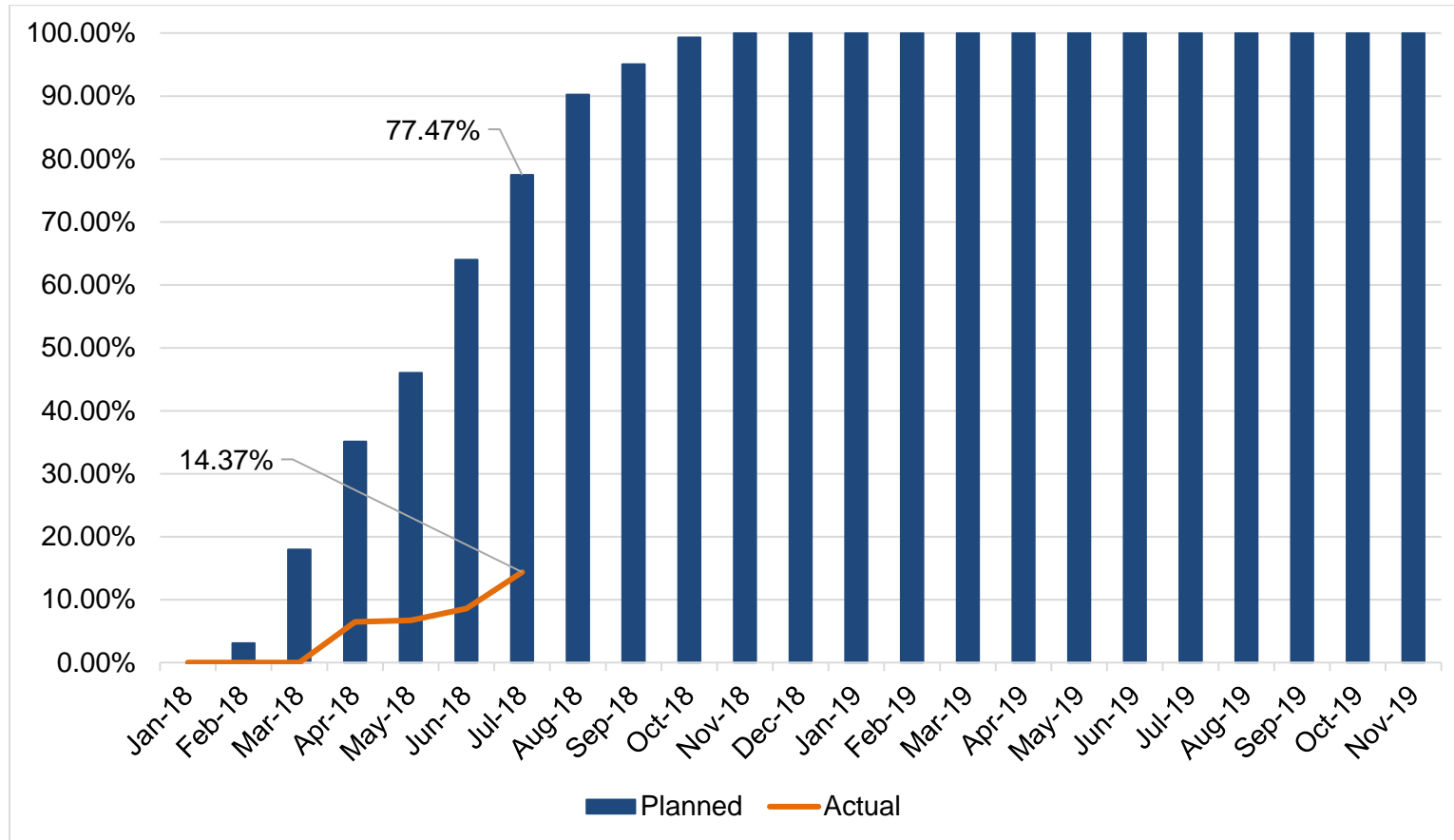
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Associated			77.47%	8.60%	5.77%	14.37%
MPS Pumping Station	10-Apr-18	23-Aug-18	85.26%	7.63%	0.62%	8.25%

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 Drawings / Documents	10-Apr-18	15-May-18	100%	25%	10%	35%
Rehabilitation and construction of Weir across Assi Nalla	20-Apr-18	18-Jun-18	100%			
Desilting of the MPS	20-Apr-18	19-May-18	100%	86%	4%	90%
Procurement & Installation	20-Apr-18	17-Aug-18	86%			
Repair of Equipment	20-Apr-18	18-Jun-18	100%			
Raising of height of Nalla tapping structure upto HFL	19-Jun-18	13-Jul-18	100%			
Construction of Control Room	19-Jun-18	8-Aug-18	84%			
Other Works	8-Aug-18	23-Aug-18				
Rising Main	10-Apr-18	2-Aug-18	98.97%	0.30%		0.30%
Submission & Approval of Drawings / Documents	10-Apr-18	10-May-18	100%	10%		10%
Desilting & CCTV inspection	20-Apr-18	3-Jun-18	100%			
Strengthening and Pipe protection of Rising main	20-Apr-18	18-Jun-18	100%			
Shifting & laying of Pipe near Samne Ghat bridge	20-Apr-18	3-Jun-18	100%			
Other repairing Work	4-Jun-18	3-Jul-18	100%			
Extension of existing Rising main to	4-Jun-18	3-Jul-18	100%			

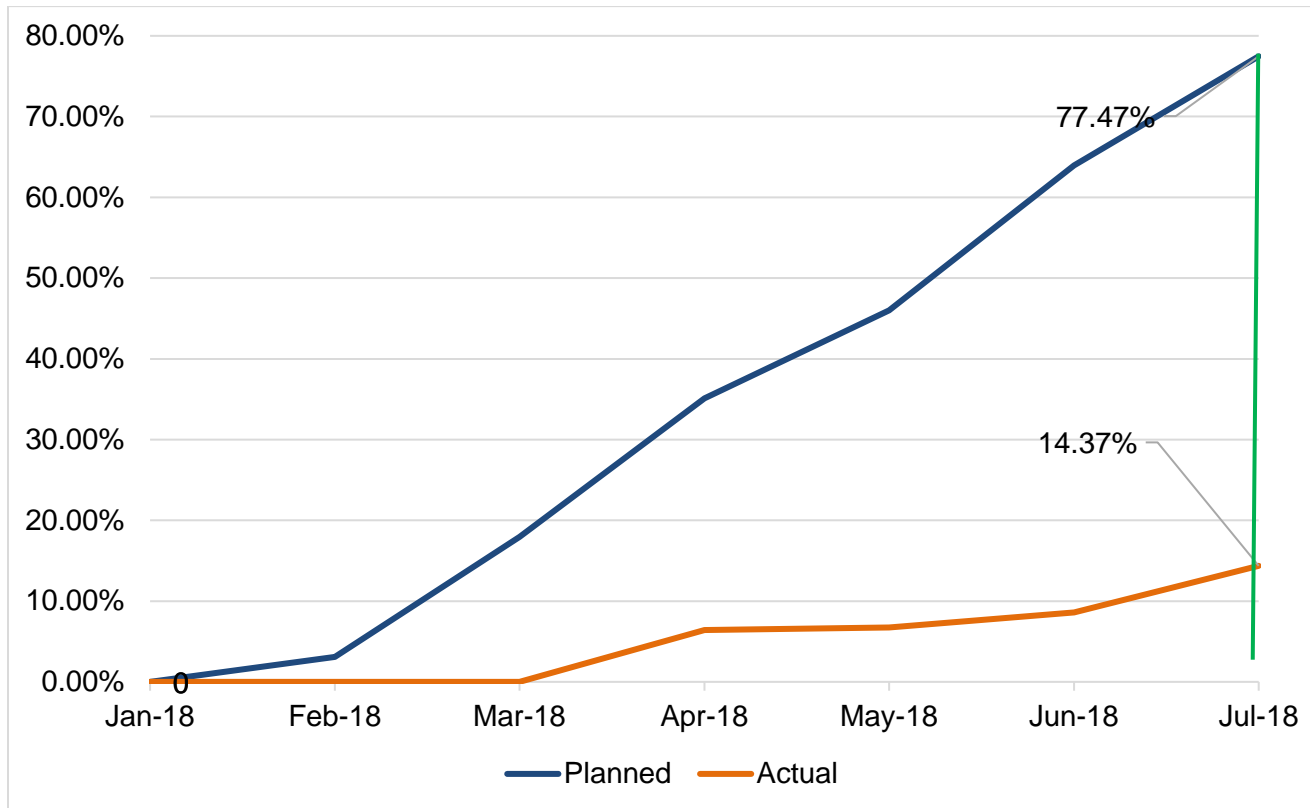
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
the Inlet point at the STP site						
Hydro testing of the PSC	4-Jul-18	2-Aug-18	93%			
Treated Effluent disposal line	20-Feb-18	18-Nov-18	73.46%	9.94%	7.15%	17.09%
Survey	20-Feb-18	24-Feb-18	100%	100%		100%
Procurement	25-Feb-18	25-Apr-18	100%	14%	4%	18%
Inspection	26-Apr-18	30-Apr-18	100%	14%	5%	19%
Drawing submission	25-Feb-18	5-Apr-18	100%	80%	20%	100%
Drawing approval	6-Apr-18	5-May-18	100%	80%		80%
Excavation	6-May-18	2-Sep-18	72%	4%	11%	15%
PCC	16-May-18	12-Sep-18	64%			
Pipe laying	23-May-18	19-Oct-18	46%	2%	11%	13%
Hydro testing	20-Oct-18	18-Nov-18				
Back filling	23-May-18	6-Jul-18	100%		12%	12%

2.1.10. Associated works - Physical progress graph

Associated infrastructure – Physical progress



Associated infrastructure - first & second milestone



2.1.11. **Overall progress** : 14.21%

2.2. Financial status

- Contract amount : Rs. 153.15 crores (Rs. 102 crores for construction + Rs. 51.15 crores for O&M)
- Expenditure
 - Mob. Adv : Rs. 10.20 crores
 - Work done - First milestone : Rs. 0.00 crores
 - Total : Rs. 10.20 crores**

2.3. Important issues

1. As per the concession agreement the first milestone (At least 25% of both physical and financial progress) should have been achieved on or before 18th July 2018. However concessionaire has achieved only 13.95%. A meeting is convened on 19th July 2018 at the project site along with UPJN officials to find out the recovery plan of concessionaire.
2. Recovery plan submitted by the concessionaire is not meeting the approved construction plan schedules hence another meeting is proposed on 07th August 2018 to discuss and finalise the same.
3. The additional resources required to meet the backlog on or before 15th August 2018 (As confirmed by the concessionaire during the meeting on 19th July 2018) is still awaited.
4. Extent of progress of construction activities performed by the Concessionaire for the Facilities which are not started at site but should have been started as per construction plan
5. Extent of progress of the rehabilitation and/or upgradation activities performed by the Concessionaire for the Associated Infrastructure;
6. Comparison of actual progress against the planned progress of construction works, reasons for delay, if any and steps taken by the Concessionaire to mitigate the delay for all the activities
7. Details of any accident or hazardous incident at the Site and the steps taken by the Concessionaire to mitigate the consequences of such accident or hazardous incident; and

8. Status of rectification of defects and/or deficiencies discovered by the Project Engineer or the Jal Nigam;
9. Monthly environmental Monitoring Reports to the Jal Nigam providing overview of compliance with EHS Plan.
10. Concessionaire yet to submit the subcontractors expertise, skills, manpower availability even after repeated request and hence the approval is still pending
11. Quality control plan, failures and success statistics for all the components along with mitigation measures
12. Due to lack of planning the site activities are being hampered even for small spell of rain fall

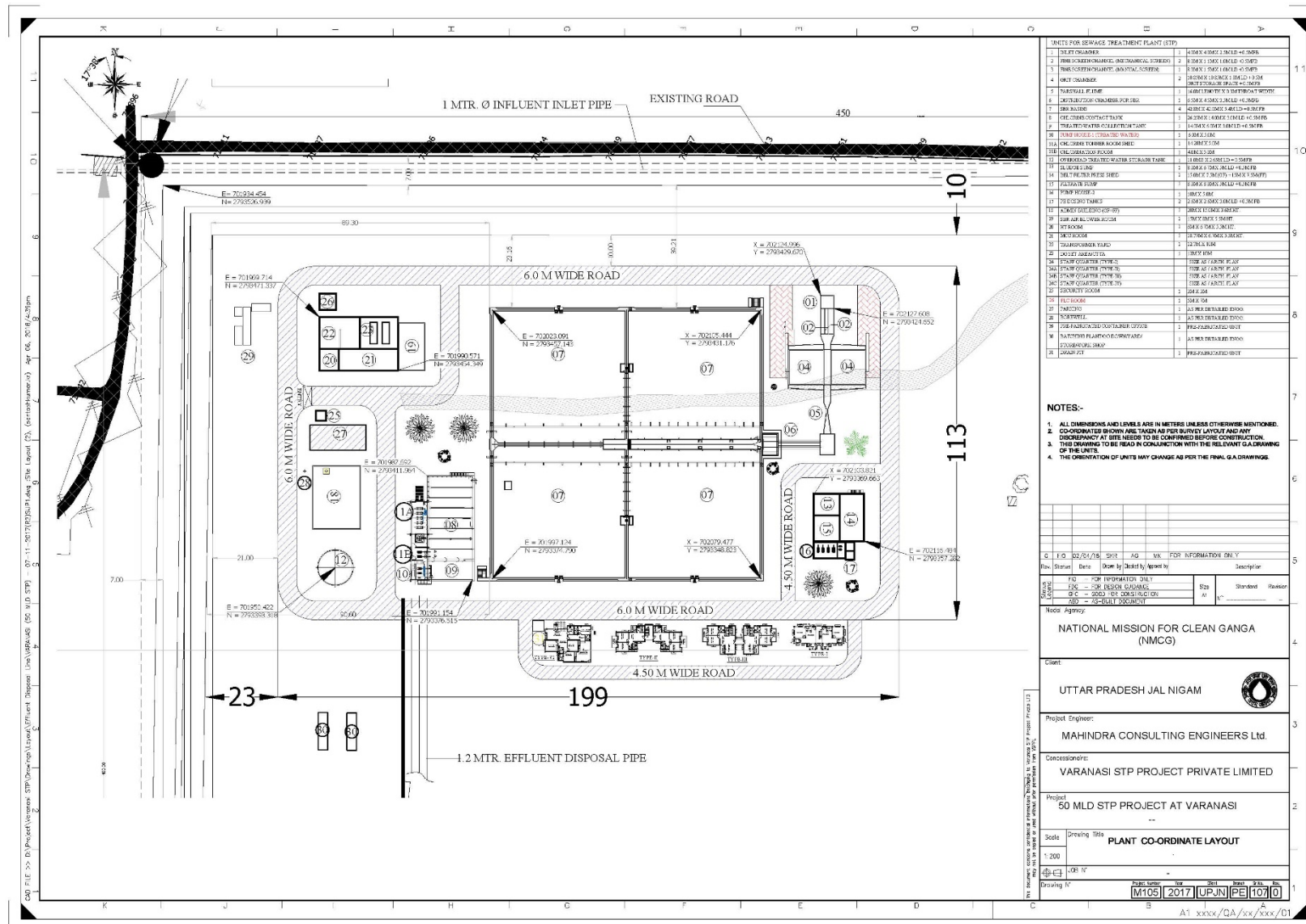


Figure 2: Development of sewage treatment plant and associated infrastructure under Hybrid Annuity based PPP mode at Varanasi

3.0. PROJECT ENGINEER ACTIVITIES

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
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			
4.1 (iv)	Review of the submissions of the Concessionaire such as <ol style="list-style-type: none"> Work schedule Detailed survey report Basic engineering Detailed design and drawings for 	Yes	<ul style="list-style-type: none"> Delay analysis & recovery plan ESHS target & achievement Puddle pipe schedule 	<ul style="list-style-type: none"> Delay analysis Review the construction milestone Remaining GA and structural

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	i) Civil works <ol style="list-style-type: none"> 1. Geo-tech reports 2. Lab testing reports 3. Third Party Inspection report ii) Mechanical and Electrical Works iii) Automation and Instrumentation works iv) Any other allied works e. QA/QC plans f. Safety plan		<ul style="list-style-type: none"> • Reinforcement drawing of security house. • Approval of SBR Basin • GA drawing for raw water receiving chamber • Extension of first milestone • Submersible pump E & M • Effluent disposal line plan, L – section and thrust block details on vertical and horizontal bends. 	<ul style="list-style-type: none"> • drawings of civil structures • QAP and data sheet for remaining mechanical, electrical and instrumentation items. • PSC pipe inspection • MS pipe inspection

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
			<ul style="list-style-type: none"> • Revised construction plan • Reinforcement drawing of security house • Turbo Max Turbo blower • Volute Press for sludge dewatering • Sub-contract for E & I • PSC pipe inspection • MS pipe inspection 	
4.1 (v)	Review of the drawings and documents	Yes	As mentioned above	As mentioned above
4.1 (vi)	Identification of milestones & verifications		Review of financial milestones	Regular review and monitoring

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
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 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	NA	NA	NA

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	detailed in clauses 16.1 to 16.5 of the Concession Agreement			
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 obligation or liability on the Employer / NMCG beyond the provisions of the Concession Agreement	NA	NA	NA
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		NA	NA

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	requirements as detailed in clause 19.3 of the Concession Agreement			
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 Good Industry Practice	Yes	Yes	Yes
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

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
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
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

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
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 closely with the Uttar Pradesh Jal Nigam and NMCG to monitor compliance with the KPIs.	Yes	Yes	Yes
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

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
5.2	The Project Engineer shall review and assist the (Name of the Employer) in 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.	Yes	Yes	Yes
5.3	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: 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;	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	h) Hydraulic flow diagram; 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 other contract for construction,	NA	NA	NA

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	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
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

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
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	Submitted by the concessionaire only on 4 th of August. However, the report was prepared by Project Engineer	Yes
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	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	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 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	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	tests are conducted in a fair and efficient manner, and shall monitor and review 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 Paragraph 5 shall apply to such tests	NA	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
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 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	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	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	
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	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
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 works, as per applicable schedule of rates, for the reduction of Scope of work if any as per Article 20.	NA	NA	
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	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
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	NA	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	
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	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	provide its recommendations on the same, including suggestions for change, if any. The O&M Manual shall cover: <ul style="list-style-type: none"> a) O&M Procedures; b) O&M Plan; c) Provision of Spare Parts; d) Sampling and Testing Methodologies; 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	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	Pradesh Jal Nigam and the Concessionaire within 10 (ten) days of receipt of the Maintenance Program			
7.4	The Project Engineer shall review the reports generated from online monitoring systems to assess adherence to KPIs and submit the monthly KPI Adherence Report to Uttar Pradesh Jal Nigam	NA	NA	
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	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	time during the O&M 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 the lapses, defects or deficiencies observed by it in O&M of the Project. The Project Engineer shall send a copy of its	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	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 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.	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
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 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.	NA	NA	
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	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	gap in skill sets of the manpower deployed by the Concessionaire			
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 mediate and assist the Parties in arriving at an amicable settlement	NA	NA	
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	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	and assessment on the events related to Emergency, Change in Law, Force Majure, Minor or total Casualties, Variation and unforeseen Site conditions etc			
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 present during the inspection.	Yes	Yes	Yes
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	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	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 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	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	Employer and the Concessionaire on non-compliance of the provisions of the Concession Agreement and other schedules by the Concessionaire, non-adherence to the 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	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: June 2018 to July 2018		
		Undertaken till previous month - June 2018	Undertaken during this month - July 2018	Expected for next month August 2018
	work from the offices of Uttar Pradesh Jal Nigam /NMCG and the Project Engineer shall, on a best endeavour 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, and occasional meetings.	Yes	Yes	Yes
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: July 2018	Period: August 2018
			Description	Expected for next month
1	Site inspection	Project Manager, UPJN	17/07/2018	Project review meeting and site inspection
2	Site inspection and progress review and milestone review meeting	GM, Project Manager, UPJN & Senior Engineers (MACE)	19/07/2018	
3	Site inspection & Progress review meeting	Chairman, Managing Director, General Manager & Project Manager of UPJN & Project Engineer (MACE)	22/07/2018	

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 2018 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	07/05/2018	
2	Project Manager	G. Sathiskumar	19/02/2018	21/05/2018
3	Civil Engineer	M. Sivapriyan	15/02/2018	
4	Civil Engineer	T. Sathyamoorthy	20/04/2018	07/05/2018
5	Senior Engineer (Electrical & Instrumentation)	R. Satish	20/04/2018	28/05/2018
6	Civil Engineer	P. Ramasubramanian	20/04/2018	
7	Civil Engineer	Imran Khadhar Mohideen	20/04/2018	
8	Structural Engineer	S. Varun Athithiya	20/04/2018	
9	Liaison Officer	O. B. Shivakumar	20/04/2018	08/07/2018
10	QA QC Expert	L. Selva Kumar	29/05/2018	

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	11.67%	2.54%	14.21%	Physical progress observed to be very slow and needs to be accelerated by Concessionaire.

ANNEX - 2

FINANCIAL STATEMENTS

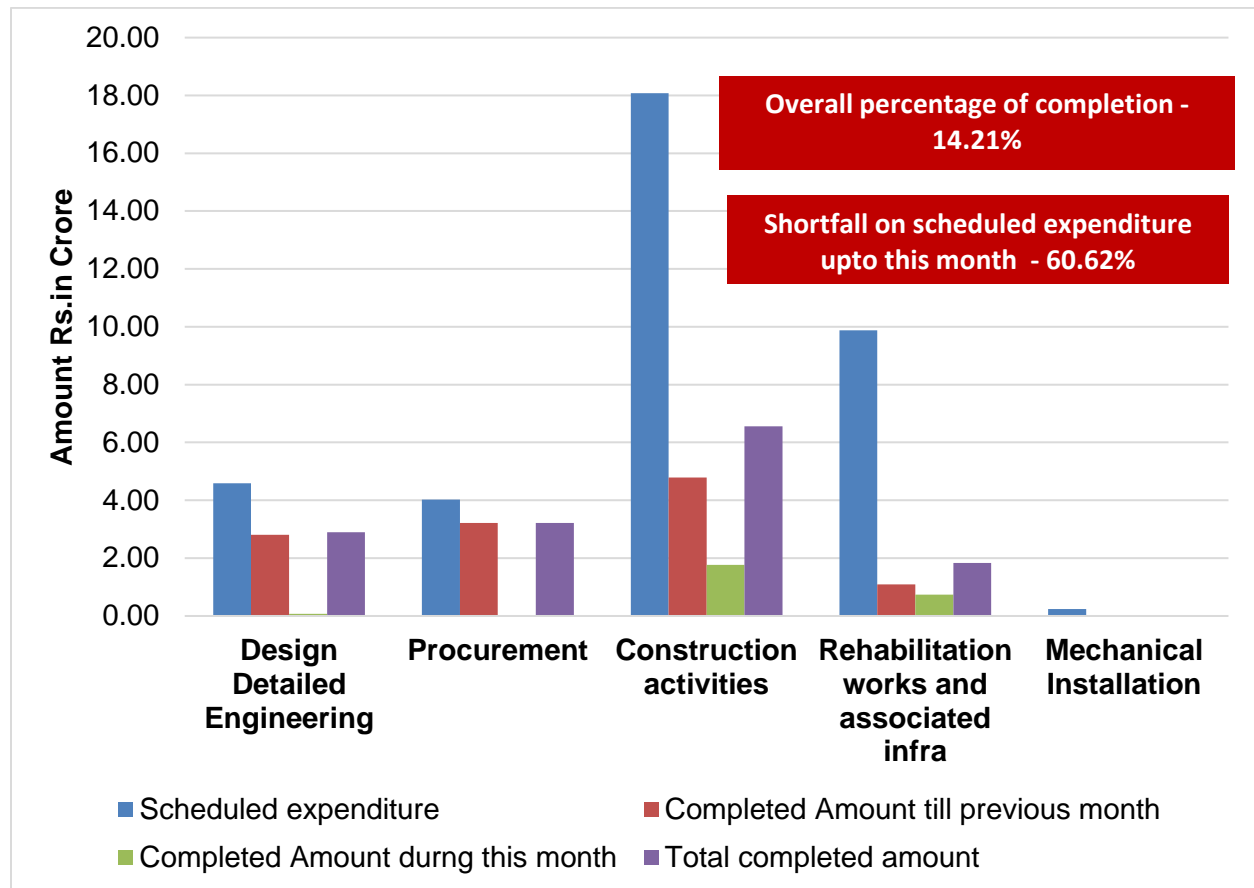
ANNEX 2 - FINANCIAL STATEMENTS

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)	7,650,000	7,650,000	-	7,650,000
Phase - II D&E (Civil, Mechanical, Electrical, Inst. drawings)	5,100,000	3,325,200	158,100	3,483,300
Structural drawings submissions & approvals	12,750,000	6,375,000	637,500	7,012,500
Mechanical & piping drawings submissions & approvals	10,200,000	5,385,600	-	5,385,600
Electrical drawings submissions & approvals	1,530,000	172,125	-	172,125
Miscellaneous documents & drawings	1,020,000	107,100	-	107,100
Instrumentation document submissions & approvals	1,530,000	-	-	-
Miscellaneous drawings	1,020,000	-	-	-
Associated				
MPS pumping station	8,696,229	778,260	63,240	841,500
Rising Main	15,141,724	45,900	-	45,900
Treated Effluent disposal line	74,932,407	10,140,284	7,290,450	17,430,734
Equipment procurement, logistics and receipt of equipment at Site				
Fine Screen / Coarse Screen / Belt Conveyors	2,972,864	-	-	-
Grit Removal Mechanism	1,691,457	510,000	-	510,000
SBR System	11,840,201	17,850,000	-	17,850,000
SAS / RAS pumps/booster pumps / treated water pumps / drain pumps	5,074,372	-	-	-

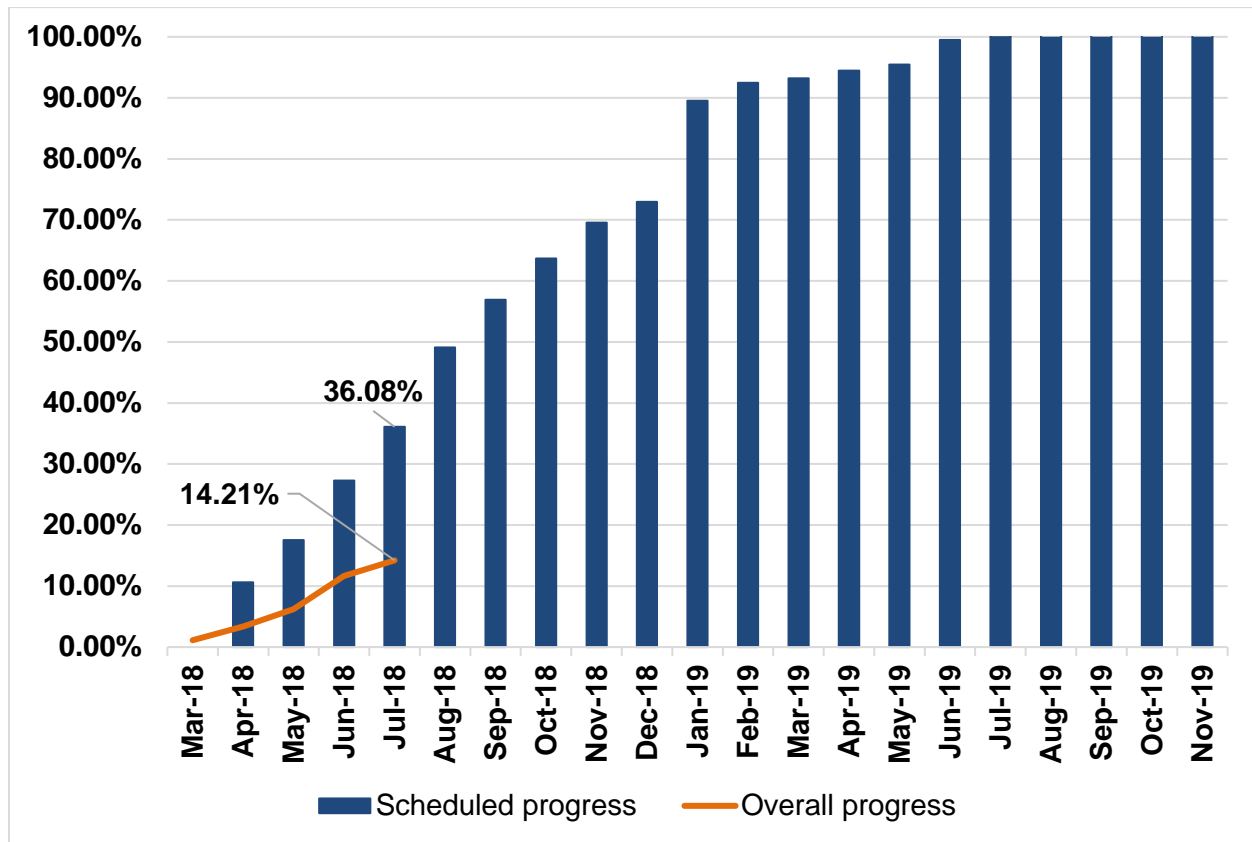
Item of work	Scheduled expenditure in Rs	Completed amount till previous month in Rs	Completed amount during this month in Rs	Total completed amount in Rs
Air blowers	7,790,955	10,200,000	-	10,200,000
Chlorination system	-	2,550,000	-	2,550,000
Tube well	2,142,513	-	-	-
Piping & fittings, valves, flanges, other associated connections	7,317,391	-	-	-
VCB Panel / APFC panel / transformer / DG Set / PMCC / synchronizing panel	222,707	1,020,000	-	1,020,000
Analysers – TDS / Total Nitrogen / TSS / COD-BOD / pH / Total phosphorus	138,587	-	-	-
Flow meters-Magnetic Flow meters/Differential LT/Weir Type Flowmeter/	177,907	-	-	-
Motorised-Gate Valves & Butterfly valves & Pressure Release Valves	138,587	-	-	-
Transmitter-Temp./Level/ Temperature	194,022	-	-	-
Level Switches	110,870	-	-	-
Pressure & Temperature Gauges	110,870	-	-	-
Other Accessories- Cables, Cable Trays, SCADA, PLC system/GPRS system	320,755	-	-	-
Civil Executions				
Bund Wall / Earthen Embankment	73,268,132	32,130,000	2,142,000	34,272,000
Inlet Chamber Manual & Mechanical Screen Chamber	10,200,000	-	-	-

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
Grit Chamber & Outlet Channel of Grit Chamber	7,504,286	-	-	-
Parshall Flume (I) & Distribution Chamber of SBR Basin	7,650,000	-	-	-
SBR Basins & SBR outlet Chamber	41,263,636	15,682,500	13,479,300	29,161,800
Chlorination Building	10,147,241	-	969,000	969,000
Chlorine Contact Tank & Treated Water Collection Tank, Treated water Pumps	9,461,379	30,600	683,400	714,000
Overhead Treated Water Tank	1,950,000	-	-	-
Belt Filter Press/ sludge sump / Filtrate sump	2,901,724			
Pump house 2	805,263			
Administrative Building & Overhead Tank	5,322,585	-	263,925	263,925
SBR air blower room	2,584,000	4,080	57,120	61,200
HT room	2,931,158	3,060	42,840	45,900
MCC room	1,721,898	3,060	42,840	45,900
Transformer Yard	1,530,000	1,530	21,420	22,950
DG set area	1,530,000	1,530	21,420	22,950
Mechanical Installation	2,360,571	-	-	-
Total	368,046,291	119,065,829	25,872,555	144,938,384
	Percentage completion of overall project			14.21%

Financial status for the month of July 2018



Progress status scheduled vs Actual - July 2018



ANNEX - 3

QUALITY ASSURANCE / QUALITY CONTROL

ANNEX 3 – QUALITY ASSURANCE / QUALITY CONTROL

1. Bund wall

S. No.	Description	IS Code	Up to Previous Month				During this month (July 2018)				Remarks
			As per IS No of test	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test	No of Test conducted	No of Acceptance	No of Rejects	
1	Soil compaction test at source (Barrow pit) - MDD, OMC & Soil characteristics	2720 Part VIII	5	5	5	0	5	**5			** 5 Samples collected from all bund-wall (north / south / east / west) excluding previous month (total 10 samples) before compaction and from the site stock pile for the soil classification and MDD / OMC-Test in progress / awaiting for the report

S. No.	Description	IS Code	Up to Previous Month				During this month (July 2018)				Remarks
			As per IS No of test	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test	No of Test conducted	No of Acceptance	No of Rejects	
2	Soil compaction test at Site - OMC & Degree of compaction	2720 Part II	143	143	107	36	110	110	107	*3	*Rectification suggested for the rejects and re-test is recommended

2. Sequential Batch Reactor (SBR)

S. No.	Description	IS Code	Up to Previous Month				During this month (July 2018)				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	10	20	10	*10	8	15	11	04*	4* Rejected material contains Improper grading, oversized, more flaky, and removed from the batching plant, Witnessed by UPJN / MACE

S. No.	Description	IS Code	Up to Previous Month				During this month (July 2018)				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	
2	Concrete Ingredients Coarse Aggregate 10mm down	IS 383-2001	10	12	8	*4	6	8	7	1*	* 1 Rejected material contains Improper grading, over sized, more flaky, and removed from the batching plant, Witnessed by UPJN / MACE
3	Concrete Ingredients Fine aggregate 4.75 mm down	IS 383-2001	4	6	4	*2	6	10	9	1*	Acceptable range, FM =2.65, *1 load Rejection due to more fines, truck sent back by the concessionaire themselves
4	Combined Grading as per approved IIT Mix design	IS 383-2001	**whenever required	3	3	0	**whenever required	1	1	1*	As per Approved mix 20mm with 60%, 10mm with 40%, due to 20 mm aggregate failed material removed from the yard and replaced another resource - status accepted with UPJN 19.07.18
5	Harden concrete	IS 516 & IS 456	every 50 M3 or part thereof	30	30	0	every 50 M3 or part thereof	26	2	*6	18 cubes sent to IIT Varanasi for the 7 & 28 days test, because site

S. No.	Description	IS Code	Up to Previous Month				During this month (July 2018)				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	
	Compressive strength										CTM disturbed, Recalibration to be done, hence awaiting cube report from IIT. and 6 cubes(28days) were failed, sent note to concessionaire for NDT those structures, waiting for their further reply.
6	OPC Cement 43 Grade	IS 8112-2013	Every consignment or whenever required	1	1	0	Every consignment or whenever required				ULTRA TECH SOURCE /MTC Available at site except last week consignment, in progress
7	Reinforcement TMT Bars	IS 456-2001, IS 1786-1987 & IS 800-2007	50 Metric tonne/one sample for each diameter	18	18	0	50 Metric tonne/one sample for each diameter				TATA STEEL/MTC Available at site for all consignment as of date
8	Admixers	IS 9103-1979	Every new consignment once reach site	1	1	0	Every new consignment once reach site				FOSROC CONPLAST/MTC Available at site for all consignment as of date
9	Water	IS 456 - 2001	6 months once	1	1	0	6 months once	1	1	0	IIT report available, found acceptable/

S. No.	Description	IS Code	Up to Previous Month				During this month (July 2018)				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	
											sampled at site premises
10	Concrete Mix design	IS 10262-2000	**whenever changed source of ingredients	Grade of M10,M15 ,M20,M25 & M30(including all physical test)	Approved given by IIT VARANASI AND ACCEPTED BY CLIENT	0	**whenever changed source of ingredients	Grade of M10,M15, M20,M25 & M30 (including all physical test)	Approved given by IIT VARANASI AND ACCEPTED BY CLIENT	0	Running mix at 50 MLD STP, RAMANA SITE (60% of 20 mm, 40% of 10mm combined grading)
11	Field control test: Slump / Concrete temperature / unit weight	IS 456, SP 23 & IS 516	Every alternative truck of concrete mixer	45	45	0	Every alternative truck of concrete mixer	68	65	*3	*3 trucks shown over slump concrete rejected by Mace/Upjn at site itself,

3. Treated Effluent disposal line

S. No.	Description	IS Code	Up to Previous Month				During this month (July 2018)				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	16 Nos	16 Nos	16 Nos		10	10	10	0	Udyog concrete pipe inspection along with UPJN engineer.
2	Soil test - SBC of soil	IS 6403	4 Nos	4 Nos	4 Nos						
3	EPDM Gasket	IS 5389-1979	65 Nos	65 Nos	65 Nos		115	115	115	0	MTC report available

4. Raising main

S. No.	Description	IS Code	Up to Previous Month				During this month (July 2018)				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	50.45Mtr	50.45 Mtr	50.45 Mtr	0	37.5Mtr	37.5Mtr	37.5Mtr	0	Bamrah Pipes inspection done along with UPJN Engineer.

5. Construction Running Materials / Equipment's

S. No.	Description	IS Code	Up to Previous Month				During this month (July 2018)				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 / bundwall)	BIS 1492	Yearly once	3	3	0					Verification done for all instruments with Calibration certificates except site cube testing machines, Calibration shown error recently, hence recalibration to be done, all cubes send to Approved IIT-Varanasi, waiting for Reports, still Pending
2	Cube testing Machine	IS 516-2001	Yearly once	1	1	0					
3	Laboratory weighing machine	IS 460-1980	Yearly once	2	2	0					
4	Ready Mix Concrete plant	IS 4926-2013	Whenever required	1	1	0					

ANNEX - 4 PHOTOGRAPHS

ANNEX 4 – PHOTOGRAPHS

SBR basin



RCC Footing



Side view



Slump Testing

SBR basin



RCC Footing



PCC

Bund wall



North side view



Levelling and compaction

ANNEX - 5
OUTWARD CORRESPONDENCE LIST
OF JULY 2018

ANNEX 5 - OUTWARD CORRESPONDENCE LIST OF JULY 2018

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
1	MACE: P968:8412	04.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Letter to development of personnel
2	MACE: P968:8413	05.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Observation on puddle pipe schedule
3	MACE: P968:8414	06.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Submission of Monthly Progress Report for the month of June 2018
4	MACE: P968:8416	12.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Submission of Monthly Inspection report for the month of May 2018
5	MACE: P968:8417	14.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval for architectural drawings and observations on reinforcement drawing of security house.
6	MACE: P968:8418	16.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Comment for approval of SBR Basin
7	MACE: P968:8419	17.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Observation on GA drawing for raw water receiving chamber
8	MACE: P968:8421	18.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Observation on request for extension of first milestone
9	MACE: P968:8423	21.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Comments for submersible pump E & M
10	MACE: P968:8425	21.07.2018	GM, UPJN	NMCG, PM,	NA	Observation on effluent disposal

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
				UPJN		line plan, L – section and thrust block details on vertical and horizontal bends.
11	MACE: P968:8428	23.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Observation on revised construction plan
12	MACE: P968:8429	24.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Submission of Monthly Inspection Report for the month of June 2018
13	MACE: P968:8430	24.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Submission of delay analysis and recovery plan
14	MACE: P968:8432	25.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval with comment on reinforcement drawing of security house
15	MACE: P968:8434	26.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Status of website hosting
16	MACE: P968:8436	27.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Details of TurboMax Turbo blower
17	MACE: P968:8437	27.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Comments on Volute Press for sludge dewatering
18	MACE: P968:8443	30.07.2018	GM, UPJN	NMCG, PM, UPJN	NA	Letter to NMCG for sub-contract for E & I

ANNEX - 6
INWARD CORRESPONDENCE LIST OF
JULY 2018

ANNEX 6 - INWARD CORRESPONDENCE LIST OF JULY 2018

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
1.	Pr-12012/35/2018-PPP/NMCG	29/06/2018	NMCG	Madhava Kumar	N		Beta version for Varanasi STP project with access login.
2.	EIL/VSPPL/2018/19 -130	02/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	5	Submission of data sheet & application method of FOSROC Renderoc HSXtra to be used for remaining work at or STP plant water retaining structures.
3.	T-12/2016-17/600/NMCG	03/07/2018	NMCG	Rajat Gupta	Y	1	MoM to review the progress of all ongoing projects at Varanasi held on 26.6.18 under the chairmanship of Director General, NMCG.
4.	EIL/VSPPL/2018/19 -131	05/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	5	Submission of Monthly Progress Report as on 30.06.2018
5.	EIL/VSPPL/2018/19 -132	07/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	5	Offer for Inspection of MS Pipe – 1000 mm

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
6.	EIL/VSPPL/2018/19 -133	10/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	5	Dispatch clearance of PSC Pipe 1200 mm dia
7.	EIL/VSPPL/2018/19 -134	10/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	1	Compliance of comments on Revised construction plan.
8.	EIL/VSPPL/2018/19 -135	11/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	1	Submission of Field Quality plan for our package of work at Ramna, Varanasi STP & Associate works
9.	EIL/VSPPL/2018/19 -136	12/07/2018	VSPPL / UPJN	Amit B Ghorpade	N		Shifting LTT power line in the Alignment of East side of Bund STP Premises
10.	EIL/VSPPL/2018/19 -137	12/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	6	Submission of Arch. Drawing & Reinforcement drawing of Security House.
11.	EIL/VSPPL/2018/19 -138	13/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	4	Submission of GA Drawing for Raw water receiving chamber.
12.	EIL/VSPPL/2018/19 -140	17/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	5	Submersible pump data sheets and QAP
13.	EIL/VSPPL/2018/19 -141	17/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	9	Additional credentials for vendor approval of M/s

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
							Gardner Denver Engineered Products IPL for supply of Air Blower.
14.	EIL/VSPPL/2018/19 -142	17/07/2018	VSPPL / UPJN	Amit B Ghorpade	N	0	Regarding stoppage of effluent PSC pipe laying work after chainage 810 mts.
15.	EIL/VSPPL/2018/19 -144	18/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	5	Submission of datasheet & GA drawings of Chlorinator Security house reinforcement drawings.
16.	EIL/VSPPL/2018/19 -145	18/07/2018	VSPPL / UPJN	Amit B Ghorpade	N	0	Regarding vendor approval of PIPL.
17.	EIL/VSPPL/2018/19 -146	19/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	5	Submission of cube test report.
18.	EIL/VSPPL/2018/19 -147	19/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	5	Offer for Inspection of PSC Pipe DN 1200mm
19.	EIL/VSPPL/2018/19 -148	19/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	5	Submission of datasheet and GA drawings of Chlorinator Security house reinforcement drawings.
20.	EIL/VSPPL/2018/19 -149	23/07/2018	VSPPL /	Amit B	Y	1	Dispatch clearance of MS

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
			UPJN	Ghorpade			Pipe – 1000 mm
21.	EIL/VSPPL/2018/19 -150	23/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	6	Submission of resources and recovery construction plan.
22.	EIL/VSPPL/2018/19 -151	24/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	1	Submission of reference list of vertical Non-clog pumps supplied by Kishore pumps Pvt Ltd
23.	EIL/VSPPL/2018/19 -152	24/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	4	Submission of MPS Pump documents & Treated water pumps documents.
24.	EIL/VSPPL/2018/19 -153	24/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	7	Details of TurboMax Turbo blower.
25.	EIL/VSPPL/2018/19 -154	25/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of equipment datasheet and GA drawing for Volute press for sludge dewatering.
26.	EIL/VSPPL/2018/19 -155	25/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of credentials of M/s SBS Enviro Aqua concepts Pvt Ltd for Volute press.

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
27.	EIL/VSPPL/2018/19 -156	25/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of equipment datasheet and QAP of Mechanical and Manual Fine screens
28.	EIL/VSPPL/2018/19 -157	26/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	6	Submission of credentials of Hitachi as System Integrator for E&I package
29.	EIL/VSPPL/2018/19 -158	27/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	1	Stoppage of work due to restricted approach road heavy rain
30.	EIL/VSPPL/2018/19 -159	30/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	1	Vendor approval request
31.	EIL/VSPPL/2018/19 -160	31/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Offer for Inspection of MS Pipes – 1000
32.	EIL/VSPPL/2018/19 -161	31/07/2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of grid removal system data sheet, GA drawing & QAP document

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
Pre - Execution Activities	11-Nov-17	4-Feb-19	Topography survey and soil investigation for MPS is pending. Main reason for the delay is lack of planning and non-availability of existing structure as built drawings	Concessionaire to carry out the field investigation and submit the topography survey and soil investigation before 15 th August 2018. UPJN to provide the as built drawing details of existing structures.
			Concessionaire submitted M/s. PIPL as EPC contractor on 25 th April 2018. As per concession agreement "contract entered into by the Concessionaire to subcontract any part of its scope of	Concessionaire to submit the details as per concession agreement. However there is no delay or progress hampering on subsequent activities due to this.

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
			work in relation to the Project under this Agreement". Hence requested the concessionaire to revise the scope and submit for approval. The revised subcontractor details to be submitted by concessionaire	
Design Detailed Engineering	11-Oct-17	20-Jul-18	<p>Drawing submitted by the concessionaire after the due date, indicates the lack of planning.</p> <p>Approval from IIT is pending for some of the items.</p> <p>Finalizations of OHT drawings is pending in spite of repeated reminders to concessionaire by UPJN.</p> <p>Drawings yet to be submitted by the concessionaire.</p> <p>Selection of equipment is pending from</p>	<p>However, concessionaire can start the excavation and PCC laying works of inlet chamber, grit removal and Parshall flume.</p> <p>Due to insufficient manpower and equipment the construction work is delayed</p> <p>Concessionaire agreed to submit the drawings on or before 31st July 2018 during the meeting held on 19th July 2018. Since the same is yet to be submitted the final target date is shifted to 15th August 2018</p> <p>Concessionaire to submit the drawings on or before 15th</p>

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
			concessionaire to finalise the foundation drawings.	August 2018.
			Electrical and instrumentation drawings and documents is yet to be submitted by the concessionaire and delayed due to the lack of finalization of equipments	Concessionaire to speed up the equipment finalization and arrive at the exact load list on or before 10 th August 2018
				However, concessionaire is in the opinion that this activity will be completed by the end of August 2018 as per revised construction plan which is yet to be approved
Associated infrastructure works	20-Feb-18	18-Nov-18	Non-availability of existing structure as built drawings. and delay in site investigation are the main reason	UPJN to provide the existing structure as built drawings on or before 15 th August 2018. Concessionaire to submit the condition assessment report along with drawings on or before 5 th August 2018
			Delay start of desilting activity in MPS	
			Delay in finalization of	Concessionaire to expedite 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
			equipments – screens, gates, valves, pumps, panel, etc.	completion of the same by 15 th August 2018
			Concessionaire yet to finalise the vendor for CCTV inspection of existing rising main	Concessionaire to expedite the completion of the same by 15 th August 2018
			Approval from road authority is pending for carrying out the trenchless cutting method near Samneghat bridge	UPJN to expedite the approval on or before 15 th August 2018
			Manufacturing delay of PSC pipes for treated effluent disposal line. Only 1020 m of pipe inspection completed.	Concessionaire informed to place the order to two three suppliers.
			Pipe joint details are pending for long time. Concessionaire to discuss with manufacturer and submit	Concessionaire to finalise the jointing details and submit the same on or before 30 th July 2018. The jointing portions are kept pending at site
			Problem with local villagers to be sorted out by UPJN. Transportation of inspected pipe from manufacturer	UPJN to sort out the issue of local villagers. Concessionaire to expedite the transportation of

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
			to site is delayed	PSC pipes within 10 days from the date of inspection
Equipment Procurement, Logistics and receipt of equipment at Site	6-Apr-18	7-Mar-19	Equipment data sheet to be submitted for approval and mechanical GA drawings, foundation drawings to be finalized for screens, grit removal, Parshall flume, all pumps, tube well, in plant piping, valves, etc. Partial submission and approval is completed	However, concessionaire is in the opinion that this activity will be completed by the end of April 2019 as per revised construction plan which is yet to be approved
Civil Executions				
Bund Wall / Earthen Embankment	6-Apr-18	10-Oct-18	Lack of sufficient equipment, manpower for carrying out the filling and compaction	One grader just arrived at site and additional 50 manpower is increased. However this will not be sufficient to meet the target as per approved construction plan. However, concessionaire is in the opinion that this activity will be completed by the end of June 2019 as per revised construction plan

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
				which is yet to be approved
Inlet Chamber Manual & Mechanical Screen Chamber	16-Apr-18	26-Jul-18	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed. However, concessionaire is in the opinion that this activity will be completed by the end of April 2019 as per revised construction plan which is yet to be approved
Grit Chamber & Outlet Channel of Grit Chamber	21-Apr-18	8-Aug-18	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed However, concessionaire is in the opinion that this activity will be completed by the end of April 2019 as per revised

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
				construction plan which is yet to be approved
Parshall Flume (I) & Distribution Chamber of SBR Basin	21-Apr-18	16-Jul-18	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed. However, concessionaire is in the opinion that this activity will be completed by the end of April 2019 as per revised construction plan which is yet to be approved
SBR Basins & SBR outlet Chamber	6-Apr-18	10-Jan-19		Concessionaire is in the opinion that this activity will be completed by the end of August 2019 as per revised construction plan which is yet to be approved
Chlorine Contact Tank & Treated Water Collection Tank, Treated water Pumps	1-May-18	28-Aug-18	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT	However, concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment 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
			is pending	construction work is delayed. However, concessionaire is in the opinion that this activity will be completed by the end of March 2019 as per revised construction plan which is yet to be approved
SBR air blower room	5-Jun-18	22-Sep-18	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	However, concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed. However, concessionaire is in the opinion that this activity will be completed by the end of August 2019 as per revised construction plan which is yet to be approved
HT room	5-Jun-18	8-Aug-18	Drawing submitted by the concessionaire after the due date indicates the lack of planning.	However, concessionaire can start the excavation and PCC laying works.

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
			Approval from IIT is pending	<p>Due to insufficient manpower and equipment the construction work is delayed</p> <p>However, concessionaire is in the opinion that this activity will be completed by the end of August 2019 as per revised construction plan which is yet to be approved</p>
MCC room	5-Jun-18	2-Oct-18	<p>Drawing submitted by the concessionaire after the due date indicates the lack of planning.</p> <p>Approval from IIT is pending</p>	<p>However, concessionaire can start the excavation and PCC laying works.</p> <p>Due to insufficient manpower and equipment the construction work is delayed.</p> <p>However, concessionaire is in the opinion that this activity will be completed by the end of August 2019 as per revised construction plan which is yet to be approved</p>
Transformer Yard	5-Jun-18	13-Jul-18	Equipment to be finalized for finalizing the	However, concessionaire is in the opinion that this

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
			foundation	activity will be completed by the end of August 2019 as per revised construction plan which is yet to be approved
DG set area	5-Jun-18	29-Jun-18	Equipment to be finalized for the foundation	However, concessionaire is in the opinion that this activity will be completed by the end of August 2019 as per revised construction plan which is yet to be approved
Mechanical Installation	7-Jun-18	9-Feb-19	Valves yet to be finalized	Concessionaire to speed up the process of finalization of vendor, However, concessionaire is in the opinion that this activity will be completed by the end of September 2019 as per revised construction plan which is yet to be approved

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	Inlet chamber manual & mechanical screen chamber	Work yet to start	
3	Grit chamber & outlet channel of grit chamber	Work yet to start	
4	Parshall flume (I) & distribution chamber of SBR basin	Work yet to start	
5	SBR basins & SBR outlet Chamber	Work is in progress	
6	Chlorination building & Chlorine contact tank & Treated water collection tank, treated water pumps	Work is in progress	
7	Belt filter press/ sludge sump / filtrate sump	Work yet to start	Awaiting for IIT, BHU approval
8	Administrative Building	Work is in progress	
9	Overhead tank for effluent disposal	Drawing yet to be submitted	
10	SBR air blower room, HT room, MCC room, Transformer yard & DG set area	Work is in progress	
11	MPS, inlet structure, weir, control room and rising main	Drawing yet to be submitted	

2.1. Bund wall / earthen embankment

S. No.	Description	Estimate		As per construction plan up to 31 st July 2018		Actual work done up to 31 st July 2018		Shortfall as on 31 st July 2018	
		Quantity	Unit	Quantity	Unit	Quantity	Unit	Quantity	Unit
1	Excavation	13888	Cum	13888	Cum	13888	Cum	0	Cum
2	Borrow Earth	86000	Cum	86000	Cum	39136	Cum	46864	Cum
3	Soil Filling	86000	Cum	86000	Cum	27271	Cum	58729	Cum

S. No.	Description	Estimate		As per construction plan up to 31 st July 2018		Actual work done up to 31 st July 2018		Shortfall as on 31 st July 2018	
		Quantity	Unit	Quantity	Unit	Quantity	Unit	Quantity	Unit
4	Soil Compaction	86000	Cum	86000	Cum	20204	Cum	65796	Cum
5	Stone Pitching	32400	Sqm	17820	Sqm	0	Sqm	17820	Sqm

2.1.1. The following requirements are arrived assuming that the shortfall quantity will be completed within 30 days from the date of mobilising the additional resources

S. No.	Description	Required per day		Additional resource required to the fold based on current deployment
1	Borrow Earth	1562	Cum	4 times
2	Pitching Stone	17820	Sqm	Concessioner yet to start the work and plan the required resource

2.1.2. Additional equipment's required

S. No.	Description	Quantity	Unit	Capacity	Unit
1	Tipper	4	Nos	8.5	Cum
2	Tipper	4	Nos	14	Cum
3	Tractor	37	Nos	2.8	Cum
4	Water tanker	15	Nos	5000	Litters
5	Grader	4	Nos	17	Tonne
6	Roller	4	Nos	11	Tonne

2.2. SBR, CCT, Blower room, Administrative building, HT, MCC, Transformer Yard & DG set area

S. No.	Description	Estimate		As per construction plan up to 31 st July 2018		Actual work done up to 31 st July 2018		Shortfall as on 31 st July 2018	
		Quantity	Unit	Quantity	Unit	Quantity	Unit	Quantity	Unit
1	Excavation	4968	Cum	4545	Cum	4411	Cum	134	Cum
2	PCC	1827	Cum	1827	Cum	1151	Cum	676	Cum
3	RCC	6865	Cum	1843	Cum	1436	Cum	407	Cum

2.2.1. The following requirements are arrived assuming that the shortfall quantity will be completed within 10 days from the date of mobilising the additional resources

Sl. No.	Description	Required per day		Additional resource required to the fold based on current deployment
1	Ready Mix Concrete	108	Cum	2 times

2.2.2. Additional equipment's required

Sl. No.	Description	Quantity	Unit	Capacity	Unit
1	JCB (0.3 Cum)	4	No	0.3	Cum
2	Transit mixer	4	No	7	Cum
3	Tipper	4	Nos	5.5	Cum
4	Tractor	2	Nos	2.8	Cum
5	Batching Plant	2	No	20	Cum/Hr
6	Concrete Pump	4	No	40	Cum/Hr

3. 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 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
Pre - Execution Activities	11-Nov-17	4-Feb-19	80.00%	80.00%		
Topographical / Soil Investigation	11-Nov-17	20-Dec-17	100%	100%	Topography survey and soil investigation for MPS is pending. Main reason for the delay is lack of planning and non-availability of existing structure as built drawings	Concessionaire to carry out the field investigation and submit the topography survey and soil investigation before 15 th August 2018. UPJN to provide the as built details of existing structures.
Submission & Approval of Sub Contracts from UPJN	1-Feb-18	30-Jun-18	100%	80%	Concessionaire submitted M/s. PIPL as EPC contractor on 25 th April 2018. As per concession agreement "contract entered into by the Concessionaire to subcontract any part of its scope of work in relation to the Project under this Agreement". Hence requested the concessionaire to revise the scope and submit for approval. The revised subcontractor details to be submitted by	Concessionaire to submit the details as per concession agreement. However there is no delay or progress hampering on subsequent activities due to this.

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
					concessionaire	
Design Detailed Engineering			100%	68.3%		
Plant Layout	9-Jan-18	8-Mar-18	100%	80%		There is no delay or progress hampering due to this.
Site Layout	8-Mar-18	12-May-18	100%	75%	Location of OHT yet to be finalized and Approval from IIT is pending	There is no delay or progress hampering on subsequent activities due to this.
Inlet Chamber	20-Feb-18	5-Apr-18	100%	100%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed
Automatic / Manual Screens	20-Feb-18	5-Apr-18	100%	100%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed
Grit Removal Chamber	20-Feb-18	5-Apr-18	100%	100%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is	Concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment 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 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
					delayed	construction work is delayed
Parshall Flume (I, II) and SBR Distribution Chamber)	20-Feb-18	5-Apr-18	100%	100%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed
Overhead Portable Tank incl. Tubewell	20-Feb-18	15-May-18	100%		Repeated reminders were made to concessionaire by UPJN. Drawing yet to be submitted by the concessionaire.	Concessionaire to submit the drawings on or before 15 th August 2018.
Foundation Drawings of Pumps, Belt Filter Press & Air Blowers	20-Feb-18	15-May-18	100%		Selection of equipment is pending from concessionaire.	Concessionaire to speed up the equipment finalization and submit the details on or before 15 th August 2018
Structural Drawings Submissions & Approvals	20-Feb-18	15-May-18	100.00%	55.00%		
Inlet Chamber	2-Mar-18	30-Apr-18	100%	100%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
						delayed
Grit Removal Chamber	2-Mar-18	30-Apr-18	100%	100%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed
Parshall Flume (I, II) and SBR Distribution Chamber	2-Mar-18	30-Apr-18	100%	100%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed
Overhead Portable Tank incl. Tubewell	2-Mar-18	15-May-18	100%		Repeated reminders were made to concessionaire by UPJN. Drawing yet to be submitted by the concessionaire.	Concessionaire to submit the drawings on or before 15 th August 2018.
Foundation Drawings of Pumps, Belt Filter Press & Air Blowers	2-Mar-18	15-May-18	100%		Selection of equipment is delayed beyond the scheduled completion and still belt filter press, air blower and some of the pumps pending from concessionaire.	Concessionaire to speed up the equipment finalization and submit the details on or before 15 th August 2018.
Miscellaneous Drawings	12-Mar-18	15-May-18	100%		Due to delay in submission of major	Concessionaire to identify and submit 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 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
					components	related drawings on or before 15 th August 2018.
Mechanical & Piping Drawings Submissions & Approvals	11-Apr-18	25-May-18	100.00%	52.80%		
Inlet Chamber	11-Apr-18	25-May-18	100%	80%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	However concessionaire can start the finalizing the procurement items and submit the related data sheets for approval on or before 15 th August 2018.
Automatic / Manual Screens	11-Apr-18	25-May-18	100%	80%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	However concessionaire can start the finalizing the procurement items and submit the related data sheets for approval on or before 15 th August 2018.
Grit Removal Chamber	11-Apr-18	25-May-18	100%	80%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	However concessionaire can start the finalizing the procurement items and submit the related data sheets for approval on or before 15 th August 2018.
Parshall Flume (I, II) and SBR Distribution Chamber	11-Apr-18	25-May-18	100%	80%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	However concessionaire can start the finalizing the procurement items and submit the related data sheets for approval on or before 15 th August 2018.

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
SBR Basins & SBR outlet Chamber	11-Apr-18	25-May-18	100%	80%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	Diffuser, air grid and related mechanical equipment data sheet approved. Concessionaire to submit the work order copy for expediting the on time delivery
Chlorine Contact Tank & Treated Water Collection Tank	11-Apr-18	25-May-18	100%	80%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	Related mechanical equipment data sheet approved. Concessionaire to submit the work order copy for expediting the on time delivery
Overhead Portable Tank incl. tubewell	11-Apr-18	25-May-18	100%		Repeated reminders were made to concessionaire by UPJN. Drawing yet to be submitted by the concessionaire.	Concessionaire to submit the drawings on or before 15 th August 2018.
Foundation Drawings of Pumps, Belt Filter Press & Air Blowers	11-Apr-18	25-May-18	100%		Selection of equipment is delayed beyond the scheduled completion and still belt filter press, air blower and some of the pumps pending from concessionaire.	Concessionaire to speed up the equipment finalization and submit the details on or before 15 th August 2018.
Overall Piping Drawings	11-Apr-18	25-May-18	100%		Delayed due to finalization of the above	Concessionaire to speed up the equipment

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
					drawings	finalization and submit the details on or before 10 th August 2018
Electrical Drawings Submissions & Approvals	11-Apr-18	14-Jul-18	100.00%	11.3%		
Electrical Load List	11-Apr-18	25-May-18	100%	75%	Yet to be finalized by the concessionaire and delayed due to the lack of finalization of equipment's	Concessionaire to speed up the equipment finalization and arrive at the exact load list on or before 10 th August 2018
SLD	11-Apr-18	25-May-18	100%		Drawing yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Cable Layout Plan	31-May-18	14-Jul-18	100%		Drawing yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Cable Layout Drawing	31-May-18	14-Jul-18	100%		Drawing yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Cable Sizing Calculations	31-May-18	14-Jul-18	100%		Drawing yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document /

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
						drawing or before 5 th August 2018
Earthing Size Calculations	31-May-18	14-Jul-18	100%		Drawing yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Cable Schedule	31-May-18	14-Jul-18	100%		Drawing yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Earthing Layout	31-May-18	14-Jul-18	100%		Drawing yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Plant Lighting Layout Plan	31-May-18	14-Jul-18	100%		Drawing yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Miscellaneous Documents & Drawings	26-May-18	9-Jul-18	100.00%	10.5%		
Design Calculation - Electrical Components	26-May-18	4-Jul-18	100%	30%	Document yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
Electrical control Philosophy	26-May-18	4-Jul-18	100%		Document yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Miscellaneous Drawings	26-May-18	9-Jul-18	100%		Document yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Instrumentation Document submissions & Approvals	1-Jun-18	15-Jul-18	100.00%			
Instrument Index / Alarm List	1-Jun-18	15-Jul-18	100%		Document yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Instrument Hook - Up Diagram	1-Jun-18	15-Jul-18	100%		Document yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
PLC - I/O List	1-Jun-18	15-Jul-18	100%		Document yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
Loop Wiring Diagram	1-Jun-18	15-Jul-18	100%		Document yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Instrument Cable Layout Plan	1-Jun-18	15-Jul-18	100%		Document yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Instrument Cable Schedule/ JB wiring detail	1-Jun-18	15-Jul-18	100%		Document yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Cause & Effect Diagram	1-Jun-18	15-Jul-18	100%		Document yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Miscellaneous drawings	6-Jun-18	20-Jul-18	100.00%			
Instrumentation Control & Philosophy	6-Jun-18	16-Jul-18	100%		Document yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Design SCADA	6-Jun-18	16-Jul-18	100%		Document yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document /

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
						drawing or before 5 th August 2018
Miscellaneous Drawings	10-Jul-18	20-Jul-18	80%		Document yet to be submitted by the concessionaire	Concessionaire to speed up the process and submit the document / drawing or before 5 th August 2018
Associated infrastructure works	20-Feb-18	18-Nov-18	77.47%	14.37%		
MPS Pumping Station	10-Apr-18	23-Aug-18	80.26%	8.25%		
Submission & Approval of Drawings / Documents	10-Apr-18	15-May-18	100%	35%	Non availability of existing structure as built drawings and delay in site investigation are the main reason	UPJN to provide the existing structure as built drawings on or before 15 th August 2018.. Concessionaire to submit the condition assessment report along with drawings on or before 5 th August 2018
Rehabilitation and construction of Weir across Assi Nalla	20-Apr-18	18-Jun-18	100%		Non availability of existing structure as built drawings and delay in site investigation are the main reason	UPJN to provide the existing structure as built drawings on or before 15 th August 2018.. Concessionaire to submit the condition assessment report along with drawings on or before 5 th August 2018

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
Desilting of the MPS	20-Apr-18	19-May-18	100%	90%	Work started only after the scheduled completion date.	
Procurement & Installation	20-Apr-18	17-Aug-18	86%		Concessionaire yet to submit the finalized vendor and equipment details	Concessionaire to speed up the engineering process and submit the data sheets on or before 15 th August 2018.. This is the long lead item which will hamper the commissioning process in case of further delay
Repair of Equipment	20-Apr-18	18-Jun-18	100%		Concessionaire yet to submit the finalized vendor and equipment details	Concessionaire to speed up the engineering process and submit the data sheets on or before 15 th August 2018.. This is the long lead item which will hamper the commissioning process in case of further delay
Raising of height of Nalla tapping structure upto HFL	19-Jun-18	13-Jul-18	100%		Non availability of existing structure as built drawings and delay in site investigation are the main reason	UPJN to provide the existing structure as built drawings on or before 15 th August 2018.. Concessionaire to submit the condition assessment report along with drawings on or before 5 th August 2018

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
Construction of Control Room	19-Jun-18	8-Aug-18	84%		Delay in site investigation is the main reason. Location and details are yet to be finalized by the concessionaire	
Rising Main	10-Apr-18	2-Aug-18	98.97%	0.30%		
Submission & Approval of Drawings / Documents	10-Apr-18	10-May-18	100%	10%	Delay in site investigation is the main reason.	Concessionaire to speed up the progress and complete the same by 15 th August 2018
Desilting & CCTV inspection	20-Apr-18	3-Jun-18	100%		Concessionaire yet to finalise the vendor and carryout the investigation	Concessionaire to speed up the progress and complete the same by 15 th August 2018
Strengthening and Pipe protection of Rising main	20-Apr-18	18-Jun-18	100%		Concessionaire yet to finalise the vendor and carryout the investigation	Concessionaire to speed up the progress and complete the same by 15 th August 2018
Shifting & laying of Pipe near Samne Ghat bridge	20-Apr-18	3-Jun-18	100%		Approval from road authority is pending for carrying out the trenchless cutting method	UPJN to expedite the approval on or before 15 th August 2018
Other repairing Work	4-Jun-18	3-Jul-18	100%		Delay in site investigation is the main reason.	Concessionaire to speed up the progress and complete the same by 15 th August 2018
Extension of existing Rising	4-Jun-18	3-Jul-18	100%		It can be done only after the completion of	

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
main to the Inlet point at the STP site					inlet structure at STP.	
Hydro testing of the PSC	4-Jul-18	2-Aug-18	93%		Delay in site investigation is the main reason.	Concessionaire to speed up the progress and complete the same by 15 th August 2018
Treated Effluent disposal line	20-Feb-18	18-Nov-18	73.46%	17.09%		
Procurement	25-Feb-18	25-Apr-18	100%	18%	Only 1020 m of pipe inspection completed. Delay in procurement of pipes by the concessionaire.	Concessionaire informed to place the order to two three suppliers.
Inspection	26-Apr-18	30-Apr-18	100%	19%	Only 1020 m of pipe inspection completed.	Concessionaire informed to place the order to two three suppliers.
Drawing approval	6-Apr-18	5-May-18	100%	80%	Pipe joint details are pending for long time. Concessionaire to discuss with manufacturer and submit	Concessionaire to finalise the jointing details and submit the same on or before 15 th August 2018.. The jointing portions are kept pending at site
Excavation	6-May-18	2-Sep-18	72%	15%	Problem with local villagers to be sorted out by UPJN. Transportation of inspected pipe from manufacturer to site is delayed	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	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
PCC	16-May-18	12-Sep-18	64%		This item is required only in the jointing portion and joint details are awaited from manufacturer.	Concessionaire to finalise the jointing details and submit the same on or before 15 th August 2018.
Pipe laying	23-May-18	19-Oct-18	46%	13%	Problem with local villagers to be sorted out by UPJN. Transportation of inspected pipe from manufacturer to site is delayed	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
Back filling	23-May-18	6-Jul-18	100%	12%	Problem with local villagers to be sorted out by UPJN. Transportation of inspected pipe from manufacturer to site is delayed	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
Equipment Procurement, Logistics and receipt of equipment at Site	6-Apr-18	7-Mar-19	12.9%	10.3%		
Fine Screen/Coarse Screen / Belt Conveyors	6-Apr-18	6-Dec-18	29.1%			
Procurement (Including	6-Apr-18	22-Oct-18	58%		Equipment data sheet to be submitted for	

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Submission & Approval of Drgs / Documents					approval and mechanical GA drawings, foundation drawings to be finalised	
Grit Removal Mechanism	26-May-18	25-Jan-19	16.6%	5.0%		
Procurement (Including Submission & Approval of Drgs / Documents)	26-May-18	11-Dec-18	33%	10%	Equipment data sheet to be submitted for approval and mechanical GA drawings, foundation drawings to be finalised	
SAS/RAS Pumps / Booster Pumps / Treated Water Pumps / Drain Pumps	26-May-18	25-Jan-19	16.6%			
Procurement (Including Submission & Approval of Drgs / Documents)	26-May-18	11-Dec-18	33%		Equipment data sheet to be submitted for approval and mechanical GA drawings, foundation drawings to be finalized	
Tubewell	16-May-18	15-Jan-19	19.1%			
Procurement (Including Submission & Approval of Drgs / Documents)	16-May-18	1-Dec-18	38%		Equipment data sheet to be submitted for approval and mechanical GA drawings, foundation drawings to be finalised	

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Piping & Fittings, Valves, Flanges, other associated connections	26-May-18	10-Jan-19	17.9%			
Procurement (Including Submission & Approval of Drgs / Documents	26-May-18	26-Nov-18	36%		Equipment data sheet to be submitted for approval and mechanical GA drawings, foundation drawings to be finalized	
Civil Executions			41.7%	15.1%		
Bund Wall / Earthen Embankment	6-Apr-18	10-Oct-18	89.8%	42.0%		
Excavation Filling & Compaction	6-Apr-18	11-Jul-18	100%	48%	Lack of sufficient equipment, manpower for carrying out the filling and compaction	One grader just arrived at site and additional 50 manpower is increased. However this will not be sufficient to meet the target as per approved construction plan. However, concessionaire is in the opinion that this activity will be completed by the end of November 2018 as per revised construction plan which is yet to be approved
Stone Pitching	11-Jun-18	10-Sep-18	55%		This work can be started only after	Concessionaire is in the opinion that this activity

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					completion of compaction.	will be completed by the end of January 2019 as per revised construction plan which is yet to be approved
Inlet Chamber Manual & Mechanical Screen Chamber	16-Apr-18	26-Jul-18	100%			
Excavation, Dressing, Filling G & PCC	16-Apr-18	25-Apr-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Foundation and Raft	26-Apr-18	5-May-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Wall & Super Structure	6-May-18	4-Jul-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Hydrotesting	5-Jul-18	11-Jul-18	100%		Drawing submitted by the concessionaire after the due date indicates	Due to insufficient manpower and equipment the

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					the lack of planning. Approval from IIT is delayed	construction work is delayed
Misc. Works	12-Jul-18	21-Jul-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Grit Chamber & Outlet Channel of Grit Chamber	21-Apr-18	8-Aug-18	98.1%			
Excavation, Dressing, Filling G & PCC	21-Apr-18	30-Apr-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Foundation and Raft	1-May-18	10-May-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Wall & Super Structure	11-May-18	9-Jul-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed

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Hydro testing	10-Jul-18	14-Jul-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Misc. Works	15-Jul-18	24-Jul-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Parshall Flume (I) & Distribution Chamber of SBR Basin	21-Apr-18	16-Jul-18	100%			
Excavation, Dressing, Filling G & PCC	21-Apr-18	30-Apr-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Foundation and Raft	1-May-18	15-May-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Wall & Super Structure	16-May-18	14-Jun-18	100%		Drawing submitted by the concessionaire after	Due to insufficient manpower and

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
					the due date indicates the lack of planning. Approval from IIT is delayed	equipment the construction work is delayed
Hydro testing	15-Jun-18	21-Jun-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Mic. Works	22-Jun-18	1-Jul-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Finishing & Landscaping	2-Jul-18	16-Jul-18	100%			
SBR Basins & SBR outlet Chamber	6-Apr-18	10-Jan-19	18.4%	13%		
Excavation, Dressing, Filling G & PCC	6-Apr-18	24-Jun-18	100%	80%	Excavation is pending for want of access to the remaining part of work	
Chlorination Building	1-May-18	3-Aug-18	99.5%	9.5%		
Foundation and Raft	16-May-18	9-Jun-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning.	Due to insufficient manpower and equipment the construction work is delayed

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
Wall & Super Structure	26-May-18	24-Jun-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning.	Due to insufficient manpower and equipment the construction work is delayed
Misc. Works	25-Jun-18	4-Jul-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning.	Due to insufficient manpower and equipment the construction work is delayed
Finishing & Landscaping	5-Jul-18	3-Aug-18	90%		Drawing submitted by the concessionaire after the due date indicates the lack of planning.	Due to insufficient manpower and equipment the construction work is delayed
Chlorine Contact Tank & Treated Water Collection Tank, Treated water Pumps	1-May-18	28-Aug-18	92.8%	7.0%		
Excavation, Dressing, Filling & PCC	1-May-18	15-May-18	100%	70%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	However concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed
Foundation and Raft	16-May-18	9-Jun-18	100%		Drawing submitted by the concessionaire after	However concessionaire can start the excavation

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					the due date indicates the lack of planning. Approval from IIT is pending	and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed
Wall & Super Structure	10-Jun-18	9-Jul-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	However concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed
Hydro testing	10-Jul-18	19-Jul-18	89%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	However concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed
SBR air blower room	5-Jun-18	22-Sep-18	63.3%	1.5%		
Excavation, Dressing, Filling G & PCC	5-Jun-18	14-Jun-18	100%	15%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
Foundation and Raft	10-Jun-18	19-Jun-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Wall & Super Structure	15-Jun-18	23-Aug-18	67%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
HT room	5-Jun-18	8-Aug-18	95.8%	1.5%		
Excavation, Dressing, Filling G & PCC	5-Jun-18	6-Jun-18	100%	15%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Foundation and Raft	7-Jun-18	11-Jun-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Wall & Super Structure	10-Jun-18	9-Jul-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
					delayed	
Misc. Works	10-Jul-18	19-Jul-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
MCC room	5-Jun-18	2-Oct-18	56.3%	1.5%		
Excavation, Dressing, Filling G & PCC	5-Jun-18	14-Jun-18	100%	15%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Foundation and Raft	20-Jun-18	14-Jul-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Wall & Super Structure	30-Jun-18	28-Aug-18	53%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is delayed	Due to insufficient manpower and equipment the construction work is delayed
Transformer Yard	5-Jun-18	13-Jul-18	100%	1.5%		
Excavation, Dressing, Filling G	5-Jun-18	8-Jun-18	100%	15%	Drawing submitted by the concessionaire after	Due to insufficient manpower and

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
& PCC					the due date indicates the lack of planning. Approval from IIT is pending	equipment the construction work is delayed
Foundation and Raft	9-Jun-18	18-Jun-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	Due to insufficient manpower and equipment the construction work is delayed
Wall & Super Structure	14-Jun-18	28-Jun-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	Due to insufficient manpower and equipment the construction work is delayed
Misc. Works	29-Jun-18	3-Jul-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	Due to insufficient manpower and equipment the construction work is delayed
Finishing	4-Jul-18	13-Jul-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	Due to insufficient manpower and equipment the construction work is delayed
DG set area	5-Jun-18	29-Jun-18	100%	1.5%		
Excavation,	5-Jun-18	9-Jun-18	100%	15%	Drawing submitted by	However concessionaire

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
Dressing, Filling G & PCC					the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed
Foundation and Raft	10-Jun-18	19-Jun-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	However concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed
Misc. Works	20-Jun-18	24-Jun-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	However concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment the construction work is delayed
Finishing	25-Jun-18	29-Jun-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT is pending	However concessionaire can start the excavation and PCC laying works. Due to insufficient manpower and equipment 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 31 st July 2018	Total completion in % as on 31 st July 2018	Delay analysis	Recovery / Mitigation plan
						construction work is delayed
Mechanical Installation	7-Jun-18	9-Feb-19	11.6%			
Piping & valve for rising main 5.5 km to discharge the effluent	7-Jun-18	2-Aug-18	96%		Valves yet to be finalised	Concessionaire to speed up the process of finalization of vendor

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 July 2018
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 July 2018
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 July 2018
	<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 July 2018
1	Planned General inspection	Conducted	Conducted on 28 th July 2018 by safety committee members
2	Routine inspection		
2.1	Daily inspection of plant and equipment by operator	Conducted	Conducted
2.2	Weekly inspection of scaffold by scaffolding supervisor	NA	NA
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 stopped
	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	Submitted	Submitted

Sl. No.	Description	Till previous month	During the month of July 2018
	<ul style="list-style-type: none"> Monthly minor accident, serious incident details 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	NA	NA

Sl. No.	Description	Till previous month	During the month of July 2018
	Drinking water facility within a distance of 200 m from the place of work for all workers	Provided at 04 locations	Provided at 04 locations
	Provision of labour accommodation	Provided for 120 labours	Provided for 120 labours
	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	