

**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**

August - 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**



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**

TABLE OF CONTENTS

1.0. INTRODUCTION.....	4
1.1. Project components	6
1.1.1. New construction units	6
1.1.2. Rehabilitation works	7
1.2. Executing agency	7
1.3. Implementation agency	7
1.4. Consulting services.....	7
1.5. Concessionaire	7
2.0. STATUS OF PROJECT	7
2.1. Physical status	8
2.1.1. Pre-execution activities	8
2.1.2. Pre-execution activities - Physical progress graph	9
2.1.3. Design detailed engineering.....	10
2.1.4. Design detailed engineering - Physical progress graph....	14
2.1.5. Equipment procurement, logistics and receipt of equipment at site.....	15
2.1.6. Equipment procurement, logistics and receipt of equipment at site - Physical progress graph.....	26
2.1.7. New construction units	27
2.1.8. New construction units - Physical progress graph	33
2.1.9. Associated works.....	34
2.1.10. Associated works - Physical progress graph.....	36
2.1.11. Overall progress :	37
2.2. Financial status	37
2.3. Important issues	37
3.0. PROJECT ENGINEER ACTIVITIES	40
4.0. MEETINGS	68
5.0. STAFF DEPLOYMENT	68

List of Annexures

ANNEX - 1	70
PROJECT PROGRESS (PHYSICAL).....	70
ANNEX - 2	72
FINANCIAL STATEMENTS.....	72
ANNEX - 3	78
QUALITY ASSURANCE / QUALITY CONTROL	78
ANNEX - 4	86
PHOTOGRAPHS.....	86
ANNEX - 5	92
OUTWARD CORRESPONDENCE LIST OF AUGUST 2018	92
ANNEX - 6	96
INWARD CORRESPONDENCE LIST OF AUGUST 2018	96
ANNEX - 7	102
DELAY ANALYSIS & RECOVERY PLAN.....	102
ANNEX - 8	129
ESHS TARGET & ACHIEVEMENT	129

MONTHLY PROGRESS REPORT

1.0. INTRODUCTION

The GoI, recognizing that long-term rejuvenation of the river Ganga will have significant social and economic benefits on the lives of the 500 million people living along its basin, has identified cleaning of the river Ganga as one of its priorities. For this purpose, in May 2015, the GoI approved the flagship Namami Gange programme for cleaning, rejuvenation, and protection of the river Ganga. In January 2016, the GoI approved a hybrid annuity model to implement STP projects under the Namami Gange programme on a PPP basis.

Subsequently, the MoWR issued the River Ganga (Rejuvenation, Protection and Management) Authorities Order, 2016 (Ganga 2016 Order) to constitute various authorities to assist the GoI in achieving its aim of effective abatement of pollution in the river Ganga. The Ganga 2016 Order applies to all states in the catchment of the river Ganga basin, including Uttar Pradesh. The Ganga 2016 Order revised the legal status of NMCG (which was initially constituted as a registered society under the Societies Registration Act, 1860) to an authority constituted under the Environment (Protection) Act, 1986 and designated NMCG as the nodal agency for the implementation of the Ganga 2016 Order.

Rapidly increasing population, rising standards of living and exponential growth of industrialisation and urbanisation have exposed water resources, in general, and rivers, in particular, to various forms of degradation. The mighty Ganga is no exception. The deterioration in the water quality impacts the people immediately. Ganga, in some stretches, particularly during lean seasons has become unfit even for bathing. The threat of global climate change, the effect of glacial melt on Ganga flow and the impacts of infrastructural projects in the upper reaches of the river, raise issues that need a comprehensive response.

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

The Uttar Pradesh Jal Nigam (Jal Nigam) is a statutory body constituted under the Uttar Pradesh Water Supply and Sewerage Act, 1975, and has the power to develop, maintain and regulate water supply and sewerage works in Uttar Pradesh. With a view to implement the Namami Gange programme and the Ganga 2016 Order, the Jal Nigam, in association with the NMCG, has decided to undertake the development of an STP with a proposed capacity of 50 MLD along with other Facilities and Associated Infrastructure at Varanasi on a PPP basis, through a hybrid annuity model. While the Jal Nigam will be the principal executing agency and bidding authority for the Project, NMCG will be responsible for making payments to the Concessionaire.

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

Intercept raw sewage flowing into the river Ganga and divert the raw sewage to the Varanasi STP;

Treatment of the raw sewage at the Varanasi STP;

Implement viable technologies and international best practices for development, operation and maintenance of the Varanasi STP and other facilities and

Demonstrate large scale private sector participation and mobilisation of private sector investment to further the national aim of rejuvenation of the river Ganga.

Figure 1: Objectives of NMCG and UP JAL NIGAM

Government of India, has approved the Namami Gange program as an integrated approach for effective abatement of pollution in river Ganga. As part of this and to ensure that no untreated domestic sewage flow into the river Ganga, various interventions are planned such as Interception & Diversion works and development & operation of Sewage Treatment Plants (STPs). Considering various development models in practice for the construction, operation and maintenance of Sewage Treatment Plants, Government of India has approved the Hybrid

Annuity based Public Private Partnership (PPP) mode as one of the options for the development & operation of STPs. Under this model, private investor/developer will design, build, finance, operate and transfer the asset (STP) to the Project Executing Agency/Jal Nigam/Jal Sansthan / Urban Local body at the end of the Concession Period (say 15 years). 40% of the Capital cost will be paid to the developer during construction of the STP. Balance 60% along with Operation & Maintenance (O&M) cost will be paid over the Concession Period on achievement of key performance indicators as per the contract. Entire cost of development and operation of the STPs will be 100% funded by the Government of India as central sector scheme. It is also envisaged to explore the possibility of recycle/ reuse of the treated waste water for non-potable purpose.

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

1.1. Project components

1.1.1. New construction units

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

1.1.2. Rehabilitation works

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

1.2. Executing agency

- Uttar Pradesh Jal Nigam (UPJN)

1.3. Implementation agency

- Uttar Pradesh Jal Nigam (UPJN)

1.4. Consulting services

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

1.5. Concessionaire

- Varanasi STP Project Private Limited

2.0. STATUS OF PROJECT

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

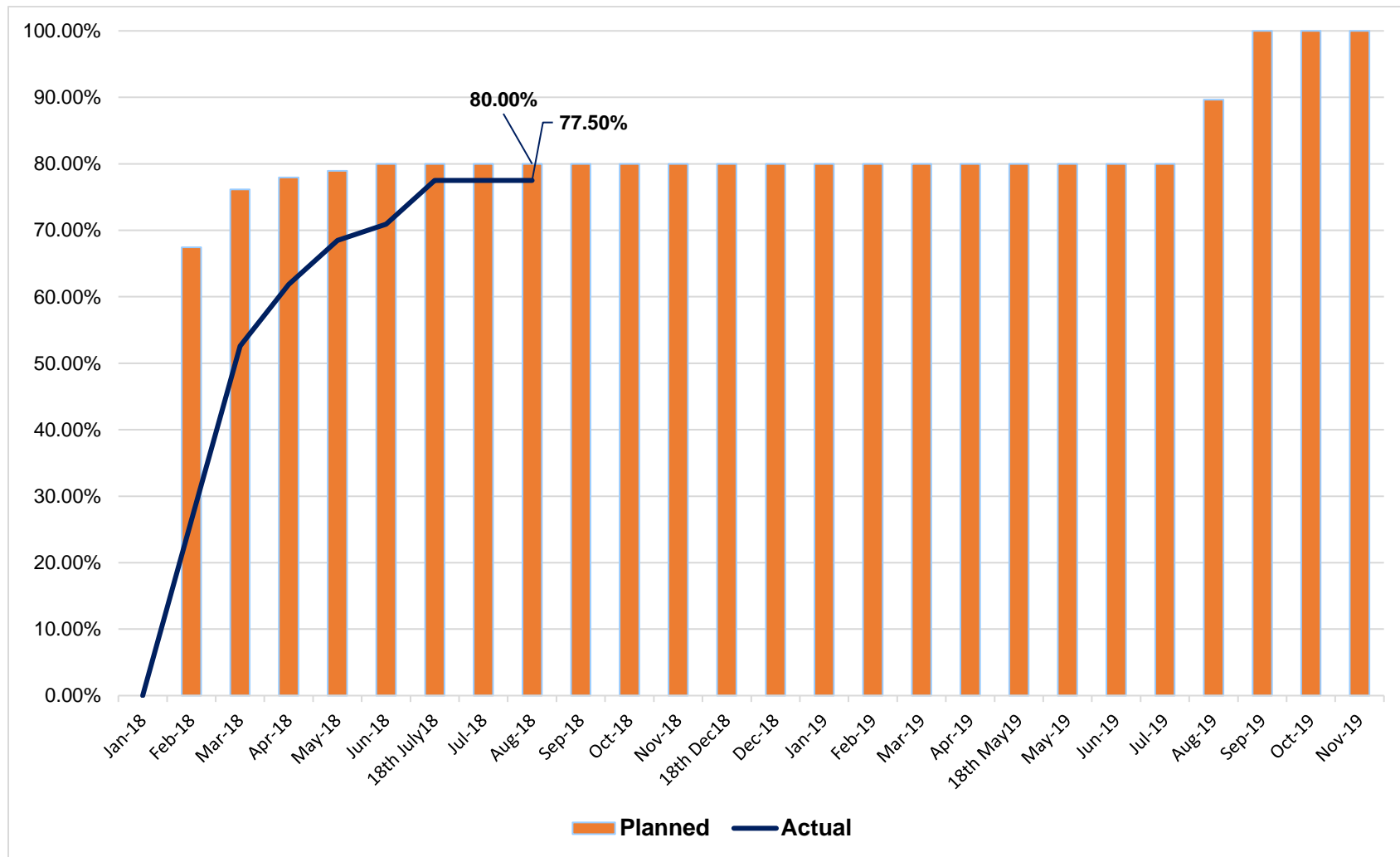
2.1. Physical status

2.1.1. Pre-execution activities

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Pre - Execution Activities	12-Oct-17	30-Sep-19	80.00%	77.50%		77.50%
Temporary Power Connection (During Construction Period)	12-Oct-17	30-Apr-18	100%	100%		100%
Permanent Power Connection	01-Aug-19	30-Sep-19				
Submission of Resource Plan including Mobilization plan	12-Oct-17	19-Feb-18	100%	100%		100%
Setting up of temporary site office	11-Nov-17	18-Feb-18	100%	100%		100%
Removal of debris & Shrubs	11-Nov-17	19-Feb-18	100%	100%		100%
Bore well construction	11-Nov-17	19-Feb-18	100%	100%		100%
Other temporary execution	20-Feb-18	11-Mar-18	100%	100%		100%
Topographical / Soil Investigation	11-Nov-17	20-Dec-17	100%	100%		100%
Condition Precedent required to be satisfied by Concessionaire	12-Oct-17	19-Feb-18	100%	100%		100%
Condition Precedent required to be satisfied by Jal Nigam	12-Oct-17	19-Feb-18	100%	100%		100%
Condition Precedent required to be satisfied by NMCG	12-Oct-17	19-Feb-18	100%	100%		100%
Appointment of Design Consultant	12-Oct-17	09-Jan-18	100%	100%		100%
Submission & Approval of Sub Contracts from UPJN	01-Feb-18	30-Jun-18	100%	50%		50%

2.1.2. Pre-execution activities - Physical progress graph

Pre-execution activities



2.1.3. Design detailed engineering

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Design Detailed Engineering	11-Oct-17	30-Oct-18	90%	64%	2%	65%
PHASE-1 Design, drawings and documentation for basic engineering package	11-Oct-17	07-Feb-18	100.00%	100.00%		100.00%
Basic engineering package	11-Oct-17	08-Jan-18	100%	100%		100%
Approval (BEP)	09-Jan-18	07-Feb-18	100%	100%		100%
Topographical / soil investigation	11-Nov-17	20-Dec-17	100%	100%		100%
Phase-II D&E (civil, mechanical, electrical, inst. drawings)	10-Jan-18	25-Sep-18	90.000%	62.200%	14%	76.20%
Plant layout / site layout	11-May-18	23-May-18	100%	80%		80%
Disposal pipe layout plan	02-Feb-18	20-Mar-18	100%	80%		80%
Bund Wall	10-Jan-18	18-Feb-18	100%	100%		100%
Inlet chamber with fine screens, grit removal and Parshall flume	20-Mar-18	08-Apr-18	100%	100%		100%
Administrative & security building	09-Apr-18	13-May-18	100%	80%	20%	100%
Air blower & MCC room	15-Mar-18	02-Jun-18	100%	80%	20%	100%
Staff quarters	09-Apr-18	23-May-18	100%	60%	10%	70%
SBR basins & SBR outlet chamber	05-Mar-18	29-Mar-18	100%	100%		100%

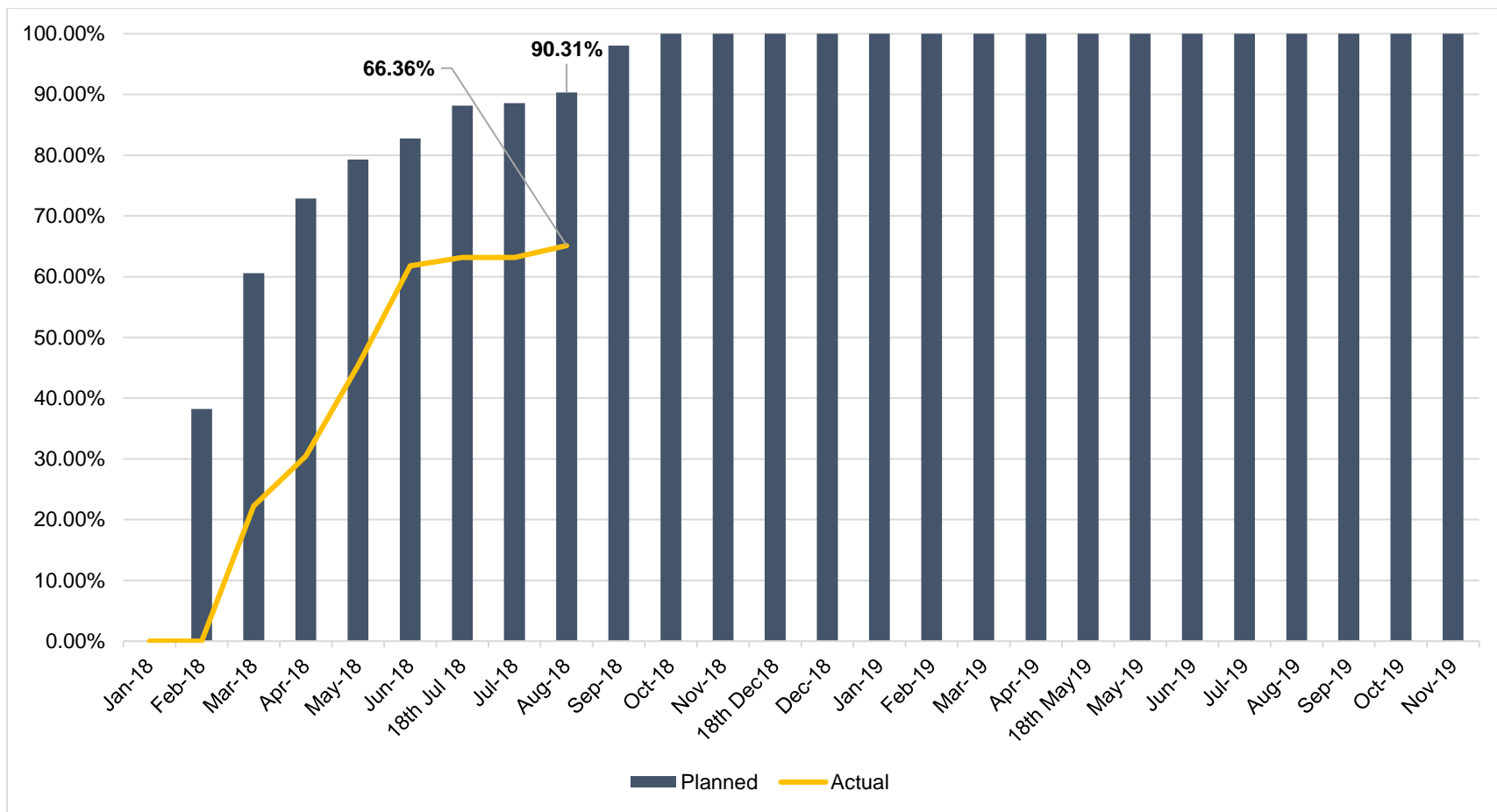
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Chlorine contact tank & treated water collection tank	25-Mar-18	25-Apr-18	100%	100%		100%
Treated water overhead tank	04-Apr-18	28-May-18	100%		50%	50%
Sludge treatment building / BFP	10-Sep-18	25-Sep-18				
Weir across Assi Nalla	05-Mar-18	14-Mar-18	100%		100%	100%
Final outfall chamber	01-Jul-18	18-Jul-18	100%		50%	50%
Raw water receiving chamber	01-Jul-18	18-Jul-18	100%		50%	50%
Electrical control room	01-Jul-18	18-Jul-18	100%		50%	50%
Structural drawings submissions & approvals	02-Feb-18	30-Sep-18	86.00%	61.40%		61.40%
Disposal pipe layout plan	02-Feb-18	20-Mar-18	100%	80%		80%
Inlet chamber with fine screens, grit removal and Parshall flume	20-Mar-18	08-Apr-18	100%	80%		80%
Administrative & security building	09-Apr-18	13-May-18	100%	80%		80%
Air blower & MCC room	15-Mar-18	02-Jun-18	100%	80%		80%
Staff quarters	09-Apr-18	23-May-18	100%	60%		60%
SBR basins & SBR outlet chamber	05-Mar-18	29-Mar-18	100%	100%		100%
Chlorine contact tank & treated water collection tank	25-Mar-18	25-Apr-18	100%	100%		100%
Treated water overhead tank	04-Apr-18	28-May-18	100%			
Sludge treatment building / BFP	10-Sep-18	30-Sep-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 %
Weir across Assi Nalla	05-Mar-18	14-Mar-18	100%			
Final outfall chamber	01-Jul-18	18-Jul-18	100%			
Raw water receiving chamber	06-Sep-18	15-Sep-18				
Electrical control room	06-Sep-18	15-Sep-18				
Design, drawings and documentation for mechanical GAD	13-Feb-18	15-Sep-18	92.63%	45.60%	3.00%	48.60%
Inlet chamber with fine screens, grit removal and Parshall flume	23-Feb-18	19-Mar-18	100%	80%		80%
SBR basins & SBR outlet Chamber	13-Feb-18	04-Mar-18	100%	80%		80%
Chlorine contact tank & treated water collection tank	05-Mar-18	24-Mar-18	100%	80%		80%
Treated water overhead tank	15-Mar-18	03-Apr-18	100%			
Sludge treatment building / BFP	28-Jul-18	16-Aug-18	100%			
Air blower & MCC room	05-Sep-18	15-Sep-18		80%		80%
Weir across Assi nalla	13-Feb-18	04-Mar-18	100%		30%	30%
Final outfall chamber	01-Jul-18	18-Jul-18	100%			
Overall piping drawings	30-May-18	05-Sep-18	94%			
Design, drawings and documentation for electrical & instrumentation works	10-Mar-18	08-Oct-18	70%	29%		29%
Transformer	10-Mar-18	08-Apr-18	100%	80%		80%
DG set	10-Mar-18	08-Apr-18	100%	40%		40%

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 %
Electrical load list	10-Mar-18	08-Apr-18	100%	75%		75%
PCC MCC panels	10-Mar-18	18-Jul-18	100%			
Cables / earthing/ lightning - layout plan, sizing, schedule	15-Sep-18	05-Oct-18				
Cable trays	01-May-18	18-Jul-18	100%			
Flow meters	15-Sep-18	05-Oct-18				
Analysers	15-Sep-18	05-Oct-18				
SLD	19-Mar-18	18-Jun-18	100%			
Design calculation	10-Mar-18	18-Jul-18	100%			
Electrical & instrumentation control philosophy	25-Sep-18	08-Oct-18				
Plant lighting layout plan	25-Sep-18	05-Oct-18				
Gauges	25-Sep-18	05-Oct-18				
Instrumentation document submissions & approvals	01-Jun-18	30-Oct-18	75.0%			
Instrument index / alarm list	01-Jun-18	18-Jul-18	100%			
Instrument hook - up diagram	01-Jun-18	18-Jul-18	100%			
PLC - I/O list, loop wiring diagram, design of SCADA	05-Oct-18	30-Oct-18				
Cause & effect diagram	01-Jun-18	18-Jul-18	100%			

2.1.4. Design detailed engineering - Physical progress graph

Design detailed engineering - Physical progress



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			1%	1%	0.1%	1%
Fine Screen / Coarse Screen / Belt Conveyors	24-May-18	18-Dec-18	2.2%	1.1%		1.1%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	24-May-18	18-Jul-18	100%	50%		50%
Manufacturing of Equipment	17-Sep-18	10-Dec-18				
Inspection / Logistics	08-Dec-18	10-Dec-18				
Receipt of equipment at site	11-Dec-18	18-Dec-18				
Grit Removal Mechanism	24-May-18	10-Mar-19	2.2%	1.1%		1.1%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	24-May-18	18-Jul-18	100%	50%		50%
Manufacturing of Equipment	01-Sep-18	10-Feb-19				
Inspection / Logistics	12-Feb-19	27-Feb-19				
Receipt of equipment at site	28-Feb-19	10-Mar-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 %
SBR System (Decanters)	19-May-18	16-May-19	2.2%	1.8%		1.8%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	19-May-18	18-Jul-18	100%	80%		80%
Manufacturing of Equipment	01-Sep-18	31-Mar-19				
Inspection / Logistics	01-Apr-19	16-Apr-19				
Receipt of equipment at site	17-Apr-19	16-May-19				
Submersible (SAS / RAS/ Filtrate / BFP feed)	31-May-18	18-Dec-18	2.2%	0.9%		0.9%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	31-May-18	18-Jul-18	100%	40%		40%
Manufacturing of Equipment	03-Sep-18	13-Dec-18				
Inspection / Logistics	01-Dec-18	10-Dec-18				
Receipt of equipment at site	14-Dec-18	18-Dec-18				
Horizontal centrifugal pumps (Treated water pumps)	31-May-18	18-Dec-18	2.2%	0.9%	0.2%	1.1%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	31-May-18	25-Jul-18	100%	40%	10%	50%
Manufacturing of Equipment	10-Sep-18	15-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 %
Inspection / Logistics	01-Dec-18	10-Dec-18				
Receipt of equipment at site	16-Dec-18	18-Dec-18				
Air Blowers	01-May-18	18-May-19	2.2%	0.9%	0.2%	1.1%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-May-18	18-Jul-18	100%	40%	10%	50%
Manufacturing of Equipment	01-Sep-18	30-Mar-19				
Inspection / Logistics	31-Mar-19	29-Apr-19				
Receipt of equipment at site	30-Apr-19	18-May-19				
Chlorination System	05-Sep-18	18-May-19		0.9%	0.2%	1.1%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	05-Sep-18	29-Sep-18		40%	10%	50%
Manufacturing of Equipment	01-Oct-18	30-Mar-19				
Inspection / Logistics	01-Apr-19	11-May-19				
Receipt of equipment at site	12-May-19	18-May-19				
Sluice Gates	05-Mar-18	18-Dec-18	2%	1%	0%	1%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	05-Mar-18	18-Jul-18	100%	25%	5%	30%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Manufacturing of Equipment	25-Sep-18	12-Dec-18				
Inspection / Logistics	01-Dec-18	10-Dec-18				
Receipt of equipment at site	13-Dec-18	18-Dec-18				
MS/CS/SS/GI/CI/DI Piping	01-Jan-19	12-Aug-19				
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-Jan-19	15-Feb-19				
Manufacturing of Equipment	01-Mar-19	30-Jul-19				
Inspection / Logistics	31-Jul-19	10-Aug-19				
Receipt of equipment at site	11-Aug-19	12-Aug-19				
Valves	01-Jan-19	12-Aug-19				
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-Jan-19	17-Jan-19				
Manufacturing of Equipment	01-Mar-19	30-Jul-19				
Inspection / Logistics	31-Jul-19	10-Aug-19				
Receipt of equipment at site	11-Aug-19	12-Aug-19				
Motorized Gates at Inlet of SBR	01-May-18	18-May-19	2%	1%		1%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-May-18	30-Aug-18	100%	25%		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 %
Manufacturing of Equipment	11-Jan-19	05-Apr-19				
Inspection / Logistics	07-Apr-19	07-May-19				
Receipt of equipment at site	08-May-19	18-May-19				
Diffusers	12-May-18	23-Apr-19	2%	1%		1%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	12-May-18	14-Jul-18	100%	40%		40%
Manufacturing of Equipment	01-Sep-18	15-Feb-19				
Inspection / Logistics	16-Feb-19	02-Apr-19				
Receipt of equipment at site	03-Apr-19	23-Apr-19				
Volute press	15-Oct-18	13-Jul-19		1%		1%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	15-Oct-18	29-Nov-18		40%		40%
Manufacturing of Equipment	29-Dec-18	30-Jun-19				
Inspection / Logistics	30-May-19	28-Jun-19				
Receipt of equipment at site	01-Jul-19	13-Jul-19				
Air Compressors	01-May-18	18-Aug-19	1%			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-May-18	04-Jul-19	28%			

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Manufacturing of Equipment	05-Jul-19	14-Aug-19				
Inspection / Logistics	15-Aug-19	16-Aug-19				
Receipt of equipment at site	17-Aug-19	18-Aug-19				
PE Dosing Tanks	15-Oct-18	13-Jul-19				
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	15-Oct-18	29-Nov-18				
Manufacturing of Equipment	29-Dec-18	30-Jun-19				
Inspection / Logistics	30-May-19	28-Jun-19				
Receipt of equipment at site	01-Jul-19	13-Jul-19				
Agitators	01-May-18	23-Jul-19	2%			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-May-18	18-Jul-18	100%			
Manufacturing of Equipment	01-Sep-18	08-Jun-19				
Inspection / Logistics	09-Jun-19	08-Jul-19				
Receipt of equipment at site	09-Jul-19	23-Jul-19				
Transformers	02-Jul-18	21-Jul-19	2.2%		0.7%	0.7%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	02-Jul-18	18-Jul-18	100%		30%	30%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Manufacturing of Equipment	19-Dec-18	15-Jun-19				
Inspection / Logistics	25-Jun-19	30-Jun-19				
Receipt of equipment at site	01-Jul-19	21-Jul-19				
HT cables	29-Sep-18	26-Jul-19				
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	29-Sep-18	09-Nov-18				
Manufacturing of Equipment	01-Mar-19	30-Jun-19				
Inspection / Logistics	05-Jul-19	15-Jul-19				
Receipt of equipment at site	16-Jul-19	26-Jul-19				
MCC panel	23-Jun-18	16-Aug-19	2%			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	23-Jun-18	27-Jul-18	100%			
Manufacturing of Equipment	01-Jan-19	30-Jun-19				
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
HT Panel	07-Sep-18	16-Aug-19				
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-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 %
Manufacturing of Equipment	01-Jan-19	30-Jun-19				
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
PLC Panel	07-Sep-18	16-Aug-19				
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18				
Manufacturing of Equipment	01-Jan-19	30-Jun-19				
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
SCADA System	07-Sep-18	16-Aug-19				
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18				
Manufacturing of Equipment	01-Jan-19	30-Jun-19				
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
MLDB, LDB,& SLDBS	07-Sep-18	16-Aug-19				
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18				

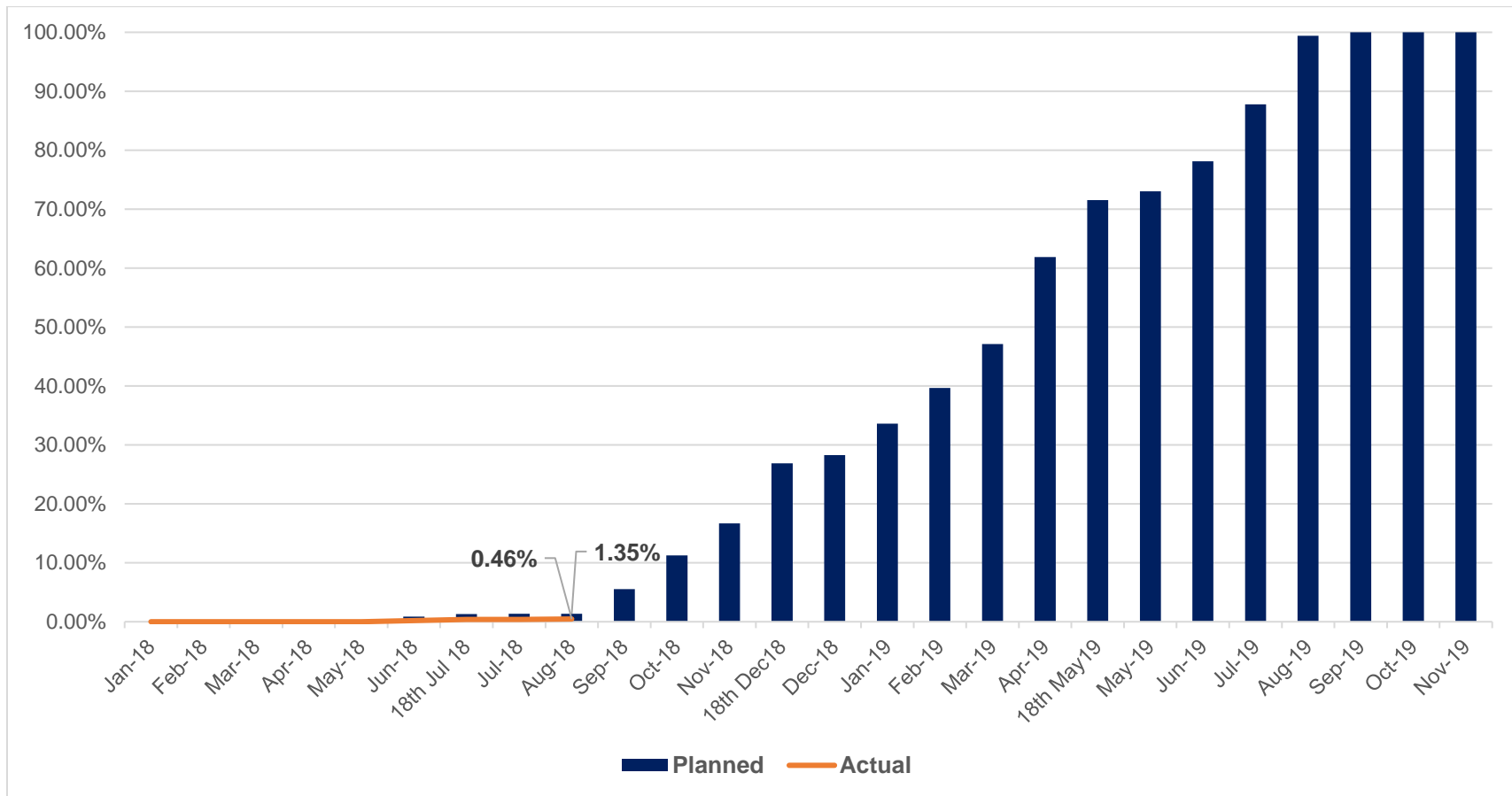
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Manufacturing of Equipment	01-Jan-19	30-Jun-19				
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
Push Button Stations/Plant lighting / Buildings lighting	07-Sep-18	16-Aug-19				
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18				
Manufacturing of Equipment	01-Jan-19	30-Jun-19				
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
Power, Control & lighting Cables	07-Sep-18	16-Aug-19				
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18				
Manufacturing of Equipment	01-Jan-19	30-Jun-19				
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
Cable trays/Lighting JB	07-Sep-18	16-Aug-19				
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-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 %
Manufacturing of Equipment	01-Jan-19	30-Jun-19				
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
DG Set	07-Sep-18	16-Aug-19			1%	1%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18			30%	30%
Manufacturing of Equipment	01-Jan-19	30-Jun-19				
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
Plant Earthing	07-Sep-18	16-Aug-19			1%	1%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18			60%	60%
Manufacturing of Equipment	01-Jan-19	20-Jun-19				
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
Instruments (Flow meter / Analyser)	20-Nov-18	16-Aug-19				
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	20-Nov-18	15-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 %
Manufacturing of Equipment	18-Mar-19	30-Jun-19				
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
Instruments (Temperature, Pressure & Level transmitter / Level, Temperature and Pressure switches)	20-Nov-18	05-Sep-19				
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	20-Nov-18	15-Dec-18				
Manufacturing of Equipment	18-Mar-19	30-Jul-19				
Inspection / Logistics	01-Aug-19	30-Aug-19				
Receipt of equipment at site	31-Aug-19	05-Sep-19				

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

Procurement - Physical progress



2.1.7. New construction units

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Civil Executions	6-Apr-18	15-Aug-19	51%	23%	7%	29%
Bund Wall / Earthen Embankment	19-Feb-18	30-Aug-19	51.3%	48.6%	2.4%	51.0%
Excavation	19-Feb-18	8-May-18	100%	100%		100%
Filling & Compaction of Bund Wall up to 1.0 Mtr Height	10-Apr-18	8-Jul-18	100%	100%		100%
Filling & Compaction of Bund Wall from 1.0 to 2.0 Mtr Height	9-Jul-18	25-Oct-18	48%	31%	16%	46%
Filling & Compaction of Bund Wall from 2.0 to 3.0 Mtr Height	1-Oct-18	29-Nov-18				
Filling & Compaction of Bund Wall from 3.0 to 4.5 Mtr Height	7-Nov-18	18-Dec-18				
Stone Pitching work, Side Drain Work & Fencing work	20-May-19	30-Aug-19				
Construction of Inlet Structure, Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for SBR	3-Jun-18	30-Jun-19	50.0%	17.0%		17.0%
Excavation	3-Jun-18	12-Jun-18	100%	85%		85%

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 %
PCC & RCC of Footing	13-Jun-18	18-Jul-18	100%			
Inlet Chamber Slab with Column, Wall	20-Sep-18	15-Dec-18				
Grit Chamber Slab with Column	1-Dec-18	28-Feb-19				
Parshall flume slab with Column	1-Mar-19	30-Mar-19				
Hydrotesting including finishing works	1-Jun-19	30-Jun-19				
SBR Basins & SBR outlet Chamber	9-Apr-18	15-Jul-19	60.6%	21.4%	10.1%	31.5%
Excavation	9-Apr-18	7-Jun-18	100%	99%		99%
PCC & Raft RCC at 72.00 level	10-Apr-18	29-Jul-18	100%	46%	19%	65%
Wall 1st Lift	5-Jun-18	30-Aug-18	100%		17%	17%
Wall 2nd Lift	7-Jun-18	5-Sep-18	93%		20%	20%
Wall 3rd Lift	24-Sep-18	15-Jan-19				
Wall Final Lift	7-Feb-19	6-Apr-19				
Walkways and Channels	6-Apr-19	11-May-19				
Hydrotesting	20-May-19	15-Jul-19				
Construction of CCT including Chlorination room & Treated water pump House	26-Apr-18	24-Aug-19	45.8%	13.9%	8.3%	22.2%
Excavation	26-Apr-18	4-Jul-18	100%	100%		100%
PCC & Raft RCC	15-May-18	25-Jul-18	100%	19%	42%	61%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
50% RCC of Structure	20-Jun-18	10-Oct-18	63%			
50% RCC of Structure	20-Jan-19	18-May-19				
Completion of Brick work and Plaster	6-Apr-19	30-Jul-19				
Hydrotest including finishing works	9-Aug-19	24-Aug-19				
Final Outfall Chamber	19-May-19	3-Aug-19				
Excavation, Dressing, Filling G & PCC	19-May-19	23-May-19				
Foundation and Raft	29-May-19	17-Jun-19				
Wall & Super Structure	18-Jun-19	18-Jul-19				
Hydrotesting & finishing works	19-Jul-19	3-Aug-19				
Overhead Treated water Tank	1-Jun-18	1-Aug-19	30.0%			
Excavation	1-Jun-18	5-Jun-18	100%			
PCC & Raft RCC	11-Jun-18	18-Jul-18	100%			
50% RCC of Structure	9-Oct-18	18-Dec-18				
50% RCC of Structure	25-Feb-19	6-May-19				
Finishing Works	19-Jun-19	1-Aug-19				
Construction of BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank	15-Oct-18	13-Jul-19				
Excavation	15-Oct-18	30-Oct-18				

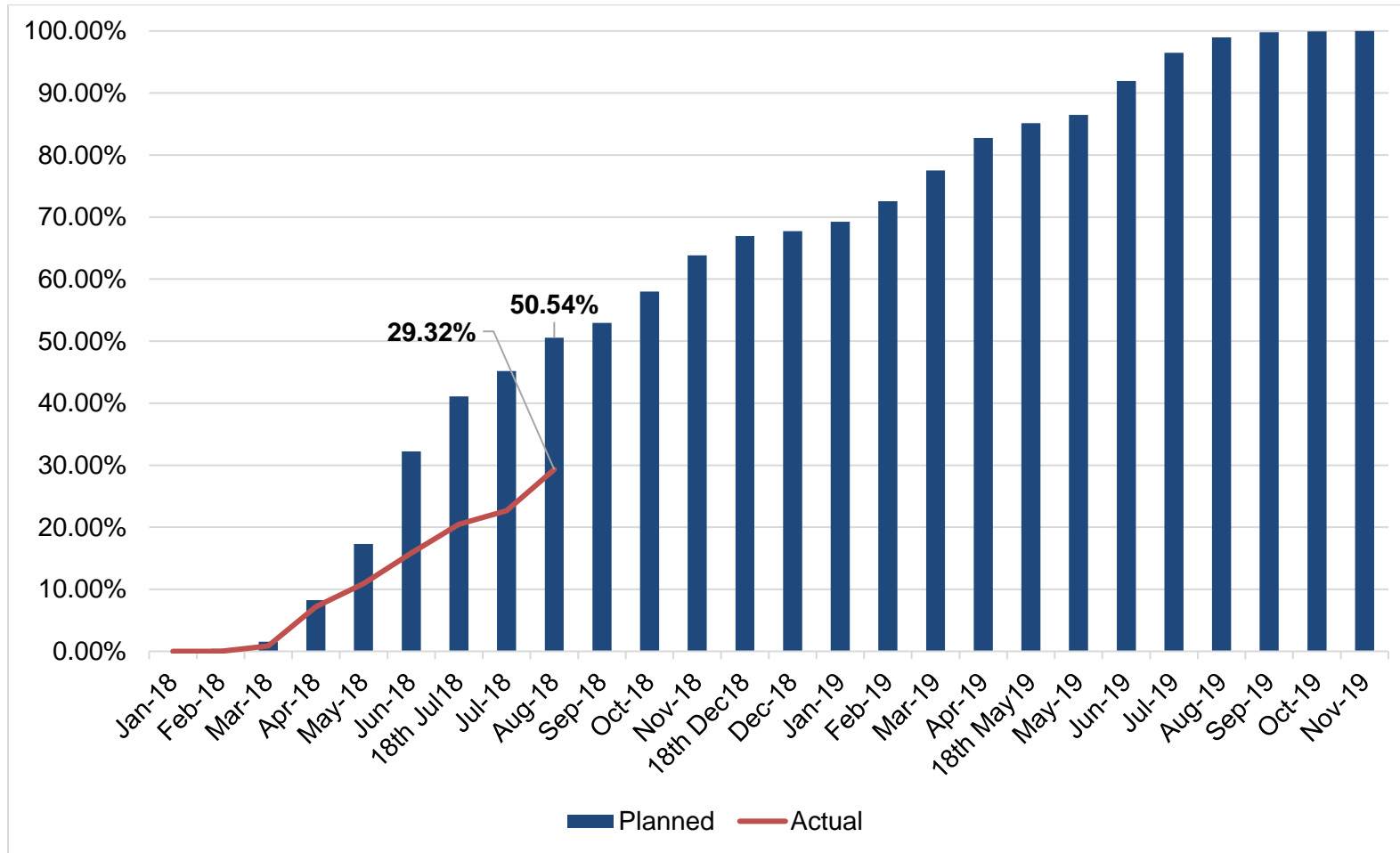
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
PCC & Raft RCC	1-Nov-18	18-Dec-18				
50% RCC of Structure	18-Jan-19	18-Mar-19				
50% RCC of Structure	19-Mar-19	17-May-19				
Completion of Brick work and Plaster	19-Apr-19	18-May-19				
Finishing Works	20-May-19	13-Jul-19				
Administrative Building including lab and workshop	3-Feb-18	11-Jul-19	44.6%	10.0%	16.2%	26.2%
Excavation	8-Jun-18	17-Jun-18	100%	100%		100%
PCC & Raft RCC	18-Jun-18	18-Jul-18	100%		81%	81%
50% RCC of Structure	16-Oct-18	18-Dec-18				
50% RCC of Structure	3-Feb-18	7-Apr-19	49%			
Completion of Brick work and Plaster	8-Apr-19	17-May-19				
Finishing Works	28-May-19	11-Jul-19				
Staff Quarters	8-Jun-18	16-Nov-19	30.0%			
Excavation	8-Jun-18	17-Jun-18	100%			
PCC & Raft RCC	11-Jun-18	18-Jul-18	100%			
50% RCC of Structure	20-May-19	9-Jul-19				
50% RCC of Structure	9-Jul-19	28-Aug-19				

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Completion of Brick work and Plaster	28-Aug-19	27-Sep-19				
Finishing Works	27-Sep-19	16-Nov-19				
Roads, Drainage & Fire Fighting system	3-Jun-19	31-Aug-19				
Roads work & Fire fighting	3-Jun-19	1-Aug-19				
Drainage Works	18-Jun-19	22-Aug-19				
Landscaping & Finishing	18-Jun-19	31-Aug-19				
Construction of Blower room, HT, MCC, Transformer Yard, DG set Area	3-Jun-18	29-Aug-19	30.0%	6.0%		6.0%
Excavation	3-Jun-18	2-Jul-18	100%	60%		60%
PCC & RCC of Footing	3-Jul-18	18-Jul-18	100%			
RCC up to Plinth	15-Sep-18	11-Oct-18				
RCC up to Lintel Beams	15-Oct-18	15-Nov-18				
RCC Roof Slab	16-Nov-18	18-Dec-18				
Brick Work	1-Jan-19	21-Mar-19				
Plastering	22-Mar-19	15-May-19				
Painting & Finishing	15-Jun-19	29-Aug-19				
Mechanical Installation	1-Aug-19	30-Aug-19				
Erection of Mechanical Equipment	1-Aug-19	30-Aug-19				

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

2.1.8. New construction units - Physical progress graph

Construction activities – Physical progress



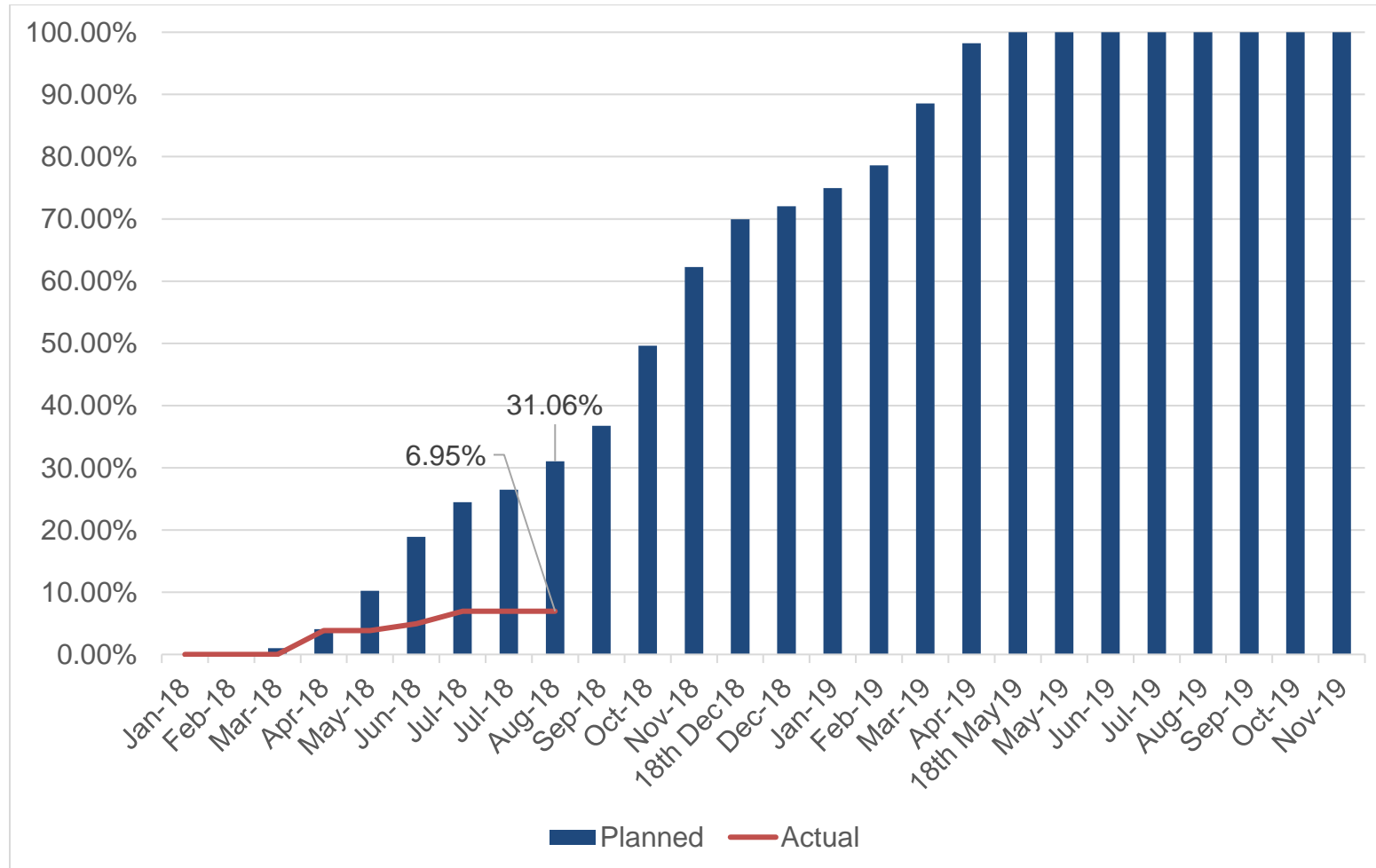
2.1.9. Associated works

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	20-Mar-18	18-May-19	31.06%	6.95%		6.95%
MPS Pumping Station	15-May-18	30-Apr-19	25.29%	7.30%		7.30%
Rehabilitation of MPS	15-May-18	30-Apr-19	31%			
Construction of Weir across Assi Nalla & Control room	13-Oct-18	30-Jan-19				
Desilting of the MPS	15-May-18	28-Aug-18	100%	73%		73%
Repair of Equipment	1-Jan-19	30-Mar-19				
Raising of height of Nalla tapping structure upto HFL	1-Apr-19	30-Apr-19				
Rising Main	15-Jun-18	25-Mar-19	19.03%			
Desilting & CCTV inspection	15-Jun-18	18-Jul-18	100%			
Strengthening and Pipe protection of Rising main Extension of existing Rising main to the Inlet point at the STP site	10-Oct-18	30-Jan-19				
Shifting & laying of Pipe near Samne Ghat bridge	13-Jul-18	15-Jan-19	26%			
Hydrotesting of the PSC	15-Feb-19	25-Mar-19				
Treated Effluent disposal line	20-Mar-18	18-May-19	33.44%	7.95%		7.95%

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 - supply of pipes including inspection, transportation and delivery at site	20-Mar-18	26-Dec-18	58%	18%		18%
Pipe laying - 20% including excavation and backfilling	9-May-18	18-Jul-18	100%	15%		15%
Pipe laying - 20% including excavation and backfilling	25-Sep-18	5-Nov-18				
Pipe laying - 20% including excavation and backfilling	6-Nov-18	18-Dec-18				
Pipe laying - 20% including excavation and backfilling	20-Feb-19	29-Mar-19				
Pipe laying - 20% including excavation and backfilling	30-Mar-19	6-May-19				
Hydrotesting & finishing works	14-Jun-18	18-May-19	23%			

2.1.10. Associated works - Physical progress graph

Associated infrastructure – Physical progress



2.1.11. Overall progress : 16.57%

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. Concessionaire agreed to deploy additional resources in order to achieve the second mile stone within the targeted date including the delay occurred
2. Recovery plan yet to be submitted by the concessionaire (assured to submit on or before 31st August 2018) as per the revised construction plan agreed between the parties
3. The additional resources required to meet the backlog on or before 31st August 2018 (As confirmed by the concessionaire during the meeting on 29th August 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 sub-contractors 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
13. Approval from IIT, BHU for electro mechanical drawings is delayed for more than the month

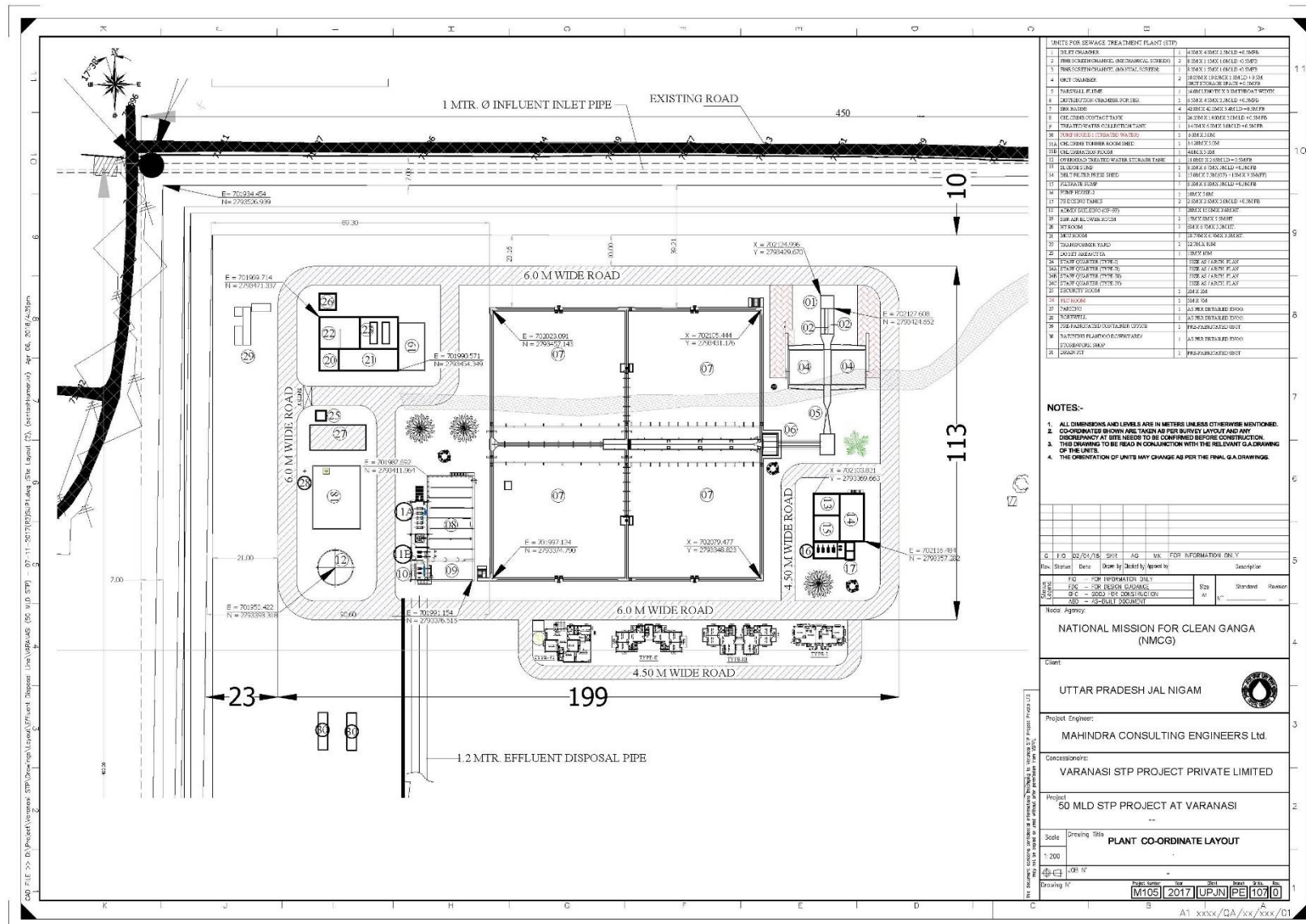


Figure 2: Development of sewage treatment plant and associated infrastructure under Hybrid Annuity based PPP mode at Varanasi

3.0. PROJECT ENGINEER ACTIVITIES

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 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"> a. Work schedule b. Detailed survey report c. Basic engineering d. Detailed design and drawings for 	Yes	<ul style="list-style-type: none"> • Delay analysis & recovery plan • ESHS target & achievement 	<ul style="list-style-type: none"> • Delay analysis • Remaining GA and structural drawings of civil structures

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 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"> • Manual & Mechanical screen • MPS & Treated water pump • Recovery plan • Chlorinator • Earthing design calculation • Coarse screen • Review of sub-contractor submitted by VSPPL • EOT requested by VSPPL • Grit removal system • Blower • Volute press 	<ul style="list-style-type: none"> • QAP and data sheet for remaining mechanical, electrical and instrumentation items. • PSC pipe inspection

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
			<ul style="list-style-type: none"> • QAP for DG set for STP & MPS • GAD, QAP & data sheet for Gate 	
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
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

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
4.1 (x)	Review, inspection and monitoring of O&M	NA	NA	NA
4.1 (xi)	Determining, as required under the Concession Agreement, the costs of any works or services and/or their reasonableness	NA	NA	NA
4.1 (xii)	Determining, as required under the Concession Agreement, the period or any extension thereof, for performing any duty or obligation	NA	NA	NA
4.1 (xiii)	Determining the events of default and guidance on consequent termination notices and payment as detailed in clauses 16.1 to 16.5 of the Concession Agreement	NA	NA	NA
4.1 (xiv)	Determine deficiencies in the commissioning & trial runs; prepare the final acceptance document for acceptance of commissioning & trial runs. Prepare & Issue Commercial Operation certificate through Uttar Pradesh Jal Nigam	NA	NA	NA
4.1 (xv)	Any other matter which is not specified in ((vi), (vii), or (viii) above and which creates an obligation or liability on the Employer / NMCG beyond the provisions of the Concession Agreement	NA	NA	NA

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
4.1 (xvi)	The Project Engineer shall submit regular periodic reports, as specified in the Concession Agreement to Uttar Pradesh Jal Nigam and NMCG, in respect of its duties and functions under the Concession Agreement	Monthly progress report	Monthly progress report	Preparation and review of monthly progress report
4.1 (xvii)	The Project Engineer shall aid and advise the Employer on any proposal for variation under Article 20 of the Concession Agreement	NA	NA	NA
4.1 (xviii)	Assisting the Parties in resolution of Disputes	NA	NA	NA
4.1 (xix)	Assisting the employer in the fulfilment of Hand back requirements as detailed in clause 19.3 of the Concession Agreement		NA	NA
4.1 (xx)	Undertaking all other duties and functions in accordance with this agreement	As mentioned above	As mentioned above	As mentioned above
4.2	The Project Engineer shall discharge its duties in an efficient manner, consistent with the highest standards of professionalism and 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	Yes	Yes	Yes

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

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
4.3(vi)	Maintains the safety and security of personnel, material and property at the Site, in accordance with the approved EHS Plan, Applicable Laws and Applicable Permits; &	Yes	Yes	Yes
4.3(vii)	Ensures that all waste materials and hazardous substances are stored and/or disposed in accordance with the EHS Plan, Applicable Laws and Applicable Permits.	Yes	Yes	Yes
4.4	Overall, The Project Engineer shall assist the Uttar Pradesh Jal Nigam in supervising the construction, rehabilitation, operation & maintenance of the Facilities and the Associated Infrastructure and shall work 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,	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: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
	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			
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:	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
	a) Conduct kick off meeting, scrutiny of contractors submittals b) Process description, process calculations and hydraulic calculations; c) List of design codes and standards; d) Master drawing schedule; e) Drainage design; f) STP Facilities layout; g) Process flow diagram; h) Hydraulic flow diagram; 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

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

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
	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			
6.3	The Project Engineer shall assist the Uttar Pradesh Jal Nigam submit their comments on effectiveness or otherwise of the Work plan submitted for meeting the specified payment milestones and completion of the work on or before the scheduled construction completion date	Yes	Yes	Yes
6.4	The Project Engineer shall review, in particular, the submissions by the Concessionaire as per Schedule 1 of the Concession Agreement, and assist Uttar Pradesh Jal Nigam in assessing the effectiveness them	Yes	Yes	Yes
6.5	The Project Engineer shall review the monthly progress report furnished by the Concessionaire and send its comments thereon to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 7 (seven) days of receipt of such report	Yes	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	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
	submit a report of such inspection (the “Inspection Report”), preferably after receipt of the monthly progress report from the Concessionaire, but before the 20th (twentieth) day of each month in any case. The report shall contain, an overview of the status, progress, quality and safety of construction, including the work methodology adopted, the materials used and their sources, and conformity of Construction Works with the Scope of the Project and the Specifications and Standards. In a separate section of the Inspection Report, the Project Engineer shall describe in reasonable detail the lapses, defects or deficiencies observed by it in the construction of the Project. The Project Engineer shall send a copy of its 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

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
6.8	For determining that the Construction Works conform to Specifications and Standards, the Project Engineer shall require the Concessionaire to carry out, or cause to be carried out, tests on a sample basis, to be specified by the Project Engineer in accordance with approved norms/Good Industry Practice for quality assurance. The Project Engineer shall issue necessary directions to the Concessionaire for ensuring that the tests are conducted in a fair and efficient manner, and shall monitor and review the results thereof	Yes	Yes	Yes
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	NA	Yes	Yes

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

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
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 Jal Nigam forthwith, identifying the whole or part of the Construction Works that should be suspended for ensuring safety in respect thereof.	NA	NA	
6.13	In the event that the Concessionaire carries out any remedial measures to secure the safety of suspended works and common public, it may, by notice in writing, require the Project Engineer to inspect such works, and within 3 (three) days of receiving such notice, the Project Engineer shall inspect the suspended works and make a report to the NMCG/ Uttar Pradesh Jal Nigam forthwith, recommending whether or not such suspension may be revoked by the NMCG/ Uttar Pradesh Jal Nigam.	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
6.14	If suspension of Construction Works is for reasons not attributable to the Concessionaire, the Project Engineer shall determine the extension of dates set forth in the project completion schedule, to which the Concessionaire is reasonably entitled, and shall notify the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire of the same	NA	NA	
6.15	Upon reference from the NMCG/ Uttar Pradesh Jal Nigam, the Project Engineer shall make a fair and reasonable assessment of the costs of providing information, works and services and certify the reasonableness of such costs for payment by the NMCG/ Uttar Pradesh Jal Nigam to the Concessionaire	NA	NA	
6.16	The Project Engineer shall aid and advise the Concessionaire in preparing the Operation & Maintenance Manual	NA	NA	
6.17	Upon reference from the NMCG/ Uttar Pradesh Jal Nigam the Project Engineer shall undertake the assessment of cost of civil works, as per applicable schedule of rates, for the reduction of Scope of work if	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
	any as per Article 20.			
6.18	The Project Engineer shall review the construction progress as per payment milestones proposed by the concessionaire and provide necessary recommendation/s to Uttar Pradesh Jal Nigam for issuance of 'Milestone Construction Certificates'	NA	NA	
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	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
	received by the Project Engineer for its review and comments during the Operation Period, the provisions of Paragraph 4 shall apply, mutatis mutandis			
7.2	<p>The Project Engineer shall review the O&M Manual (Clause 8.2) and the Scheduled Maintenance Programme submitted by the concessionaire and provide its recommendations on the same, including suggestions for change, if any.</p> <p>The O&M Manual shall cover:</p> <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; 	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
	l) Management of Assets Plans. And m) Annual Scheduled Maintenance programme.			
7.3	The Project Engineer shall review the annual Maintenance Program furnished by the Concessionaire and send its comments thereon to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 10 (ten) days of receipt of the Maintenance Program	NA	NA	
7.4	The Project Engineer shall review the reports generated from online monitoring systems to assess adherence to KPIs and submit the 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	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
	submitted by the concessionaire on the tests conducted at the Inlet Point, the Outlet Point or at any other point at the Varanasi STP for the Digested Sludge. Separately, the Project Engineer shall also have the right to take random samples of the incoming Sewage, the Digested Sludge and the Treated Effluent at any time during the O&M 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	NA	NA	

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

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
	accordance with the Concession Agreement, and shall also determine the Damages, if any, payable by the Concessionaire to the NMCG/ Uttar Pradesh Jal Nigam for such delay.			
7.13	The Project Engineer shall monitor and review the curing of defects and deficiencies by the Concessionaire.	NA	NA	
7.14	In the event that the Concessionaire notifies the Project Engineer of any modifications that it proposes to make to the project, the Project Engineer shall review the same and send its comments to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 15 (fifteen) days of receiving the proposal.	NA	NA	
7.15	The Project Engineer shall undertake sewage flow sampling, as and when required by the NMCG/ Uttar Pradesh Jal Nigam, under and in accordance with the provisions of this agreement	NA	NA	
7.16	The Project Engineer shall review and report to the employer on all the reports (Daily, Monthly, Quarterly and Annual), including monthly Environmental	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
	Monitoring Reports as detailed in Schedule 11(Part G) of the Concession Agreement.			
7.17	The Project Engineer shall provide necessary training/capacity building to the operators/technicians of the STP, as and when required, so as to address the gap in skill sets of the manpower deployed by the Concessionaire	NA	NA	
9.1	The Project Engineer shall determine the costs, and/or their reasonableness, that are required to be determined by it under the Concession Agreement	NA	NA	
9.2	The Project Engineer shall determine the period, or any extension thereof, that is required to be determined by it under the Concession Agreement	NA	NA	
10.1	When called upon by either Party in the event of any Dispute, the Project Engineer shall 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	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
	reasoned written statement relying on good industry practice and authentic literature			
11.0	As and when requested by NMCG/ Uttar Pradesh Jal Nigam, the Project Engineer shall provide its opinion and assessment on the events related to Emergency, Change in Law, Force Majure, Minor or total Casualties, Variation and unforeseen Site conditions etc	NA	NA	
12.1	The Project Engineer shall notify its programme of inspection to the NMCG/ Uttar Pradesh Jal Nigam and to the Concessionaire, who may, in their discretion, depute their respective representatives to be 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	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
	'as-built' Drawings, and keep them in its safe custody.			
12.4	Upon completion of its assignment hereunder, the Project Engineer shall duly classify and list all Drawings, Documents, results of tests and other relevant records, and hand them over to the NMCG/ Uttar Pradesh Jal Nigam or such other person as the NMCG/ Uttar Pradesh Jal Nigam may specify, and obtain written receipt thereof. Two copies of the said documents shall also be furnished in their editable digital format or in such other medium or manner as may be acceptable to the NMCG/Uttar Pradesh Jal Nigam	Yes	Yes	Yes
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,	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
	Construction and maintenance and operation of the Facility in accordance with the provisions of the Concession Agreement and other schedules. Any failure of the Project Engineer in notifying to the Employer and the Concessionaire on non-compliance of the provisions of the Concession Agreement and other schedules by the Concessionaire, non-adherence to the 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	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
	conferences which will be held at the office of the Uttar Pradesh Jal Nigam / NMCG. Uttar Pradesh Jal Nigam / NMCG may, in its discretion, require the Project Engineer to participate in extended meetings and/ or work from the offices of Uttar Pradesh 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	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: July 2018 to August 2018		
		Undertaken till previous month - July 2018	Undertaken during this month - August 2018	Expected for next month September 2018
	communications. This may take the form of telephone/teleconferencing, emails, and occasional meetings.			
15.3	The Deliverables will be submitted as per schedule provided in this RFP	Yes	Yes	Yes

4.0. MEETINGS

Project Engineer undertaken and planned services.

Sl. No.	Services	Undertaken by	Period: August 2018	Period: September 2018
			Description	Expected for next month
1	Site inspection	GM, CE & Project Manager, UPJN	06/08/2018	Project review meeting and site inspection
2	Site inspection	Team members, State Ganga River Conservation Agency	17/08/2018	
3	Site inspection and progress review meeting	GM, Project Manager, UPJN	24/08/2018	
4	Site inspection, Progress review & review of construction plan Rev 7 meeting	GM, Project Manager, UPJN & Senior Engineers (MACE)	29/08/2018	

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	13.57%	3.00%	16.57%	Physical progress observed to be very slow and needs to be accelerated by Concessionaire.

ANNEX - 2

FINANCIAL STATEMENTS

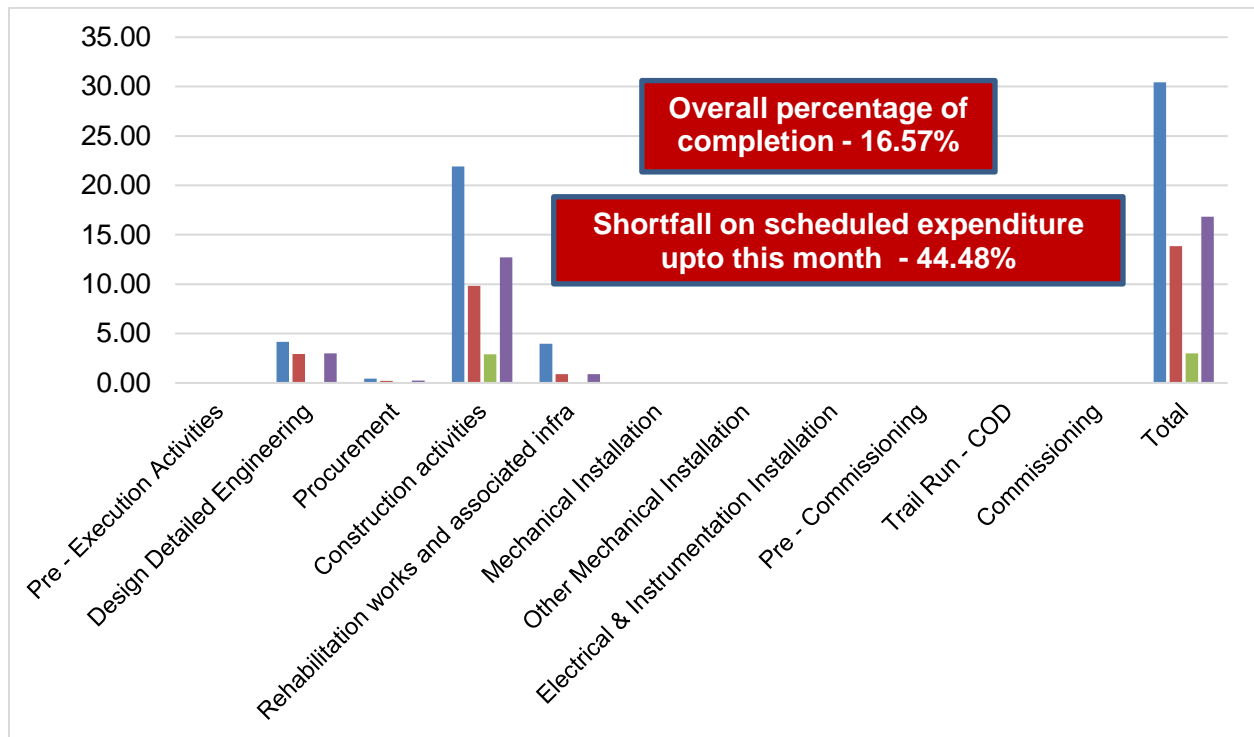
ANNEX 2 - FINANCIAL STATEMENTS

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)	4,590,000	3,172,200	7,14,000	3,886,200
Topographical / Soil Investigation	5,100,000	5,100,000	-	5,100,000
Structural drawings submissions & approvals	10,965,000	7,828,500	446,250	8,274,750
Mechanical & piping drawings submissions & approvals	9,448,531	4,651,200	306,000	4,957,200
Electrical drawings submissions & approvals	1,785,000	745,875	-	745,875
Instrumentation document submissions & approvals	1,912,500	-	-	-
Associated				
MPS pumping station	2,579,143	744,600	-	744,600
Rising Main	2,911,935	-	-	-
Treated Effluent disposal line	34,110,375	8,113,228	-	8,113,228
Equipment procurement, logistics and receipt of equipment at Site				
Fine Screen / Coarse Screen / Belt Conveyors	226,667	113,333	-	113,333
Grit Removal Mechanism	226,667	113,333	-	113,333
SBR System (Decanters)	1,133,333	906,667	-	906,667
SAS / RAS pumps/booster pumps / treated water pumps / drain pumps	226,667	90,667	-	90,667

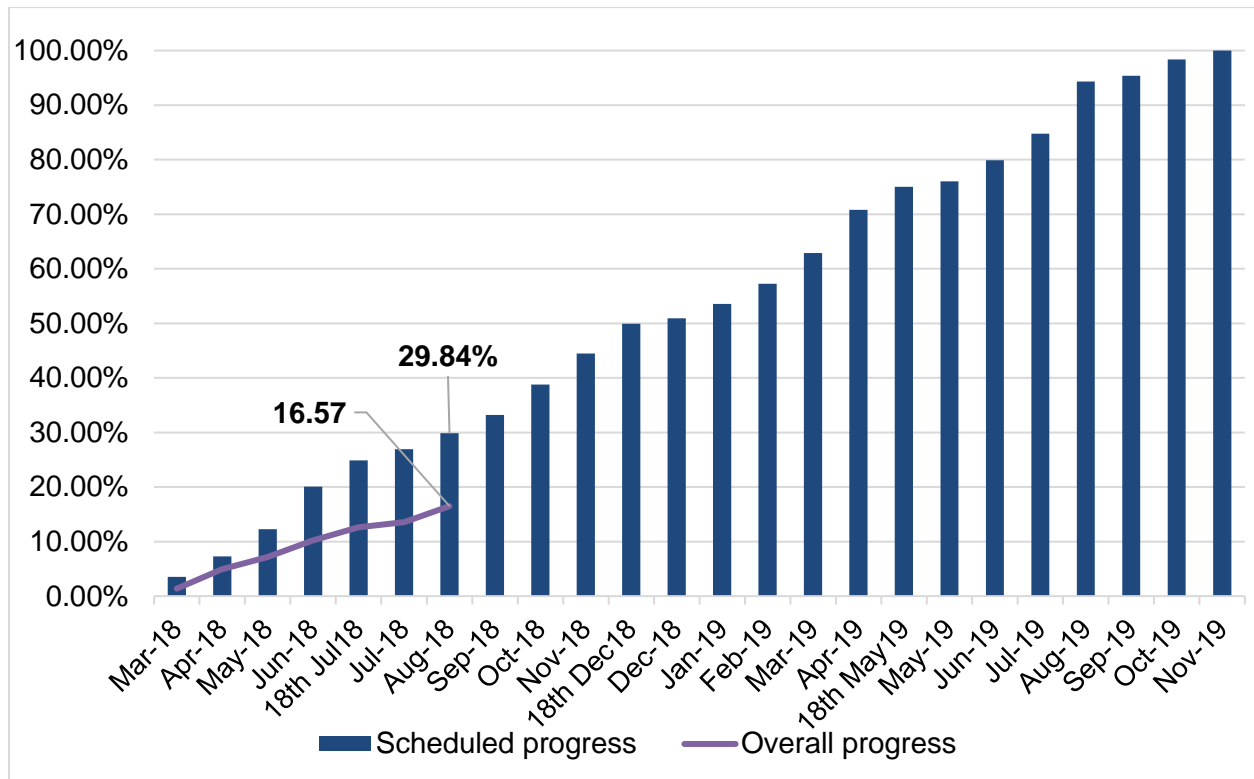
Item of work	Scheduled expenditure in Rs	Completed amount till previous month in Rs	Completed amount during this month in Rs	Total completed amount in Rs
Horizontal centrifugal pumps (Treated water pumps)	453,333	181,333	45,333	226,667
Air blowers	906,667	362,667	90,667	453,333
Chlorination system	-	90,667	22,667	113,333
Sluice Gates	113,333	28,333	5,667	34,000
Motorized Gates at Inlet Of SBR	226,667	56,667	-	56,667
Diffusers	226,667	90,667	-	90,667
Volute press	-	90,667	-	90,667
Air Compressors	63,932	-	-	-
Agitators	170,000	-	-	-
Transformers	113,333	-	34,000	34,000
MCC panel	113,333	-	-	-
DG Set	-	-	34,000	34,000
Plant Earthing	-	-	34,000	34,000
Civil Executions				
Bund Wall / Earthen Embankment	41,838,889	39,646,125	1,996,650	41,642,775
Construction of Inlet Structure, Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for SBR	12,750,000	4,335,000	-	4,335,000
SBR Basins & SBR outlet Chamber	136,000,000	48,123,600	22,651,140	70,774,740
Construction of CCT including Chlorination room & Treated water pump House	14,029,554	4,238,100	2,539,800	6,777,900
Overhead Treated Water Tank	765,000	-	-	-

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
Administrative Building including lab and workshop	4,547,103	1,020,000	1,655,256	2,675,256
Staff Quarters	4,590,000	-	-	-
Construction of Blower room, HT, MCC, Transformer Yard, DG set Area	4,590,000	915,399	-	915,399
Total	304,363,628	138,408,827	30,575,429	168,984,257
	Percentage completion of overall project			16.57%

Financial status for the month of August 2018



Progress status scheduled vs Actual - August 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 (August 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	10	10	5	0					** 5 Samples collected from all bund wall (north/ south/ east/ west) excluding previous month (total 10 samples) before compaction and from the site stock plie for the soil classification and MDD /OMC-Test in progress / awaiting for the report
2	Soil compaction test at Site - OMC & Degree of compaction	2720 Part II	253	253	214	39	10	10	6	*4	*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 (August 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	18	35	21	*14	8	8	7	1*	Found acceptable, report attached, witnessed by UPJN/MACE & 1 rejected material sent back to quarry.
2	Concrete ingredients coarse aggregate 10mm down	IS 383-2001	16	20	15	*5	1	1	1	0	Remain same qty of previous month at batching plant, which was passed already.
3	Concrete ingredients fine aggregate 4.75 mm down	IS 383-2001	10	16	13	*3	1	1	1	0	Remain same qty of previous month at batching plant, dumped massive qty which was covered test and found ok.
4	Combined Grading as per approved IIT Mix design	IS 383-2001	**whenever required	4	4	1	**whenever required				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, currently running mix, no issues
5	Harden	IS 516 &	every 50	56	32	6	every 50 M3	36	36	0	18 cubes sent to IIT

S. No.	Description	IS Code	Up to Previous Month				During this month (August 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	
	concrete Compressive strength	IS 456	M3 or part thereof				or part thereof				Varanasi for the 7 & 28 days test, cube report received from IIT attached copy and Site CTM Recalibration done,(report attached) since 04.08.18 all concrete cubes tested site lab only, report attached
6	OPC Cement 43 Grade	IS 8112-2013	Every consignment or whenever required	1	1	0	Every consignment or whenever required	1			ULTRA TECH SOURCE /MTC Available. Random OPC 43 grade cement collected from godown, awaiting for result.
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	18			TATA STEEL/MTC Available at site for all consignment as of date, 18 samples each diameter (8/10/12/16/20/25) collected for physical and chemical test, sent to IIT BHU, sample witnessed by UPJN/MACE on 24.08.18
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

S. No.	Description	IS Code	Up to Previous Month				During this month (August 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	
9	Water	IS 456 - 2001	6 months once	2	2	0	6 months once	1	1	0	IIT report available, found acceptable/ sampled at site
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	113	110	3	Every alternative truck of concrete mixer	25	25	0	Witnessed MACE/UPJN

3. Treated Effluent disposal line

S. No.	Description	IS Code	Up to Previous Month				During this month (August 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	26 Nos	26 Nos	26 Nos		20 Nos	20 Nos	20 Nos		PSC 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	180 Nos	180 Nos	180 Nos						MTC report available

4. Raising main

S. No.	Description	IS Code	Up to Previous Month				During this month (August 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	87.95 Mtr	87.9 5Mtr	87.9 5Mtr	0	158.8 Mtr	158.8 Mtr	158.8 Mtr	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 (August 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 / bund wall)	BIS 1492	Yearly once	6	6	0	Yearly once	3	3	0	Verification done for all instruments, CTM Site lab recalibration certificates attached & found ok
2	Cube testing Machine	IS 516-2001	Yearly once	1	1	1	Yearly once	1	0	1	
3	Laboratory weighing machine	IS 460-1980	Yearly once	4	4	0	Yearly once	2	2	0	
4	Ready Mix Concrete plant	IS 4926-2013	Whenever required	2	2	0	Whenever required	1	1	0	

ANNEX - 4 PHOTOGRAPHS

ANNEX 4 – PHOTOGRAPHS - SBR basin



RCC Footing Concrete



Wall shuttering



Wall concrete

SBR basin



Side view



PCC

Bund wall



Compaction



Compaction



Compaction testing

ADMIN BUILDING



RCC Footing

ANNEX - 5
OUTWARD CORRESPONDENCE LIST
OF AUGUST 2018

ANNEX 5 - OUTWARD CORRESPONDENCE LIST OF AUGUST 2018

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
1	MACE: P968:8445	02.08.2018	GM, UPJN	NMCG, PM, UPJN	NAs	Approval with comments for manual and mechanical screen
2	MACE: P968:8446	02.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval with comments for MPS pump and treated water pump
3	MACE: P968:8447	02.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Vendor approval for blower
4	MACE: P968:8449	02.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Comments for recovery plan submitted by VSPPL
5	MACE: P968:8450	05.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval with comments for Chlorinator
6	MACE: P968:8451	06.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Additional information required from VSPPL for review of earthing calculation
7	MACE: P968:8452	06.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval with comments for coarse screen
8	MACE: P968:8454	06.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Observation on sub-contractor approval
9	MACE: P968:8455	06.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Observation on request for extension of time requested by VSPPL
10	MACE: P968:8456	06.08.2018	NMCG	GM, UPJN,	NA	Submission of monthly progress

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
				PM, UPJN		report for July'2018.
11	MACE: P968:8457	07.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval with comments for grit removal system
12	MACE: P968:8460	11.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval with comments for submersible pump electro-mechanical & QAP data sheet.
13	MACE: P968:8461	13.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval with comments for raw water receiving chamber GAD
14	MACE: P968:8466	17.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval of Gardener Denver blower make
15	MACE: P968:8467	17.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval of SBS enviro aqua concept – Volute press make.
16	MACE: P968:8468	17.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Request for adopting type of OHT as suggested by VSPPL
17	MACE: P968:8469	18.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval with comments for civil QAP.
18	MACE: P968:8470	19.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Observation on revised construction plan.
19	MACE: P968:8473	20.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval of earthing design document
20	MACE: P968:8475	23.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval & comments on QAP for DG set for

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
						MPS and STP
21	MACE: P968:8476	24.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval of data sheet, drawing and QAP for SBR.
22	MACE: P968:8477	26.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval with comments for MPS Pump.
23	MACE: P968:8478	27.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Observation of GA drawing on OHT
24	MACE: P968:8479	27.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval on QAP of DG set for MPS and STP
25	MACE: P968:8482	29.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Observation of grit removal
26	MACE: P968:8483	31.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Observation on cube test reports
27	MACE: P968:8484	31.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Approval on data sheets of DG set for MPS and STP
28	MACE: P968:8485	31.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval with comments for data sheets, QAP and GAD for mechanical and manual fine screens and conveyor belt.
29	MACE: P968:8486	31.08.2018	GM, UPJN	NMCG, PM, UPJN	NA	Observations on data sheets, QAP and GAD for gate

ANNEX - 6
INWARD CORRESPONDENCE LIST OF
AUGUST 2018

ANNEX 6 - INWARD CORRESPONDENCE LIST OF AUGUST 2018

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
1.	EIL/VSPPL/2018/162	03.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	3	Approval of Sub-contractor PIPL
2.	EIL/VSPPL/2018/163	03.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of data sheets, QAP document and GAD Manual / Mechanical coarse screen
3.	EIL/VSPPL/2018/164	04.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of MPR for July 2018
4.	EIL/VSPPL/2018/165	04.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	4	Submission of Key SLD, SLD for MPS a& STP earthing design calculation for STP
5.	EIL/VSPPL/2018/166	06.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	4	Approval of Gardener & Denver for supply of Air blowers
6.	EIL/VSPPL/2018/167	07.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	4	Revised raw water receiving chamber Mechanical GAD
7.	EIL/VSPPL/2018/168	09.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Dispatch clearance of PSC Pipe – 1200mm dia
8.	EIL/VSPPL/2018/169	09.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Dispatch clearance of MS pipe – 1000mm dia
9.	EIL/VSPPL/2018/170	09.08.2018	VSPPL /	Amit B	Y	2	Submission of data sheets,

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
			UPJN	Ghorpade			GAD and QAP document of submersible pumps
10.	EIL/VSPPL/2018/171	10.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of revised earthing design calculation for STP.
11.	EIL/VSPPL/2018/172	11.08.2018	----	----	N	0	Request for road side cutting for laying PSC pipe line.
12.	EIL/VSPPL/2018/173	14.08.2018	VSPPL / UPJN	Amit B Ghorpade	N	0	Request for approval of Gardner Denver make for Air blowers
13.	EIL/VSPPL/2018/174	14.08.2018	VSPPL / UPJN	Amit B Ghorpade	N	0	Approval of SBS – Amcon make for Volute sludge press.
14.	EIL/VSPPL/2018/175	14.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of GAD and datasheets of Gates
15.	EIL/VSPPL/2018/176	14.08.2018	VSPPL / UPJN	Amit B Ghorpade	N	0	Inspection of PSC pipe 1200mm dia.
16.	EIL/VSPPL/2018/177	15.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	1	Revised Catch-up / construction plan.
17.	EIL/VSPPL/2018/178	16.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Approval of GA drawing of OHT
18.	EIL/VSPPL/2018/179	16.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of Data sheets GAD and QAP of Manual / Mechanical

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
19.	EIL/VSPPL/2018/180	17.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of GAD, Datasheet and QAP for Gate
20.	EIL/VSPPL/2018/181	17.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	5	Submission of Data sheet, GAD and Pump Curves of MPS pipes.
21.	EIL/VSPPL/2018/182	20.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	5	Submission of Datasheet, GAD and P&I of Volute press
22.	EIL/VSPPL/2018/183	21.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Offer for Inspection of PSC Pipe 1200mm dia
23.	EIL/VSPPL/2018/184	22.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	6	Submission of Compliance sheet for submersible pump, lifting chain & guide rail drawings, painting of pump accessories – revised QAP of submersible pumps.
24.	EIL/VSPPL/2018/185	22.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of reply to SBR comments and details.
25.	EIL/VSPPL/2018/186	22.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	8	Submission of comparison study between Triveni BFP, Teknofungi BFP & Volute press for power consumption.
26.	EIL/VSPPL/2018/187	22.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	1	Submission of Datasheet, GAD Synchronisation panel drawing and QAP of 625 KVA

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
							DG set for MPS and STP.
27.	EIL/VSPPL/2018/188	22.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of Mechanical GAD for Weir across Assi Nalla
28.	EIL/VSPPL/2018/189	23.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	1	Request for approval of Subcontractor PIPL
29.	EIL/VSPPL/2018/190	24.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of revised construction plan Rev.7
30.	EIL/VSPPL/2018/191	24.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of Grit removal system replies to MACE comments.
31.	EIL/VSPPL/2018/192	24.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of transformer sizing calculation for MPS and STP.
32.	EIL/VSPPL/2018/193	27.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of Datasheet, GAD Synchronisation panel drawing and QAP of 625 KVA DG set for MPS and STP. Rev. 1
33.	EIL/VSPPL/2018/194	28.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of Cube test report
34.	EIL/VSPPL/2018/195	28.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of treated water pump datasheet, GAD & QAP documents, Rev.1

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
35.	EIL/VSPPL/2018/196	28.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of GAD of Electrical control room (MPS Area) Rev. 0
36.	EIL/VSPPL/2018/197	30.08.2018	VSPPL / UPJN	Amit B Ghorpade	N		Request for permission of road cutting & Traffic diversion for trenchless pipe line work.
37.	EIL/VSPPL/2018/198	30.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of Chlorinator and accessories (datasheet, GAD & QAP) Rev.1
38.	EIL/VSPPL/2018/199	30.08.2018	VSPPL / UPJN	Amit B Ghorpade	Y	1	Request for permission of road side cutting for laying of PSC pipe line.

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	12-Oct-17	30-Sep-19	Topography survey and soil investigation for MPS is pending. Main reason for the delay is lack of planning and delay in receipt of existing structure as built drawings	Concessionaire to carry out the field investigation and submit the topography survey and soil investigation before 15 th September 2018. UPJN to provide the remaining 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	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
			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	
Design Detailed Engineering	11-Oct-17	30-Oct-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>Structural drawings yet to be submitted by the concessionaire.</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. In the month of August 2018, only GA drawing have been submitted and structural drawing are yet to be submitted</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
			Selection of equipment is pending from concessionaire to finalise the foundation drawings.	Concessionaire to submit the drawings on or before 15 th August 2018. And the same is yet to be submitted till date
			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. Data sheet, QAP & Design documents for DG set & Transformer have been submitted partially Earthing calculation sheet submitted for MPS & STP
				However, concessionaire is in the opinion that this activity will be completed by the end of end of October 2018 as per revised construction plan Rev 7 which is yet to be approved by UPJN
Associated infrastructure works	20-Mar-18	18-May-19	Delay in receipt for existing structure as built drawings. and delay in site investigation are the main reason	UPJN to provide the remaining existing structure as built drawings on or before 15 th September 2018.

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 submit the condition assessment report along with drawings on or before 15 th September 2018
			Delay start of desilting activity in MPS	
			Concessionaire yet to finalise the vendor for CCTV inspection of existing rising main	Concessionaire to expedite the completion of the same by 15 th September 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 September 2018
			Manufacturing delay of PSC pipes for treated effluent disposal line. Only 1160 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 15 th September 2018. The jointing portions are kept pending at site
			Problem with local villagers to be	UPJN to sort out the issue of local

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
			sorted out by UPJN. Transportation of inspected pipe from manufacturer to site is delayed	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	24-May-18	5-Sep-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 August 2019 as per revised construction plan Rev 7 which is yet to be approved by UPJN
Civil Executions				
Inlet Chamber Manual & Mechanical Screen Chamber, Grit Chamber & Outlet Channel of Grit Chamber & Parshall Flume (I) & Distribution Chamber of SBR Basin	03-June-18	30-Jun-19	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Approval from IIT was delayed	Concessionaire started 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

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
				activity will be completed by the end of June 2019 as per revised construction plan Rev 7 which is yet to be approved by UPJN
SBR Basins & SBR outlet Chamber	9-Apr-18	15-Jul-19	Lack of sufficient equipment, manpower	Concessionaire is in the opinion that this activity will be completed by the end of July 2019 as per revised construction plan Rev 7 which is yet to be approved by UPJN
Chlorine Contact Tank & Treated Water Collection Tank, Treated water Pumps	26-Apr-18	24-Aug-19	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Delay occurred for getting approval from IIT	Concessionaire started 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 Rev7 which is yet to be approved
SBR air blower room, HT room,	3-Jun-18	29-Aug-19	Drawing submitted by the concessionaire	Concessionaire started the excavation and PCC

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
MCC room, Transformer Yard & DG set area			after the due date indicates the lack of planning. Delay occurred for getting from approval from IIT	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 Rev7 which is yet to be approved
Overhead treated water tank	1-Jun-18	1-Aug-19	Concessionaire recently submitted GA drawing. Structural drawing not yet submitted	However, concessionaire is in the opinion that this activity will be completed by the end of August 2019 as per revised construction plan Rev7 which is yet to be approved by UPJN
Administrative building including lab and workshop	3-Feb-18	11-Jul-19	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Delay occurred for getting from approval from IIT	Concessionaire started the excavation, PCC & RCC laying works. However, concessionaire is in the opinion that this activity will be completed by the end of July 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 Rev 7 which is yet to be approved by UPJN
Staff quarters	8-Jun-18	16-Nov-19	<p>Drawing submitted by the concessionaire after the due date indicates the lack of planning.</p> <p>Delay occurred for getting from approval from IIT</p>	<p>However, concessionaire is in the opinion that this activity will be completed by the end of November 2019 as per revised construction plan Rev 7 which is yet to be approved by UPJN</p>

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

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

S. No.	Description	Estimate		As per construction plan up to 31 st August 2018		Actual work done up to 31 st August 2018		Shortfall as on 31 st August 2018	
		Quantity	Unit	Quantity	Unit	Quantity	Unit	Quantity	Unit
1	Excavation	5330	Cum	5330	Cum	4935.45	Cum	394.55	Cum
2	PCC & RCC	9776	Cum	8676	Cum	4639	Cum	4038	Cum

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

Sl. No.	Description	Required per day		Additional resource required to the fold based on current deployment
1	Ready Mix Concrete	135	Cum	3 times

2.1.2. Additional equipment's required

Sl. No.	Description	Quantity	Unit	Capacity	Unit
1	Transit mixer	5	No	7	Cum
2	Tipper	5	Nos	5.5	Cum
3	Tractor	3	Nos	2.8	Cum
4	Batching Plant	Present output of batching plant has to be increased by three times of the present output to overcome the back log			
5	Concrete Pump	Present output of batching plant has to be increased by three times of the present output to overcome the back log			

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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
Pre - Execution Activities	12-Oct-17	30-Sep-19	80.00%	77.50%		
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 delay on receipt of existing structure as built drawings	Concessionaire to carry out the field investigation and submit the topography survey & soil investigation before 15 th September 2018
Submission & Approval of Sub Contracts from UPJN	1-Feb-18	30-Jun-18	100%	50%	Concessionaire submitted M/s. PIIPL 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 & submit for approval. The revised subcontractor details to be submitted by concessionaire	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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
Design Detailed Engineering	11-Oct-17	30-Oct-18	100%	65%		
Plant Layout / Site layout	11-May-18	23-May-18	100%	80%		There is no delay or progress hampering due to this
Disposal pipe layout plan	02-Feb-18	20-Mar-18	100%	80%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Delay on approval from IIT BHU	Concessionaire started the excavation, Pipe laying works. Due to insufficient manpower & equipment the construction work is delayed
Staff Quarters	09-Apr-18	23-May-18	100%	60%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Delay on approval from IIT BHU	Due to insufficient manpower & equipment the construction work is delayed
Treated water overhead tank	04-Apr-18	28-May-18	100%	50%	Concessionaire is yet to submit Structural drawing.	Concessionaire to submit the structural drawing on or before 15 th September 2018
Weir Across Assi Nalla	05-Mar-18	14-Mar-18	100%	100%	Concessionaire is yet to submit Structural drawing.	Concessionaire to submit the structural drawing on or before 15 th September 2018
Final outfall chamber	01-Jul-18	18-Jul-18	100%	50%	Concessionaire is yet to submit Structural drawing.	Concessionaire to submit the structural drawing on or before 15 th September 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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
Raw water receiving chamber	01-Jul-18	18-Jul-18	100%	50%	Concessionaire is yet to submit Structural drawing.	Concessionaire to submit the structural drawing on or before 15 th September 2018
Electrical control room	01-Jul-18	18-Jul-18	100%	50%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Delay on approval from IIT BHU	Concessionaire started the excavation work. Due to insufficient manpower & equipment the construction work is delayed
Structural Drawings Submissions & Approvals	02-Feb-18	30-Sep-18	86%	61.40%		
Disposal pipe layout plan	02-Feb-18	20-Mar-18	100%	80%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Delay on approval from IIT BHU	Concessionaire started the excavation, Pipe laying works. Due to insufficient manpower & equipment the construction work is delayed
Staff Quarters	09-Apr-18	23-May-18	100%	60%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Delay on approval from IIT BHU	Due to insufficient manpower & equipment the construction work is delayed
Treated water overhead tank	04-Apr-18	28-May-18	100%		Concessionaire is yet to submit Structural drawing.	Concessionaire to submit the structural drawing on or before 15 th September

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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
						2018
Weir Across Assi Nalla	05-Mar-18	14-Mar-18	100%		Concessionaire is yet to submit Structural drawing.	Concessionaire to submit the structural drawing on or before 15 th September 2018
Final outfall chamber	01-Jul-18	18-Jul-18	100%		Concessionaire is yet to submit Structural drawing.	Concessionaire to submit the structural drawing on or before 15 th September 2018
Design, Drawings & Documentation for Mechanical GAD	13-Feb-18	15-Sep-18	92.63%	48.60%		
Inlet Chamber with fine screens, grit removal and Parshall flume	23-Feb-18	19-Mar-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 September 2018.
SBR Basins & SBR outlet Chamber	13-Feb-18	04-Mar-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 September 2018.
Chlorine Contact Tank & Treated Water Collection	05-Mar-18	24-Mar-18	100%	80%	Drawing submitted by the concessionaire after the due date indicates	However concessionaire can start the finalizing the procurement items 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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
Tank					the lack of planning. Approval from IIT is pending	submit the related data sheets for approval on or before 15 th September 2018.
Treated water overhead tank	15-Mar-18	03-Apr-18	100%		Concessionaire is yet to submit design & drawing.	Concessionaire to submit the design drawing on or before 15 th September 2018
Sludge treatment building / BFP	28-Jul-18	16-Aug-18	100%		Concessionaire is yet to submit design & drawing.	Concessionaire to submit the design drawing on or before 15 th September 2018
Weir Across Assi Nalla	13-Feb-18	04-Mar-18	100%	30%	Concessionaire is yet to submit design & drawing.	Concessionaire to submit the remaining design drawing on or before 15 th September 2018
Final outfall chamber	01-Jul-18	18-Jul-18	100%		Concessionaire is yet to submit design & drawing.	Concessionaire to submit the design drawing on or before 15 th September 2018
Overall Piping Drawings	30-May-18	05-Sep-18	94%		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 September 2018.
Design, Drawings and Documentation for Electrical &	10-Mar-18	08-Oct-18	70.00%	29%		

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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
Instrumentation works						
Transformer	10-Mar-18	08-Apr-18	100%	80%	Delayed due to the lack of finalization of equipment's	Concessionaire to speed up the equipment finalization on or before 15 th September 2018
DG set	10-Mar-18	08-Apr-18	100%	40%	Delayed due to the lack of finalization of equipment's	Concessionaire to speed up the equipment finalization on or before 15 th September 2018
Electrical Load List	10-Mar-18	08-Apr-18	100%	75%	Electrical load list submitted by the concessionaire after the due date indicates the lack of planning.	
PCC MCC panels	10-Mar-18	18-Jul-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 September 2018.
Cable trays	01-May-18	18-Jul-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 September 2018.
SLD	19-Mar-18	18-Jun-18	100%		Repeated reminders were made to concessionaire by	Concessionaire to submit the drawings on or before 15 th September 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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
					UPJN. Drawing yet to be submitted by the concessionaire.	
Design calculation	10-Mar-18	18-Jul-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 September 2018.
Instrumentation Document submissions & Approvals	01-Jun-18	30-Oct-18	75%			
Instrument Index / Alarm List	01-Jun-18	18-Jul-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 September 2018.
Instrument Hook - Up Diagram	01-Jun-18	18-Jul-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 September 2018.
Cause & Effect Diagram	01-Jun-18	18-Jul-18	100%		Repeated reminders were made to concessionaire by UPJN. Drawing yet to be	Concessionaire to submit the drawings on or before 15 th September 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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
					submitted by the concessionaire.	
Associated infrastructure works	20-Mar-18	18-May-19	31.06%	6.95%		
MPS Pumping Station	15-May-18	10-Apr-19	25.29%	7.3%		
Rehabilitation of MPS	15-May-18	30-Apr-19	31%	35%	Delay in receipt for existing structure as built drawings. and delay in site investigation are the main reason	UPJN to provide the remaining existing structure as built drawings on or before 15 th September 2018. Concessionaire to submit the condition assessment report along with drawings on or before 15 th September 2018
Desilting of the MPS	15-May-18	28-Aug-18	100%	73%	Due to lack of man power and equipment	Concessionaire need to increase man power and equipment.
Rising Main	15-Jun-18	25-Mar-19	19.03%	0.30%		
Desilting & CCTV inspection	15-Jun-18	18-Jul-18	100%		Concessionaire yet to finalize the vendor and carry out the investigation	Concessionaire to speed up the progress and complete the same by 15 th of September 2018.
Treated Effluent disposal line	20-Mar-18	18-May-19	33.44%	7.95%		

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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
Procurement - supply of pipes including inspection, transportation and delivery at site	20-Mar-18	26-Dec-18	58%	18%	Only 1160 m of pipe inspection completed. Delay in procurement of pipes by the concessionaire.	Concessionaire informed to place the order to two three suppliers.
Pipe laying - 20% including excavation and backfilling	09-May-18	18-Jul-18	100%	15%	Only 1160 m of pipe inspection completed. Delay in procurement of pipes by the concessionaire.	Concessionaire informed to place the order to two three suppliers.
Hydrotesting & finishing works	14-Jun-18	18-May-19	23%			
Equipment Procurement, Logistics and receipt of equipment at Site			1.35%	0.77%		
Fine Screen/Coarse Screen / Belt Conveyors	24-May-18	18-Dec-18	2.2%	1.1%		
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	24-May-18	18-Jul-18	100%	50%	Equipment data sheet to be submitted for approval and mechanical GA drawings, foundation drawings to be finalised	
Grit Removal	24-May-18	10-Mar-19	2.2%	1.1%		

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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
Mechanism						
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	24-May-18	18-Jul-18	100%	50%	Equipment data sheet to be submitted for approval and mechanical GA drawings, foundation drawings to be finalised	
SBR System (Decanters)	19-May-18	16-May-19	2.2%	1.8%		
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	19-May-18	18-Jul-18	100%	80%		
Submersible (SAS / RAS/Filtrate / BFP feed)	31-May-18	18-Dec-18	2.2%	0.9%		
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	31-May-18	18-Jul-18	100%	40%		
Horizontal centrifugal pumps (Treated water	31-May-18	18-Dec-18	2.2%	1.1%		

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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
pumps)						
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	31-May-18	25-Jul-18	100%	50%		
Air Blowers	01-May-18	18-May-19	2.2%	1.1%		
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	01-May-18	18-Jul-18	100%	50%		
Sluice Gates	05-Mar-18	18-Dec-18	2%	1%		
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	05-Mar-18	18-Jul-18	100%	30%		
Motorized Gates at Inlet Of SBR	01-May-18	18-May-19	2%	1%		
Submission & Approval of Drawings / Documents & data	01-May-18	30-Aug-18	100%	25%		

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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
sheets including release of purchase order						
Diffusers	12-May-18	23-Apr-19	2%	1%		
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	12-May-18	14-Jul-18	100%	40%		
Air Compressors	01-May-18	18-Aug-19	1%			
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	01-May-18	04-Jul-19	28%			
Agitators	01-May-18	23-Jul-19	2%			
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	01-May-18	18-Jul-18	100%			
Transformers	02-Jul-18	21-Jul-19	2.2%	0.7%		
Submission & Approval of	02-Jul-18	18-Jul-18	100%	30%		

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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
Drawings / Documents & data sheets including release of purchase order						
MCC panel	23-Jun-18	16-Aug-19	2%			
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	23-Jun-18	27-Jul-18	100%			
Civil Executions	6-Apr-18	15- Aug-19	51%	29%		
Construction of Inlet Structure, Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for SBR	03-Jun-18	30-Jun-19	50%	17%		
Excavation	03-Jun-18	12-Jun-18	100%	85%		
PCC & RCC of Footing	13-Jun-18	18-Jul-18	100%			
SBR Basins & SBR outlet Chamber	09-Apr-18	15-Jul-19	60.6%	31.5%		
Excavation	09-Apr-18	07-Jun-18	100%	99%		
PCC & Raft RCC at 72.00 level	10-Apr-18	29-Jul-18	100%	65%	Lack of sufficient equipment and man	Concessionaire agreed to increase man power 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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
					power to carry out the work.	equipments on or before 31 st August 2018.
Wall 1st Lift	05-Jun-18	30-Aug-18	100%	17%	Lack of sufficient equipment and man power to carry out the work.	Concessionaire agreed to increase man power and equipments on or before 31 st August 2018.
Wall 2nd Lift	07-Jun-18	05-Sep-18	93%	20%	Lack of sufficient equipment and man power to carry out the work.	Concessionaire agreed to increase man power and equipments on or before 31 st August 2018.
Construction of CCT including Chlorination room & Treated water pump House	26-Apr-18	24-Aug-19	45.8%	22.2%		
Excavation	26-Apr-18	04-Jul-18	100%	100%		
PCC & Raft RCC	15-May-18	25-Jul-18	100%	61%	Lack of sufficient equipment and man power to carry out the work.	Concessionaire agreed to increase man power and equipments on or before 31 st August 2018.
50% RCC of Structure	20-Jun-18	10-Oct-18	63%		Lack of sufficient equipment and man power to carry out the work.	Concessionaire agreed to increase man power and equipments on or before 31 st August 2018.
Overhead Treated water Tank	01-Jun-18	01-Aug-19	30%			
Excavation	01-Jun-18	05-Jun-18	100%		Concessionaire is yet to submit design & drawing.	Concessionaire to submit the design drawing on or before 15 th September 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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
PCC & Raft RCC	11-Jun-18	18-Jul-18	100%			
Administrative Building including lab and workshop	03-Feb-18	11-Jul-19	44.6%	26.2%		
PCC & Raft RCC	18-Jun-18	18-Jul-18	100%	81%	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Delay on approval from IIT BHU	Concessionaire started the excavation & PCC laying works. Due to insufficient manpower & equipment the construction work is delayed
50% RCC of Structure	03-Feb-18	07-Apr-19	49%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Delay on approval from IIT BHU	Concessionaire started the excavation & PCC laying works. Due to insufficient manpower & equipment the construction work is delayed
Staff Quarters	08-Jun-18	16-Nov-19	30%			
Excavation	08-Jun-18	17-Jun-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Delay on approval from IIT BHU	Concessionaire started the excavation & PCC laying works. Due to insufficient manpower & equipment the construction work is delayed
PCC & Raft RCC	11-Jun-18	18-Jul-18	100%			
Construction of Blower room, HT, MCC, Transformer	03-Jun-18	29-Aug-19	30%	6%		

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 August 2018	Total completion in % as on 31 st August 2018	Delay analysis	Recovery / Mitigation plan
Yard, DG set Area						
Excavation	03-Jun-18	02-Jul-18	100%		Drawing submitted by the concessionaire after the due date indicates the lack of planning. Delay on approval from IIT BHU	Concessionaire started the excavation & PCC laying works. Due to insufficient manpower & equipment the construction work is delayed
PCC & RCC of Footing	03-Jul-18	18-Jul-18				

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 August 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 August 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 August 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 August 2018
1	Planned General inspection	Conducted	Conducted
2	Routine inspection		
2.1	Daily inspection of plant and equipment by operator	Conducted	Conducted
2.2	Weekly inspection of scaffold by scaffolding supervisor	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 August 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	<p>HSE Bulletin board indicating</p> <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
	Drinking water facility within a distance of 200 m from the	Provided at 04	Provided at 04 locations

Sl. No.	Description	Till previous month	During the month of August 2018
	place of work for all workers	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	
5	15 th August 2018 – Independence Day celebration and Planting of saplings	Conducted	