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

January - 2019

Executing Agency	Funding Agency	Project Engineer	Concessionaire
Uttar Pradesh Jal Nigam, Varanasi - 221 005	**National Mission for Clean Ganga** MoWR, River Development & Ganga Rejuvenation, New Delhi - 110002	**Mahindra Consulting Engineers Limited** Mahindra Towers, No. 17/18, Pattullous Road, Chennai - 600 002, Tamil Nadu, India	**Varanasi STP Project Private Limited** 6th Floor, Plot No. 19, Film City, Sector 16 A, Gautam Buddha Nagar, Noida, Uttar Pradesh - 201 301

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MONTHLY PROGRESS REPORT

1.0. INTRODUCTION

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

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

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

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

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

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

- 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

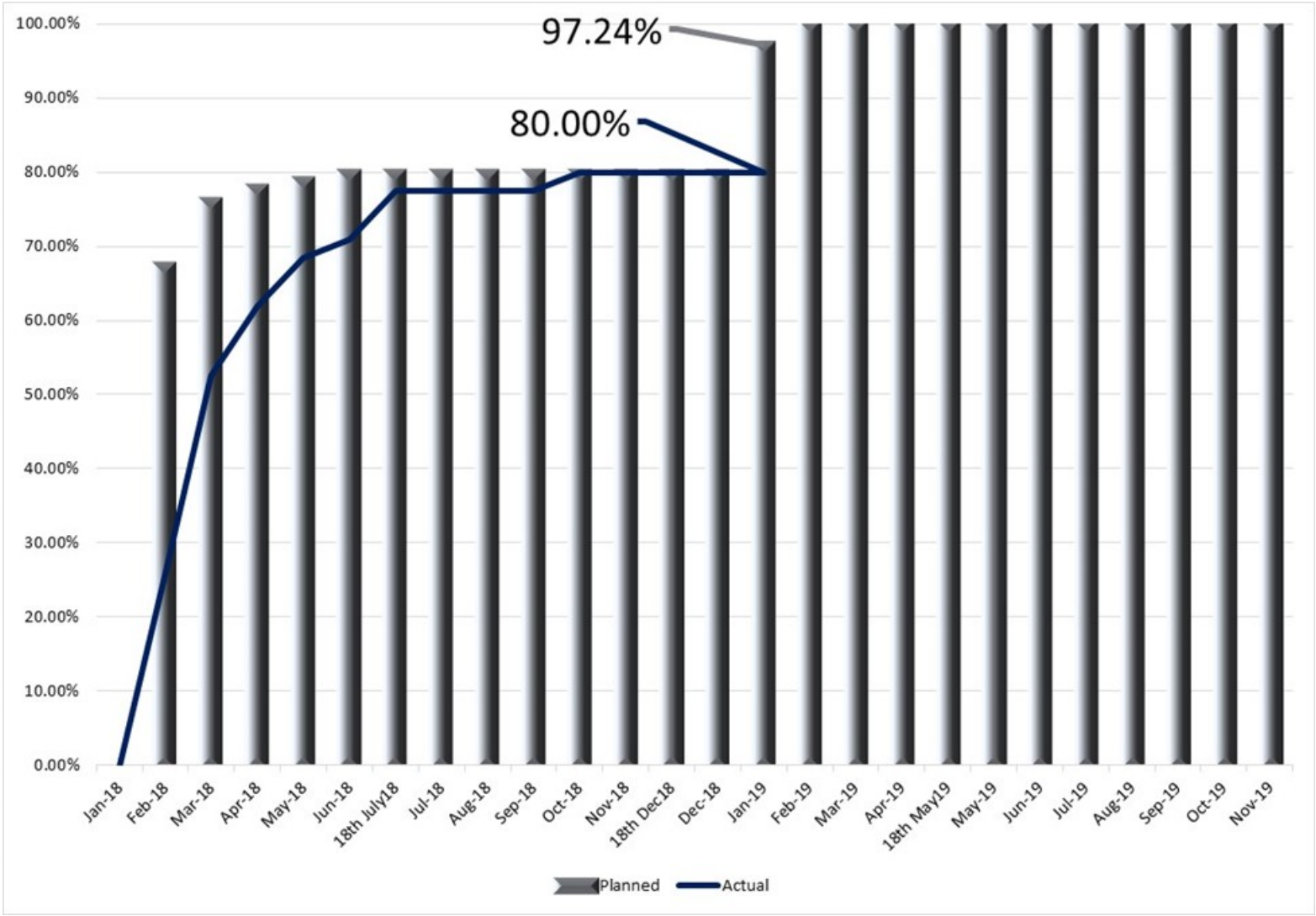
STATUS	**:**	**CONSTRUCTION STAGE**
Concessionaire Contract Agreement No.	:	SUBIN-DLDL80840374672746341531P
Name of the Concessionaire	:	Varanasi STP Project Pvt. Ltd.
Commencement date	:	19th February 2018
Completion date (as per contract):		18th November 2019

2.1. Physical status

2.1.1. Pre-execution activities

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Pre - Execution Activities	**12-Oct-17**	**04-Feb-19**	**97.24%**	**80.00%**		**80.00%**
Temporary Power Connection (During Construction Period)	12-Oct-17	30-Apr-18	100%	100%		100%
Permanent Power Connection	06-Jan-18	04-Feb-19	86%			
Submission of Resource Plan including Mobilization plan	12-Oct-17	19-Feb-18	100%	100%		100%
Setting up of temporary site office	11-Nov-17	18-Feb-18	100%	100%		100%
Removal of debris & Shrubs	11-Nov-17	19-Feb-18	100%	100%		100%
Bore well construction	11-Nov-17	19-Feb-18	100%	100%		100%
Other temporary execution	20-Feb-18	11-Mar-18	100%	100%		100%
Topographical / Soil Investigation	11-Nov-17	20-Dec-17	100%	100%		100%
Condition Precedent required to be satisfied by Concessionaire	12-Oct-17	19-Feb-18	100%	100%		100%
Condition Precedent required to be satisfied by Jal Nigam	12-Oct-17	19-Feb-18	100%	100%		100%
Condition Precedent required to be satisfied by NMCG	12-Oct-17	19-Feb-18	100%	100%		100%
Appointment of Design Consultant	12-Oct-17	09-Jan-18	100%	100%		100%
Submission & Approval of Sub Contracts from UPJN	01-Feb-18	30-Jun-18	100%	100%		100%

2.1.2. Pre-execution activities - Physical progress graph



2.1.3. Design detailed engineering

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Design Detailed Engineering	11-Oct-17	30-Oct-18	**100%**	**88%**	**5%**	**93%**
PHASE-1 Design, drawings and documentation for basic engineering package	**11-Oct-17**	**07-Feb-18**	**100%**	**100%**		**100%**
Basic engineering package	11-Oct-17	08-Jan-18	100%	100%		100%
Approval (BEP)	09-Jan-18	07-Feb-18	100%	100%		100%
Topographical / soil investigation	**11-Nov-17**	**20-Dec-17**	100%	100%		100%
Phase-II D&E (civil, mechanical, electrical, inst. drawings)	**10-Jan-18**	**25-Sep-18**	**100%**	**97%**	**0.60%**	**97.60%**
Plant layout / site layout	11-May-18	23-May-18	100%	90%		90%
Disposal pipe layout plan	02-Feb-18	20-Mar-18	100%	100%		100%
Bund Wall	10-Jan-18	18-Feb-18	100%	100%		100%
Inlet chamber with fine screens, grit removal and Parshall flume	20-Mar-18	08-Apr-18	100%	100%		100%
Administrative & security building	09-Apr-18	13-May-18	100%	100%		100%
Air blower & MCC room	15-Mar-18	02-Jun-18	100%	100%		100%
Staff quarters	09-Apr-18	23-May-18	100%	100%		100%

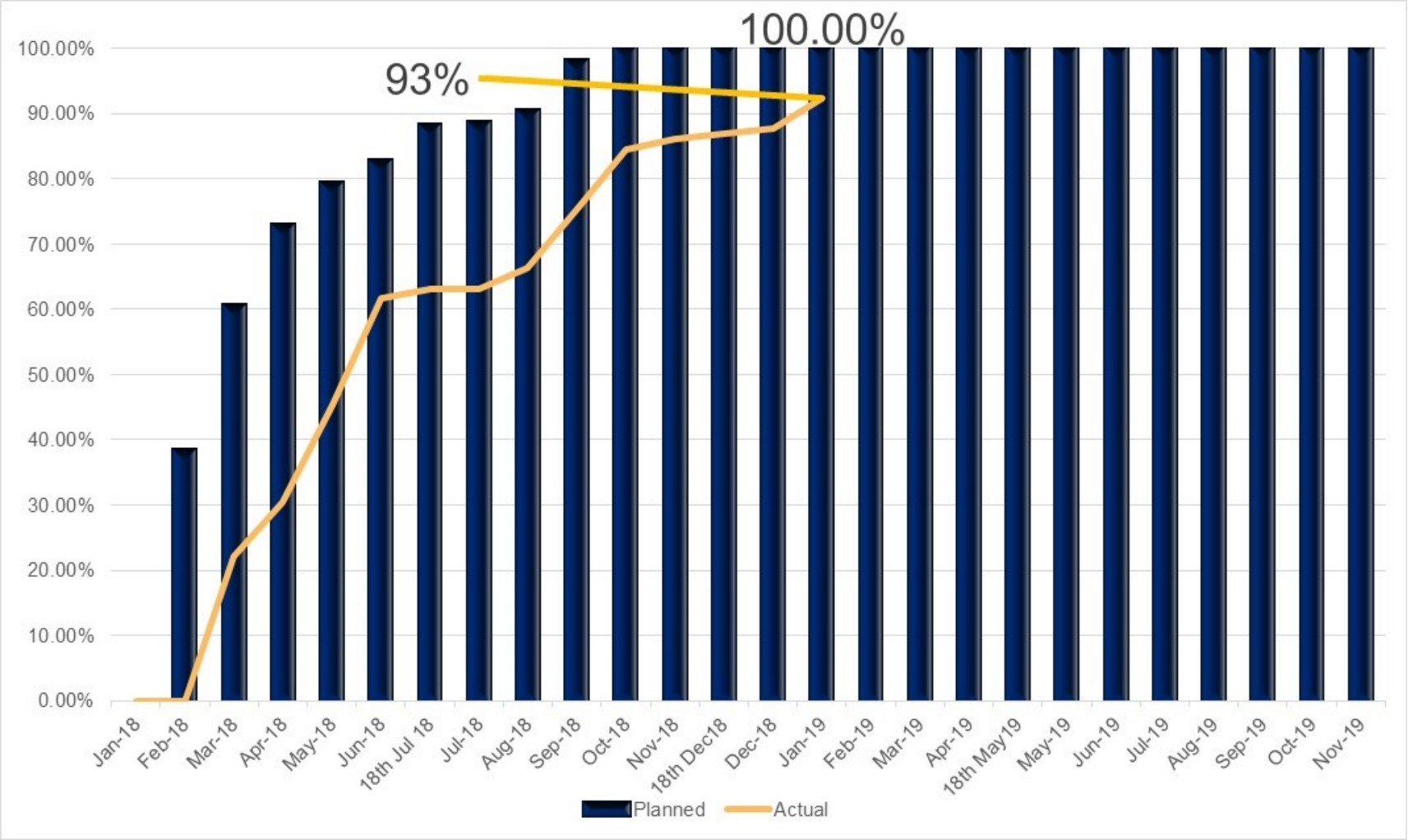
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
SBR basins & SBR outlet chamber	05-Mar-18	29-Mar-18	100%	100%		100%
Chlorine contact tank & treated water collection tank	25-Mar-18	25-Apr-18	100%	100%		100%
Treated water overhead tank	04-Apr-18	28-May-18	100%	100%		100%
Sludge treatment building / BFP	10-Sep-18	25-Sep-18	100%	100%		100%
Weir across Assi Nalla	05-Mar-18	14-Mar-18	100%	60%		60%
Final outfall chamber	01-Jul-18	18-Jul-18	100%	80%		80%
Raw water receiving chamber	01-Jul-18	18-Jul-18	100%	60%	20%	80%
Electrical control room	01-Jul-18	18-Jul-18	100%	60%	20%	80%
Structural drawings submissions & approvals	**02-Feb-18**	**30-Sep-18**	**100%**	**94.40%**	**2.40%**	**96.80%**
Disposal pipe layout plan	02-Feb-18	20-Mar-18	100%	100%		100%
Inlet chamber with fine screens, grit removal and Parshall flume	20-Mar-18	08-Apr-18	100%	100%		100%
Administrative & security building	09-Apr-18	13-May-18	100%	100%		100%
Air blower & MCC room	15-Mar-18	02-Jun-18	100%	100%		100%
Staff quarters	09-Apr-18	23-May-18	100%	100%		100%
SBR basins & SBR outlet chamber	05-Mar-18	29-Mar-18	100%	100%		100%
Chlorine contact tank & treated	25-Mar-18	25-Apr-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 %
water collection tank						
Treated water overhead tank	04-Apr-18	28-May-18	100%	100%		100%
Sludge treatment building / BFP	10-Sep-18	30-Sep-18	100%	100%		100%
Weir across Assi Nalla	05-Mar-18	14-Mar-18	100%			
Final outfall chamber	01-Jul-18	18-Jul-18	100%	60%	20%	80%
Raw water receiving chamber	06-Sep-18	15-Sep-18	100%		80%	80%
Electrical control room	06-Sep-18	15-Sep-18	100%	60%	20%	80%
Design, drawings and documentation for mechanical GAD	**13-Feb-18**	**15-Sep-18**	**100%**	**75.60%**	**10.80%**	**86.40%**
Inlet chamber with fine screens, grit removal and Parshall flume	23-Feb-18	19-Mar-18	100%	100%		100%
SBR basins & SBR outlet Chamber	13-Feb-18	04-Mar-18	100%	100%		100%
Chlorine contact tank & treated water collection tank	05-Mar-18	24-Mar-18	100%	100%		100%
Treated water overhead tank	15-Mar-18	03-Apr-18	100%	80%		80%
Sludge treatment building / BFP	28-Jul-18	16-Aug-18	100%	60%	40%	100%
Air blower & MCC room	05-Sep-18	15-Sep-18	100%	100%		100%
Weir across Assi nalla	13-Feb-18	04-Mar-18	100%	40%		40%
Final outfall chamber	01-Jul-18	18-Jul-18	100%		80%	80%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Overall piping drawings	30-May-18	05-Sep-18	100%	40%		40%
Design, drawings and documentation for electrical & instrumentation works	**10-Mar-18**	**08-Oct-18**	100%	71%	12%	83.4%
Transformer	10-Mar-18	08-Apr-18	100%	100%		100%
DG set	10-Mar-18	08-Apr-18	100%	100%		100%
Electrical load list	10-Mar-18	08-Apr-18	100%	100%		100%
PCC MCC panels	10-Mar-18	18-Jul-18	100%	40%	40%	80%
Cables / earthing/ lightning - layout plan, sizing, schedule	15-Sep-18	05-Oct-18	100%	60%	10%	70%
Cable trays	01-May-18	18-Jul-18	100%	60%	20%	80%
Flow meters	15-Sep-18	05-Oct-18	100%	40%	40%	80%
Analysers	15-Sep-18	05-Oct-18	100%	40%	40%	80%
SLD	19-Mar-18	18-Jun-18	100%	80%		80%
Design calculation	10-Mar-18	18-Jul-18	100%	40%		40%
Electrical & instrumentation control philosophy	25-Sep-18	08-Oct-18	100%	40%	20%	60%
Plant lighting layout plan	25-Sep-18	05-Oct-18	100%	40%		40%
Gauges	25-Sep-18	05-Oct-18	100%	40%	20%	60%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Instrumentation document submissions & approvals	**01-Jun-18**	**30-Oct-18**	**100%**	**45%**	**15%**	**60%**
Instrument index / alarm list	01-Jun-18	18-Jul-18	100%	80%		80%
Instrument hook - up diagram	01-Jun-18	18-Jul-18	100%	60%	20%	80%
PLC - I/O list, loop wiring diagram, design of SCADA	05-Oct-18	30-Oct-18	100%	40%	40%	80%
Cause & effect diagram	01-Jun-18	18-Jul-18	100%			

2.1.4. Design detailed engineering - Physical progress graph



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

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Equipment Procurement, Logistics and receipt of equipment at Site			**34%**	**10%**	**21%**	**31%**
Fine Screen / Coarse Screen / Belt Conveyors	**24-May-18**	**18-Dec-18**	**100%**	**30.4%**		**30.4%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	24-May-18	18-Jul-18	100%	100%		100%
Manufacturing of Equipment	17-Sep-18	10-Dec-18	100%	59%		59%
Inspection / Logistics	08-Dec-18	10-Dec-18	100%			
Receipt of equipment at site	11-Dec-18	18-Dec-18	100%			
Grit Removal Mechanism	**24-May-18**	**10-Mar-19**	**47.1%**	**18%**		**18%**
Submission & Approval of Drgs / Docs & data sheets including release	24-May-18	18-Jul-18	100%	100%		100%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
of purchase order						
Manufacturing of Equipment	01-Sep-18	10-Feb-19	94%	33%		33%
Inspection / Logistics	12-Feb-19	27-Feb-19				
Receipt of equipment at site	28-Feb-19	10-Mar-19				
SBR System (Decanters)	**19-May-18**	**16-May-19**	**36.6%**	**18.5%**	**56.5%**	**75%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	19-May-18	18-Jul-18	100%	100%		100%
Manufacturing of Equipment	01-Sep-18	31-Mar-19	72%	34%	66%	100%
Inspection / Logistics	01-Apr-19	16-Apr-19			100%	100%
Receipt of equipment at site	17-Apr-19	16-May-19				
Submersible (SAS / RAS/ Filtrate / BFP feed)	**31-May-18**	**18-Dec-18**	**100%**	**29.5%**	**33.0%**	**62.5%**
Submission & Approval of Drgs / Docs & data	31-May-18	18-Jul-18	100%	100%		100%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
sheets including release of purchase order						
Manufacturing of Equipment	03-Sep-18	13-Dec-18	100%	57%	43%	100%
Inspection / Logistics	01-Dec-18	10-Dec-18	100%		50%	50%
Receipt of equipment at site	14-Dec-18	18-Dec-18	100%			
Horizontal centrifugal pumps (Treated water pumps)	**31-May-18**	**18-Dec-18**	**100.0%**	**2.2%**		**2.2%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	31-May-18	25-Jul-18	100%	100%		100%
Manufacturing of Equipment	10-Sep-18	15-Dec-18	100%			
Inspection / Logistics	01-Dec-18	10-Dec-18	100%			
Receipt of equipment at site	16-Dec-18	18-Dec-18	100%			
Air Blowers	**01-May-18**	**18-May-19**	**36.8%**	**18.5%**	**31.5%**	**50.0%**

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-May-18	18-Jul-18	100%	100%		100%
Manufacturing of Equipment	01-Sep-18	30-Mar-19	72%	34%	66%	100%
Inspection / Logistics	31-Mar-19	29-Apr-19				
Receipt of equipment at site	30-Apr-19	18-May-19				
Chlorination System	**05-Sep-18**	**18-May-19**	**34.6%**	**15.1%**	**47.4%**	**62.5%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	05-Sep-18	29-Sep-18	100%	100%		100%
Manufacturing of Equipment	01-Oct-18	30-Mar-19	68%	27%	73%	100%
Inspection / Logistics	01-Apr-19	11-May-19			50%	50%
Receipt of equipment at site	12-May-19	18-May-19				
Sluice Gates	**05-Mar-18**	**18-Dec-18**	**100%**	**2%**		**2%**

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	05-Mar-18	18-Jul-18	100%	100%		100%
Manufacturing of Equipment	25-Sep-18	12-Dec-18	100%			
Inspection / Logistics	01-Dec-18	10-Dec-18	100%			
Receipt of equipment at site	13-Dec-18	18-Dec-18	100%			
MS/CS/SS/GI/CI/DI Piping	**01-Jan-19**	**12-Aug-19**	**1.5%**			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-Jan-19	15-Feb-19	67%			
Manufacturing of Equipment	01-Mar-19	30-Jul-19				
Inspection / Logistics	31-Jul-19	10-Aug-19				
Receipt of equipment at site	11-Aug-19	12-Aug-19				
Valves	**01-Jan-19**	**12-Aug-19**	**2%**			

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-Jan-19	17-Jan-19	100%			
Manufacturing of Equipment	01-Mar-19	30-Jul-19				
Inspection / Logistics	31-Jul-19	10-Aug-19				
Receipt of equipment at site	11-Aug-19	12-Aug-19				
Motorized Gates at Inlet of SBR	**01-May-18**	**18-May-19**	**14%**	**1%**	**1%**	**2%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-May-18	30-Aug-18	100%	50%	30%	80%
Manufacturing of Equipment	11-Jan-19	05-Apr-19	24%			
Inspection / Logistics	07-Apr-19	07-May-19				
Receipt of equipment at site	08-May-19	18-May-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 %
Diffusers	**12-May-18**	**23-Apr-19**	**46%**	**11%**	**39%**	**50%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	12-May-18	14-Jul-18	100%	100%		100%
Manufacturing of Equipment	01-Sep-18	15-Feb-19	91%	18%	82%	100%
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**	**11%**	**11%**		**11%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	15-Oct-18	29-Nov-18	100%	100%		100%
Manufacturing of Equipment	29-Dec-18	30-Jun-19	18%	18%		18%
Inspection / Logistics	30-May-19	28-Jun-19				
Receipt of equipment at site	01-Jul-19	13-Jul-19				

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
PE Dosing Tanks	**15-Oct-18**	**13-Jul-19**	**11%**	**11%**		**11%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	15-Oct-18	29-Nov-18	100%	100%		100%
Manufacturing of Equipment	29-Dec-18	30-Jun-19	18%	18%		18%
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**	**28%**		**1%**	**1%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-May-18	18-Jul-18	100%		60%	60%
Manufacturing of Equipment	01-Sep-18	08-Jun-19	54%			
Inspection / Logistics	09-Jun-19	08-Jul-19				
Receipt of equipment at site	09-Jul-19	23-Jul-19				

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Transformers	**02-Jul-18**	**21-Jul-19**	**13.8%**	**2.2%**	**47.8%**	**50%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	02-Jul-18	18-Jul-18	100%	100%		100%
Manufacturing of Equipment	19-Dec-18	15-Jun-19	24%		100%	100%
Inspection / Logistics	25-Jun-19	30-Jun-19				
Receipt of equipment at site	01-Jul-19	21-Jul-19				
HT cables	**29-Sep-18**	**26-Jul-19**	**2.2%**		**1.8%**	**1.8%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	29-Sep-18	09-Nov-18	100%		80%	80%
Manufacturing of Equipment	01-Mar-19	30-Jun-19				
Inspection / Logistics	05-Jul-19	15-Jul-19				
Receipt of equipment at site	16-Jul-19	26-Jul-19				

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
MCC panel	**23-Jun-18**	**16-Aug-19**	**10%**	**1%**	**1%**	**2%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	23-Jun-18	27-Jul-18	100%	60%	20%	80%
Manufacturing of Equipment	01-Jan-19	30-Jun-19	17%			
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**	**10%**	**1%**	**49%**	**50%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	60%	40%	100%
Manufacturing of Equipment	01-Jan-19	30-Jun-19	17%		100%	100%
Inspection / Logistics	01-Jul-19	31-Jul-19				

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Receipt of equipment at site	01-Aug-19	16-Aug-19				
PLC Panel	**07-Sep-18**	**16-Aug-19**	**10%**	**1%**	**37%**	**38%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	60%		60%
Manufacturing of Equipment	01-Jan-19	30-Jun-19	17%		60%	60%
Inspection / Logistics	01-Jul-19	31-Jul-19			30%	30%
Receipt of equipment at site	01-Aug-19	16-Aug-19				
SCADA System	**07-Sep-18**	**16-Aug-19**	**10%**			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%			
Manufacturing of Equipment	01-Jan-19	30-Jun-19	17%			
Inspection / Logistics	01-Jul-19	31-Jul-19				

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Receipt of equipment at site	01-Aug-19	16-Aug-19				
MLDB, LDB & SLDBS	**07-Sep-18**	**16-Aug-19**	**10%**			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%			
Manufacturing of Equipment	01-Jan-19	30-Jun-19	17%			
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**	10%			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%			
Manufacturing of Equipment	01-Jan-19	30-Jun-19	17%			

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-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**	**10%**	**1%**		**1%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	40%		40%
Manufacturing of Equipment	01-Jan-19	30-Jun-19	17%			
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**	**10%**	**0%**	**1%**	**2%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	20%	60%	80%

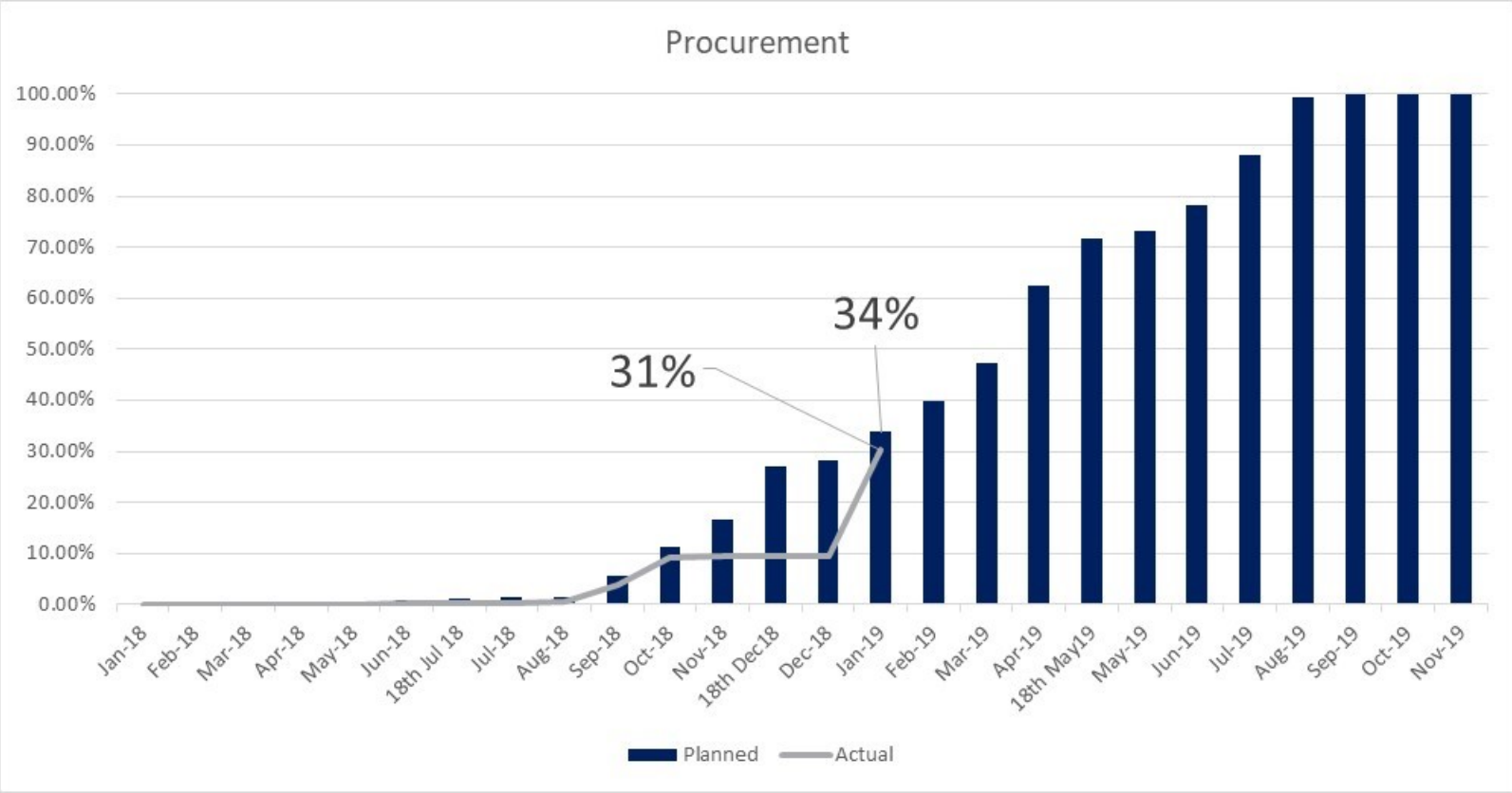
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Manufacturing of Equipment	01-Jan-19	30-Jun-19	17%			
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
DG Set	**07-Sep-18**	**16-Aug-19**	**10%**	**2%**		**2%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	100%		100%
Manufacturing of Equipment	01-Jan-19	30-Jun-19	17%			
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**	**11%**	**1%**	**0%**	**2%**
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	60%	20%	80%

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

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	20-Nov-18	15-Dec-18	100%	60%		60%
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


Procurement
100.00%
90.00%
80.00%
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
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May-19
Jun-19
Jul-19
Aug-19
Sep-19
Oct-19
Nov-19
Planned
Actual

2.1.7. New construction units

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Civil Executions	**19-Feb-18**	**16-Nov-19**	**69%**	**62%**	**8%**	**70%**
Bund Wall / Earthen Embankment	**19-Feb-18**	**30-Aug-19**	**87.5%**	**70.6%**	**10.1%**	**80.6%**
Excavation	19-Feb-18	8-May-18	100%	100%		100%
Filling & Compaction of Bund Wall up to 1.0 Mtr Height	10-Apr-18	8-Jul-18	100%	100%		100%
Filling & Compaction of Bund Wall from 1.0 to 2.0 Mtr Height	9-Jul-18	25-Oct-18	100%	72%	28%	100%
Filling & Compaction of Bund Wall from 2.0 to 3.0 Mtr Height	1-Oct-18	29-Nov-18	100%	65%	27%	92%
Filling & Compaction of Bund Wall from 3.0 to 4.5 Mtr Height	7-Nov-18	18-Dec-18	100%	42%	12%	54%
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**	**72.5%**	**54.4%**	**6.3%**	**60.7%**
Excavation	3-Jun-18	12-Jun-18	100%	100%		100%
PCC & RCC of Footing	13-Jun-18	18-Jul-18	100%	100%		100%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Inlet Chamber Slab with Column, Wall	20-Sep-18	15-Dec-18	100%	34%	14%	48%
Grit Chamber Slab with Column	1-Dec-18	28-Feb-19	69%		4%	4%
Parshall flume slab with Column	1-Mar-19	30-Mar-19			29%	29%
Hydrotesting including finishing works	1-Jun-19	30-Jun-19				
SBR Basins & SBR outlet Chamber	**9-Apr-18**	**15-Jul-19**	**72.7%**	**70.3%**	**8.2%**	**78.5%**
Excavation	9-Apr-18	7-Jun-18	100%	100%		100%
PCC & Raft RCC at 72.00 level	10-Apr-18	29-Jul-18	100%	100%		100%
Wall 1st Lift	5-Jun-18	30-Aug-18	100%	75%	19%	94%
Wall 2nd Lift	7-Jun-18	5-Sep-18	100%	66%	27%	93%
Wall 3rd Lift	24-Sep-18	15-Jan-19	100%	58%	12%	70%
Wall Final Lift	7-Feb-19	6-Apr-19		52%	26%	78%
Walkways and Channels	6-Apr-19	11-May-19		35%	-15%	20%
Hydrotesting	20-May-19	15-Jul-19				
Construction of CCT including Chlorination room & Treated water pump House	**26-Apr-18**	**24-Aug-19**	**57.3%**	**60.5%**	**11.5%**	**72.0%**
Excavation	26-Apr-18	4-Jul-18	100%	100%		100%
PCC & Raft RCC	15-May-18	25-Jul-18	100%	100%		100%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
50% RCC of Structure	20-Jun-18	10-Oct-18	100%	100%		100%
50% RCC of Structure	20-Jan-19	18-May-19	9%	22%	26%	48%
Completion of Brick work and Plaster	6-Apr-19	30-Jul-19				
Hydrotest including finishing works	9-Aug-19	24-Aug-19			100%	100%
Final Outfall Chamber	**19-May-19**	**3-Aug-19**				
Excavation, Dressing, Filling G & PCC	19-May-19	23-May-19				
Foundation and Raft	29-May-19	17-Jun-19				
Wall & Super Structure	18-Jun-19	18-Jul-19				
Hydrotesting & finishing works	19-Jul-19	3-Aug-19				
Overhead Treated Water Tank	**1-Jun-18**	**1-Aug-19**	**60.0%**	**32.1%**	**1.2%**	**33.3%**
Excavation	1-Jun-18	5-Jun-18	100%	100%		100%
PCC & Raft RCC	11-Jun-18	18-Jul-18	100%	100%		100%
50% RCC of Structure	9-Oct-18	18-Dec-18	100%	7%	4%	11%
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**	**35.5%**	**30.3%**		**30.3%**

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Excavation	15-Oct-18	30-Oct-18	100%	100%		100%
PCC & Raft RCC	1-Nov-18	18-Dec-18	100%	100%		100%
50% RCC of Structure	18-Jan-19	18-Mar-19	22%	1%		1%
50% RCC of Structure	19-Mar-19	17-May-19				
Completion of Brick work and Plaster	19-Apr-19	18-May-19				
Finishing Works	20-May-19	13-Jul-19				
Administrative Building including lab and workshop	**3-Feb-18**	**11-Jul-19**	**60.0%**	**58.2%**	**21.2%**	**79.4%**
Excavation	8-Jun-18	17-Jun-18	100%	100%		100%
PCC & Raft RCC	18-Jun-18	18-Jul-18	100%	100%		100%
50% RCC of Structure	16-Oct-18	18-Dec-18	100%	94%	6%	100%
50% RCC of Structure	3-Feb-19	7-Apr-19		0%	64%	64%
Completion of Brick work and Plaster	8-Apr-19	17-May-19			4%	4%
Finishing Works	28-May-19	11-Jul-19				
Staff Quarters	**8-Jun-18**	**16-Nov-19**	**30.0%**	**36.8%**	**5.0%**	**41.8%**
Excavation	8-Jun-18	17-Jun-18	100%	100%		100%
PCC & Raft RCC	11-Jun-18	18-Jul-18	100%	100%		100%
50% RCC of Structure	20-May-19	9-Jul-19		34%	19%	53%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
50% RCC of Structure	9-Jul-19	28-Aug-19				
Completion of Brick work and Plaster	28-Aug-19	27-Sep-19			5%	5%
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**	**73.8%**	**42.3%**	**7.3%**	**49.6%**
Excavation	3-Jun-18	2-Jul-18	100%	100%		100%
PCC & RCC of Footing	3-Jul-18	18-Jul-18	100%	100%		100%
RCC up to Plinth	15-Sep-18	11-Oct-18	100%	100%		100%
RCC up to Lintel Beams	15-Oct-18	15-Nov-18	100%	23%	73%	96%
RCC Roof Slab	16-Nov-18	18-Dec-18	100%			
Brick Work	1-Jan-19	21-Mar-19	38%			
Plastering	22-Mar-19	15-May-19				
Painting & Finishing	15-Jun-19	29-Aug-19				

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

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

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

Item of work	Estimate		Physical status			
	Quantity	Unit	Previous month completion	Completion during this month	Total completion	Total completion in %
from 1.0 to 2.0 Mtr Height						
Filling & Compaction of Bund Wall from 2.0 to 3.0 Mtr Height	19056	Cum	12408	1563	13971	92%
Filling & Compaction of Bund Wall from 3.0 to 4.5 Mtr Height	16154	Cum	6844	643	7487	46%
Stone Pitching work, Side Drain Work & Fencing work	6720	Sqm				
Construction of Inlet Structure, Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for SBR						
Excavation	600	Cum	600		600	100%
PCC	72	Cum	72		72	100%
RCC for footing	173	Cum	173		173	100%
Inlet Chamber Slab with Column, Wall	159	Cum	54	22	76	48%
Grit Chamber Slab with Column	159	Cum		7	7	4%
Parshall flume slab with Column	79	Cum		23	23	29%
SBR Basins & SBR outlet Chamber						
Excavation	2210	Cum	2210		2210	100%
PCC	1424	Cum	1412		1424	100%
Raft RCC	4169	Cum	4169		4169	100%

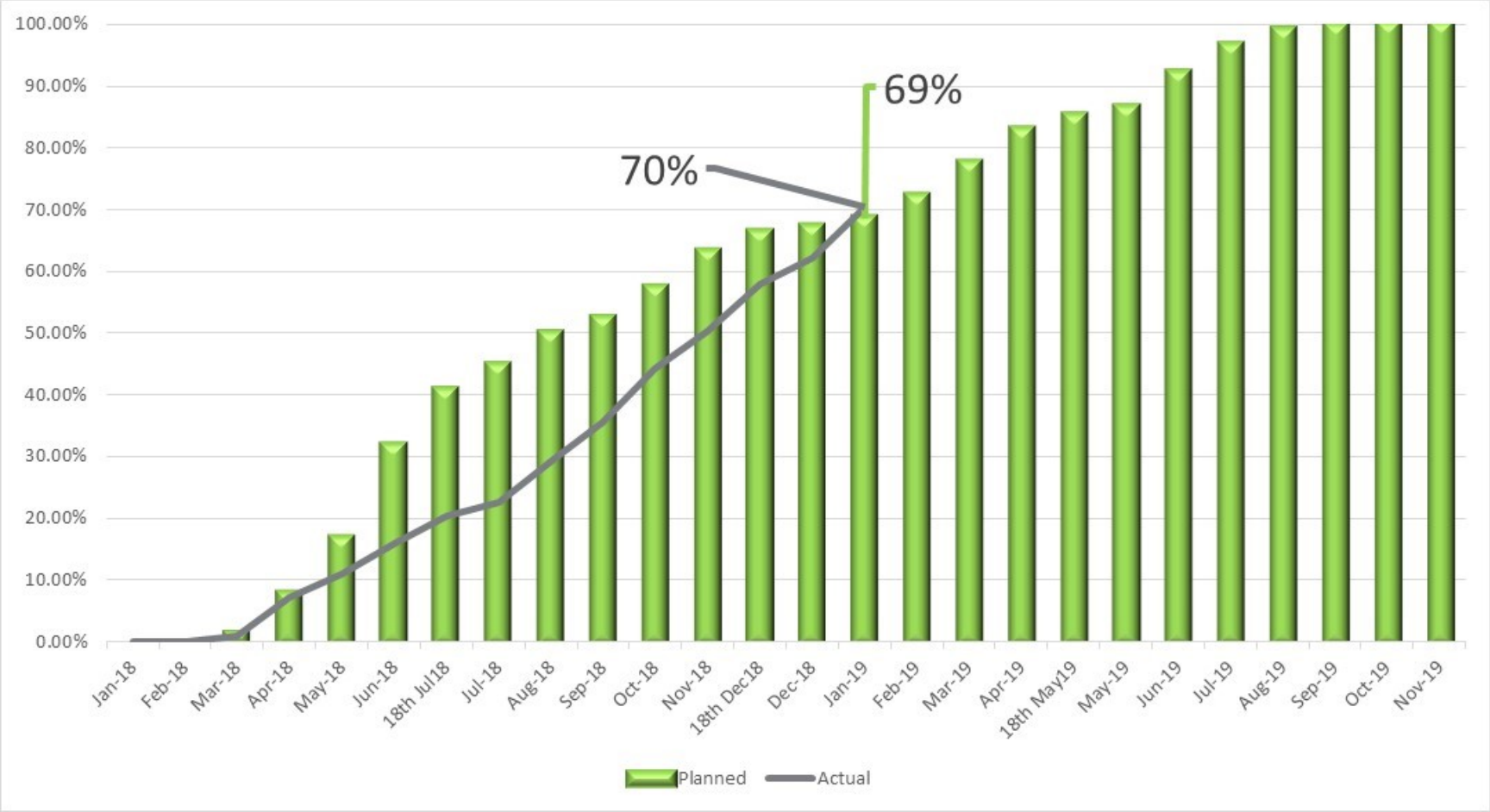
Item of work	Estimate		Physical status			
	Quantity	Unit	Previous month completion	Completion during this month	Total completion	Total completion in %
Wall 1st Lift	560	Cum	422.70	105.30	528	94%
Wall 2nd Lift	390	Cum	256	107	363	93%
Wall 3rd Lift	291	Cum	168	36	204	70%
Wall Final Lift	462	Cum	217	105	322	78%
Walkways and Channels	306	Cum	28.50	33.5	62	21%
Construction of CCT including Chlorination room & Treated water pump House						
Excavation	1023	Cum	1023		1023	100%
PCC	140	Cum	140		140	100%
Raft RCC	266	Cum	266		266	100%
50% RCC of Structure	146.50	Cum	146.50		146.50	100%
50% RCC of Structure	146.50	Cum		38.5	71	48%
Brick work	71	Cum				
Plastering works	1342	Sqm				
Overhead Treated Water Tank						
Excavation	549	Cum	549		549	100%
PCC	18	Cum	18		18	100%
Raft RCC	61	Cum	61		61	100%
50% RCC of Structure	79	Cum	6.20	3.8	10	11%
50% RCC of Structure	79	Cum				

Item of work	Estimate		Physical status			
	Quantity	Unit	Previous month completion	Completion during this month	Total completion	Total completion in %
Finishing Works						
Construction of BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank						
Excavation	720	Cum	720		720	100%
PCC	39	Cum	39		39	100%
Raft RCC	167	Cum	167		167	100%
50% RCC of Structure	194	Cum	2.10		2.10	1%
50% RCC of Structure	194	Cum				
Brick work	35	Cum				
Plastering work	290	Sqm				
Administrative Building including lab and workshop						
Excavation	656	Cum	656		656	100%
PCC	27	Cum	27		27	100%
Raft RCC	101	Cum	101		101	100%
50% RCC of Structure	107	Cum	100.70	6.3	100.70	100%
50% RCC of Structure	107	Cum		68	68	64%
Brick work				30	30	18%
Plastering work						
Finishing Works						

Item of work	Estimate		Physical status			
	Quantity	Unit	Previous month completion	Completion during this month	Total completion	Total completion in %
Staff Quarters						
Excavation	1502	Cum	1502		1502	100%
PCC	70	Cum	70		70	100%
Raft RCC	260	Cum	260		260	100%
50% RCC of Structure	215	Cum	72.90	42.1	115	54%
50% RCC of Structure	215	Cum				
Brick work	551	Cum		58	58	10%
Plastering work						
Finishing Works						
Construction of Blower room, HT, MCC, Transformer Yard, DG set Area						
Excavation	587	Cum	587		587	100%
PCC	39	Cum	39		39	100%
RCC of Footing	160	Cum	160		160	100%
RCC up to Plinth	35	Cum	35		35	100%
RCC up to Lintel Beams	35	Cum	8	25	33	96%
RCC Roof Slab	136	Cum				
Brick Work	165	Cum				
Plastering	2000	Sqm				
Finishing works						

2.1.9. New construction units - Physical progress graph

Construction activities – Physical progress



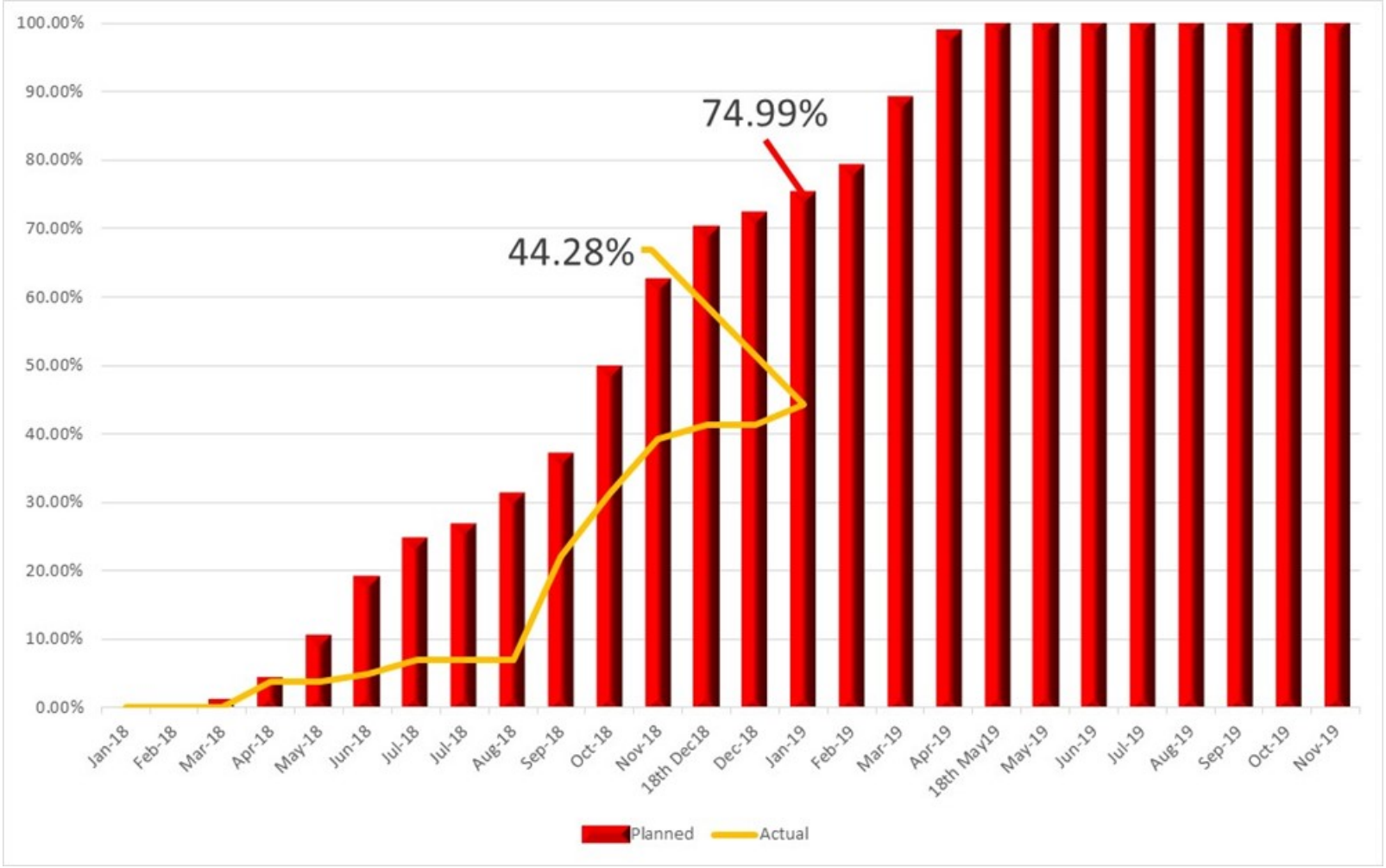
2.1.10. Associated works

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Associated	20-Mar-18	18-May-19	74.99%	41.22%	3.06%	44.28%
MPS Pumping Station	**15-May-18**	**30-Apr-19**	**65.69%**	**33.50%**		**33.50%**
Rehabilitation of MPS	15-May-18	30-Apr-19	75%	52%		52%
Construction of Weir across Assi Nalla & Control room	13-Oct-18	30-Jan-19	100%			
Desilting of the MPS	15-May-18	28-Aug-18	100%	75%		75%
Repair of Equipment	1-Jan-19	30-Mar-19	34%			
Raising of height of Nalla tapping structure upto HFL	1-Apr-19	30-Apr-19				
Rising Main	**15-Jun-18**	**25-Mar-19**	**85%**	**7%**		**7%**
Desilting & CCTV inspection	15-Jun-18	18-Jul-18	100%			
Strengthening and Pipe protection of Rising main Extension of existing Rising main to the Inlet point at the STP site	10-Oct-18	30-Jan-19	100%			
Shifting & laying of Pipe near Samne Ghat bridge	13-Jul-18	15-Jan-19	100%	20%		20%
Hydrotesting of the PSC	15-Feb-19	25-Mar-19				

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Treated Effluent disposal line	**20-Mar-18**	**18-May-19**	**74.42%**	**47.13%**	**3.82%**	**50.95%**
Procurement - supply of pipes including inspection, transportation and delivery at site	20-Mar-18	26-Dec-18	100%	55%	2%	57%
Pipe laying - 20% including excavation and backfilling	9-May-18	18-Jul-18	100%	100%		100%
Pipe laying - 20% including excavation and backfilling	25-Sep-18	5-Nov-18	100%	100%		100%
Pipe laying - 20% including excavation and backfilling	6-Nov-18	18-Dec-18	100%	33%	26%	59%
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	68%	5%		5%

2.1.11. Associated works - Physical progress graph

Associated infrastructure – Physical progress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60.00%
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18th May19
May-19
Jun-19
Jul-19
Aug-19
Sep-19
Oct-19
Nov-19
Planned
Actual

2.1.12. **Overall physical progress** : **48.97**%

Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
53.37%	38.53%	10.44%	48.97%

2.2. Financial status for construction work

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

Financial progress in % as on 31.01.2019

Scheduled / Planned completion as on January 2019 in %	Up to previous month (December 2018) completion in %	Completion during this month (January 2019) in %	Total completion up to January 2019 in %
53.37%	36.05%	12.38%	48.44%

Status of financial expenditure as on 31.01.2019

Sl. No	Description	Total expenditure incurred (NMCG & VSPPL) Rupees in crore	Expenditure incurred by VSPPL in Rupees in crore	Expenditure incurred by NMCG in Rupees in crore	Expenditure incurred as per site progress Rupees in crore
1	Mobilization advance (10% of Rs.102 Cr)	10.20		10.20	31.32
2	First mile stone payment (25% of Rs.102 Cr)	25.50	15.30	10.20	
3	Deduction of mobilization advance for first milestone (25% of mobilization of advance)	-2.55		-2.55	
	Total	**33.15**	**15.30**	**17.85**	

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

S. No.	Issues identified	Action Taken	Status
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. Despite concessionaire agreed to deploy additional resources to achieve the second mile stone within the targeted date including the delay occurred, same is not reflected in the field. However, concessionaire targeting to achieve the first milestone progress as on 15th October 2018. By doing this there will be backlog of three months' work progress related to second mile stone. Concessionaire to take necessary resource mobilization to full till the targeted second mile stone progress on or before 18 December 2018.	Number of labours are increased post Dussehra Fest and concessionaire confirmed to complete the 2nd Mile Stone by end of January 2019 and all the back log will be recovered by 3rd Milestone.	Concessionaire achieved physical progress is 48.97%
2)	Recovery plan submitted by the concessionaire on 8th September 2018 is not accompanying the resource plan (material, man power & machineries). Concessionaire agreed to submit the same on or before 1st October 2018.	Submitted on 24th October'18 and commented back by MACE on 31st Oct	The same will be submitted by the concessionaire shortly.
3)	Extent of progress of the rehabilitation and/or upgradation activities performed by the concessionaire for the associated infrastructure.	Partially submitted for approval	Most of the drawings are approved by the project engineer, work shall start by 15th Feb'19
4)	Monthly Environmental Monitoring Reports to the Jal Nigam providing	In progress.	Due, till date

S. No.	Issues identified	Action Taken	Status
	overview of compliance with EHS Plan.		
5)	Action to be taken to start the trenchless pipe line work near Samne Ghat as the Concerned authority already provided their acceptance orally and necessary approval will be issued shortly	Permission from Traffic Dept. is still awaited.	Trenchless work will be started after receiving official permission from PWD, expected to start by 10th Feb'19.
6)	Action to be taken for carrying out the desilting and CCTV inspection of existing rising main as the activity should have been completed as per construction plan.	Concessionaire is confirmed to start the desilting after 15th Nov'18.	Concessionaire informed that the desilting and CCTV inspection work will start latest by 10th Feb'19.
7)	Insurance policy is submitted in the name of Essel infra projects. As per concession agreement this should be in the name of VSPPL.	Concessionaire to resubmit the insurance policy in the name of VSPPL	The concessionaire has applied for the same. It is under process.

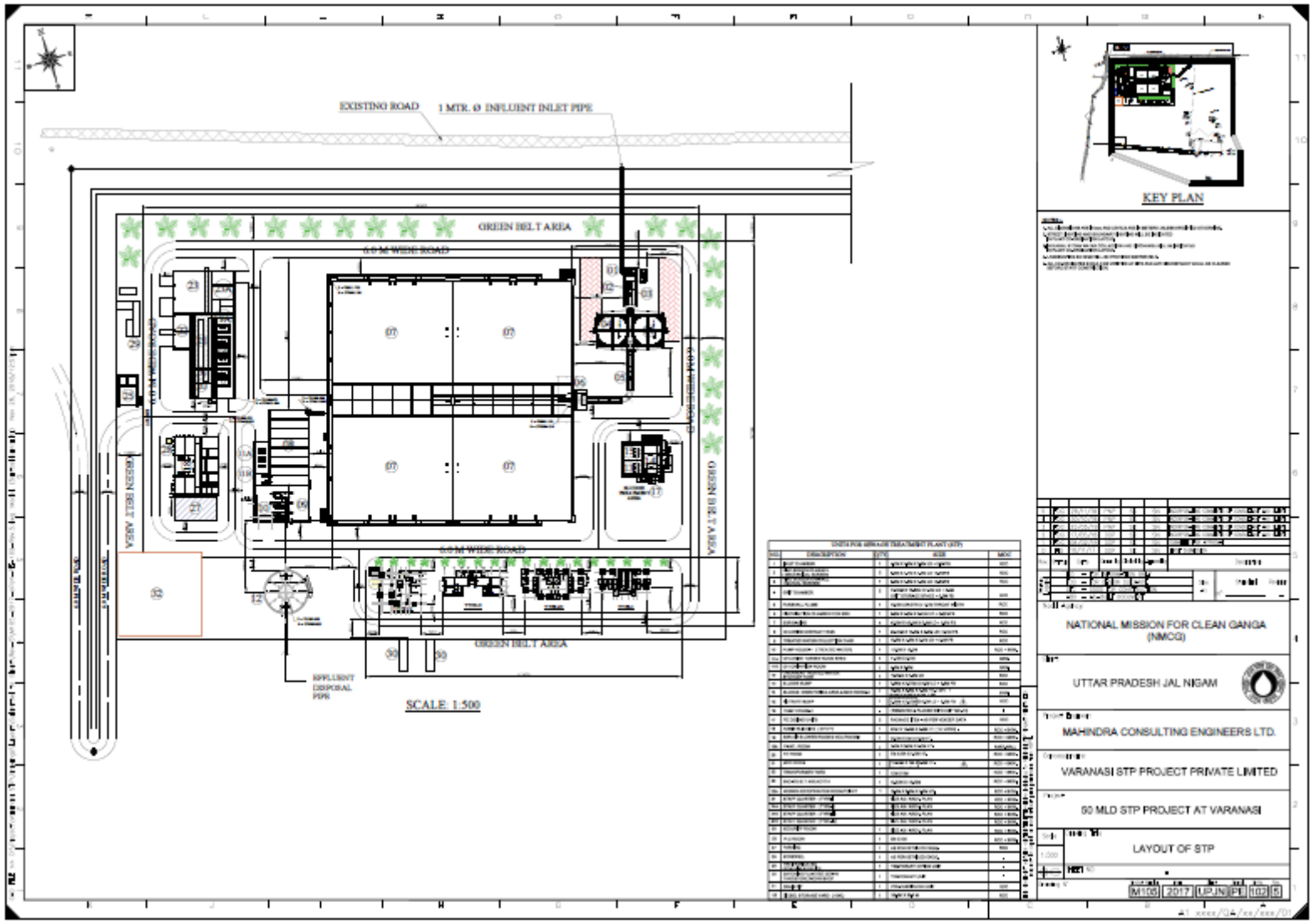


Figure 2: Development of sewage treatment plant and associated infrastructure under Hybrid Annuity based PPP mode at Varanasi

3.0. PROJECT ENGINEER ACTIVITIES

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
4.1 (i)	Review, analysis and qualifying assessment of field investigations carried out and reported by the Concessionaire in respect of topographical surveys, hydraulic & hydrologic data verification, sub-surface investigation including laboratory testing and reports of geologists wherever applicable, investigation of construction material including lab testing.	Yes	Yes	Review of construction material testing
4.1 (ii)	Review, analysis and qualifying assessment of design memorandums, specifications and construction drawings prepared and submitted by the concessionaire.	Yes	Yes	Review of construction drawings
4.1 (iii)	Conduct kick off meetings			
4.1 (iv)	Review of the submissions of the Concessionaire such as	Yes	• Preparation and submission of MPR	• Delay analysis • Remaining GA

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	a. Work schedule b. Detailed survey report c. Basic engineering d. Detailed design and drawings for i) Civil works 1. Geo-tech reports 2. Lab testing reports 3. Third Party Inspection report ii) Mechanical & Electrical Works iii) Automation & Instrumentation works iv) Any other allied works e. QA/QC plans f. Safety plan		December 2018 • Preparation and submission of MIR November 2018 • Observation on GST claim • Observation on MS pipe thickness calculation(Ring main) • Observation on civil GA & structural drawing of raw water receiving chamber • Intimation to UPJN regarding delay in supply of PSC pipe 1200 mm diameter • Recommended for approval for lighting protection calculation	& structural drawings of civil structures • QAP & data sheet for remaining mechanical, electrical & instrumentation items. • PSC pipe inspection • Mechanical and Electrical equipment inspection

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
			• Recommended for approval with comments as MS pipe thickness calculation • Recommended for approval for the data sheet of level measuring instruments & QAP for MPS & STP • Observation on civil GA & Details of outfall structure (Rev 4) • Observation on piping GAD for CCT & treated water pump house (Area 05) • Observation on Agitator for sludge storage tank	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
			• Recommended for giving dispatch clearance to submersible pumps: RAS pump, SAS pump, Filtrate pump and BEP feed pump. • Recommended for approved for the capacitor sizing calculation for MPS & STP(Rev 2) • Observation on plant piping layout plan • Observations on design calculation of thickness of MS pipe (Rising Main from MPS), Rev. 3 • Observations on	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
			revised Civil GA (Rev. 2) and Structural Design & Drawing (Rev. 1) of receiving chamber • Observations on revised of Civil GA Drawing of Final Outfall Chamber, Rev 5. • Observation on switchgear room and transformer yard layout for STP -R0 along with CRS and co Recommended for approval for datasheet of level measuring instrument(R1) Pressure measuring	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**

			instrument(R2) & panel mounted digital indicator & totalizer (R1) for MPS & STP
			• Observation on piping GAD for Air blower room (Area – 04)
			• Inspection of :
			  • Decanter
			  • Submergible pumps
			  • Chlorination system
			  • PLC panel for SBR	

4.1 (v)	Review of the drawings and documents	Yes	As mentioned above	As mentioned above
4.1 (vi)	Identification of milestones & verifications		Regular review and monitoring	Regular review and monitoring

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
4.1 (vii)	To Assist NMCG for getting statutory permissions		NA	NA
4.1 (viii)	Ensure compliance with statutory provisions under various applicable laws		Yes	Yes
4.1 (ix)	Review, inspection, supervision and monitoring of construction works conducting tests on completion of construction and issuing completion / provisional certificate	Yes	Day to day monitoring of construction activities by site personnel and Monthly inspection by Key experts	Day to day monitoring of construction activities by site personnel and Monthly inspection by Key experts
4.1 (x)	Review, inspection and monitoring of O&M	NA	NA	NA
4.1 (xi)	Determining, as required under the Concession Agreement, the costs of any works or services and/or their reasonableness	NA	NA	NA
4.1 (xii)	Determining, as required under the Concession Agreement, the period or any	NA	NA	NA

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	extension thereof, for performing any duty or obligation			
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
4.1 (xvi)	The Project Engineer shall submit regular periodic reports, as specified in the	Monthly progress	Monthly progress report	Preparation and review of

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	Concession Agreement to Uttar Pradesh Jal Nigam and NMCG, in respect of its duties and functions under the Concession Agreement	report		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

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
4.3(i)	The Project Engineer must function in a manner to assist & equip the employer to ascertain that the Concessionaire shall operate and maintain the Facilities and the Associated Infrastructure in a manner that: Is in compliance with the Technical Specifications, Applicable Laws, Applicable Permits and Good Industry Practice; Results in the Facilities and the Associated Infrastructure achieving the KPIs as detailed in schedule 10 of the Concession Agreement & certify within 7 days the KPI adherence Report as per clause 8.12 of the Concession Agreement;	Yes	Yes	Yes
4.3(ii)	Ensures that the Varanasi STP are capable of treating Sewage up to the Design Capacity on a daily basis;	Yes	Yes	Yes
4.3(iii)	Ensures efficient treatment of Sewage and handling and disposal of STP By- Products	NA	NA	NA

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	and the Treated Effluent			
4.3(iv)	STPs are safe and reliable, subject to normal wear and tear of the Facilities and the Associated Infrastructure;	NA	NA	NA
4.3(v)	Is in compliance with the technology license agreement executed by the Concessionaire for the technology, processes, know-how and systems used or incorporated into the Facilities and/or the Associated Infrastructure	Yes	NA	NA
4.3(vi)	Maintains the safety and security of personnel, material and property at the Site, in accordance with the approved EHS Plan, Applicable Laws and Applicable Permits.	Yes	Yes	Yes
4.3(vii)	Ensures that all waste materials and hazardous substances are stored and/or disposed in accordance with the EHS Plan, Applicable Laws and Applicable Permits.	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
4.4	Overall, The Project Engineer shall assist the Uttar Pradesh Jal Nigam in supervising the construction, rehabilitation, operation & maintenance of the Facilities and the Associated Infrastructure and shall work closely with the Uttar Pradesh Jal Nigam and NMCG to monitor compliance with the KPIs.	Yes	Yes	Yes
5.1	During the Development Period, the Project Engineer shall undertake a detailed review of the basic engineering Designs, furnished by the Concessionaire along with supporting data, including the geo-technical and hydrological investigations, characteristics of materials from borrow areas and quarry sites, topographical surveys and Sewage Flow Analysis. The Project Engineer shall complete such review and send its comments / observations to the NMCG / Name of the Employer (i.e. State Institution)	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: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	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: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	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	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	sent to it by the Concessionaire and furnish its comments within 10 (ten) days of receiving such drawings or documents.			
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 &	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	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			
6.2	The Project Engineer shall review, and assist the Uttar Pradesh Jal Nigam in reviewing the submissions by the concessionaire, the Construction plan as defined in clause 7.3 of the Concession Agreement including Phase 1 and Phase II drawings, as well as the 'As Built' drawings on completion and EHS plans as defined in clause 7.4 of the Concession Agreement	Yes	Yes	Yes
6.3	The Project Engineer shall assist the Uttar Pradesh Jal Nigam submit their comments on effectiveness or otherwise of the Work plan submitted for meeting the specified	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	payment milestones and completion of the work on or before the scheduled construction completion date			
6.4	The Project Engineer shall review, in particular, the submissions by the Concessionaire as per Schedule 1 of the Concession Agreement, and assist Uttar Pradesh Jal Nigam in assessing the effectiveness them	Yes	Yes	Yes
6.5	The Project Engineer shall review the monthly progress report furnished by the Concessionaire and send its comments thereon to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 7 (seven) days of receipt of such report	Yes	Concessionaire submitted progress report on 4th Feb 2019 for the month of January 2019. However, the report was prepared by Project Engineer	Yes
6.6	The Project Engineer shall inspect the Construction Works and the Project as and	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	when necessary and submit a report of such inspection (the "Inspection Report"), preferably after receipt of the monthly progress report from the Concessionaire, but before the 20th (twentieth) day of each month in any case. The report shall contain, an overview of the status, progress, quality and safety of construction, including the work methodology adopted, the materials used and their sources, and conformity of Construction Works with the Scope of the Project and the Specifications and Standards. In a separate section of the Inspection Report, the Project Engineer shall describe in reasonable detail the lapses, defects or deficiencies observed by it in the construction of the Project. The Project Engineer shall send a copy of its Inspection Report to the NMCG/ Uttar			

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	Pradesh Jal Nigam and the Concessionaire within 3 (three) days of the inspection			
6.7	However serious lapses, defects and/or deficiencies shall be reported to the Uttar Pradesh Jal Nigam/NMCG immediately without waiting for the monthly progress submissions as mentioned in the previous paragraph	Yes	Yes	Yes
6.8	For determining that the Construction Works conform to Specifications and Standards, the Project Engineer shall require the Concessionaire to carry out, or cause to be carried out, tests on a sample basis, to be specified by the Project Engineer in accordance with approved norms/Good Industry Practice for quality assurance. The Project Engineer shall issue necessary directions to the Concessionaire for ensuring that the tests are conducted in a	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	fair and efficient manner, and shall monitor and review the results thereof			
6.9	The timing of tests referred to in Paragraph 6.8, and the criteria for acceptance/ rejection of their results shall be determined by the Project Engineer in accordance with the norms /rules and Good Industry Practice. The tests shall be undertaken on a random sample basis and shall be in addition to, and independent of, the tests that may be carried out by the Concessionaire for its own quality assurance in accordance with Good Industry Practice	Yes	Yes	Yes
6.10	In the event that the Concessionaire carries out any remedial works for removal or rectification of any defects or deficiencies, the Project Engineer shall require the Concessionaire to carry out, or cause to be	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	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	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	Concessionaire, the Project Engineer shall review the same and send its comments to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire forthwith.			
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	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	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.			
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	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	same			
6.15	Upon reference from the NMCG/ Uttar Pradesh Jal Nigam, the Project Engineer shall make a fair and reasonable assessment of the costs of providing information, works and services and certify the reasonableness of such costs for payment by the NMCG/ Uttar Pradesh Jal Nigam to the Concessionaire	NA	NA	
6.16	The Project Engineer shall aid and advise the Concessionaire in preparing the Operation & Maintenance Manual	NA	NA	
6.17	Upon reference from the NMCG/ Uttar Pradesh Jal Nigam the Project Engineer shall undertake the assessment of cost of civil works, as per applicable schedule of rates, for the reduction of Scope of work if any as per Article 20.	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
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'	Yes	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	Yes	NA	
6.20	On completion of construction and at behest of Employer, the Project Engineer may review the work done as per 'as built' drawings and identify defects and suggest changes as per clause 7.13(v) of the Concession Agreement	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
6.21	Similarly, the Project Engineer may inspect the trial process and may point out the defects and cause changes or retrial of the process as per clause 7.14(d) of the Concession Agreement	NA	NA	
7.1	In respect of the Designs, Drawings, and Documents received by the Project Engineer for its review and comments during the Operation Period, the provisions of Paragraph 4 shall apply, mutatis mutandis	NA	NA	
7.2	The Project Engineer shall review the O&M Manual (Clause 8.2) and the Scheduled Maintenance Programme submitted by the concessionaire and provide its recommendations on the same, including suggestions for change, if any. The O&M Manual shall cover: a) O&M Procedures;	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	b) O&M Plan; c) Provision of Spare Parts; d) Sampling and Testing Methodologies; e) Storage and control of Inventory; f) Arrangements for data security and Integrity; g) Procedures for recording and disposal of complaints; h) Operational Contingencies Plans; i) Human Resources Plans; j) EHS Plans; k) Emergency procedures; l) Management of Assets Plans. And m) Annual Scheduled Maintenance programme.			
7.3	The Project Engineer shall review the annual Maintenance Program furnished by the Concessionaire and send its comments	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	thereon to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 10 (ten) days of receipt of the Maintenance Program			
7.4	The Project Engineer shall review the reports generated from online monitoring systems to assess adherence to KPIs and submit the monthly KPI Adherence Report to Uttar Pradesh Jal Nigam	NA	NA	
7.5	The Project Engineer shall verify the daily reports submitted by the concessionaire regarding the volume of sewage and its quality re influent standards and monitor and record the same on regular basis	NA	NA	
7.6	The Project Engineer shall monitor, review and advise the Uttar Pradesh Jal Nigam on the reports submitted by the concessionaire as per clause 8.8(b)(iii) (A) to (G) of the Concession Agreement	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
7.7	The Project Engineer shall regularly verify the report submitted by the concessionaire on the tests conducted at the Inlet Point, the Outlet Point or at any other point at the Varanasi STP for the Digested Sludge. Separately, the Project Engineer shall also have the right to take random samples of the incoming Sewage, the Digested Sludge and the Treated Effluent at any time during the O&M Period to test compliance with the Influent Standards and the Discharge Standards.	NA	NA	
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	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	receipt of such report			
7.9	The Project Engineer shall inspect the Project once every month, preferably after receipt of the monthly status report from the Concessionaire, but before the 20th (twentieth) day of each month in any case, and make out an O&M Inspection Report setting forth an overview of the status, quality and safety of O&M including its conformity with the Maintenance Requirements and Safety Requirements. In a separate section of the O&M Inspection Report, the Project Engineer shall describe in reasonable detail the lapses, defects or deficiencies observed by it in O&M of the Project. The Project Engineer shall send a copy of its O&M Inspection Report to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 7 (seven) days of the	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	inspection			
7.10	The Project Engineer may inspect the project more than once in a month, if any lapses, defects or deficiencies require such inspections.	NA	NA	
7.11	The Project Engineer shall in its O&M Inspection Report specify the tests, if any, that the Concessionaire shall carry out, or cause to be carried out, for the purpose of determining that the project is in conformity with the Maintenance Requirements. It shall monitor and review the results of such tests and the remedial measures, if any, taken by the Concessionaire in this behalf.	NA	NA	
7.12	The Project Engineer shall determine if any delay has occurred in completion of repair or remedial works in accordance with the Concession Agreement, and shall also determine the Damages, if any, payable by	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	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	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	report to the employer on all the reports (Daily, Monthly, Quarterly and Annual), including monthly Environmental Monitoring Reports as detailed in Schedule 11(Part G) of the Concession Agreement.			
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	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
10.1	When called upon by either Party in the event of any Dispute, the Project Engineer shall mediate and assist the Parties in arriving at an amicable settlement	NA	NA	
10.2	In the event of any disagreement between the Parties regarding the meaning, scope and nature of Good Industry Practice, as set forth in any provision of the Concession Agreement, the Project Engineer shall specify such meaning, scope and nature by issuing a reasoned written statement relying on good industry practice and authentic literature	NA	NA	
11.0	As and when requested by NMCG/ Uttar Pradesh Jal Nigam, the Project Engineer shall provide its opinion and assessment on the events related to Emergency, Change in Law, Force Majure, Minor or total Casualties, Variation and unforeseen Site	NA	NA	

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	conditions etc			
12.1	The Project Engineer shall notify its programme of inspection to the NMCG/ Uttar Pradesh Jal Nigam and to the Concessionaire, who may, in their discretion, depute their respective representatives to be present during the inspection.	Yes	Yes	Yes
12.2	A copy of all communications, comments, instructions, Drawings or Documents sent by the Project Engineer to the Concessionaire pursuant to this TOR, and a copy of all the test results with comments of the Project Engineer thereon shall be furnished to the NMCG/ Uttar Pradesh Jal Nigam forthwith.	Yes	Yes	Yes
12.3	The Project Engineer shall retain at least one copy each of all Drawings and	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	Documents received by it, including '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,	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	the Project Engineer shall act with the efficiency and urgency necessary for discharging its functions in accordance with Good Industry Practice.			
12.6	Project Engineers shall be expected to fully comply with all the provisions of the "Terms of Reference", and shall be fully responsible for supervising the Design, Construction and maintenance and operation of the Facility in accordance with the provisions of the Concession Agreement and other schedules. Any failure of the Project Engineer in notifying to the Employer and the Concessionaire on non- compliance of the provisions of the Concession Agreement and other schedules by the Concessionaire, non-adherence to the provision of this ToR and non-adherence to the time schedule prescribed under this ToR shall amount to	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	non-performance.			
12.7	The project Engineer shall develop & maintain a project website and with the approval of NMCG/UPJN post from time to time, information (textual and Audio- Visual) on project progress on a continuous basis. On completion of services as per this RFP document, the website with all necessary technical information shall be handed over to UPJN.	Yes	Yes	Yes
14.1	Uttar Pradesh Jal Nigam may review with the Project Engineer, any or all of the documents and advice forming part of the Consultancy, in meetings and conferences which will be held at the office of the Uttar Pradesh Jal Nigam / NMCG. Uttar Pradesh Jal Nigam / NMCG may, in its discretion, require the Project Engineer to participate in extended meetings and/ or work from the	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	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	Yes	Yes	Yes

Activities carried out as per TOR				
Clause as per TOR	**Scope**	**Period: December 2018 to February 2019**		
		Undertaken till previous month - December 2018	**Undertaken during this month – January 2019**	**Expected for next month February 2019**
	required in addition to all key 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: January 2019	Period: February 2019
			Description	Expected for next month
1	Site Inspection & Review of progress	1) Mr. Arif Khan, SMCG 2) Assistant Engineers, GPPU, Varanasi`	9th January 2019	Project review meeting and site inspection
2	Site visit & Review of progress	1) Mr. S. K. Rai, 2) General Manager, GPPU, Varanasi. 3) Mr. T. Sathyamoorthy, Senior Manager, MACE	29th January 2019	
3	Site visit	Media representatives from NMCG, New Delhi	29th January 2019	

5.0. STAFF DEPLOYMENT

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

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

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

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

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

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

ANNEX - 1
PROJECT PROGRESS (PHYSICAL)

ANNEX 1 - PROJECT PROGRESS (PHYSICAL)

Sl. No.	Component / Package	Physical Progress in Percentage			Remarks
		Up to Previous month	During month	Total	
1	2	3	4	5	6
1	Development of sewage treatment plant and associated infrastructure under Hybrid Annuity based PPP mode at Varanasi	38.53%	10.44%	48.97%	Physical progress observed to be very slow and needs to be accelerated by Concessionaire.

ANNEX - 2
FINANCIAL STATEMENTS

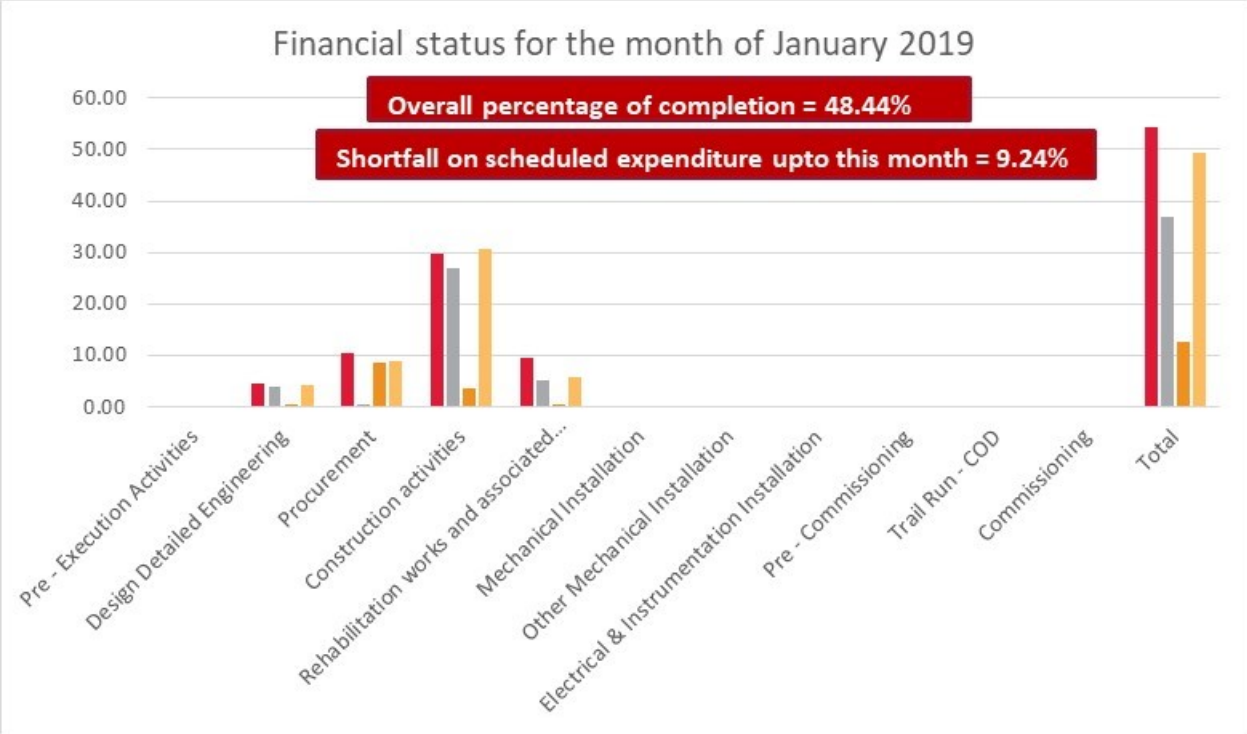
ANNEX 2 - FINANCIAL STATEMENTS

Item of work	Scheduled expenditure in Rs	Completed amount till previous month in Rs	Completed amount during this month in Rs	Total completed amount in Rs
Design detailed engineering				
Phase - I D&E (BEP)	76,50,000	76,50,000	-	76,50,000
Phase - II D&E (Civil, Mechanical, Electrical, Inst. drawings)	5,100,000	4,947,000	30,600	4,977,600
Topographical / Soil Investigation	51,00,000	51,00,000	-	51,00,000
Structural drawings submissions & approvals	12,750,000	12,036,000	306,000	12,342,000
Mechanical & piping drawings submissions & approvals	10,200,000	7,711,200	1,101,600	8,812,800
Electrical drawings submissions & approvals	2,550,000	1,820,700	306,000	2,126,700
Instrumentation document submissions & approvals	2,550,000	1,147,500	382,500	1,530,000
Associated				
MPS pumping station	6,700,870	3,417,000	-	3,417,000
Rising Main	13,005,000	1,071,000	-	1,071,000
Treated Effluent disposal line	75,905,503	48,073,666	3,896,400	51,970,066
Equipment procurement, logistics and receipt of equipment at Site				
Fine Screen / Coarse Screen / Belt Conveyors	10,200,000	226,667	-	226,667
Grit Removal Mechanism	4,799,177	226,667	-	226,667
SBR System (Decanters)	18,686,572	1,133,333	37,116,667	38,250,000
SAS / RAS pumps/booster pumps / treated water pumps / drain pumps	10,200,000	226,667	6,148,333	6,375,000
Horizontal centrifugal pumps (Treated water pumps)	20,400,000	453,333	-	453,333
Air blowers	15,016,127	906,667	19,493,333	20,400,000
Chlorination system	3,529,704	226,667	6,148,333	6,375,000

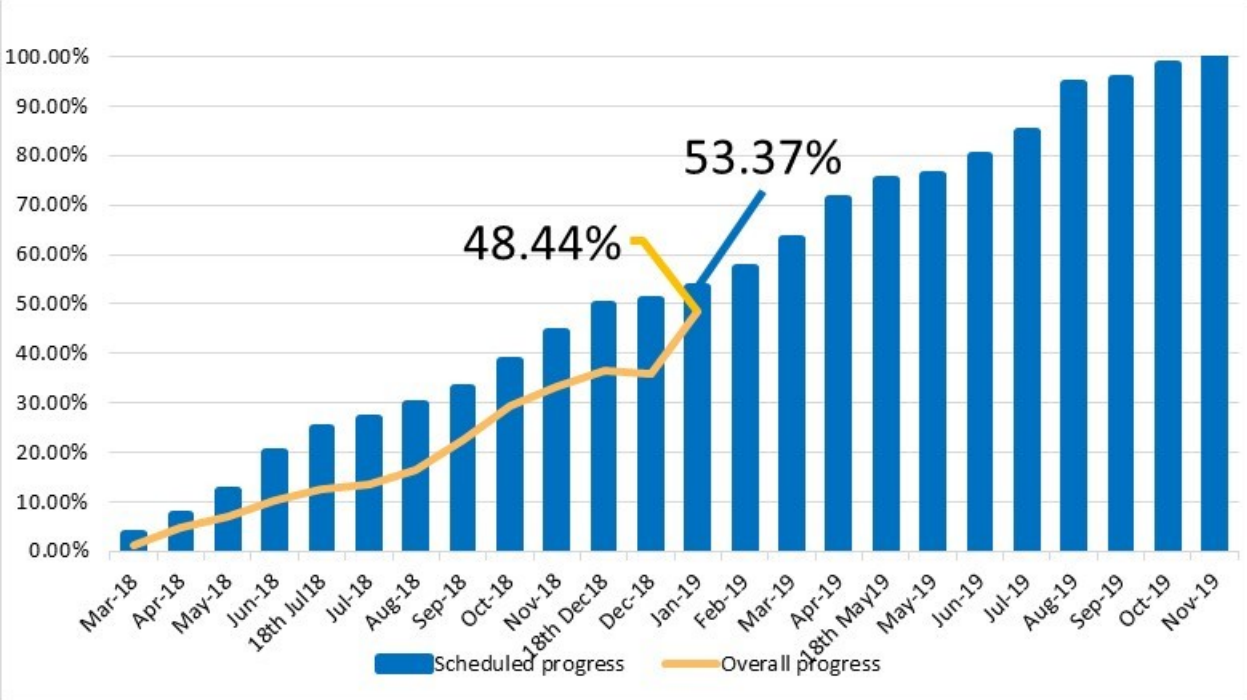
Item of work	Scheduled expenditure in Rs	Completed amount till previous month in Rs	Completed amount during this month in Rs	Total completed amount in Rs
Sluice Gates	5,100,000	113,333	-	113,333
MS/CS/SS/GI/CI/DI Piping	151,111			
Valves	226,667			
Motorized Gates at Inlet Of SBR	1,386,984	113,333	68,000	181,333
Diffusers	4,662,275	226,667	4,873,333	5,100,000
Volute press	1,105,464	226,667	-	226,667
PE Dosing Tanks	276,366	-	-	-
Agitators	2,154,143	-	102,000	102,000
Transformers	701,966	113,333	2,436,667	2,550,000
HT cables	56,667	-	45,333	45,333
MCC panel	519,444	68,000	22,667	90,667
HT Panel	519,444	68,000	2,482,000	2,550,000
PLC Panel	1,558,333	204,000	5,533,500	5,737,500
SCADA System	1,038,889	-	-	-
MLDB, LDB,& SLDBS	519,444	-	-	-
Push Button Stations/Plant lighting / Buildings lighting	259,722	-	-	-
Power, Control & lighting Cables	519,444	45,333	-	45,333
Cable trays/Lighting JB	259,722	11,333	34,000	45,333
DG Set	519,444	113,333	-	113,333
Plant Earthing	271,667	34,000	11,333	45,333
Instruments (Flow meter / Analyzer)	170,000	102,000	-	102,000
Instruments (Temperature, Pressure & Level transmitter / Level, Temperature and Pressure switches)	170,000	102,000	-	102,000
Civil Executions				
Bund Wall / Earthen Embankment	71,400,000	57,571,350	8,236,500	65,807,850
Construction of Inlet Structure,	18,480,337	13,874,763	1,598,000	15,472,763

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
Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for SBR				
SBR Basins & SBR outlet Chamber	163,200,000	157,733,310	18,360,000	176,093,310
Construction of CCT including Chlorination room & Treated water pump House	17,543,136	18,514,224	3,519,000	22,033,224
Overhead Treated Water Tank	1,530,000	817,275	30,600	847,875
Construction of BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank	3,621,864	3,090,090	-	3,090,090
Administrative Building including lab and workshop	6,120,000	5,940,174	2,162,400	8,102,574
Staff Quarters	4,590,000	5,628,717	759,900	6,388,617
Construction of Blower room, HT, MCC, Transformer Yard, DG set Area	11,291,013	6,478,387	1,116,900	7,595,287
Total	544,411,801	367,790,356	126,321,900	494,112,256
	Percentage completion of overall project		**48.44%**	

Financial status for the month of January 2019



Progress status scheduled vs Actual - January 2019



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 (January 2019)				Remarks
			As per IS No of test required	No. of Test conducted	No. of Acceptance	No. of Rejects	As per IS No of test required	No. of Test conducted	No. of Acceptance	No. of Rejects	
1	Soil compaction test at source (Barrow pit) - MDD, OMC & Soil characteristics	2720 Part VIII	12	12	12	0	10	10	0	0	As per used borrow pit soil quantity all test has been covered up, as on date. **10 sample taken and sent to third party testing and waiting for their report.
2	Soil compaction test at Site - OMC & Degree of compaction	2720 Part II	868	868	771	97	156	156	144	12	97* samples rejected up to previous month recompacted and retested, found ok. 12*Rectification suggested for recompact ion and retesting as per

S. No.	Description	IS Code	Up to Previous Month				During this month (January 2019)				Remarks
			As per IS No of test required	No. of Test conducted	No. of Acceptance	No. of Rejects	As per IS No of test required	No. of Test conducted	No. of Acceptance	No. of Rejects	
											relevant code.

2. Sequential Batch Reactor (SBR)

S. No.	Description	IS Code	Up to Previous Month				During this month (January 2019)				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No. of Test conducted	No. of Acceptance	No. of Rejects	
1	Concrete ingredients coarse aggregate 20mm down	IS 383-2001	48	86	69	17*	1	5	5	**0**	Found acceptable, witnessed by UPJN/MACE 17 Samples of aggregates are removed from site being over sized
2	Concrete ingredients coarse aggregate 10mm down	IS 383-2001	35	49	44	*5	1	3	3	0	Found acceptable, witnessed by UPJN/MACE 5 Samples of aggregates are removed from site being under sized
3	Concrete ingredients fine aggregate 4.75 mm down	IS 383-2001	29	47	42	**5***	0	0	0	**0**	Found acceptable, witnessed by UPJN/MACE 5 Samples of aggregates are removed from site being under sized under sized

S. No.	Description	IS Code	Up to Previous Month				During this month (January 2019)				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No. of Test conducted	No. of Acceptance	No. of Rejects	
4	Combined Grading as per approved IIT Mix design	IS 383-2001	**whenever required	4	4	0	**whenever required	0	0	0	As per Approved mix 20mm with 60%,10mm with 40%, currently running mix, found ok
5	Harden concrete Compressive strength	IS 516 &IS 456	every 50 M3 or part thereof	764	764	**0**	every 50 M3 or part thereof	198	198	0	All concrete cubes tested at site lab only. Cube test machine calibration test done by approved 3rd party.
6	OPC Cement 43 Grade	IS 8112-2013	Every consignment or whenever required	1	1	0	Every consignment or whenever required	0	0	0	Ultra Tech Source / MTC Available**.**
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	0	0	0	TATA STEEL/MTC Available at site for all consignment as of date,
8	Admixed	IS 9103-1979	Every new consignment once reach site	1	1	0	Every new consignment once reach site	0	0	0	FOSROC conplast / MTC Available at site for all consignment as of date
9	Water	IS 456 - 2001	6 months once	2	2	0	6 months once	0	0	0	IIT report available, found acceptable,

S. No.	Description	IS Code	Up to Previous Month				During this month (January 2019)				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No. of Test conducted	No. of Acceptance	No. of Rejects	
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	378	365	13	Every alternative truck of concrete mixer	50	50	0	13* under/over slump concrete has been realtered as per norms and again retested, found within specified range. All tests Witnessed by MACE / UPJN at spot inspection
12	Bricks	IS1077&IS5454	Every new consignment once reach site. 20 bricks to be selected from the lot 2000-10000	20	20	0	Every new consignment once reach site. 20 bricks to be selected from the lot 2000-10000	20	20	0	Report received for 20 bricks that were sent for third party testing and result found acceptable.

3. Treated Effluent disposal line

S. No.	Description	IS Code	Up to Previous Month				During this month (January 2019)				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	
1	PSC Pipes 1200mm dia - characteristics Test (Dimension, Straightness, Thickness, Hydrostatic & Permeability)	IS 784 & IS 3597	594	594	577	17	0	0	0	0	17 nos pipe were rejected due to main body seepage during the hydro pressure test, Witnessed by Concrete udyog & Project engineer.
2	Soil test - SBC of soil	IS 6403	4	4	4						
3	EPDM Gasket	IS 5389-1979	532	532	532	0	13	13	13	0	MTC report available from concrete udyog pipes

4. Raising main

S. No.	Description	IS Code	Up to Previous Month				During this month (January 2019)				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	
1	MS Pipes 1000mm dia - characteristics Test (Dimension, Thickness, Hydro testing, Epoxy coating, Anti corrosive coating & Marking)	IS 3589:2001	246.72 Mtr (48 nos)	246.72 Mtr (48 nos)	246.72 Mtr (48 nos)	0	0	0	0	0	Bamrah Pipes -nodia factory-inspection done along with UPJN Engineer.

5. Construction Running Materials / Equipment's

S. No.	Description	IS Code	Up to Previous Month				During this month (January 2019)				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	
1	Auto level (SBR / Pipe lines / bund wall)	BIS 1492	Yearly once	3	3	0	Yearly once	0	0	0	Verification done for all instruments / tools & CTM Site lab recalibration certificates found ok, Recalibration done for RMC plant on 27.12.18
2	Cube testing Machine	IS 516-2001	Yearly once	2	2	0	Yearly once	0	0	0	
3	Laboratory weighing machine	IS 460-1980	Yearly once	2	2	0	Yearly once	0	0	0	
4	Ready Mix Concrete plant	IS 4926-2013	Whenever required	3	3	0	Whenever required	0	0	0	

ANNEX - 4
PHOTOGRAPHS

SBR basin	 **North side View**
	 **South side View**

West side view

Wall No.4

Inlet chamber, Fine screens, Grit Basin & Parshall Flume	 **Side view**
Bund wall	 **East side wall**

North side wall

West side wall

South side wall

Administrative Building

Human eye view

SBR air blower room, HT room, MCC room, Transformer Yard & DG set area	 **Tie beam level**
Staff Quarters	 **Type 4**

Type – 4

Treated Effluent disposal line

PSC Pipe laying

ANNEX - 5
OUTWARD CORRESPONDENCE LIST OF JANUARY 2019

ANNEX 5 - OUTWARD CORRESPONDENCE LIST OF JANUARY 2019

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
1	MACE:P968:8771	04.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Preparation and submission of monthly progress report for the month of December 2018
2	MACE:P968:8772	05.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Preparation and submission of monthly inspection report for the month of November 2018
3	MACE:P968:8779	08.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation on GST claim by concessionaire
4	MACE:P968:8780	08.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation on MS pipe thickness calculation (Ring main)
5	MACE:P968:8781	09.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation on civil GA & structural drawing of raw water receiving chamber
6	MACE:P968:8783	09.01.2019	GM, GPPU	NMCG, PM, UPJN	NA	Intimation to UPJN regarding delay in supply of PSC pipe 1200 mm diameter
7	MACE:P968:8787	10.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval for lighting protection calculation
8	MACE:P968:8788	10.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval with comments as MS pipe thickness calculation
9	MACE:P968:8791	12.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval for the data sheet of level measuring instruments & QAP for MPS & STP
10	MACE:P968:8793	14.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation on civil GA & Details of outfall structure (Rev 4)
11	MACE:P968:8795	14.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation on piping GAD for CCT & treated water pump house (Area

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
						05)
12	MACE:P968:8796	14.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation on Agitator for sludge storage tank
13	MACE:P968:8803	19.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for giving dispatch clearance to submersible pumps: RAS pump, SAS pump, Filtrate pump and BEP feed pump.
14	MACE:P968:8804	19.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approved for the capacitor sizing calculation for MPS & STP(Rev 2)
15	MACE:P968:8809	22.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation on plant piping layout plan
16	MACE:P968:8810	22.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observations on design calculation of thickness of MS pipe (Rising Main from MPS), Rev. 3
17	MACE:P968:8811	22.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observations on revised Civil GA (Rev. 2) and Structural Design & Drawing (Rev. 1) of receiving chamber
18	MACE:P968:8812	23.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observations on revised of Civil GA Drawing of Final Outfall Chamber, Rev. 5
19	MACE:P968:8813	23.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommendation for approval with comments for Datasheet, GA drawings and complete details of the 415 V Non-segregated busduct for STP and MPS
20	MACE:P968:8816	23.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommendation for approval with notes for Civil GA, Rev. 3 and Structural Calculation and Drawing of Electrical Control Room, MPS Area,

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
						Rev. 2
21	MACE:P968:8826	29.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation on switchgear room and transformer yard layout for STP -R0 along with CRS and comments
22	MACE:P968:8829	29.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval for datasheet of level measuring instrument(R1) Pressure measuring instrument(R2) & panel mounted digital indicator & totalizer (R1) for MPS & STP
23	MACE:P968:8831	30.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation on piping GAD for Air blower room (Area – 04)
24	MACE:P968:8835	30.01.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommendation for approval with comments for the revised Civil (Rev. 4) & RCC Detail (Rev. 3) of Electrical Control Room at MPS

ANNEX - 6
INWARD CORRESPONDENCE LIST OF JANUARY 2019

ANNEX 6 - INWARD CORRESPONDENCE LIST OF JANUARY 2019

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
1.	EIL/VSPPL/2018-19/351	02-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of supporting document for GST Claim.
2.	EIL/VSPPL/2018-19/352	03-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	7	Submission of Civil and Structural Drawing of Raw Water Receiving Chamber.
3.	EIL/VSPPL/2018-19/353	03-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of Monthly progress report for the month of December 2018
4.	EIL/VSPPL/2018-19/354	03-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	6	Submission of Revised Civil GA & Det. of Outfall Structure, Rev. 4.
5.	EIL/VSPPL/2018-19/355	03-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Submission of renewed Workmen Compensation Policy copy
6.	EIL/VSPPL/2018-19/356	03.01.2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Reply for delay in submission of drawings / documents.
7.	EIL/VSPPL/2018-19/357	07-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	4	Submission of revised Civil GA & Details of Rehabilitation of Rising Main 1000 mm Dia Pipe. Rev. 1.
8.	EIL/VSPPL/2018-19/358	09-01-2019	VSPPL /	Amit B	Y	1	Inspection call for PLC panel (

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
			UPJN	Ghorpade			SBR) and Decanter core parts
9.	EIL/VSPPL/2018-19/359	09-01-2019	VSPPL / UPJN	Amit B Ghorpade	N		Inspection call for Chlorination system and leak absorption system
10.	EIL/VSPPL/2018-19/360	09-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of Mechanical Datasheet, G.A. Drawing and QAP for Agitator at Sludge Storage Tank.
11.	EIL/VSPPL/2018-19/361	10-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of Piping GA Drawing for Air Blower Room (Area - 04)
12.	EIL/VSPPL/2018-19/362	10-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of Piping G.A. Drawing for CCT and Treated water Pump House (Area-5)
13.	EIL/VSPPL/2018-19/363	13-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	8	Submission of Electrical Documents for STP & MPS - Capacitor Sizing Calculation, HT & LT Cable Sizing, Key SLD and Fault Level Calculation for STP
14.	EIL/VSPPL/2018-19/364	14-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of revised M.S. Pipe Thickness Calculation (Rising Main from MPS), Rev. 3.

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
15.	EIL/VSPPL/2018-19/365	14-01-2019	VSPPL/ UPJN	Amit B Ghorpade	Y	10	Submission of Civil GA, Rev. 3 and Structural Calculation and Drawing of Electrical Control Room, MPS Area, Rev. 2.
16.	EIL/VSPPL/2018-19/366	15-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	4	Request for Dispatch Clearance – C – Tech Decanters.
17.	EIL/VSPPL/2018-19/367	15-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Request for permission of Road Side Cutting for Laying of PSC Pipe Line.
18.	EIL/VSPPL/2018-19/368	16-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	6	Submission of Electrical Documents: Switchgear Room & Transformer Yard Layout for STP- Rev. 0, GA & SLD Drawing of 415 V PMCC, MCC, APFC Panel & PDB for STP & MPS - Rev 1 and Datasheet, GA drawings and complete details of the 415 V Non Segregated Aluminium Busduct for STP & MPS - Rev. 0.

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
19.	EIL/VSPPL/2018-19/369	17-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission Revised of Civil GA Drawing of Final Outfall Chamber, Rev. 5 along with compliance
20.	EIL/VSPPL/2018-19/371	18-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Request for Dispatch Clearance – Pumps: RAS Pump, SAS Pump, Filtrate Pump and BFP Feed Pump – M/s. Kishore Pumps Limited
21.	EIL/VSPPL/2018-19/372	19-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Revised Inspection Call for Air Blower – M/s. Garden Denver
22.	EIL/VSPPL/2018-19/373	21-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission Approved Mechanical GA Drawing of Sludge Treatment Building and CCT & Treated Water Pump House.
23.	EIL/VSPPL/2018-19/374	22-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of Vendor Credentials for supply of Instruments.
24.	EIL/VSPPL/2018-19/375	24-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of NDT Test reports of Columns at Primary Treatment Unit
25.	EIL/VSPPL/2018-19/376	24-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of Electrical Drawing - Cable Routing

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
							Layout - Internal for STP, Rev. 0.
26.	EIL/VSPPL/2018-19/377	24-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of Instrumentation Documents for STP and MPS, Rev. 1.
27.	EIL/VSPPL/2018-19/378	24-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Inspection Call for 11 KV HT Panel for STP and MPS.
28.	EIL/VSPPL/2018-19/379	24-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Inspection call for Transformers for STP and MPS.
29.	EIL/VSPPL/2018-19/380	25-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	5	Submission of Instrumentation Documents - Analysers for STP, Rev. 3; Flow Measuring Instrument for MPS, Rev. 2 and for STP, Rev. 1.
30.	EIL/VSPPL/2018-19/381	25-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	4	Submission of M.S. Pipe Thickness Calculation (Rising Main from MPS), Rev. 4
31.	EIL/VSPPL/2018-19/382	28-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	11	Submission of revised Civil (Rev. 4) & RCC Detail (Rev. 3) of Electrical Control Room at MPS
32.	EIL/VSPPL/2018-19/383	28-01-2019	VSPPL /	Amit B	Y	16	Submission of revised

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
			UPJN	Ghorpade			Instrumentation Data Sheets for STP and MPS.
33.	EIL/VSPPL/2018-19/384	28-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of Electrical Drawing: Cable Routing Layout - External for STP, Rev. 0.
34.	EIL/VSPPL/2018-19/385	28-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	6	Submission of revised Raw Water Receiving Chamber - Civil G.A. (Rev. 3) & RCC Detail (Rev. 2) along with compliance sheet
35.	EIL/VSPPL/2018-19/386	28-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of revised Mechanical GA Drawing of Overhead Tank (OHT) Rev. 3 along with Compliance Sheet.
36.	EIL/VSPPL/2018-19/387	29-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	3	Revised M.S. Pipe Thickness Calculation (Effluent Disposal Pipe), Rev. 3 along with Compliance Sheet.
37.	EIL/VSPPL/2018-19/388	29-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	4	Replacement with Revised of Civil GA Drawing of Final Outfall Chamber, Rev. 6 along with compliance.

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
38.	EIL/VSPPL/2018-19/389	30-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Request for Dispatch Clearance – SBR PLC Panel – M/s. SFC Environmental Technologies Pvt. Ltd.
39.	EIL/VSPPL/2018-19/390	30-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Request for Dispatch Clearance – Decanter Core Parts – M/s. SFC Environmental Technologies Pvt. Ltd.
40.	EIL/VSPPL/2018-19/393	30-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Submission of Vendor Credentials of Electronics Systems and Devices for the supply of Totalizer for Parshall Flume
41.	EIL/VSPPL/2018-19/394	30-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of revised Instrumentation Data Sheet - Analyzers for STP, Rev. 3
42.	EIL/VSPPL/2018-19/395	31-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Submission of Comment Response sheet for Road Design Calculation, Rev. 0.
43.	EIL/VSPPL/2018-19/396	31-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of Control Philosophy for STP and MPS, Rev. 0.
44.	EIL/VSPPL/2018-19/397	31-01-2019	VSPPL /	Amit B	Y	1	Notice to inspection of work

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
			UPJN	Ghorpade			against completion of 2nd Payment Milestone.
45.	EIL/VSPPL/2018-19/398	31-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of Instrumentation Documents - Instrument Cable Datasheet for STP and MPS, Rev. 0
46.	EIL/VSPPL/2018-19/399	31-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of Electrical Drawing and Document - Fault Level Calculation for MPS and Lighting Layout - Outdoor for STP, Rev. 1.
47.	EIL/VSPPL/2018-19/400	31-01-2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Regarding Manufacturing Clearance issued and confirmation received from Vendor

ANNEX - 7
DELAY ANALYSIS & RECOVERY PLAN

ANNEX 7 – DELAY ANALYSIS & RECOVERY PLAN

Delay analysis and recovery plan:

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

1. Summary of delay analysis

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
Design Detailed Engineering	11-Oct-17	30-Oct-18	Drawing submitted by the concessionaire after the due date, indicates the lack of planning. Approval from IIT is pending for some of the items.	However, concessionaire started the works
			Structural drawing of the following component is pending due to lack of planning. • Weir across assi nalla	Concessionaire to plan the submission and approval on or before 15th February 2019
			Instrumentation drawing of the following component is pending due to lack of planning. • Cause & Effect	Concessionaire to plan the submission and approval on or before 15th February 2019

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
			Diagram	
Associated infrastructure works	20-Mar-18	18-May-19	Delay in receipt for existing structure as built drawings. and delay in site investigation are the main reason	UPJN not provided existing structure as built drawings Concessionaire to submit the condition assessment report along with drawings on or before 15th February2019
			Concessionaire yet to finalise the vendor for CCTV inspection of existing rising main	Concessionaire to expedite to start the same by 15th February2019
			Work not yet started for carrying out the trenchless cutting method near Samneghat bridge	Concessionaire to expedite the delivery as per schedule
			Manufacturing delay of PSC pipes for treated effluent disposal line. Only 2885 m of pipe inspection completed.	Concessionaire to instruct the manufacturers to speed up the progress or else need to identify one more supplier and place the work order to expedite the delivery as per schedule
			Problem with local villagers to be sorted out by	UPJN to sort out the issue of local villagers.

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
			UPJN. Transportation of inspected pipe from manufacturer to site is delayed	Concessionaire to expedite the transportation of PSC pipes within 10 days from the date of inspection
			Hydro testing of pipes already laid is delayed unduly due to lack of planning, manpower, equipment.	Concessionaire to plan to complete the hydro testing within 30 days from the date of laying.
Equipment Procurement, Logistics and receipt of equipment at Site	24-May-18	5-Sep-19	Data sheet and GA drawings for the following items are pending due to lack of planning • PE dosing tanks • SCADA • MLDB, LDB & SLDBS • Push button stations / plant lighting / building lightings	Concessionaire to expedite the Submission of the same by 15th February 2019
Civil Executions				
Bund Wall / Earthen Embankment	19-Feb-18	30-Aug-19	Lack of sufficient equipment, manpower	
Inlet Chamber Manual & Mechanical Screen Chamber, Grit Chamber & Outlet Channel of Grit Chamber &	03-June-18	30-Jun-19	Drawing submitted by the concessionaire after the due date indicates the lack of planning and lack of sufficient equipment, manpower	Concessionaire started the works. Full utilization of the available equipment shall increase the output and mitigate the delay

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
Parshall Flume (I) & Distribution Chamber of SBR Basin			Delay occurred for getting from approval from IIT	occurred.
SBR air blower room, HT room, MCC room, Transformer Yard & DG set area	3-Jun-18	29-Aug-19	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Delay occurred for getting from approval from IIT and lack of sufficient equipment, manpower	Full utilization of the available equipment shall increase the output and mitigate the delay occurred.
Overhead treated water tank	1-Jun-18	1-Aug-19	Concessionaire recently submitted structural drawing i.e after the target date. This is mainly due to lack of planning or engineering team and lack of sufficient equipment, manpower	Concessionaire started the excavation work. Full utilization of the available equipment shall increase the output and mitigate the delay occurred.
Construction of BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank	15-Oct-18	13-Jul-19	Drawing submitted by the concessionaire after the due date indicates the lack of planning. Delay occurred for getting from approval from IIT	Full utilization of the available equipment shall increase the output and mitigate the delay occurred.

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

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

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

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

S. No.	Description	Estimate		As per construction plan up to 31st January 2019		Actual work done up to 31st January 2019		Shortfall as on 31st January 2019	
		Quantity	Unit	Quantity	Unit	Quantity	Unit	Quantity	Unit
1	PCC & RCC	11311	Cum	9418	Cum	9056	Cum	362	Cum

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

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

Sl. No.	Description	Quantity	Unit	Capacity	Unit
16	Vibrator	6	Nos		
17	Dewatering pump	3	Nos		
18	Labour (Skilled & Un skilled)	165	Nos		

2.2. Bund Wall / Earthen Embankment

S. No.	Description	Estimate		As per construction plan up to 31st January 2019		Actual work done up to 31st January 2019		Shortfall as on 31st January 2019	
		Quantity	Unit	Quantity	Unit	Quantity	Unit	Quantity	Unit
1	Earth filling & Compaction of Bund Wall	81411	Cum	81411	Cum	67659	Cum	13752	Cum

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

S. No.	Description	Quantity	Unit	Capacity	Unit
1	JCB	1	Nos		
2	Tractor	8	Nos	2.8	Cum
3	Auto Level	2			
4	Water tanker	2	Nos	5000	Litters
5	Grader	1	No	17	Tonne
6	Roller	1	No	11	Tonne
7	Labour (Skilled & Un skilled)	19	Nos		

2.3. Treated Effluent disposal line

S. No.	Description	Estimate		As per construction plan up to on 31st January 2019		Actual work done up to on 31st January 2019		Shortfall as on on 31st January 2019	
		Quantity	Unit	Quantity	Unit	Quantity	Unit	Quantity	Unit
1	Procurement of PSC Pipe	4800	Mtr	4800	Mtr	2736	Mtr	2064	Mtr
2	PSC pipe laying	4800	Mtr	2880	Mtr	2487	Mtr	393	Mtr

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

S. No.	Description	Quantity	Unit	Capacity	Unit
1	JCB		1	No	
2	Hydra		1	No	
3	Excavator		1	No	
4	Tractor		1		
5	Auto Level		1		
6	Water tanker		1	No	
7	Labour (Skilled & Un skilled)		20	Nos	

1. Item wise Detailed analysis

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31st January 2019	Total completion in % as on 31st January 2019	Delay analysis	Recovery / Mitigation plan
Design Detailed Engineering	11-Oct-17	30-Oct-18	**100%**	**93%**		
Civil GA	10-Jan-18	25-Sep-18	**100%**	**97.60%**		
Plant Layout / Site layout	11-May-18	23-May-18	100%	90%		
Weir Across Assi Nalla	05-Mar-18	14-Mar-18	100%	60%	Concessionaire yet to submit the revised drawing after incorporating the observations	Concessionaire to submit the on or before 15th February 2019
Structural Drawings Submissions & Approvals	**02-Feb-18**	**30-Sep-18**	**100%**	**96.80%**		
Weir Across Assi Nalla	05-Mar-18	14-Mar-18	100%		Concessionaire is yet to submit Structural drawing.	Concessionaire to submit the drawing on or before 15th February 2019
Design, Drawings & Documentation for Mechanical GAD	**13-Feb-18**	**15-Sep-18**	**100%**	**86.40%**		
Overall Piping Drawings	30-May-18	05-Sep-18	100%	40%	Concessionaire yet to submit the revised drawing after incorporating the observations	Concessionaire to submit the drawing on or before 15th February 2019

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31st January 2019	Total completion in % as on 31st January 2019	Delay analysis	Recovery / Mitigation plan
Design, Drawings and Documentation for Electrical & Instrumentation works	10-Mar-18	08-Oct-18	**100.00%**	**83.40%**		
Plant Lighting Layout Plan	25-Sep-18	05-Oct-18	100%	40%	Concessionaire yet to submit the revised drawing after incorporating the observations	Concessionaire to submit the drawing on or before 15th February 2019
Instrumentation Document submissions & Approvals	**01-Jun-18**	**30-Oct-18**	**100%**	**60%**		
Cause & Effect Diagram	01-Jun-18	18-Jul-18	100%		Concessionaire yet to submit the drawings indicates the lack of planning and lack of engineering team strength	Concessionaire to submit the drawing on or before 15th February 2019
Associated infrastructure works	**20-Mar-18**	**18-May-19**	**74.99%**	**44.28%**		
MPS Pumping Station	15-May-18	10-Apr-19	**66.59%**	**33.50%**		
Rehabilitation of MPS	15-May-18	30-Apr-19	75%	52%		

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31st January 2019	Total completion in % as on 31st January 2019	Delay analysis	Recovery / Mitigation plan
Construction Of weir across assi nalla & control room	13-Oct-18	30-Jan-19	100%		Concessionaire yet to submit the drawings indicates the lack of planning and lack of engineering team strength	Concessionaire to submit the drawing on or before 15th February 2019
Desilting of the MPS	15-May-18	28-Aug-18	100%	75%	Desilting is held up due to non-start of CCTV inspection and non-finalization of drawings	
Rising Main	**15-Jun-18**	**25-Mar-19**	**85%**	**7%**		
Desilting & CCTV inspection	15-Jun-18	18-Jul-18	100%		Concessionaire yet to finalize the vendor and carry out the investigation	
Strengthening and Pipe protection of Rising main Extension of existing Rising main to the Inlet point at the STP site	10-Oct-18	30-Jan-19	100%			
Shifting & laying of pipe near samne ghat	13-Jul-18	15-Jan-19	100%	20%		
Treated Effluent disposal line	**20-Mar-18**	**18-May-19**	**74.42%**	**50.95%**		

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31st January 2019	Total completion in % as on 31st January 2019	Delay analysis	Recovery / Mitigation plan
Procurement - supply of pipes including inspection, transportation and delivery at site	20-Mar-18	26-Dec-18	100%	57%	Only 2885 m of pipe inspection completed. Delay in procurement of pipes by the concessionaire.	Concessionaire to instruct the manufacturers to speed up the progress or else need to identify one more supplier and place the work order to expedite the delivery as per schedule
Pipe laying - 20% including excavation and backfilling (3rd 20%)	06-Nov-18	18-Dec-18	100%	59%		
Hydrotesting & finishing works	14-Jun-18	18-May-19	59%	5%	Hydro testing of pipes already laid is delayed unduly due to lack of planning, manpower, equipment.	Concessionaire to ensure the hydrotesting of already laid pipes on or before 15th February 2019. Concessionaire to plan to complete the hydrotesting within 20 days from the date of laying.
Equipment Procurement, Logistics and receipt of			**34 %**	**31 %**		

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31st January 2019	Total completion in % as on 31st January 2019	Delay analysis	Recovery / Mitigation plan
equipment at Site						
Fine Screen/Coarse Screen/Belt Conveyors	**24-May-18**	**18-Dec-18**	**100.0%**	**30.40%**		
Manufacturing of Equipment	17-Sep-18	10-Dec-18	100%			
Inspection / Logistics	08-Dec-18	10-Dec-18	100%			
Receipt of equipment at site	11-Dec-18	18-Dec-18	100%			
Grit Removal Mechanism	**24-May-18**	**10-Mar-19**	**47.1%**	**18%**		
Manufacturing of Equipment	01-Sep-18	10-Feb-19	94%			
Horizontal centrifugal pumps (Treated water pumps)	**31-May-18**	**18-Dec-18**	**100%**	**2.2%**		
Manufacturing of Equipment	10-Sep-18	15-Dec-18	100%		Manufacturing clearance is delayed due to delay in approval of data sheet	Concessionaire to expedite the manufacturing process within the scheduled time
Inspection / Logistics	01-Dec-18	10-Dec-18	100%			
Receipt of equipment at site	16-Dec-18	18-Dec-18	100%			
Sluice Gates	**05-Mar-18**	**18-Dec-18**	**100%**	**2%**		

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31st January 2019	Total completion in % as on 31st January 2019	Delay analysis	Recovery / Mitigation plan
Manufacturing of Equipment	25-Sep-18	12-Dec-18	100%		Manufacturing clearance is delayed due to delay in approval of data sheet	Concessionaire to expedite the manufacturing process within the scheduled time
Inspection / Logistics	01-Dec-18	10-Dec-18	100%			
Receipt of equipment at site	13-Dec-18	18-Dec-18	100%			
PE Dosing Tanks	**15-Oct-18**	**13-Jul-19**	3%			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	15-Oct-18	29-Nov-18	100%			
Manufacturing of Equipment	29-Dec-18	30-Jun-19	18%			
Agitators	**01-May-18**	**23-Jul-19**	**23%**			
Manufacturing of Equipment	01-Sep-18	08-Jun-19	54%		Manufacturing clearance is delayed due to delay in approval of data sheet	
SCADA System	**07-Sep-18**	**16-Aug-19**	2%			
Submission & Approval of Drawings / Documents & data	07-Sep-18	09-Nov-18	100%			

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31st January 2019	Total completion in % as on 31st January 2019	Delay analysis	Recovery / Mitigation plan
sheets including release of purchase order						
Manufacturing of Equipment	01-Jan-19	30-Jun-19	17%			
MLDB, LDB & SLDBS	**07-Sep-18**	**16-Aug-19**	2%			
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%			
Manufacturing of Equipment	01-Jan-19	30-Jun-19	17%			
Push Button Stations/Plant lighting / Buildings lighting	**07-Sep-18**	**16-Aug-19**	2%			
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%			
Manufacturing of Equipment	01-Jan-19	30-Jun-19	17%			

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31st January 2019	Total completion in % as on 31st January 2019	Delay analysis	Recovery / Mitigation plan
Civil Executions	**6-Apr-18**	**15- Aug-19**	**69%**	**70%**		
Bund Wall / Earthen Embankment	**19-Feb-18**	**30-Aug-19**	**87.50%**	**80.60%**		
Filling & Compaction of Bund Wall from 2.0 to 3.0 Mtr Height	01-Oct-18	29-Nov-18	100%	92%	Lack of planning and efficient utilisation of available manpower and equipment	Full utilization of the available equipment shall increase the output and mitigate the delay occurred.
Filling & Compaction of Bund Wall from 3.0 to 4.5 Mtr Height	07-Nov-18	18-Dec-18	100%	54%	Lack of planning and efficient utilisation of available manpower and equipment	Full utilization of the available equipment shall increase the output and mitigate the delay occurred.
Construction of Inlet Structure, Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for SBR	**03-Jun-18**	**30-Jun-19**	**72.50%**	**60.70%**	Lack of planning and efficient utilisation of available manpower and equipment	Full utilization of the available equipment shall increase the output and mitigate the delay occurred.
Inlet Chamber Slab with Column, Wall	20-Sep-18	15-Dec-18	100%	48%		
Grit Chamber Slab with Column	01-Dec-18	28-Feb-19	69%	4%		
Overhead Treated Water Tank	**01-Jun-18**	**01-Aug-19**	**60%**	**33.30%**	Lack of planning and efficient utilization of	Full utilization of the available equipment

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 31st January 2019	Total completion in % as on 31st January 2019	Delay analysis	Recovery / Mitigation plan
					available manpower and equipment	shall increase the output and mitigate the delay occurred.
50% RCC of Structure	09-Oct-18	18-Dec-18	100%	11%		
Construction of BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank	**15-Oct-18**	**13-Jul-19**	**35.5%**	**30.30%**		
50% RCC of Structure	18-Jan-19	18-Mar-19	22%	1%		
Construction of Blower room, HT, MCC, Transformer Yard, DG set Area	**03-Jun-18**	**29-Aug-19**	**73.80%**	**49.60%**	Lack of planning and efficient utilization of available manpower and equipment	Full utilization of the available equipment shall increase the output and mitigate the delay occurred.
RCC up to lintel	15-Oct-18	15-Nov-18	100%	96%		
RCC Roof slab	16-Nov-18	18-Dec-18	100%			
Brick Work	01-Jan-19	21-Mar-19	38%			

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

HSE Training and competence adherence

Sl. No.	Description	Till previous month	During the month of January 2019
1	Issue of a photo identity card duly signed by the authorized representative of the company / subcontractor before they are engaged for any work	Issued	In progress

2	HSE induction training at the first day of their joining explaining the nature of the work for all the personnel working at site on the following topics
	• Hazard identification procedure - Hazards on site
	  • Fails
	  • 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 January 2019
	• Site housekeeping • Fire • Personnel protective equipment • What is available • How to obtain it? • Correct use and care • Health • Site welfare facilities • Potential health hazards • First Aid / CPR • Duties of contractor • Brief outline of the responsibilities of the contractor by law • Details of accident prevention policy • Building and other constructions welfare law • Employer's duties • Brief outline of responsibilities of employee • Site safety rules		
3	Tool box meetings Key issues discussed at Daily Tool Box meetings includes • The job to be done • Awareness of hazards, risks & control measures associated with specific activity, review safe work practices • Active involvement of crew and open discussion on any concerns and commitment to work safely	Conducted	Conducted
4	Behavior modification and disciplinary action	None	None
5	Post-accident or near miss meeting	No accident occurred	No accident occurred

HSE Inspections and submission of reports

Sl. No.	Description	Till previous month	During the month of January 2019
1	Planned General inspection	Conducted	Conducted
2	Routine inspection		
2.1	Daily inspection of plant and equipment by operator	Conducted	Conducted
2.2	Weekly inspection of scaffold by scaffolding supervisor	NA	Conducted
2.3	Monthly inspection of electrical hand tools by competent electrical supervisor	Conducted	Conducted
2.4	Quarterly inspection of temporary electrical systems by competent electrical supervisor	Conducted	Conducted
2.5	Yearly inspection of lifting machinery, lifting appliances, equipment and gears by Government approved competent person	NA	NA
2.6	Half yearly inspection of pressure vessels by Govt approved competent person	NA	NA
3	Specific inspection		
	Inspection performed before a heavy lifting operation	Conducted on regular basis before starting the jobs	Conducted on regular basis before starting the jobs
	Inspection performed before and after the entry of person into a confined space	01 No. Conducted on 27th 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 • Monthly minor accident, serious incident details	Submitted	Submitted

Sl. No.	Description	Till previous month	During the month of January 2019
	• Average manpower details, man-hours works • Lost time (no of working days) • Number of training / tool box talk • Number of people trained • HSE committee minutes of meeting • HSE inspection, etc		
6	HSE Bulletin board indicating • 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	01 number of urinals Provided
	Drinking water facility within a distance of 200 m from the place of	Provided at 04	Provided at 04

Sl. No.	Description	Till previous month	During the month of January 2019
	work for all workers	locations	locations
	Provision of labour accommodation	Provided for 120 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	4th March 2018 – National safety day	Conducted	
2	7th April 2018 – World health day		
3	14th April 2018 – First safety day		
4	5th June 2018 – World environmental day	Conducted	
5	15Th August 2018 – Independence Day celebration and Planting of saplings	Conducted	