

**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**

**April - 2019**



**Executing Agency**

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



**Funding Agency**

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



**Project Engineer**

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



**Concessionaire**

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

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## **MONTHLY PROGRESS REPORT**

### **1.0. INTRODUCTION**

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

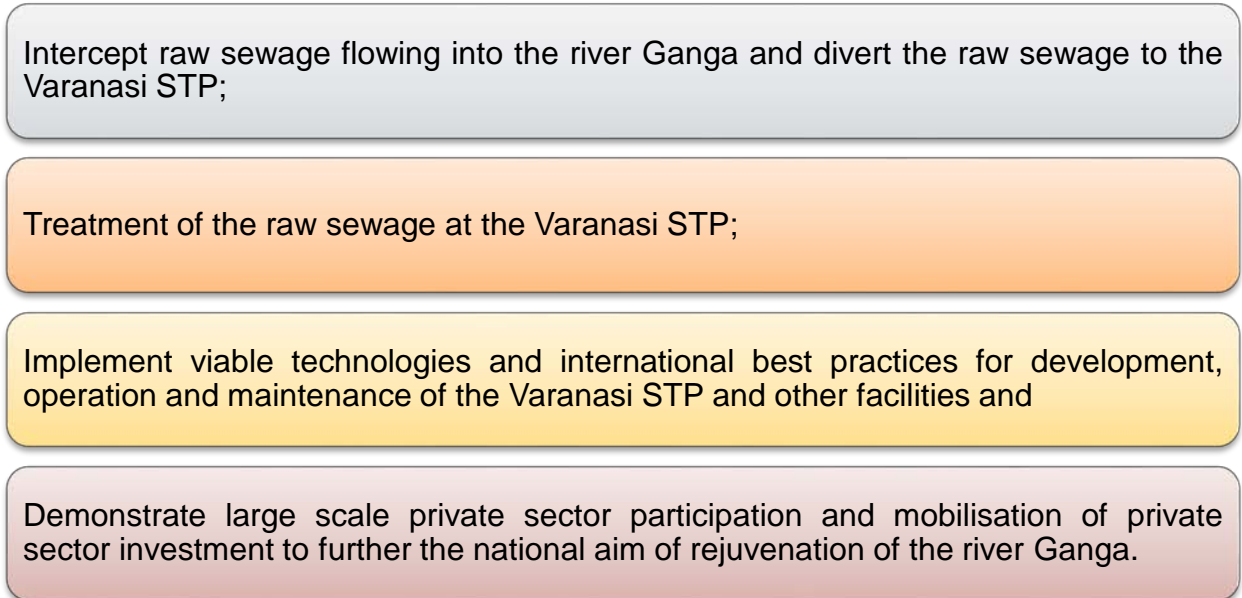
Subsequently, the MoWR issued the River Ganga (Rejuvenation, Protection and Management) Authorities Order, 2016 (Ganga 2016 Order) to constitute various authorities to assist the Gol in achieving its aim of effective abatement of pollution in the river Ganga. The Ganga 2016 Order applies to all states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

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

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

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

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



**Figure 1: Objectives of NMCG and UP JAL NIGAM**

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

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

NMCG & UPJN appointed M/s. Mahindra Consulting Engineers Limited, Chennai as Project Engineer for this project through tendering process. Letter of Award is issued dated 5<sup>th</sup> January 2018 and agreement signed between the parties on 16<sup>th</sup> 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 with 25KLD OHT
- 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**

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

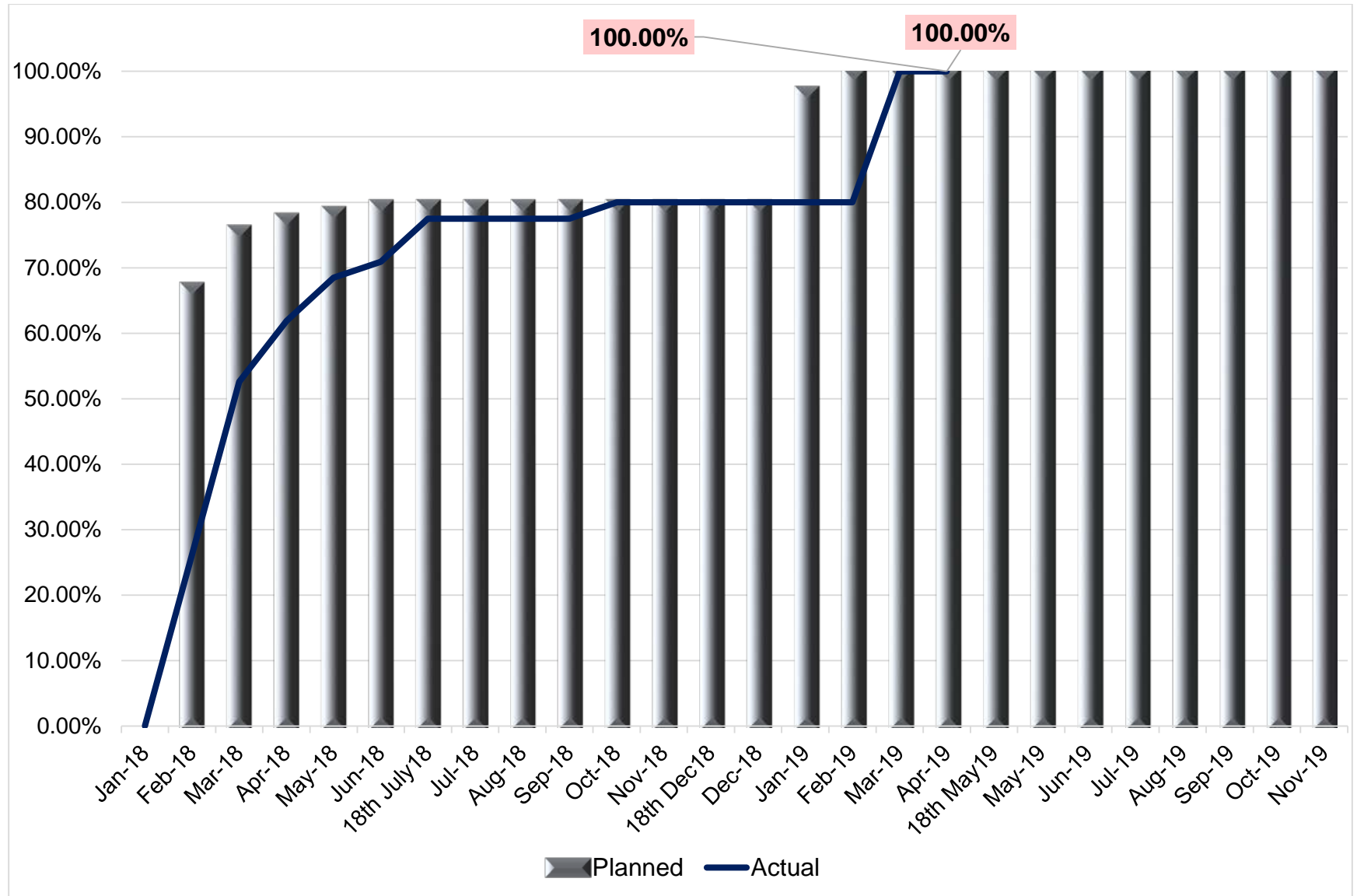
## 2.1. Physical status

### 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 %
<b>Pre - Execution Activities</b>	<b>12-Oct-17</b>	<b>04-Feb-19</b>	<b>100%</b>	<b>100%</b>		<b>100%</b>
Temporary Power Connection (During Construction Period)	12-Oct-17	30-Apr-18	100%	100%		100%
Permanent Power Connection	06-Jan-18	04-Feb-19	100%	100%		100%
Submission of Resource Plan including Mobilization plan	12-Oct-17	19-Feb-18	100%	100%		100%
Setting up of temporary site office	11-Nov-17	18-Feb-18	100%	100%		100%
Removal of debris & Shrubs	11-Nov-17	19-Feb-18	100%	100%		100%
Bore well construction	11-Nov-17	19-Feb-18	100%	100%		100%
Other temporary execution	20-Feb-18	11-Mar-18	100%	100%		100%
Topographical / Soil Investigation	11-Nov-17	20-Dec-17	100%	100%		100%
Condition Precedent required to be satisfied by Concessionaire	12-Oct-17	19-Feb-18	100%	100%		100%
Condition Precedent required to be satisfied by Jal Nigam	12-Oct-17	19-Feb-18	100%	100%		100%
Condition Precedent required to be satisfied by NMCG	12-Oct-17	19-Feb-18	100%	100%		100%
Appointment of Design Consultant	12-Oct-17	09-Jan-18	100%	100%		100%
Submission & Approval of Sub Contracts from UPJN	01-Feb-18	30-Jun-18	100%	100%		100%



2.1.2. Pre-execution activities - Physical progress graph



### 2.1.3. Design detailed engineering

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
<b>Design Detailed Engineering</b>	11-Oct-17	30-Oct-18	<b>100%</b>	<b>95.83%</b>	<b>0.56%</b>	<b>96.39%</b>
<b>PHASE-1 Design, drawings and documentation for basic engineering package</b>	<b>11-Oct-17</b>	<b>07-Feb-18</b>	<b>100%</b>	<b>100%</b>		<b>100%</b>
Basic engineering package	11-Oct-17	08-Jan-18	100%	100%		100%
Approval (BEP)	09-Jan-18	07-Feb-18	100%	100%		100%
<b>Topographical / soil investigation</b>	<b>11-Nov-17</b>	<b>20-Dec-17</b>	100%	100%		100%
<b>Phase-II D&amp;E (civil, mechanical, electrical, inst. drawings)</b>	<b>10-Jan-18</b>	<b>25-Sep-18</b>	<b>100%</b>	<b>99.2%</b>		<b>99.20%</b>
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%

*Development of 50 MLD sewage treatment plant and associated infrastructure on PPP basic at Ramana, Varanasi*

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%	100%		100%
Raw water receiving chamber	01-Jul-18	18-Jul-18	100%	100%		100%
Electrical control room	01-Jul-18	18-Jul-18	100%	100%		100%
<b>Structural drawings submissions &amp; approvals</b>	<b>02-Feb-18</b>	<b>30-Sep-18</b>	<b>100%</b>	<b>99.20%</b>		<b>99.20%</b>
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%

*Development of 50 MLD sewage treatment plant and associated infrastructure on PPP basic at Ramana, Varanasi*

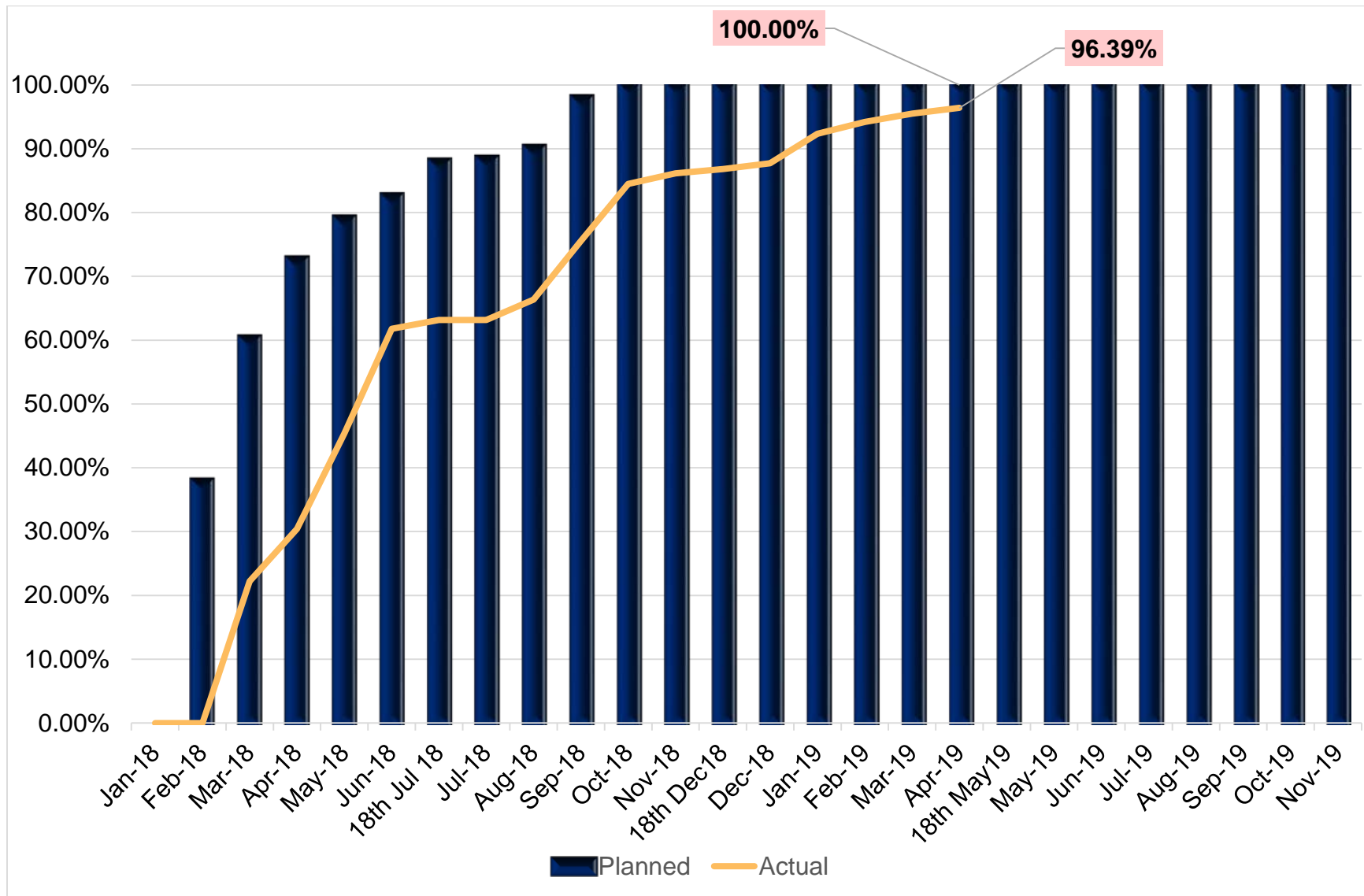
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Chlorine contact tank & treated water collection tank	25-Mar-18	25-Apr-18	100%	100%		100%
Treated water overhead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

*Development of 50 MLD sewage treatment plant and associated infrastructure on PPP basic at Ramana, Varanasi*

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Weir across Assi nalla	13-Feb-18	04-Mar-18	100%	60%		60%
Final outfall chamber	01-Jul-18	18-Jul-18	100%	100%		100%
Overall piping drawings	30-May-18	05-Sep-18	100%	40%		40%
<b>Design, drawings and documentation for electrical &amp; instrumentation works</b>	<b>10-Mar-18</b>	<b>08-Oct-18</b>	100%	94%		94%
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%	100%		100%
Cables / earthing/ lightning - layout plan, sizing, schedule	15-Sep-18	05-Oct-18	100%	80%		80%
Cable trays	01-May-18	18-Jul-18	100%	100%		100%
Flow meters	15-Sep-18	05-Oct-18	100%	100%		100%
Analysers	15-Sep-18	05-Oct-18	100%	100%		100%
SLD	19-Mar-18	18-Jun-18	100%	100%		100%
Design calculation	10-Mar-18	18-Jul-18	100%	40%		40%
Electrical & instrumentation control philosophy	25-Sep-18	08-Oct-18	100%	60%		60%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Plant lighting layout plan	25-Sep-18	05-Oct-18	100%	100%		100%
Gauges	25-Sep-18	05-Oct-18	100%	100%		100%
<b>Instrumentation document submissions &amp; approvals</b>	<b>01-Jun-18</b>	<b>30-Oct-18</b>	<b>100%</b>	<b>75%</b>	<b>10%</b>	<b>85%</b>
Instrument index / alarm list	01-Jun-18	18-Jul-18	100%	100%		100%
Instrument hook - up diagram	01-Jun-18	18-Jul-18	100%	100%		100%
PLC - I/O list, loop wiring diagram, design of SCADA	05-Oct-18	30-Oct-18	100%	100%		100%
Cause & effect diagram	01-Jun-18	18-Jul-18	100%		40%	40%

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 %
<b>Equipment Procurement, Logistics and receipt of equipment at Site</b>			62%	44%	10%	54%
<b>Fine Screen / Coarse Screen / Belt Conveyors</b>	<b>24-May-18</b>	<b>18-Dec-18</b>	<b>100.0%</b>	<b>30.4%</b>	<b>32.1%</b>	<b>62.5%</b>
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%	41%	100%
Inspection / Logistics	08-Dec-18	10-Dec-18	100%		50%	50%
Receipt of equipment at site	11-Dec-18	18-Dec-18	100%			
<b>Grit Removal Mechanism</b>	<b>24-May-18</b>	<b>10-Mar-19</b>	<b>100.0%</b>	<b>18.0%</b>		<b>18.0%</b>
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	24-May-18	18-Jul-18	100%	100%		100%
Manufacturing of Equipment	01-Sep-18	10-Feb-19	100%	33%		33%
Inspection / Logistics	12-Feb-19	27-Feb-19	100%			
Receipt of equipment at site	28-Feb-19	10-Mar-19	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 %
<b>SBR System (Decanters)</b>	<b>19-May-18</b>	<b>16-May-19</b>	<b>86.2%</b>	<b>100.0%</b>		<b>100.0%</b>
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	100%	100%		100%
Inspection / Logistics	01-Apr-19	16-Apr-19	100%	100%		100%
Receipt of equipment at site	17-Apr-19	16-May-19	45%	100%		100%
<b>Submersible (SAS / RAS/ Filtrate / BFP feed)</b>	<b>31-May-18</b>	<b>18-Dec-18</b>	<b>100.0%</b>	<b>100.0%</b>		<b>100.0%</b>
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	31-May-18	18-Jul-18	100%	100%		100%
Manufacturing of Equipment	03-Sep-18	13-Dec-18	100%	100%		100%
Inspection / Logistics	01-Dec-18	10-Dec-18	100%	100%		100%
Receipt of equipment at site	14-Dec-18	18-Dec-18	100%	100%		100%
<b>Horizontal centrifugal pumps (Treated water pumps)</b>	<b>31-May-18</b>	<b>18-Dec-18</b>	<b>100.0%</b>	<b>2.2%</b>	<b>60.3%</b>	<b>62.5%</b>
Submission & Approval of Drgs / Docs & data sheets	31-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 %
including release of purchase order						
Manufacturing of Equipment	10-Sep-18	15-Dec-18	100%		100%	100%
Inspection / Logistics	01-Dec-18	10-Dec-18	100%		50%	50%
Receipt of equipment at site	16-Dec-18	18-Dec-18	100%			
<b>Air Blowers</b>	<b>01-May-18</b>	<b>18-May-19</b>	<b>75.0%</b>	<b>62.5%</b>		<b>62.5%</b>
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	100%	100%		100%
Inspection / Logistics	31-Mar-19	29-Apr-19	100%	50%		50%
Receipt of equipment at site	30-Apr-19	18-May-19				
<b>Chlorination System</b>	<b>05-Sep-18</b>	<b>18-May-19</b>	<b>68.1%</b>	<b>100.0%</b>		<b>100.0%</b>
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	100%	100%		100%
Inspection / Logistics	01-Apr-19	11-May-19	73%	100%		100%
Receipt of equipment at site	12-May-19	18-May-19		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 %
<b>Sluice Gates</b>	<b>05-Mar-18</b>	<b>18-Dec-18</b>	<b>100%</b>	<b>12%</b>	<b>51%</b>	<b>63%</b>
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%	20%	80%	100%
Inspection / Logistics	01-Dec-18	10-Dec-18	100%		50%	50%
Receipt of equipment at site	13-Dec-18	18-Dec-18	100%			
<b>MS/CS/SS/GI/CI/DI Piping</b>	<b>01-Jan-19</b>	<b>12-Aug-19</b>	<b>21.2%</b>			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-Jan-19	15-Feb-19	100%			
Manufacturing of Equipment	01-Mar-19	30-Jul-19	40%			
Inspection / Logistics	31-Jul-19	10-Aug-19				
Receipt of equipment at site	11-Aug-19	12-Aug-19				
<b>Valves</b>	<b>01-Jan-19</b>	<b>12-Aug-19</b>	<b>21%</b>	<b>0%</b>		<b>0%</b>
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-Jan-19	17-Jan-19	100%	20%		20%

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-Mar-19	30-Jul-19	40%			
Inspection / Logistics	31-Jul-19	10-Aug-19				
Receipt of equipment at site	11-Aug-19	12-Aug-19				
<b>Motorized Gates at Inlet of SBR</b>	<b>01-May-18</b>	<b>18-May-19</b>	<b>69%</b>	<b>12%</b>	<b>51%</b>	<b>63%</b>
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-May-18	30-Aug-18	100%	100%		100%
Manufacturing of Equipment	11-Jan-19	05-Apr-19	100%	20%	80%	100%
Inspection / Logistics	07-Apr-19	07-May-19	77%		50%	50%
Receipt of equipment at site	08-May-19	18-May-19				
<b>Diffusers</b>	<b>12-May-18</b>	<b>23-Apr-19</b>	<b>100%</b>	<b>63%</b>		<b>63%</b>
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	12-May-18	14-Jul-18	100%	100%		100%
Manufacturing of Equipment	01-Sep-18	15-Feb-19	100%	100%		100%
Inspection / Logistics	16-Feb-19	02-Apr-19	100%	50%		50%
Receipt of equipment at site	03-Apr-19	23-Apr-19	100%			
<b>Volute press</b>	<b>15-Oct-18</b>	<b>13-Jul-19</b>	<b>34%</b>	<b>11%</b>	<b>39%</b>	<b>50%</b>

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	15-Oct-18	29-Nov-18	100%	100%		100%
Manufacturing of Equipment	29-Dec-18	30-Jun-19	67%	18%	82%	100%
Inspection / Logistics	30-May-19	28-Jun-19				
Receipt of equipment at site	01-Jul-19	13-Jul-19				
<b>PE Dosing Tanks</b>	<b>15-Oct-18</b>	<b>13-Jul-19</b>	<b>34%</b>		<b>1%</b>	<b>1%</b>
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	15-Oct-18	29-Nov-18	100%		40%	40%
Manufacturing of Equipment	29-Dec-18	30-Jun-19	67%			
Inspection / Logistics	30-May-19	28-Jun-19				
Receipt of equipment at site	01-Jul-19	13-Jul-19				
<b>Agitators</b>	<b>01-May-18</b>	<b>23-Jul-19</b>	<b>43%</b>	<b>2%</b>		<b>2%</b>
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-May-18	18-Jul-18	100%	80%		80%
Manufacturing of Equipment	01-Sep-18	08-Jun-19	86%			

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	09-Jun-19	08-Jul-19				
Receipt of equipment at site	09-Jul-19	23-Jul-19				
<b>Transformers</b>	<b>02-Jul-18</b>	<b>21-Jul-19</b>	<b>37.7%</b>	<b>100%</b>		<b>100%</b>
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	74%	100%		100%
Inspection / Logistics	25-Jun-19	30-Jun-19		100%		100%
Receipt of equipment at site	01-Jul-19	21-Jul-19		100%		100%
<b>HT cables</b>	<b>29-Sep-18</b>	<b>26-Jul-19</b>	<b>25.9%</b>	<b>1.80%</b>		<b>1.80%</b>
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	50%			
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 %
<b>MCC panel</b>	<b>23-Jun-18</b>	<b>16-Aug-19</b>	34%	50%		50%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	23-Jun-18	27-Jul-18	100%	100%		100%
Manufacturing of Equipment	01-Jan-19	30-Jun-19	66%	100%		100%
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
<b>HT Panel</b>	<b>07-Sep-18</b>	<b>16-Aug-19</b>	<b>34%</b>	<b>100%</b>		<b>100%</b>
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	66%	100%		100%
Inspection / Logistics	01-Jul-19	31-Jul-19		100%		100%
Receipt of equipment at site	01-Aug-19	16-Aug-19		100%		100%
<b>PLC Panel</b>	<b>07-Sep-18</b>	<b>16-Aug-19</b>	<b>34%</b>	<b>60%</b>		<b>60%</b>
Submission & Approval of Drgs / Docs & data sheets	07-Sep-18	09-Nov-18	100%	60%		60%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
including release of purchase order						
Manufacturing of Equipment	01-Jan-19	30-Jun-19	66%	60%		60%
Inspection / Logistics	01-Jul-19	31-Jul-19		60%		60%
Receipt of equipment at site	01-Aug-19	16-Aug-19		60%		60%
<b>SCADA System</b>	<b>07-Sep-18</b>	<b>16-Aug-19</b>	34%	2%		2%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	80%		80%
Manufacturing of Equipment	01-Jan-19	30-Jun-19	66%			
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
<b>MLDB, LDB &amp; SLDBS</b>	<b>07-Sep-18</b>	<b>16-Aug-19</b>	34%	50%		50%
Submission & Approval of Drgs / Docs & data sheets	07-Sep-18	09-Nov-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 %
including release of purchase order						
Manufacturing of Equipment	01-Jan-19	30-Jun-19	66%	100%		100%
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
<b>Push Button Stations / Plant lighting / Buildings lighting</b>	<b>07-Sep-18</b>	<b>16-Aug-19</b>	34%			
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	66%			
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
<b>Power, Control &amp; lighting Cables</b>	<b>07-Sep-18</b>	<b>16-Aug-19</b>	34%	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	07-Sep-18	09-Nov-18	100%	50%		50%
Manufacturing of Equipment	01-Jan-19	30-Jun-19	66%			
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
<b>Cable trays/Lighting JB</b>	<b>07-Sep-18</b>	<b>16-Aug-19</b>	34%	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	66%			
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				

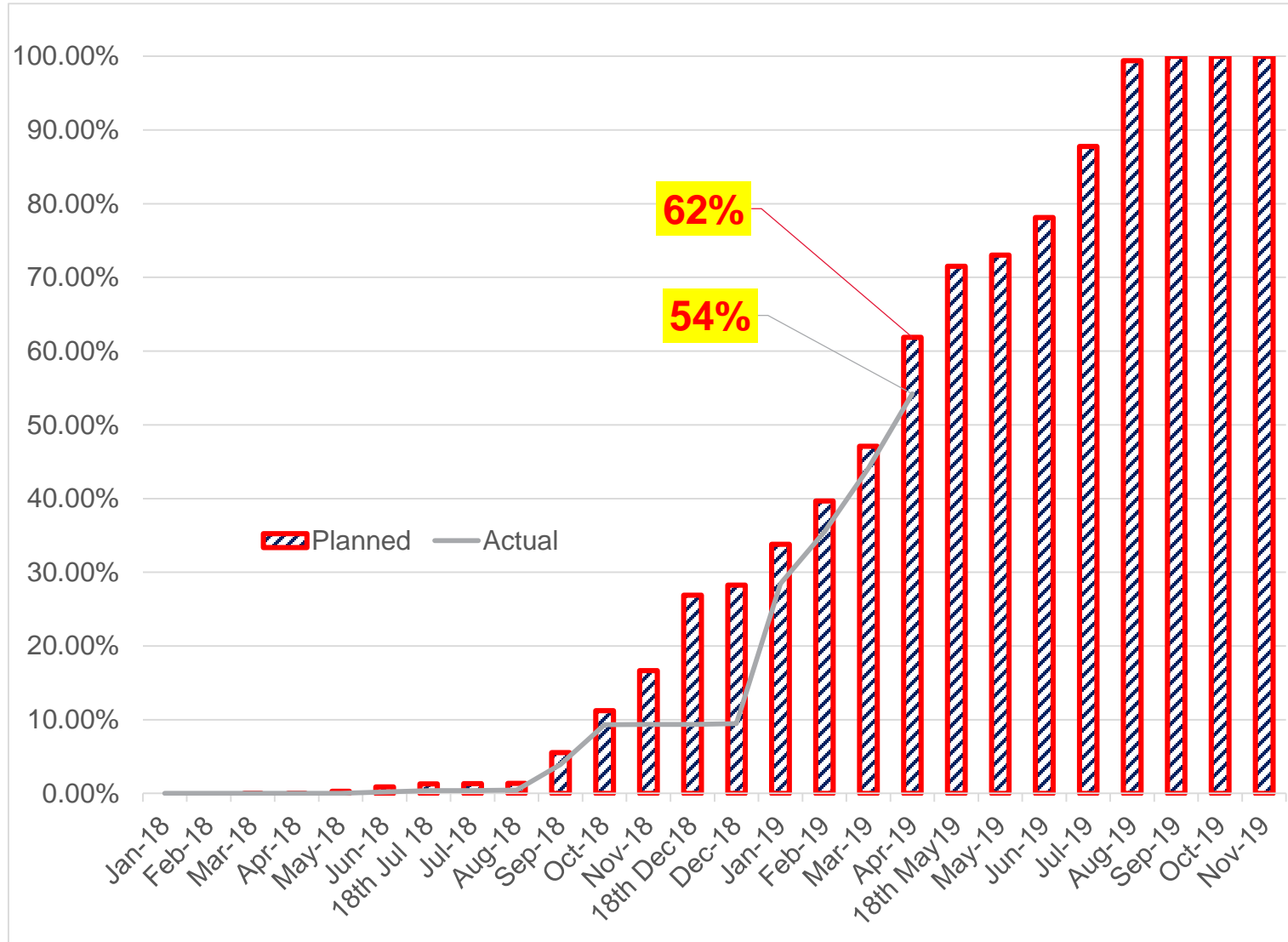
Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
<b>DG Set</b>	<b>07-Sep-18</b>	<b>16-Aug-19</b>	34%	2%		2%
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	100%		100%
Manufacturing of Equipment	01-Jan-19	30-Jun-19	66%			
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
<b>Plant Earthing</b>	<b>07-Sep-18</b>	<b>16-Aug-19</b>	36%	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	20-Jun-19	70%			
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
<b>Instruments (Flow meter / Analyser)</b>	<b>20-Nov-18</b>	<b>16-Aug-19</b>	<b>22%</b>	<b>2%</b>		<b>2%</b>
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	20-Nov-18	15-Dec-18	100%	100%		100%
Manufacturing of Equipment	18-Mar-19	30-Jun-19	41%			
Inspection / Logistics	01-Jul-19	31-Jul-19				
Receipt of equipment at site	01-Aug-19	16-Aug-19				
<b>Instruments (Temperature, Pressure &amp; Level transmitter / Level, Temperature and Pressure switches)</b>	<b>20-Nov-18</b>	<b>05-Sep-19</b>	<b>18%</b>	<b>2%</b>		<b>2%</b>
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	20-Nov-18	15-Dec-18	100%	100%		100%

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Manufacturing of Equipment	18-Mar-19	30-Jul-19	32%			
Inspection / Logistics	01-Aug-19	30-Aug-19				
Receipt of equipment at site	31-Aug-19	05-Sep-19				

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

Procurement - Physical progress



2.1.7. New construction units

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
<b>Civil Executions</b>	<b>19-Feb-18</b>	<b>16-Nov-19</b>	83%	78%	1%	79%
<b>Bund Wall / Earthen Embankment</b>	<b>19-Feb-18</b>	<b>30-Aug-19</b>	<b>87.5%</b>	<b>85.5%</b>	<b>1.1%</b>	<b>86.6%</b>
Excavation	19-Feb-18	8-May-18	100%	100%		100%
Filling & Compaction of Bund Wall up to 1.0 Mtr Height	10-Apr-18	8-Jul-18	100%	100%		100%
Filling & Compaction of Bund Wall from 1.0 to 2.0 Mtr Height	9-Jul-18	25-Oct-18	100%	100%		100%
Filling & Compaction of Bund Wall from 2.0 to 3.0 Mtr Height	1-Oct-18	29-Nov-18	100%	98%		98%
Filling & Compaction of Bund Wall from 3.0 to 4.5 Mtr Height	7-Nov-18	18-Dec-18	100%	81%	9%	90%
Stone Pitching work, Side Drain Work & Fencing work	20-May-19	30-Aug-19		4%		4%
<b>Construction of Inlet Structure, Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for SBR</b>	<b>3-Jun-18</b>	<b>30-Jun-19</b>	<b>90.0%</b>	<b>65.5%</b>		<b>65.5%</b>
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%	52%		52%
Grit Chamber Slab with Column	1-Dec-18	28-Feb-19	100%	9%		9%
Parshall flume slab with Column	1-Mar-19	30-Mar-19	100%	56%		56%
Hydrotesting including finishing works	1-Jun-19	30-Jun-19				
<b>SBR Basins &amp; SBR outlet Chamber</b>	<b>9-Apr-18</b>	<b>15-Jul-19</b>	<b>90.3%</b>	<b>89.1%</b>	<b>0.7%</b>	<b>89.8%</b>
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%	97%		97%
Wall 2nd Lift	7-Jun-18	5-Sep-18	100%	97%		97%
Wall 3rd Lift	24-Sep-18	15-Jan-19	100%	97%		97%
Wall Final Lift	7-Feb-19	6-Apr-19	100%	97%		97%
Walkways and Channels	6-Apr-19	11-May-19	69%	58%		58%
Hydrotesting	20-May-19	15-Jul-19		15%	10%	25%
<b>Construction of CCT including Chlorination room &amp; Treated water pump House</b>	<b>26-Apr-18</b>	<b>24-Aug-19</b>	<b>79.3%</b>	<b>73.6%</b>		<b>73.6%</b>
Excavation	26-Apr-18	4-Jul-18	100%	100%		100%
PCC & Raft RCC	15-May-18	25-Jul-18	100%	100%		100%
50% RCC of Structure	20-Jun-18	10-Oct-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-Jan-19	18-May-19	85%	54%		54%
Completion of Brick work and Plaster	6-Apr-19	30-Jul-19	21%			
Hydrotest including finishing works	9-Aug-19	24-Aug-19		100%		100%
<b>Final Outfall Chamber</b>	<b>19-May-19</b>	<b>3-Aug-19</b>				
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				
<b>Overhead Treated Water Tank</b>	<b>1-Jun-18</b>	<b>1-Aug-19</b>	<b>87.4%</b>	<b>34.5%</b>		<b>34.5%</b>
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%	15%		15%
50% RCC of Structure	25-Feb-19	6-May-19				
Finishing Works	19-Jun-19	1-Aug-19				
<b>Construction of BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank</b>	<b>15-Oct-18</b>	<b>13-Jul-19</b>	<b>76.6%</b>	<b>36.0%</b>	<b>11.5%</b>	<b>47.5%</b>
Excavation	15-Oct-18	30-Oct-18	100%	100%		100%
PCC & Raft RCC	1-Nov-18	18-Dec-18	100%	100%		100%

*Development of 50 MLD sewage treatment plant and associated infrastructure on PPP basic at Ramana, Varanasi*

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	18-Jan-19	18-Mar-19	100%	24%	46%	70%
50% RCC of Structure	19-Mar-19	17-May-19	71%			
Completion of Brick work and Plaster	19-Apr-19	18-May-19	38%			
Finishing Works	20-May-19	13-Jul-19				
<b>Administrative Building including lab and workshop</b>	<b>3-Feb-18</b>	<b>11-Jul-19</b>	<b>92.8%</b>	<b>82.8%</b>	<b>0.1%</b>	<b>82.9%</b>
Excavation	8-Jun-18	17-Jun-18	100%	100%		100%
PCC & Raft RCC	18-Jun-18	18-Jul-18	100%	100%		100%
50% RCC of Structure	16-Oct-18	18-Dec-18	100%	100%		100%
50% RCC of Structure	3-Feb-19	7-Apr-19	100%	69%		69%
Completion of Brick work and Plaster	8-Apr-19	17-May-19	56%	42%	1%	43%
Finishing Works	28-May-19	11-Jul-19				
<b>Staff Quarters</b>	<b>8-Jun-18</b>	<b>16-Nov-19</b>	<b>30.0%</b>	<b>45.5%</b>	<b>0.5%</b>	<b>45.9%</b>
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		68%		68%
50% RCC of Structure	9-Jul-19	28-Aug-19				
Completion of Brick work and Plaster	28-Aug-19	27-Sep-19		8%	2%	10%

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 %
Finishing Works	27-Sep-19	16-Nov-19				
<b>Roads, Drainage &amp; Fire Fighting system</b>	<b>3-Jun-19</b>	<b>31-Aug-19</b>				
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				
<b>Construction of Blower room, HT, MCC, Transformer Yard, DG set Area</b>	<b>3-Jun-18</b>	<b>29-Aug-19</b>	<b>87.2%</b>	<b>57.6%</b>	<b>8.8%</b>	<b>66.4%</b>
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%	100%		100%
RCC Roof Slab	16-Nov-18	18-Dec-18	100%	38%	44%	82%
Brick Work	1-Jan-19	21-Mar-19	100%			
Plastering	22-Mar-19	15-May-19	72%			
Painting & Finishing	15-Jun-19	29-Aug-19				
<b>Mechanical Installation</b>	<b>1-Aug-19</b>	<b>30-Aug-19</b>				
<b>Erection of Mechanical Equipment</b>	<b>1-Aug-19</b>	<b>30-Aug-19</b>				
Electrical & Instrumentation Installation	1-Aug-19	31-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 %
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 %
<b>Civil Executions</b>						
<b>Bund Wall / Earthen Embankment</b>						
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 from 1.0 to 2.0 Mtr Height	22140	Cum	22140		22140	100%
Filling & Compaction of Bund Wall from 2.0 to 3.0 Mtr Height	19056	Cum	18644		18644	100%
Filling & Compaction of Bund Wall from 3.0 to 4.5 Mtr Height	16154	Cum	13085	1382	14467	90%

Item of work	Estimate		Physical status			
	Quantity	Unit	Previous month completion	Completion during this month	Total completion	Total completion in %
Stone Pitching work, Side Drain Work & Fencing work	6720	Sqm	385	41	426	4%
<b>Construction of Inlet Structure, Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for SBR</b>						
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	83		83	52%
Grit Chamber Slab with Column	159	Cum	14		14	9%
Parshall flume slab with Column	79	Cum	44		44	56%
<b>SBR Basins &amp; SBR outlet Chamber</b>						
Excavation	2210	Cum	2210		2210	100%
PCC	1424	Cum	1412		1424	100%
Raft RCC	4169	Cum	4169		4169	100%
Wall 1st Lift	560	Cum	538		538	96%
Wall 2nd Lift	390	Cum	373		373	96%
Wall 3rd Lift	291	Cum	281		281	97%

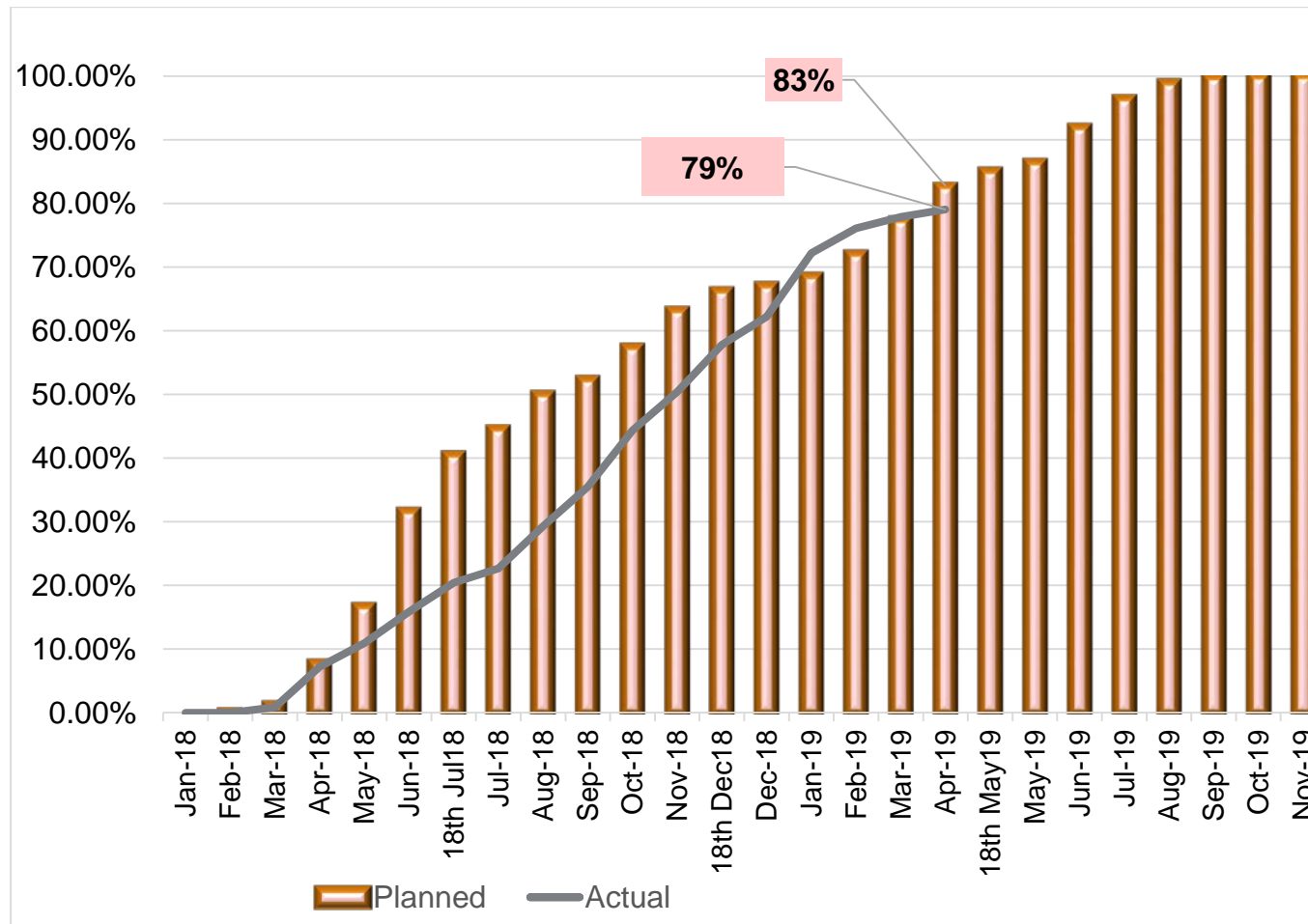
Item of work	Estimate		Physical status			
	Quantity	Unit	Previous month completion	Completion during this month	Total completion	Total completion in %
Wall Final Lift	462	Cum	402		402	97%
Walkways and Channels	306	Cum	129	36	153	55%
<b>Construction of CCT including Chlorination room &amp; Treated water pump House</b>						
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	79	2	81	55%
Brick work	71	Cum				
Plastering works	1342	Sqm				
<b>Overhead Treated Water Tank</b>						
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	14		14	15%
50% RCC of Structure	79	Cum				
Finishing Works						
<b>Construction of BFP Building, Filtrate Pump, Pump house - 2,</b>						

Item of work	Estimate		Physical status			
	Quantity	Unit	Previous month completion	Completion during this month	Total completion	Total completion in %
<b>PE dosing tank</b>						
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	47	94	141	73%
50% RCC of Structure	194	Cum				
Brick work	35	Cum				
Plastering work	290	Sqm				
<b>Administrative Building including lab and workshop</b>						
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	107		107	100%
50% RCC of Structure	107	Cum	73		73	69%
Brick work	172	Cum	135	3	138	80%
Plastering work	2230	Cum	131		131	6%
Finishing Works						
<b>Staff Quarters</b>						
Excavation	1502	Cum	1502		1502	100%
PCC	70	Cum	70		70	100%

Item of work	Estimate		Physical status			
	Quantity	Unit	Previous month completion	Completion during this month	Total completion	Total completion in %
Raft RCC	260	Cum	260		260	100%
50% RCC of Structure	215	Cum	146		146	68%
50% RCC of Structure	215	Cum				
Brick work	551	Cum	98	21	119	22%
Plastering work						
Finishing Works						
<b>Construction of Blower room, HT, MCC, Transformer Yard, DG set Area</b>						
Excavation	587	Cum	587		587	100%
PCC	39	Cum	39		39	100%
RCC of Footing	160	Cum	160		160	100%
RCC up to Plinth	35	Cum	35		35	100%
RCC up to Lintel Beams	35	Cum	33	3	35	100%
RCC Roof Slab	136	Cum	51	60	111	82%
Brick Work	165	Cum				
Plastering	2000	Sqm				
Finishing works						



2.1.9. New construction units - Physical progress graph

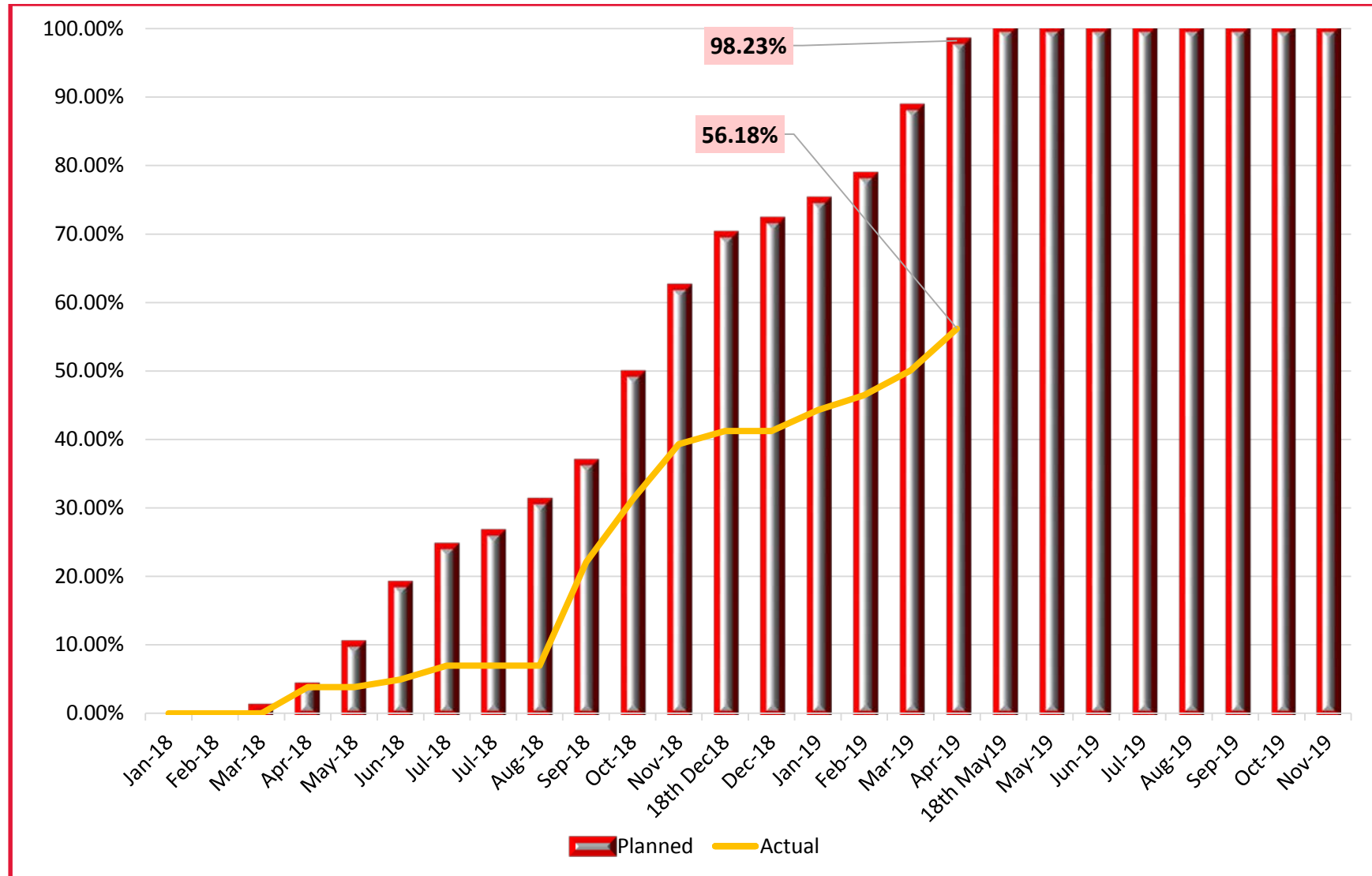


2.1.10. Associated works

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
<b>Associated</b>	20-Mar-18	18-May-19	98.23%	50.08%	6.10%	56.18%
<b>MPS Pumping Station</b>	<b>15-May-18</b>	<b>30-Apr-19</b>	<b>100.00%</b>	<b>33.50%</b>		<b>33.50%</b>
Rehabilitation of MPS	15-May-18	30-Apr-19	100%	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	100%			
Raising of height of Nalla tapping structure upto HFL	1-Apr-19	30-Apr-19	100%			
<b>Rising Main</b>	<b>15-Jun-18</b>	<b>25-Mar-19</b>	<b>100.00%</b>	<b>12.60%</b>	<b>4.41%</b>	<b>17.01%</b>
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%	36%	13%	49%
Hydrotesting of the PSC	15-Feb-19	25-Mar-19	100%			
<b>Treated Effluent disposal line</b>	<b>20-Mar-18</b>	<b>18-May-19</b>	<b>97.79%</b>	<b>57.37%</b>	<b>6.96%</b>	<b>64.33%</b>

Item of work	As per schedule		Physical status			
	Proposed Date	Completed Date	Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
Procurement - supply of pipes including inspection, transportation and delivery at site	20-Mar-18	26-Dec-18	100%	69%		69%
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%	76%	24%	100%
Pipe laying - 20% including excavation and backfilling	20-Feb-19	29-Mar-19	100%		34%	34%
Pipe laying - 20% including excavation and backfilling	30-Mar-19	6-May-19	84%			
Hydrotesting & finishing works	14-Jun-18	18-May-19	95%	5%		5%

2.1.11. Associated works - Physical progress graph



**2.1.12. Overall physical progress : 61.58 %**

Scheduled completion in %	Previous month completion in %	Completion during this month in %	Total completion in %
70.83%	57.23%	4.35%	61.58%

**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 30.04.2019**

Scheduled / Planned completion as on April 2019 in %	Up to previous month (March 2019) completion in %	Completion during this month (April 2019) in %	Total completion up to April 2019 in %
70.83%	56.70%	4.72%	61.42%

**Status of financial expenditure as on 30.04.2019**

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	<b>62.65</b>
2	First mile stone payment (25% of Rs.110.47 Cr) as per price index	27.62	16.57	11.05	
3	Deduction of mobilization advance for first milestone (25% of mobilization of advance)	-2.55		-2.55	
4	Deduction of interest on mobilization advance	-0.46		-0.46	

*Development of 50 MLD sewage treatment plant and associated infrastructure on PPP basic at Ramana, Varanasi*

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
	upto first milestone (25% of mobilization of advance)				
5	Deduction of delay damage on first milestone	-0.89		-0.89	
6	Second milestone payment (25% of Rs.110.16 Cr) as per price index	27.54	16.52	11.02	
7	Deduction of mobilization advance for second milestone (25% of mobilization of advance)	-2.55		-2.55	
8	Deduction of interest on mobilization advance upto second milestone (25% of mobilization of advance)	-0.19		-0.19	
9	Deduction of delay damage on second milestone	-0.49		-0.49	
	<b>Total</b>	<b>58.23</b>	<b>33.09</b>	<b>25.13</b>	

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

**2.3.1. Issues identified during this month**

<b>S. No</b>	<b>Issues identified during this month</b>	
1.	The achieved progress during last three months is 12.39% only as against planned progress of 17.46%. From 15 <sup>th</sup> April 2019, the site activities are almost nil due to their internal financial issues. Third milestone of 75% to be achieved as on 18 <sup>th</sup> May 2019 where as only 61.58% is achieved till this month and remaining 13.5% to be achieved within 18 days which is impossible considering the financial issues.	
2.	A meeting with VSPPL lender is scheduled during second week of May 2019	
3.	VSPPL top management assured to discuss with their chairman for getting some fund from their other groups/projects as intermediate relief to keep the momentum of the project progress and also ensure to complete the work along with Ganga river before start of monsoon i.e 15 <sup>th</sup> June 2019	
4.	If the work along the Ganga basin is not completed before start of monsoon i.e. 15 <sup>th</sup> June 2019, then the project completion will be delayed by another 4 to 5 months due to non-availability of work front	
5.	Procurement activities such as inspection of manufactured items is also pending due to financial issues	

**2.3.2. Issues identified till last month**

S. No.	Issues identified till last month	Action Taken	Status
1	As per the concession agreement the third milestone (At least 75% of both physical and financial progress) should be achieved on or before 18th May 2019. As on date only 57.23% alone is achieved and remaining 17.77% to be achieved within 50 days. Concessionaire yet to initiate the activities in the MPS, strengthening and protection of existing rising main by deploying additional resources to achieve the third milestone within the targeted date including the delay occurred, same is not reflected in the field.	Due to financial issues of their internal process, there is no progress achieved during last month and site is standstill without any activity	Pending since March 2019
2	2nd Recovery plan submitted by the concessionaire on 12th February 2019 is not accompanying the resource plan (material, man power & machineries). Concessionaire agreed to submit the same on or before 28th February 2019. However, the same is pending for submission as on date.	Not yet submitted	Pending since February 2019
3	Expedite the manufacturing and delivery of remaining treated effluent pipe of around 1400 m on or before 15th May 2019	No action taken due to financial issues of their internal process	Pending since February 2019
4	Planning to expedite the pending order placement and completion of engineering activities	No action taken due to financial issues of their internal process	Pending Since February 2019
5	Steps to complete the rising main strengthening and protection along	Trenchless work is in progress. Engineering drawing submission	Partially pending



**Development of 50 MLD sewage treatment plant and associated infrastructure on PPP basic at Ramana, Varanasi**

S. No.	Issues identified till last month	Action Taken	Status
	the Ganga river on or before 31st May 2019	and CCTV inspection is still pending. No action taken due to financial issues of their internal process	since February 2019
6	Initiating the desilting and CCTV inspection of existing rising main within a week	No action taken due to financial issues of their internal process	Pending since February 2019
7	VSPPL to provide the details for input consideration for finalizing the GST claim. A meeting is proposed to convene during next month to discuss and solve this	Meeting conducted on 22nd April 2019. VSPPL to submit the following details as requested during the meeting Copies of purchase orders placed on Vendors by VSPPL since inception Copies of invoice Copies submitted by Vendors of VSPPL since inception Purchase Register since inception Purchases Ledger since inception Trail Balance – Since Inception to March 2018 Trail Balance for Period April 2018 to March 2019 Audited Financial statement for the year ended March 2018 `Provisional / Audited Financials for the year ended March 2019 (with all the notes and workings) Annual GST Return for the period from April 2017 to March 2018 GSTR Returns in Form GSTR 1; GSTR 2A and GSTR 3B for the	Partially initiated

**Development of 50 MLD sewage treatment plant and associated infrastructure on PPP basic at Ramana, Varanasi**

S. No.	Issues identified till last month	Action Taken	Status
		period November 2018 to March 2019.	
8	As per the concession agreement the third milestone (At least 75% of both physical and financial progress) should have been achieved on or before 18th May 2019. Concessionaire yet to initiate the activities in the MPS, rising main by deploying additional resources to achieve the third milestone within the targeted date including the delay occurred, same is not reflected in the field.	Due to financial issues of their internal process, there is no progress achieved during last month and site is standstill without any activity	Partially initiated (trenchless pipe work)
9.	2nd Recovery plan submitted by the concessionaire on 12th February 2019 is not accompanying the resource plan (material, man power & machineries). Concessionaire agreed to submit the same on or before 28th February 2019	Yet to submit	Pending since February 2019
10	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 1st week of May 2019
11	Monthly Environmental Monitoring Reports to the Jal Nigam providing overview of compliance with EHS Plan.	In progress.	Due, till date

**Development of 50 MLD sewage treatment plant and  
associated infrastructure on PPP basic at Ramana, Varanasi**

<b>S. No.</b>	<b>Issues identified till last month</b>	<b>Action Taken</b>	<b>Status</b>
12	Action to be taken to start the trenchless pipe line work near SamneGhat 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 started on 14.03.2019 and around 50% completed as on 30th April 2019
13	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 informed that the desilting and CCTV inspection work will start latest by 8th April 2019. Due to financial issues of their internal process, there is no progress achieved during last month and site is standstill without any activity	Pending since February 2019

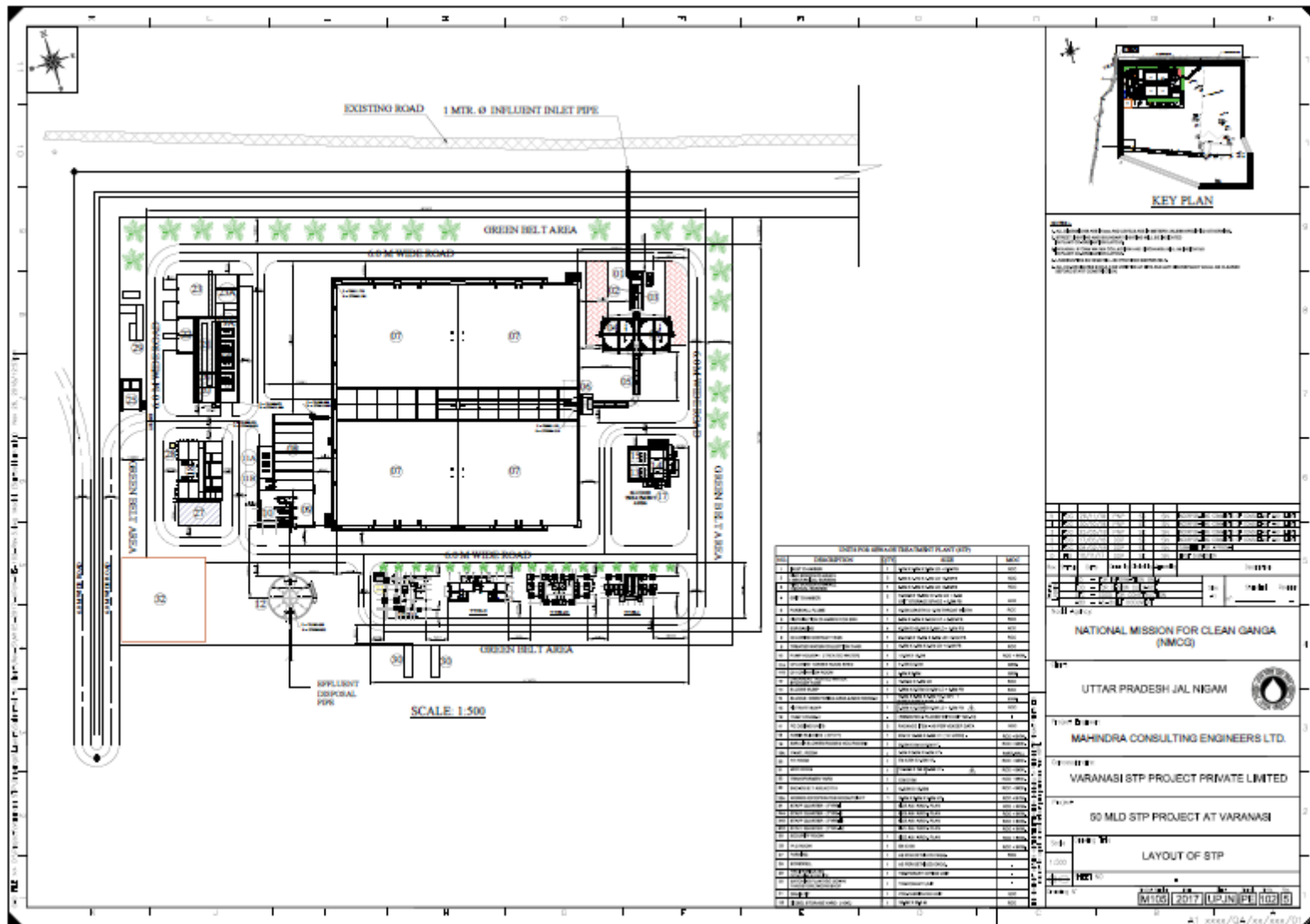


Figure 2: Development of sewage treatment plant and associated infrastructure under Hybrid Annuity based PPP mode at Varanasi

### 3.0. PROJECT ENGINEER ACTIVITIES

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: March 2019 to May 2019		
		Undertaken till previous month – March 2019	Undertaken during this month – April 2019	Expected for next month May 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 a. Work schedule b. Detailed survey report	Yes	<ul style="list-style-type: none"> <li>• Recommendation for vector approval for instruments.</li> <li>• Observation on submission of civil &amp;</li> </ul>	<ul style="list-style-type: none"> <li>• Delay analysis</li> <li>• Remaining GA &amp; structural</li> </ul>

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: March 2019 to May 2019		
		Undertaken till previous month – March 2019	Undertaken during this month – April 2019	Expected for next month May 2019
	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		RCC detail of air blower & design calc of DG & transformer foundation. <ul style="list-style-type: none"> <li>• Recommended for approval for cable roofing layout external for STP &amp; switchgear room &amp; transform yard layout for STP Rev.1</li> <li>• Recommended for dispatch clearance for MPs pumps</li> <li>• Observation on revised civil GA and reinforcement drawing of staff quarters (Type II) with 25KL OHT Rev.1</li> <li>• Submission monthly inspection report for the month of March 2019. UPJN Varanasi</li> </ul>	drawings of civil structures <ul style="list-style-type: none"> <li>• QAP &amp; data sheet for remaining mechanical, electrical &amp; instrumentation items.</li> <li>• PSC pipe inspection</li> <li>• Mechanical and Electrical equipment inspection</li> </ul>

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: March 2019 to May 2019		
		Undertaken till previous month – March 2019	Undertaken during this month – April 2019	Expected for next month May 2019
			<ul style="list-style-type: none"> <li>• Monthly inspection report submission for the month of March 2019</li> <li>• Recommended for Approval for instrumentation documents for STP &amp; MPS Rev-1</li> <li>• Recommended for approval for electrical Document for MPs lighting calculation Hi-tech specification for lighting fixture lighting layout</li> <li>• Observation on data sheet of HT &amp; LT cables for MPs and STP</li> <li>• Observation on earthing detail and data sheet</li> <li>• Recommended for approval with</li> </ul>	

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: March 2019 to May 2019		
		Undertaken till previous month – March 2019	Undertaken during this month – April 2019	Expected for next month May 2019
			comments for electrical cable schedule for STP <ul style="list-style-type: none"> <li>• Letter to General Manager. UPJN Varanasi, delay submission as per month of March 26<sup>th</sup></li> <li>• Recommended for approval for lighting layout for MPs.</li> <li>• Recommended for approval of data sheet for HT, LT cable.</li> <li>• Observation on system configuration for STP &amp; MPs Rev.2</li> <li>• Substantial delay for carrying out construction activities</li> <li>• Observation indicate in CRS on March documents of value press local control</li> </ul>	



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

Activities carried out as per TOR				
Clause as per TOR	Scope	Period: March 2019 to May 2019		
		Undertaken till previous month – March 2019	Undertaken during this month – April 2019	Expected for next month May 2019
			<ul style="list-style-type: none"> <li>Recommended for approval on revised civil GA &amp; reinforcement drawing of staff quarters (Type II) with 25 KL OHT Rev.1</li> <li>Recommended for Approval of electrical design philosophy for STP &amp; MPs</li> <li>Observation in instrumentation documents of cause &amp; effort diagram for STP Rev.0</li> <li>Recommended for approval for cable routing layout external for STP Rev.</li> </ul>	
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	Regular review

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

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	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 Concession Agreement to Uttar Pradesh Jal Nigam and NMCG, in respect of its duties and	Monthly progress report	Monthly progress report	Preparation and review of monthly progress report

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	functions under the Concession Agreement			
4.1 (xvii)	The Project Engineer shall aid and advise the Employer on any proposal for variation under Article 20 of the Concession Agreement	NA	NA	NA
4.1 (xviii)	Assisting the Parties in resolution of Disputes	NA	NA	NA
4.1 (xix)	Assisting the employer in the fulfilment of Hand back requirements as detailed in clause 19.3 of the Concession Agreement		NA	NA
4.1 (xx)	Undertaking all other duties and functions in accordance with this agreement	As mentioned above	As mentioned above	As mentioned above
4.2	The Project Engineer shall discharge its duties in an efficient manner, consistent with the highest standards of professionalism and Good Industry Practice	Yes	Yes	Yes
4.3(i)	The Project Engineer must function in a manner to assist & equip the employer to ascertain that the Concessionaire shall operate and maintain the Facilities and the Associated Infrastructure in a manner that:	Yes	Yes	Yes

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	Is in compliance with the Technical Specifications, Applicable Laws, Applicable Permits and Good Industry Practice; Results in the Facilities and the Associated Infrastructure achieving the KPIs as detailed in schedule 10 of the Concession Agreement & certify within 7 days the KPI adherence Report as per clause 8.12 of the Concession Agreement;			
4.3(ii)	Ensures that the Varanasi STP are capable of treating Sewage up to the Design Capacity on a daily basis;	Yes	Yes	Yes
4.3(iii)	Ensures efficient treatment of Sewage and handling and disposal of STP By- Products and the Treated Effluent	NA	NA	NA
4.3(iv)	STPs are safe and reliable, subject to normal wear and tear of the Facilities and the Associated Infrastructure;	NA	NA	NA
4.3(v)	Is in compliance with the technology license agreement executed by the Concessionaire	Yes	NA	NA

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	for the technology, processes, know-how and systems used or incorporated into the Facilities and/or the Associated Infrastructure			
4.3(vi)	Maintains the safety and security of personnel, material and property at the Site, in accordance with the approved EHS Plan, Applicable Laws and Applicable Permits.	Yes	Yes	Yes
4.3(vii)	Ensures that all waste materials and hazardous substances are stored and/or disposed in accordance with the EHS Plan, Applicable Laws and Applicable Permits.	Yes	Yes	Yes
4.4	Overall, The Project Engineer shall assist the Uttar Pradesh Jal Nigam in supervising the construction, rehabilitation, operation & maintenance of the Facilities and the Associated Infrastructure and shall work closely with the Uttar Pradesh Jal Nigam and NMCG to monitor compliance with the KPIs.	Yes	Yes	Yes
5.1	During the Development Period, the Project	Yes	Review of construction	Review of

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



Activities carried out as per TOR				
Clause as per TOR	Scope	Period: March 2019 to May 2019		
		Undertaken till previous month – March 2019	Undertaken during this month – April 2019	Expected for next month May 2019
	<b>Construction Plan”</b> so as to confirm to the scope as per <b>Schedule 1</b> of the Concession Agreement.			
5.3	The basic engineering drawings in the above case shall mean the designs and documents to be submitted by the Concessionaire & approved by the Uttar Pradesh Jal Nigam as a Condition Precedent & shall include but not limited to: a) Conduct kick off meeting, scrutiny of contractors submittals b) Process description, process calculations and hydraulic calculations; c) List of design codes and standards; d) Master drawing schedule; e) Drainage design; f) STP Facilities layout; g) Process flow diagram; h) Hydraulic flow diagram; i) Mass balance diagram;	Yes	Yes	Yes

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

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

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
6.3	The Project Engineer shall assist the Uttar Pradesh Jal Nigam submit their comments on effectiveness or otherwise of the Work plan submitted for meeting the specified payment milestones and completion of the work on or before the scheduled construction completion date	Yes	Yes	Yes
6.4	The Project Engineer shall review, in particular, the submissions by the Concessionaire as per Schedule 1 of the Concession Agreement, and assist Uttar Pradesh Jal Nigam in assessing the effectiveness them	Yes	Yes	Yes
6.5	The Project Engineer shall review the monthly progress report furnished by the Concessionaire and send its comments thereon to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 7 (seven) days of receipt of such report	Yes	Concessionaire not yet submitted progress report for the month of April 2019. However, the report was prepared by Project Engineer	Yes
6.6	The Project Engineer shall inspect the	Yes	Yes	Yes

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

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

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

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



<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	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.			
6.13	In the event that the Concessionaire carries out any remedial measures to secure the safety of suspended works and common public, it may, by notice in writing, require the Project Engineer to inspect such works, and within 3 (three) days of receiving such notice, the Project Engineer shall inspect the suspended works and make a report to the NMCG/ Uttar Pradesh Jal Nigam forthwith, recommending whether or not such	NA	NA	

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	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 same	NA	NA	
6.15	Upon reference from the NMCG/ Uttar Pradesh Jal Nigam, the Project Engineer shall make a fair and reasonable assessment of the costs of providing information, works and services and certify the reasonableness of such costs for payment by the NMCG/ Uttar Pradesh Jal Nigam to the Concessionaire	NA	NA	
6.16	The Project Engineer shall aid and advise the Concessionaire in preparing the Operation & Maintenance Manual	NA	NA	

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
6.17	Upon reference from the NMCG/ Uttar Pradesh Jal Nigam the Project Engineer shall undertake the assessment of cost of civil works, as per applicable schedule of rates, for the reduction of Scope of work if any as per Article 20.	NA	NA	
6.18	The Project Engineer shall review the construction progress as per payment milestones proposed by the concessionaire and provide necessary recommendation/s to Uttar Pradesh Jal Nigam for issuance of 'Milestone Construction Certificates'	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	NA	NA	

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	the work done as per 'as built' drawings and identify defects and suggest changes as per clause 7.13(v) of the Concession Agreement			
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	

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	b) O&M Plan; c) Provision of Spare Parts; d) Sampling and Testing Methodologies; e) Storage and control of Inventory; f) Arrangements for data security and Integrity; g) Procedures for recording and disposal of complaints; h) Operational Contingencies Plans; i) Human Resources Plans; j) EHS Plans; k) Emergency procedures; l) Management of Assets Plans. And m) Annual Scheduled Maintenance programme.			
7.3	The Project Engineer shall review the annual Maintenance Program furnished by the Concessionaire and send its comments thereon to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 10 (ten)	NA	NA	

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	days of receipt of the Maintenance Program			
7.4	The Project Engineer shall review the reports generated from online monitoring systems to assess adherence to KPIs and submit the monthly KPI Adherence Report to Uttar Pradesh Jal Nigam	NA	NA	
7.5	The Project Engineer shall verify the daily reports submitted by the concessionaire regarding the volume of sewage and its quality re influent standards and monitor and record the same on regular basis	NA	NA	
7.6	The Project Engineer shall monitor, review and advise the Uttar Pradesh Jal Nigam on the reports submitted by the concessionaire as per clause 8.8(b)(iii) (A) to (G) of the Concession Agreement	NA	NA	
7.7	The Project Engineer shall regularly verify the report submitted by the concessionaire on the tests conducted at the Inlet Point, the Outlet Point or at any other point at the Varanasi STP	NA	NA	

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	for the Digested Sludge. Separately, the Project Engineer shall also have the right to take random samples of the incoming Sewage, the Digested Sludge and the Treated Effluent at any time during the O&M Period to test compliance with the Influent Standards and the Discharge Standards.			
7.8	The Project Engineer shall review the monthly status report furnished by the Concessionaire (as required under clause 812(c)) of the Concession Agreement) and send its comments thereon to the NMCG/ Uttar Pradesh Jal Nigam and the Concessionaire within 7 (seven) days of receipt of such report	NA	NA	
7.9	The Project Engineer shall inspect the Project once every month, preferably after receipt of the monthly status report from the Concessionaire, but before the 20th (twentieth) day of each month in any case and make out an O&M Inspection Report setting forth an overview of the status, quality and	NA	NA	

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
			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 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	NA	NA	



<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	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.			
7.12	The Project Engineer shall determine if any delay has occurred in completion of repair or remedial works in accordance with the Concession Agreement, and shall also determine the Damages, if any, payable by the Concessionaire to the NMCG/ Uttar Pradesh Jal Nigam for such delay.	NA	NA	
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	NA	NA	

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	(fifteen) days of receiving the proposal.			
7.15	The Project Engineer shall undertake sewage flow sampling, as and when required by the NMCG/ Uttar Pradesh Jal Nigam, under and in accordance with the provisions of this agreement	NA	NA	
7.16	The Project Engineer shall review and report to the employer on all the reports (Daily, Monthly, Quarterly and Annual), including monthly Environmental Monitoring Reports as detailed in Schedule 11(Part G) of the Concession Agreement.	NA	NA	
7.17	The Project Engineer shall provide necessary training/capacity building to the operators/technicians of the STP, as and when required, so as to address the 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	NA	NA	

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	Concession Agreement			
9.2	The Project Engineer shall determine the period, or any extension thereof, that is required to be determined by it under the Concession Agreement	NA	NA	
10.1	When called upon by either Party in the event of any Dispute, the Project Engineer shall mediate and assist the Parties in arriving at an amicable settlement	NA	NA	
10.2	In the event of any disagreement between the Parties regarding the meaning, scope and nature of Good Industry Practice, as set forth in any provision of the Concession Agreement, the Project Engineer shall specify such meaning, scope and nature by issuing a reasoned written statement relying on good industry practice and authentic literature	NA	NA	
11.0	As and when requested by NMCG/ Uttar Pradesh Jal Nigam, the Project Engineer shall provide its opinion and assessment on the	NA	NA	

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	events related to Emergency, Change in Law, Force Majure, Minor or total Casualties, Variation and unforeseen Site conditions etc			
12.1	The Project Engineer shall notify its programme of inspection to the NMCG/ Uttar Pradesh Jal Nigam and to the Concessionaire, who may, in their discretion, depute their respective representatives to be present during the inspection.	Yes	Yes	Yes
12.2	A copy of all communications, comments, instructions, Drawings or Documents sent by the Project Engineer to the Concessionaire pursuant to this TOR, and a copy of all the test results with comments of the Project Engineer thereon shall be furnished to the NMCG/ Uttar Pradesh Jal Nigam forthwith.	Yes	Yes	Yes
12.3	The Project Engineer shall retain at least one copy each of all Drawings and Documents received by it, including 'as-built' Drawings,	Yes	Yes	Yes

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	and keep them in its safe custody.			
12.4	Upon completion of its assignment hereunder, the Project Engineer shall duly classify and list all Drawings, Documents, results of tests and other relevant records, and hand them over to the NMCG/ Uttar Pradesh Jal Nigam or such other person as the NMCG/ Uttar Pradesh Jal Nigam may specify and obtain written receipt thereof. Two copies of the said documents shall also be furnished in their editable digital format or in such other medium or manner as may be acceptable to the NMCG/Uttar Pradesh Jal Nigam	Yes	Yes	Yes
12.5	Wherever no period has been specified for delivery of services by the Project Engineer, the Project Engineer shall act with the efficiency and urgency necessary for discharging its functions in accordance with Good Industry Practice.	Yes	Yes	Yes

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
		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 non-performance.	Yes
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	Yes	Yes	Yes

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	completion of services as per this RFP document, the website with all necessary technical information shall be handed over to UPJN.			
14.1	Uttar Pradesh Jal Nigam may review with the Project Engineer, any or all of the documents and advice forming part of the Consultancy, in meetings and conferences which will be held at the office of the Uttar Pradesh Jal Nigam / NMCG. Uttar Pradesh Jal Nigam / NMCG may, in its discretion, require the Project Engineer to participate in extended meetings and/ or work from the offices of Uttar Pradesh 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.	Yes	Yes	Yes
15.1	The Project Engineer may prepare Issue Papers highlighting issues that could become critical for the timely completion of the Project	Yes	Yes	Yes

<b>Activities carried out as per TOR</b>				
<b>Clause as per TOR</b>	<b>Scope</b>	<b>Period: March 2019 to May 2019</b>		
		<b>Undertaken till previous month – March 2019</b>	<b>Undertaken during this month – April 2019</b>	<b>Expected for next month May 2019</b>
	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.			
15.2	The Project Engineer will make a presentation on the inception report for discussion with the Uttar Pradesh Jal Nigam / NMCG at a meeting. This will be a working document. Regular communication with Uttar Pradesh Jal Nigam / NMCG is required in addition to all key communications. This may take the form of telephone/ teleconferencing, emails, and occasional meetings.	Yes	Yes	Yes
15.3	The Deliverables will be submitted as per schedule provided in this RFP	Yes	Yes	Yes



#### 4.0. MEETINGS

Project Engineer undertaken and planned services.

Sl. No.	Services	Undertaken by	Period: April 2019	Period: May 2019
			Description	Expected for next month
1	Site visit & Review of progress	1) Mr. Naresh Kumar Goyal, Technical Principal, SMCG	23rd April 2019	Project review meeting and site inspection
2	Site visit & Review of progress	1) Mr. A. Srinivasan, General Manager, MACE	30 <sup>th</sup> April 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, 1<sup>st</sup> 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 April 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	Civil Engineer	P. Ramasubramanian (Additional deployment)	20/04/2018	27/11/2018
6	Civil Engineer	Imran Khadhar Mohideen (Additional deployment)	20/04/2018	
7	Structural Engineer	S. Varun Athithiya (Additional deployment)	20/04/2018	

**Development of 50 MLD sewage treatment plant and  
associated infrastructure on PPP basic at Ramana, Varanasi**

<b>Staff deployed on site at Ramana, Varanasi</b>			<b>Date of deployment</b>	
<b>Sl. No.</b>	<b>Designation</b>	<b>Name of staff</b>	<b>From</b>	<b>To</b>
8	Senior Engineer (Electrical & Instrumentation)	R. Satish (As per agreement)	20/04/2018 04/03/2019	28/05/2018
9	Structural Engineer	M. Vishnukumar (As per agreement)	24/09/2018	
10	Electrical Engineer	K.Ganesh (As per agreement)	11/10/2018	13/10/2018
11	Liaison Officer	O. B. Shivakumar (Additional deployment)	20/04/2018	08/07/2018
12	QA QC Expert /Safety	L. Selva Kumar (Additional deployment)	29/05/2018	07/04/2019

# **ANNEX - 1**

## **PROJECT PROGRESS (PHYSICAL)**

**ANNEX 1 - PROJECT PROGRESS (PHYSICAL)**

Sl. No.	Component / Package	Physical Progress in Percentage				Remarks
		Scheduled till 30 <sup>th</sup> April 2019	Up to Previous month	During month	Total	
1	2	3	4	5	6	7
1	Development of sewage treatment plant and associated infrastructure under Hybrid Annuity based PPP mode at Varanasi	70.83	57.23%	4.35%	61.58%	From 15 <sup>th</sup> April 2019, the site activities are almost nil due to their internal financial issues. Third milestone of 75% to be achieved as on 18 <sup>th</sup> May 2019 whereas only 61.58% is achieved till this month and remaining 13.5% to be achieved within 18 days which is impossible considering the financial issues. A meeting with VSPPL lender is scheduled during second week of May 2019

# **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
<b>Design detailed engineering</b>				
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	5,059,200	-	5,089,800
Topographical / Soil Investigation	51,00,000	51,00,000	-	51,00,000
Structural drawings submissions & approvals	12,750,000	12648000		1,264,800
Mechanical & piping drawings submissions & approvals	10,200,000	9,220,800		9,220,800
Electrical drawings submissions & approvals	2,550,000	2,397,000		2,397,000
Instrumentation document submissions & approvals	2,550,000	1,912,500	255,000	2,167,500
<b>Associated</b>				
MPS pumping station	10,200,000	3,417,000	-	3,417,000
Rising Main	15,300,000	1,927,800	674,730	2,602,530
Treated Effluent disposal line	99,743,538	58,513,366	7,099,200	65,612,566
<b>Equipment procurement, logistics and receipt of equipment at Site</b>				
Fine Screen / Coarse Screen / Belt Conveyors	10,200,000	3,101,933	3,273,067	6,375,000
Grit Removal Mechanism	10,200,000	2,26,667	-	2,26,667
SBR System (Decanters)	43,965,517	51,000,000	-	51,000,000
SAS / RAS pumps/booster pumps / treated water pumps / drain pumps	10,200,000	10,200,000	-	10,200,000
Horizontal centrifugal pumps (Treated water pumps)	20,400,000	453,333	12,296,667	12,750,000

**Development of 50 MLD sewage treatment plant and associated infrastructure on PPP basic at Ramana, Varanasi**

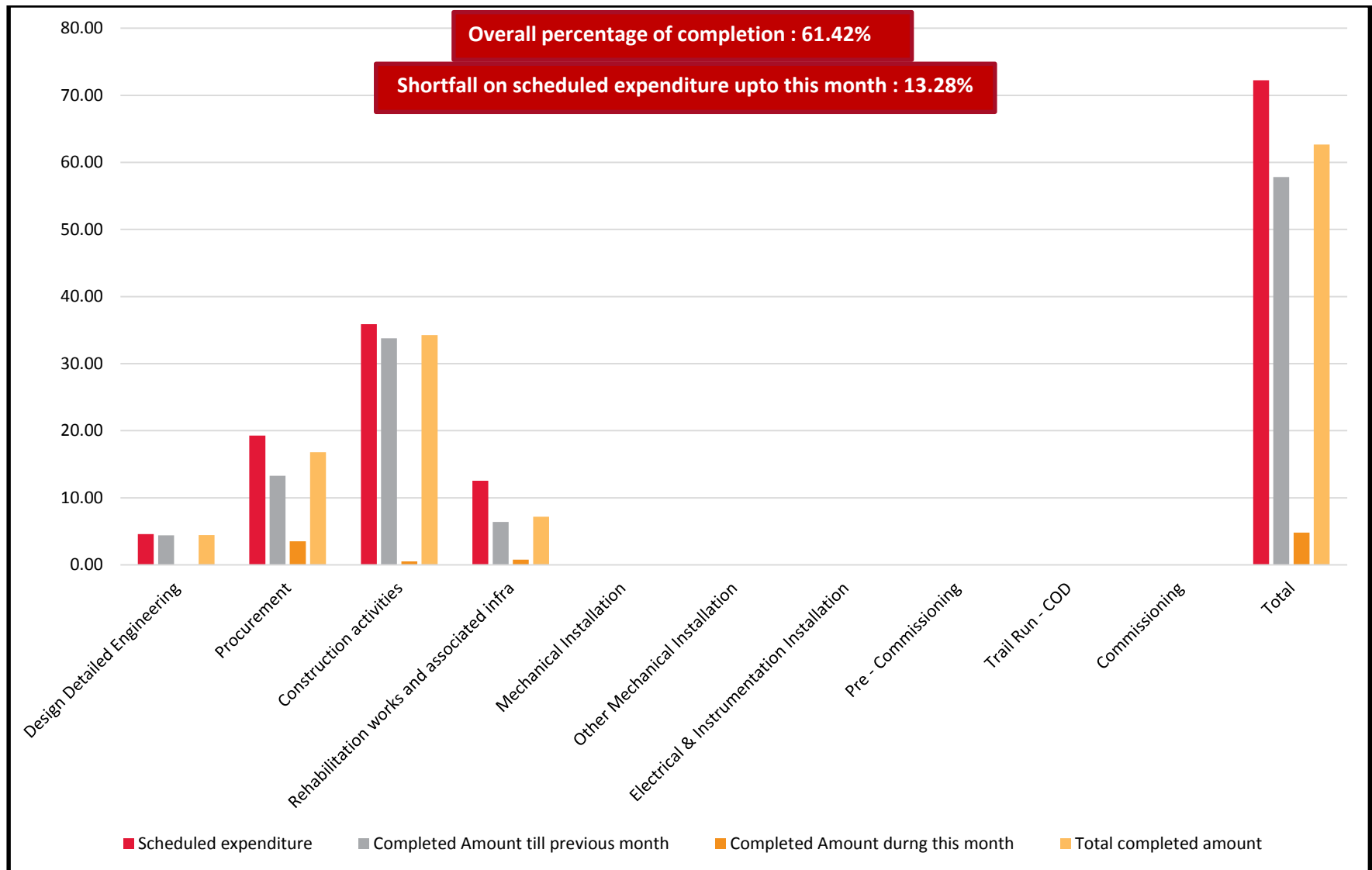
<b>Item of work</b>	<b>Scheduled expenditure in Rs</b>	<b>Completed amount till previous month in Rs</b>	<b>Completed amount during this month in Rs</b>	<b>Total completed amount in Rs</b>
Air blowers	30,600,000	25,500,000	-	25,500,000
Chlorination system	6,948,750	10,200,000	-	10,200,000
Sluice Gates	5,100,000	600,667	2,586,833	3,187,500
MS/CS/SS/GI/CI/DI Pipping	2,163,091			
Valves	2,163,091	45,333		45,333
Motorized Gates at Inlet Of SBR	7,055,000	1,201,333	5,173,667	6,375,000
Diffusers	10,200,000	6,375,000	-	6,375,000
Volute press	3,475,556	1,103,867	3,996,133	5,100,000
PE Dosing Tanks	868,889	-	22,667	22,667
Agitators	3,315,911	136,000	-	136,000
Transformers	1,920,300	5,100,000	-	5,100,000
HT cables	660,799	45,333		45,333
MCC panel	1,724,241	2,550,000	-	2,550,000
HT Panel	1,724,241	5,100,000	-	5,100,000
PLC Panel	5,172,722	9,180,000	-	9,180,000
SCADA System	3,448,481	181,333	-	181,333
MLDB, LDB & SLDBS	1,724,241	2,550,000	-	2,550,000
Push Button Stations/Plant lighting / Buildings lighting	862,120	-	-	-
Power, Control & lighting Cables	1,724,241	56,667	-	56,667
Cable trays/Lighting JB	862,120	56,667	-	56,667
DG Set	1,724,241	113,333	-	113,333
Plant Earthing	909,500	56,667	-	56,667
Instruments (Flow meter / Analyzer)	1,681,202	170,000	-	170,000
Instruments (Temperature, Pressure & Level transmitter / Level, Temperature and Pressure switches)	1,342,873	170,000	-	170,000



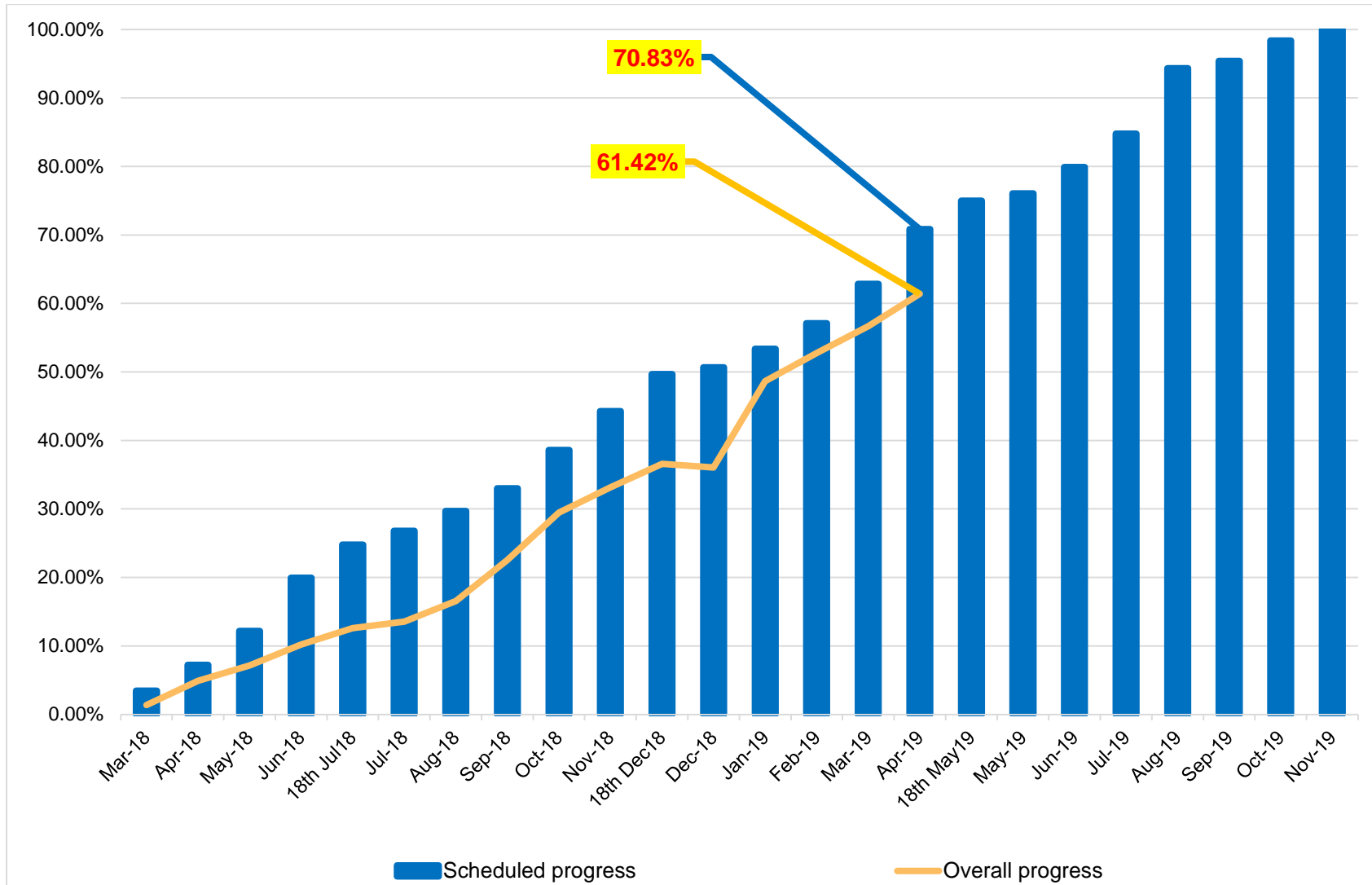
**Development of 50 MLD sewage treatment plant and associated infrastructure on PPP basic at Ramana, Varanasi**

<b>Item of work</b>	<b>Scheduled expenditure in Rs</b>	<b>Completed amount till previous month in Rs</b>	<b>Completed amount during this month in Rs</b>	<b>Total completed amount in Rs</b>
<b>Civil Executions</b>				
Bund Wall / Earthen Embankment	71,400,000	69,734,850	918,000	70,652,850
Construction of Inlet Structure, Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for SBR	22,950,000	16,696,763	-	16,696,763
SBR Basins & SBR outlet Chamber	202,688,571	199,953,660	1,530,000	201,483,660
Construction of CCT including Chlorination room & Treated water pump House	24,270,964	22,522,824	-	22,522,824
Overhead Treated Water Tank	2,229,429	880,541	-	880,541
Construction of BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank	7,812,151	3,676,590	1,173,000	4,849,590
Administrative Building including lab and workshop	9,467,692	8,446,824	5,100	8,451,924
Staff Quarters	4,590,000	6,954,717	71,400	7,026,117
Construction of Blower room, HT, MCC, Transformer Yard, DG set Area	13,345,000	881,9287	1,346,400	10,165,687
<b>Total</b>	<b>722,426,793</b>	<b>578,357,255</b>	<b>48,165,363</b>	<b>626,522,618</b>
	<b>Percentage completion of overall project</b>		<b>61.42%</b>	

Financial status for the month of April 2019



Progress status scheduled vs Actual - April 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 (April 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	22	22	12	0	-	-	-	-	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	1220	1220	1102	118	143	143	115	28	146 Rectification suggested for re-compaction & retesting as per relevant code.

2. New construction units

Sl. No.	Description	IS Code	Till previous month				April 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	Coarse - aggregate 20mm down	IS 383-2001	52	96	79	17	-	-	-	-	17 rejects (oversize) removed from site.
2	Coarse - aggregate 10mm down	IS 383-2001	40	56	51	5	-	-	-	-	5 rejects (undersize) removed from site.
3	Fine aggregate 4.75 mm down	IS 383-2001	35	54	49	5	1	1	1	-	5 rejects (undersize) removed from site.
4	Combined Grading as per approved IIT Mix design	IS 383-2001	Whenever required	4	4	-	Whenever required	-	-	-	As per approved mix 60% of 20mm and 40% of 10mm being used.
5	Hardened	IS 516	Every	1081	1081	-	Every	18	18	-	Third party test

Sl. No.	Description	IS Code	Till previous month				April 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	
	concrete Compressive strength	& IS 456	50m <sup>3</sup> or part thereof				50m <sup>3</sup> or part thereof				report available.
6	OPC Cement 43 Grade	IS 8112-2013	Every batch	1	1	Every batch	-	-	-	Every batch	UltraTech MTC
7	Reinforcement TMT Bars	IS 456-2000, IS 1786 - 1987 & IS 800 -2007	One sample for each size per 50 MT	51	51	-	One sample for each size per 50 MT	-	-	-	TATA Steel MTC / Third party report for all consignment.
8	Admixture	IS 9103 - 1979	Every new lot	1	1	-	Every new lot	-	-	-	FOSROC Conplast / MTC available for all consignment.
9	Water	IS 456 -2001	Once in six	3	2	0	Once in six	-	-	-	1 sample sent to IIT BHU on

Sl. No.	Description	IS Code	Till previous month				April 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	
			months				months				28/03/2019. Awaiting report.
10	Mix design	IS 10262-2000	Whenever source of material changes	M10, M15, M20, M25, M30	Approved IIT BHU & accepted by client	0	Whenever source of material changes	M10, M15, M20, M25, M30	Approved IIT BHU & accepted by client	0	As per approved mix 60% of 20mm and 40% of 10mm being used.
11	Field control test: Slump /Concrete temperature/ unit weight	IS 456, SP 23 & IS 516	Every alternate truck	485	472	13	Every alternate truck	10	10	-	13 rejects were realtered and found acceptable.



Sl. No.	Description	IS Code	Till previous month				April 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	
12	Bricks	IS 1077 & IS 5454	20nos to be selected from a lot of 2000-10000.	40	40	-	20nos to be selected from a lot of 2000-10000.	-	-	-	20 nos tested as site laboratory & 20 nos sent to third party testing. Results were found acceptable

3. Treated Effluent disposal line

Sl. No	Description	IS Code	Till previous month				April 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	707	707	677	30	-	-	-	-	677 nos were accepted, 30 were rejected. 30 nos were rectified retested and found acceptable.
2	Soil Test – SBC of soil	IS 6403	4	4	4	-	-	-	-	-	
3	EPDM Gasket	IS 5389-1979	565	565	565	-	98	98	98		

**4. Raising main**

S. No.	Description	IS Code	Up to Previous Month				During this month (April 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)	-	-	-	-	-	Factory inspection done along with client at Bamrah pipes, Noida
2	Dye penetration test Cleaner- CL 96 Penetrator – PT97 Developer – DL 98 Mode of application – Spray	IS 23277:2015	10	10	10	-	19	19	19	-	Lighting equipment- laser Dwell time – 2 to 5 min Developing time 10 to 15 min

5. Construction Running Materials / Equipment's

S. No.	Description	IS Code	Up to Previous Month				During this month (April 2019)				Remarks
			As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	As per IS No of test required	No of Test conducted	No of Acceptance	No of Rejects	
1	Auto level (SBR / Pipe lines / bund wall)	BIS 1492	Yearly once	3	3		Yearly once				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		Yearly once				
3	Laboratory weighing machine	IS 460-1980	Yearly once	2	2		Yearly once				
4	Ready Mix Concrete plant	IS 4926-2013	Whenever required	3	3		Whenever required				

# **ANNEX - 4 PHOTOGRAPHS**

SBR Basin



**Basin 3 water level 4m**



**Basin 3 water level 5.4m**





SBR access staircase at north west corner

Bund wall





Stone pitching on Northern side

Administrative Building





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



Staff Quarters



Type - I



**Type - II**



**Type - III**





Type - IV

Rising Main



Trenchless M.S. Pipe laying

Equipment reached site





Transformer



Radiator for transformer



<p>Site Inspection by MACE</p>	
<p>BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank</p>	

<p>Inlet Structure, Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for</p>	
<p>OHT</p>	

CCT



**ANNEX - 5**  
**OUTWARD CORRESPONDENCE LIST**  
**OF APRIL 2019**



### **ANNEX 5 - OUTWARD CORRESPONDENCE LIST OF APRIL 2019**

<b>S. No.</b>	<b>Document No.</b>	<b>Date</b>	<b>To (Organization)</b>	<b>Copies To</b>	<b>Subject File No.</b>	<b>Subject</b>
1.	MACE: P968:9002	30.03.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommendation for vector approval for instruments.
2.	MACE: P968:9004	30.03.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation on submission of civil & RCC detail of air blower & design calc of DG & transformer foundation.
3.	MACE: P968:9006	01.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval for cable routing layout external for STP & switchgear room & transform yard layout for STP Rev.1
4.	MACE: P968:9011	01.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for dispatch clearance for MPS pumps
5.	MACE: P968:9016	03.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation on revised civil GA & reinforcement drawing of staff quarters (Type II) with 25KL OHT Rev.1
6.	MACE: P968:9018	03.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Submission monthly Progress report for the month of March 2019.
7.	MACE: P968:9020	04.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Monthly inspection report submission for the month of March 2019
8.	MACE: P968:9021	05.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Approval for instrumentation documents for STP & MPS Rev-1
9.	MACE: P968:9022	05.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval for electrical Document for MPS lighting calculation Hi-tech

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
						specification for lighting fixture lighting layout
10.	MACE: P968:9023	05.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation on data sheet of HT & LT cables for MPS and STP
11.	MACE: P968:9025	05.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation on earthing detail and data sheet
12.	MACE: P968:9027	08.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval with comments for electrical cable schedule for STP
13.	MACE: P968:9029	09.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Delay submission as per MOM 26
14.	MACE: P968:9031	11.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval for lighting layout for MPS.
15.	MACE: P968:9032	11.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval of data sheet for HT, LT cable.
16.	MACE: P968:9041	13.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation on system configuration for STP & MPS Rev.2
17.	MACE: P968:9042	13.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Substantial delay for carrying out construction activities
18.	MACE: P968:9043	13.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation indicate in CRS on March documents of Volute press local control panel (wiring diagram GA & QAP)
19.	MACE: P968:9088	23.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	UPJN to obtain the following additional detail from VSPPL for validation their claim of GST
20.	MACE: P968:9089	23.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval lighting layout indoor for STP Rev.1
21.	MACE: P968:9095	24.04.2019	GM, UPJN	NMCG, PM,	NA	Submission of monthly QA / QC

**Development of 50 MLD sewage treatment plant and associated infrastructure on PPP basic at Ramana, Varanasi**

S. No.	Document No.	Date	To (Organization)	Copies To	Subject File No.	Subject
				UPJN		report for the month of Feb. 2019.
22.	MACE: P968:9096	24.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Submission of month QA /QC report for the month of March 2019.
23.	MACE: P968:9097	25.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation instrumentation documentation cause & effective diagram for MPS,
24.	MACE: P968:9099	25.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval on revised civil GA & reinforcement drawing of staff quarters (Type II) with 25 KL OHT Rev.1
25.	MACE: P968:9100	25.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Approval of electrical design philosophy for STP & MPS
26.	MACE: P968:9104	26.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation in instrumentation documents of cause & effective diagram for STP Rev.0
27.	MACE: P968:9105	26.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for approval for Cable routing layout external for STP Rev.
28.	MACE: P968:9117	30.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Observation on structural drawing of weir-across melt R1
29.	MACE: P968:9118	30.04.2019	GM, UPJN	NMCG, PM, UPJN	NA	Recommended for dispatch clearance for screens with belt conveyor gate

**ANNEX - 6**  
**INWARD CORRESPONDENCE LIST OF**  
**APRIL 2019**

**ANNEX 6 - INWARD CORRESPONDENCE LIST OF APRIL 2019**

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
1.	EIL/VSPPL/2019-20/439	02.04.2019	VSPPL / UPJN	Amit B Ghorpade	N		Request for Dispatch Clearance – For Air Blowers
2.	EIL/VSPPL/2019-20/440	02.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Submission of Monthly progress report
3.	EIL/VSPPL/2019-20/441	03.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of Instrumentation Documents for STP and MPS, Rev. 2
4.	EIL/VSPPL/2019-20/442	04.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	3	Compliance for Cable routing Layout – External for STP
5.	EIL/VSPPL/2019-20/443	04.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	4	Pressure gauge vendor (General Instruments) Approval.
6.	EIL/VSPPL/2019-20/444	04.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	4	Submission of Electrical Documents for STP, Rev.0
7.	EIL/VSPPL/2019-20/445	05.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Submission of Approved STP Layout Rev.05
8.	EIL/VSPPL/2019-20/446	08.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Inspection Call for OAN 1828-108 – Pump and Motor for Treated water.
9.	EIL/VSPPL/2019-20/447	09.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	5	Submission of Electrical documents-datasheet & QAP for HT, Power cable for STP & MPS, Rev. 1

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
10.	EIL/VSPPL/2019-20/448	09.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	3	Submission of Mechanical document of Volute press local control panel (wiring diagram, GA & QAP)
11.	EIL/VSPPL/2019-20/449	09.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Inspection call for Gates & Screens.
12.	EIL/VSPPL/2019-20/450	10.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Inspection call for Volute press (Sludge dewatering system).
13.	EIL/VSPPL/2019-20/451	09.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	3	Compliance of lighting layout for MPS
14.	EIL/VSPPL/2019-20/453	12.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Request for advance for supply of 1000 dia MS pipe at rising main trenchless
15.	EIL/VSPPL/2019-20/454	18.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Delay for carrying out construction activities
16.	EIL/VSPPL/2019-20/455	19.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	12	Revised civil drawings and design calculation of staff quarter Type – II with 25 KL OHT
17.	EIL/VSPPL/2019-20/456	22.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Mechanical document of Poly dosing system.
18.	EIL/VSPPL/2019-20/457	23.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Delay for carrying out the construction activities.
19.	EIL/VSPPL/2019-20/458	24.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	2	Inspection note of the flood effected rising main held on 6th

Sl. No.	Document No	Letter Date	From		Attachments		Subject
			Organization	Writer	Y/N	No.	
							Apr 2019
20.	EIL/VSPPL/2019-20/459	24.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	5	Layout and RCC details of Interceptor weir across assi nala.
21.	EIL/VSPPL/2019-20/460	25.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	1	Inspection call for PSC PIPE DN 1200mm.
22.	EIL/VSPPL/2019-20/461	27.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	5	Submission of Civil Drawings Details of MS Rising Main on Pile, MS Pipe Structural Design and Soil Test Report Mahesh Nagar.
23.	EIL/VSPPL/2019-20/462	29.04.2019	VSPPL / UPJN	Amit B Ghorpade	Y	6	Compliance on Dispatch Clearance of MPS Pumps

# **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	<p>Drawing submitted by the concessionaire after the due date, indicates the lack of planning.</p> <p>Approval from IIT is pending for some of the items.</p>	However, concessionaire started the works
			<ul style="list-style-type: none"> <li>• Structural drawing for weir</li> <li>• Mechanical drawing for overall piping</li> <li>• Instrumental drawing for Cause &amp; Effect Diagram</li> </ul>	<p>Concessionaire to plan for revised drawing &amp; submission as per observation on or before 15<sup>th</sup> May 2019 for the following.</p> <ul style="list-style-type: none"> <li>• Structural for weir</li> <li>• Mechanical drawing for overall piping</li> <li>• Instrumental for Cause &amp; Effect Diagram</li> </ul>

**Development of 50 MLD sewage treatment plant and associated infrastructure on PPP basic at Ramana, Varanasi**

<b>Item of work</b>	<b>Scheduled start date as per approved construction plan</b>	<b>Scheduled completion date as per approved construction plan</b>	<b>Delay analysis</b>	<b>Recovery / Mitigation plan</b>
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 15 <sup>th</sup> May 2019
			Concessionaire recently finalized the vendor for CCTV inspection of existing rising main	Concessionaire to expedite to start the same by 10 <sup>th</sup> May 2019
			Manufacturing delay of PSC pipes for treated effluent disposal line.  Only 3385 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
			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	Concessionaire to expedite the Submission of the same by 15 <sup>th</sup> May 2019

<b>Item of work</b>	<b>Scheduled start date as per approved construction plan</b>	<b>Scheduled completion date as per approved construction plan</b>	<b>Delay analysis</b>	<b>Recovery / Mitigation plan</b>
			<ul style="list-style-type: none"> <li>• MS/CS/SS/GI/ CI/DI Piping</li> <li>• Valves</li> <li>• Push button stations / plant lighting / building lightings</li> </ul>	
<b>Civil Executions</b>				
Bund Wall / Earthen Embankment	19-Feb-18	30-Aug-19	Lack of planning and lack of full utilization of equipment & manpower	Full utilization of the available equipment shall increase the output and mitigate the delay occurred
Inlet Chamber Manual & Mechanical Screen Chamber, Grit Chamber & Outlet Channel of Grit Chamber & Parshall Flume (I) & Distribution Chamber of SBR Basin	03-June-18	30-Jun-19	<p>Drawing submitted by the concessionaire after the due date indicates the lack of planning</p> <p>Delay occurred for getting from approval from IIT and lack of full utilization of equipment &amp; manpower</p>	Due to Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at earliest
SBR Basins & SBR outlet Chamber	09-Apr-18	15-Jul-19	Lack of planning and lack of full utilization of equipment & manpower	Due to Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at earliest

**Development of 50 MLD sewage treatment plant and associated infrastructure on PPP basic at Ramana, Varanasi**

<b>Item of work</b>	<b>Scheduled start date as per approved construction plan</b>	<b>Scheduled completion date as per approved construction plan</b>	<b>Delay analysis</b>	<b>Recovery / Mitigation plan</b>
Construction of CCT including Chlorination room & Treated water pump House	26-Apr-18	24-Aug-19	Lack of planning and lack of full utilization of equipment & manpower	Due to Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at earliest
Overhead treated water tank	1-Jun-18	1-Aug-19	Concessionaire recently submitted structural drawing i.e after the target date. Delay occurred for getting from approval from IIT and lack of full utilization of equipment & manpower	Due to Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at earliest
Construction of BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank	15-Oct-18	13-Jul-19	Drawing submitted by the concessionaire after the due date indicates the lack of planning.  Delay occurred for getting from approval from IIT and lack of full utilization of equipment & manpower	Due to Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at earliest
Administrative	08-Jun-18	11-Jul-19	Drawing	Due to

Item of work	Scheduled start date as per approved construction plan	Scheduled completion date as per approved construction plan	Delay analysis	Recovery / Mitigation plan
Building including lab and workshop			<p>submitted by the concessionaire after the due date indicates the lack of planning.</p> <p>Delay occurred for getting from approval from IIT and lack of full utilization of equipment &amp; manpower</p>	<p>Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at earliest</p>
Construction of Blower room, HT, MCC, Transformer Yard, DG set Area	03-Jun-18	29-Aug-19	<p>Drawing submitted by the concessionaire after the due date indicates the lack of planning.</p> <p>Delay occurred for getting from approval from IIT and lack of full utilization of equipment &amp; manpower</p>	<p>Due to Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at earliest</p>

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

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

**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 on 30 <sup>th</sup> April 2019		Actual work done up to on 30 <sup>th</sup> April 2019		Shortfall as on 30 <sup>th</sup> April 2019	
		Quantity	Unit	Quantity	Unit	Quantity	Unit	Quantity	Unit
1	PCC & RCC	11311	Cum	10432	Cum	9938	Cum	494	Cum

Due to Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at earliest

**2.2. Bund Wall / Earthen Embankment**

S. No.	Description	Estimate		As per construction plan up to on 30 <sup>th</sup> April 2019		Actual work done up to on 30 <sup>th</sup> April 2019		Shortfall as on 30 <sup>th</sup> April 2019	
		Quantity	Unit	Quantity	Unit	Quantity	Unit	Quantity	Unit
1	Earth filling & Compaction of Bund Wall	81411	Cum	81411	Cum	79432	Cum	1979	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	Liters
5	Grader	1	No	17	Ton
6	Roller	1	No	11	Ton
7	Engineer	1	No		
8	Supervisor	1	No		
9	Labour	23	Nos		

### 2.3. Treated Effluent disposal line

S. No.	Description	Estimate		As per construction plan up to on 30 <sup>th</sup> April 2019		Actual work done up to on 30 <sup>th</sup> April 2019		Shortfall as on 30 <sup>th</sup> April 2019	
		Quantity	Unit	Quantity	Unit	Quantity	Unit	Quantity	Unit
1	Procurement of PSC Pipe	4200	Mtr	4200	Mtr	3315	Mtr	885	Mtr
2	PSC pipe laying	4200	Mtr	4065	Mtr	2805	Mtr	1260	Mtr

Note: Actual length as per site condition is 4200Mtr

Due to Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at earliest



**1. Item wise Detailed analysis**

Item of work	Schedule start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 30 <sup>st</sup> April 2019	Total completion in % 30 <sup>th</sup> April 2019	Delay analysis	Recovery / Mitigation plan
<b>Design Detailed Engineering</b>	11-Oct-17	30-Oct-18	<b>100%</b>	<b>96%</b>		
<b>Civil GA</b>	10-Jan-18	25-Sep-18	<b>100%</b>	<b>99.20%</b>		
Weir Across Assi Nalla	05-Mar-18	14-Mar-18	100%	60%	Concessionaire yet to submit the revised drawing after incorporating the OHT	Concessionaire to submit the revised drawing on or before 15 <sup>th</sup> May 2019
<b>Structural Drawings Submissions &amp; Approvals</b>	<b>02-Feb-18</b>	<b>30-Sep-18</b>	<b>100%</b>	<b>99.20%</b>	Concessionaire yet to submit the revised drawing after incorporating the weir drawing	Concessionaire to submit the revised drawing on or before 15 <sup>th</sup> May 2019
Weir Across Assi Nalla	05-Mar-18	14-Mar-18	100%	60%		
<b>Design, Drawings &amp; Documentation for Mechanical GAD</b>	<b>13-Feb-18</b>	<b>15-Sep-18</b>	<b>100%</b>	<b>90.40%</b>		
Treated water overhead tank	15-Mar-18	03-Apr-18	100%	<b>80%</b>		
Weir Across Assi Nalla	13-Feb-18	04-Mar-18	100%	60%		
Overall Piping	30-May-18	05-Sep-18	100%	40%	Concessionaire yet	Concessionaire to submit

Item of work	Schedule d start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 30 <sup>st</sup> April 2019	Total completion in % 30 <sup>th</sup> April 2019	Delay analysis	Recovery / Mitigation plan
Drawings					to submit the revised drawing after incorporating the observations	the drawing on or before 15 <sup>th</sup> May 2019
<b>Design, Drawings and Documentation for Electrical &amp; Instrumentation works</b>	10-Mar-18	08-Oct-18	<b>100%</b>	<b>94.00%</b>		
Cables / earthing/ Lightning - Layout plan, sizing, schedule	15-Sep-18	05-Oct-18	100%	80%	Concessionaire yet to submit the revised drawing after incorporating the observations	Concessionaire to submit the drawing on or before 5 <sup>th</sup> May 2019
Design calculation	10-Mar-18	18-Jul-18	100%	40%		
Electrical & Instrumentation control philosophy	25-Sep-18	08-Oct-18	100%	60%		
<b>Instrumentation Document submissions &amp; Approvals</b>	<b>01-Jun-18</b>	<b>30-Oct-18</b>	<b>100%</b>	<b>75%</b>		
Cause & Effect Diagram	01-Jun-18	18-Jul-18	100%	40%		Concessionaire to submit the drawing on or before 15 <sup>th</sup> May 2019

Item of work	Schedule d start date as per approved construct ion plan	Scheduled completion date as per approved constructio n plan	Scheduled completio n in % as on 30 <sup>st</sup> April 2019	Total completion in % 30 <sup>th</sup> April 2019	Delay analysis	Recovery / Mitigation plan
<b>Associated infrastructure works</b>	<b>20-Mar-18</b>	<b>18-May-19</b>	<b>98.23%</b>	<b>56.18%</b>		
<b>MPS Pumping Station</b>	15-May-18	10-Apr-19	<b>100%</b>	<b>33.50%</b>		
Rehabilitation of MPS	15-May-18	30-Apr-19	100%	52%		
Construction Of weir across assi nalla & control room	13-Oct-18	30-Jan-19	100%		Concessionaire yet to submit the drawings indicates the lack of planning and lack of engineering team strength	Concessionaire to submit the revised drawing on or before 15 <sup>th</sup> May 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	
Repair of Equipment	01-Jan-19	30-Mar-19	100%			
<b>Rising Main</b>	<b>15-Jun-18</b>	<b>25-Mar-19</b>	<b>100%</b>	<b>17.01%</b>		
Shifting & laying of pipe near samne ghat	13-Jul-18	15-Jan-19	100%	49%		
Hydro testing	15-Feb-19	25-Mar-19	100%			

Item of work	Schedule d start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 30 <sup>st</sup> April 2019	Total completion in % 30 <sup>th</sup> April 2019	Delay analysis	Recovery / Mitigation plan
<b>Treated Effluent disposal line</b>	<b>20-Mar-18</b>	<b>18-May-19</b>	<b>97.79%</b>	<b>64.33%</b>		
Procurement - supply of pipes including inspection, transportation and delivery at site	20-Mar-18	26-Dec-18	100%	69%	Only 3385 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 (4 <sup>th</sup> 20%)	20-Feb-19	29-Mar-19	100%	34%		
Hydrotesting & finishing works	14-Jun-18	18-May-19	95%	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 1 <sup>st</sup> week of June 2019.  Concessionaire to plan to complete the hydrotesting within 20 days from the date of laying.

Item of work	Schedule d start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 30 <sup>st</sup> April 2019	Total completion in % 30 <sup>th</sup> April 2019	Delay analysis	Recovery / Mitigation plan
<b>Equipment Procurement, Logistics and receipt of equipment at Site</b>	<b>24-May-18</b>	<b>05-May-19</b>	<b>62 %</b>	<b>54 %</b>		
<b>Fine Screen/Coarse Screen/Belt Conveyors</b>	<b>24-May-18</b>	<b>18-Dec-18</b>	<b>100.0%</b>	<b>62.5%</b>		
Inspection / Logistics	08-Dec-18	10-Dec-18	100%	<b>50%</b>		
Receipt of equipment at site	11-Dec-18	18-Dec-18	100%			
<b>Grit Removal Mechanism</b>	<b>24-May-18</b>	<b>10-Mar-19</b>	<b>100%</b>	<b>18%</b>		
Manufacturing of Equipment	01-Sep-18	10-Feb-19	100%	<b>33%</b>		
Inspection / Logistics	12-Feb-19	27-Feb-19	100%			
<b>Horizontal centrifugal pumps (Treated water pumps)</b>	<b>31-May-18</b>	<b>18-Dec-18</b>	<b>100%</b>	<b>62.5%</b>		
Inspection / Logistics	01-Dec-18	10-Dec-18	100%	50%		
Receipt of	16-Dec-18	18-Dec-18	100%			

Item of work	Schedule d start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 30 <sup>st</sup> April 2019	Total completion in % 30 <sup>th</sup> April 2019	Delay analysis	Recovery / Mitigation plan
equipment at site						
<b>Sluice Gates</b>	<b>05-Mar-18</b>	<b>18-Dec-18</b>	<b>100%</b>	<b>63%</b>		
Inspection / Logistics	01-Dec-18	10-Dec-18	100%	<b>50%</b>		
Receipt of equipment at site	13-Dec-18	18-Dec-18	100%			
<b>MS/CS/SS/GI/CI/DI Piping</b>	<b>01-Jan-19</b>	<b>12-Aug-19</b>	21.2%			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-Jan-19	15-Feb-19	100%			
Manufacturing of Equipment	01-Mar-19	30-Jul-19	40%			
<b>Valves</b>	<b>01-Jan-19</b>	<b>12-Aug-19</b>	<b>21%</b>			
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	01-Jan-19	17-Jan-19	100%	<b>20%</b>		
Manufacturing of Equipment	01-Mar-19	30-Jul-19	40%			
<b>Motorized Gates at Inlet Of SBR</b>	<b>01-May-19</b>	<b>18-May-19</b>	<b>69%</b>	<b>63%</b>		
Inspection /	7-Apr-19	7-May-19	77%	50%		

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Item of work	Schedule d start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 30 <sup>st</sup> April 2019	Total completion in % 30 <sup>th</sup> April 2019	Delay analysis	Recovery / Mitigation plan
Logistics						
<b>Diffusers</b>	<b>12-May-18</b>	<b>23-Apr-19</b>	<b>100%</b>	<b>63%</b>		
Inspection / Logistics	16-Feb-19	2-Apr-19	96%	50%		
<b>PE Dosing Tanks</b>	<b>15-Oct-18</b>	<b>13-Jul-19</b>	<b>34%</b>	<b>1%</b>		
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	15-Oct-18	29-Nov-18	100%	40%		
Manufacturing of Equipment	29-Dec-18	30-Jun-19	67%			
<b>Agitators</b>	<b>01-May-18</b>	<b>23-Jul-19</b>	<b>43%</b>	<b>2%</b>		
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	01-May-18	18-Jul-18	100%	80%		
Manufacturing of Equipment	01-Sep-18	08-Jun-19	86%			
<b>HT Cables</b>	<b>29-Sep-18</b>	<b>26-Jul-19</b>	<b>25.9%</b>	<b>1.8%</b>		
Submission &	29-Sep-18	09-Nov-18	100%	80%		

Item of work	Schedule d start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 30 <sup>st</sup> April 2019	Total completion in % 30 <sup>th</sup> April 2019	Delay analysis	Recovery / Mitigation plan
Approval of Drawings / Documents & data sheets including release of purchase order						
Manufacturing of Equipment	01-Mar-19	30-Jun-19	50%			
<b>SCADA System</b>	<b>07-Sep-18</b>	<b>16-Aug-19</b>	34%	2%		
Submission & Approval of Drawings / Documents & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	80%		
Manufacturing of Equipment	01-Jan-19	30-Jun-19	66%			
<b>Push Button Stations/Plant lighting / Buildings lighting</b>	<b>07-Sep-18</b>	<b>16-Aug-19</b>	34%			
Submission & Approval of Drawings / Documents & data	07-Sep-18	09-Nov-18	100%			



Item of work	Schedule d start date as per approved construct ion plan	Scheduled completion date as per approved constructio n plan	Scheduled completio n in % as on 30 <sup>st</sup> April 2019	Total completion in % 30 <sup>th</sup> April 2019	Delay analysis	Recovery / Mitigation plan
sheets including release of purchase order						
Manufacturing of Equipment	01-Jan-19	30-Jun-19	66%			
<b>Power, Control &amp; lighting Cables</b>	<b>07-Sep-18</b>	<b>16-Aug-19</b>	<b>34%</b>	<b>1%</b>		
Submission & Approval of Drgs / Docs & data sheets including release of purchase order	07-Sep-18	09-Nov-18	100%	50%		
Manufacturing of Equipment	01-Jan-19	30-Jun-19	66%			
<b>Cable trays/Lighting JB</b>	<b>07-Sep-18</b>	<b>16-Aug-19</b>	<b>34%</b>	<b>2%</b>		
Manufacturing of Equipment	01-Jan-19	30-Jun-19	66%			
<b>DG Set</b>	<b>07-Sep-18</b>	<b>16-Aug-19</b>	<b>34%</b>	<b>2%</b>		
Manufacturing of Equipment	01-Jan-19	30-Jun-19	66%			
<b>Plant Earthing</b>	<b>07-Sep-18</b>	<b>16-Aug-19</b>	<b>36%</b>	<b>2%</b>		
Manufacturing of Equipment	01-Jan-19	30-Jun-19	70%			
<b>Instruments (Flow meter / Analyser)</b>	<b>20-Nov-18</b>	<b>16-Aug-19</b>	<b>22%</b>	<b>2%</b>		

Item of work	Schedule d start date as per approved construct ion plan	Scheduled completion date as per approved constructio n plan	Scheduled completio n in % as on 30 <sup>st</sup> April 2019	Total completion in % 30 <sup>th</sup> April 2019	Delay analysis	Recovery / Mitigation plan
Manufacturing of Equipment	18-Mar-19	30-Jun-19	41%			
<b>Instruments (Temperature, Pressure &amp; Level transmitter / Level, Temperature and Pressure switches)</b>	<b>20-Nov-18</b>	<b>05-Sep-19</b>	<b>18%</b>	<b>2%</b>		
Manufacturing of Equipment	18-Mar-19	30-Jun-19	41%			
<b>Civil Executions</b>	<b>6-Apr-18</b>	<b>15- Aug-19</b>	<b>83%</b>	<b>79%</b>		
<b>Bund Wall / Earthen Embankment</b>	<b>19-Feb-18</b>	<b>30-Aug-19</b>	<b>87.50%</b>	<b>86.60%</b>		
Filling & Compaction of Bund Wall from 3.0 to 4.5 Mtr Height	07-Nov-18	18-Dec-18	100%	90%	Lack of planning and efficient utilisation of available manpower and equipment	Due to Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at earliest.

Item of work	Schedule d start date as per approved construct ion plan	Scheduled completion date as per approved constructio n plan	Scheduled completio n in % as on 30 <sup>st</sup> April 2019	Total completion in % 30 <sup>th</sup> April 2019	Delay analysis	Recovery / Mitigation plan
<b>Construction of Inlet Structure, Fine Screen, Grit Chamber, Parshall Fume, Distribution Chamber for SBR</b>	<b>03-Jun-18</b>	<b>30-Jun-19</b>	<b>90%</b>	<b>65.50%</b>	Lack of planning and efficient utilisation of available manpower and equipment	Due to Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at earliest
Inlet Chamber Slab with Column, Wall	20-Sep-18	15-Dec-18	100%	52%		
Grit Chamber Slab with Column	01-Dec-18	28-Feb-19	100%	9%		
Parshall flume slab with Column	01-Mar-19	30-Mar-19	100%	56%		
<b>SBR Basins &amp; SBR outlet Chamber</b>	<b>09-Apr-18</b>	<b>15-Jul-19</b>	<b>90.3%</b>	<b>89.8%</b>		Due to Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at

*Development of 50 MLD sewage treatment plant and associated infrastructure on PPP basic at Ramana, Varanasi*

Item of work	Schedule d start date as per approved construct ion plan	Scheduled completion date as per approved constructio n plan	Scheduled completio n in % as on 30 <sup>st</sup> April 2019	Total completion in % 30 <sup>th</sup> April 2019	Delay analysis	Recovery / Mitigation plan
						earliest
Walkways and channels	06-Apr-19	11-May-19	69%	58%		
<b>Construction of CCT including Chlorination room &amp; Treated water pump House</b>	<b>26-Apr-18</b>	<b>24-Aug-19</b>	<b>79.3%</b>	<b>73.6%</b>		Due to Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at earliest
50 % RCC of Structure	20-Jan-19	18-May-19	85%	54%		
Completion of Brick work and plaster	06-Apr-19	30-Jul-19	21%			
<b>Overhead Treated Water Tank</b>	<b>01-Jun-18</b>	<b>01-Aug-19</b>	<b>87.4%</b>	<b>34.50%</b>	Lack of planning and efficient utilization of available manpower and equipment	Due to Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at

**Development of 50 MLD sewage treatment plant and associated infrastructure on PPP basic at Ramana, Varanasi**

Item of work	Schedule d start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 30 <sup>st</sup> April 2019	Total completion in % 30 <sup>th</sup> April 2019	Delay analysis	Recovery / Mitigation plan
						earliest .
50% RCC of Structure	09-Oct-18	18-Dec-18	100%	15%		
50% RCC of Structure	25-Feb-19	06-May-19	91%			
<b>Construction of BFP Building, Filtrate Pump, Pump house - 2, PE dosing tank</b>	<b>15-Oct-18</b>	<b>13-Jul-19</b>	<b>76.6%</b>	<b>47.5%</b>	Lack of planning and efficient utilization of available manpower and equipment	Due to Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at earliest
50% RCC of Structure	18-Jan-19	18-Mar-19	100%	70%		
50% RCC of Structure	19-Mar-19	17-May-19	71%			
Completion of Brick work and plaster	19-Apr-19	18-May-19	38%			
<b>Administrative Building including lab and workshop</b>	<b>08-Jun-18</b>	<b>11-Jul-19</b>	<b>92.8%</b>	<b>82.9%</b>		
50% RCC of Structure	03-Feb-19	07-Apr-19	100%	69%		

Item of work	Schedule d start date as per approved construction plan	Scheduled completion date as per approved construction plan	Scheduled completion in % as on 30 <sup>st</sup> April 2019	Total completion in % 30 <sup>th</sup> April 2019	Delay analysis	Recovery / Mitigation plan
Completion of Brick work and plaster	08-Apr-19	17-May-19	56%	43%		
<b>Construction of Blower room, HT, MCC, Transformer Yard, DG set Area</b>	<b>03-Jun-18</b>	<b>29-Aug-19</b>	<b>87.2%</b>	<b>66.4%</b>	Lack of planning and efficient utilization of available manpower and equipment	Due to Concessionaire internal financial crunch work has been stopped at site. It has been highlighted to the Concessionaire to solve financial crunch and take mitigation measure to commence the work at earliest
RCC Roof slab	16-Nov-18	18-Dec-18	100%	82%		
Brick Work	01-Jan-19	21-Mar-19	100%			
Plastering	22-Mar-19	15-May-19	72%			

# **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 April 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 April 2019
1	Issue of a photo identity card duly signed by the authorized representative of the company / subcontractor before they are engaged for any work	Issued	In progress
2	HSE induction training at the first day of their joining explaining the nature of the work for all the personnel working at site on the following topics <ul style="list-style-type: none"> <li>• Hazard identification procedure - Hazards on site               <ul style="list-style-type: none"> <li>• Fails</li> <li>• Slip trip</li> <li>• Electricity</li> <li>• Working at height</li> <li>• Excavation</li> <li>• Drop objects</li> <li>• Machinery</li> <li>• Material handling (Manual and mechanical)</li> <li>• Transportation</li> </ul> </li> </ul>	Inducted	Inducted



Sl. No.	Description	Till previous month	During the month of April 2019
	<ul style="list-style-type: none"> <li>• Site housekeeping</li> <li>• Fire</li> <li>• Personnel protective equipment               <ul style="list-style-type: none"> <li>• What is available</li> <li>• How to obtain it?</li> <li>• Correct use and care</li> </ul> </li> <li>• Health               <ul style="list-style-type: none"> <li>• Site welfare facilities</li> <li>• Potential health hazards</li> <li>• First Aid / CPR</li> </ul> </li> <li>• Duties of contractor               <ul style="list-style-type: none"> <li>• Brief outline of the responsibilities of the contractor by law</li> <li>• Details of accident prevention policy</li> <li>• Building and other constructions welfare law</li> </ul> </li> <li>• Employer's duties               <ul style="list-style-type: none"> <li>• Brief outline of responsibilities of employee</li> <li>• Site safety rules</li> </ul> </li> </ul>		
3	Tool box meetings Key issues discussed at Daily Tool Box meetings includes <ul style="list-style-type: none"> <li>• The job to be done</li> <li>• Awareness of hazards, risks &amp; control measures associated with specific activity, review safe work practices</li> <li>• Active involvement of crew and open discussion on any concerns and commitment to work safely</li> </ul>	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 April 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 27 <sup>th</sup> 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 <ul style="list-style-type: none"> <li>• Monthly minor accident, serious incident details</li> <li>• Average manpower details, man-hours works</li> </ul>	Submitted	Submitted

Sl. No.	Description	Till previous month	During the month of April 2019
	<ul style="list-style-type: none"> <li>• Lost time (no of working days)</li> <li>• Number of training / tool box talk</li> <li>• Number of people trained</li> <li>• HSE committee minutes of meeting</li> <li>• HSE inspection, etc</li> </ul>		
6	HSE Bulletin board indicating <ul style="list-style-type: none"> <li>• Safety promotions / awards</li> <li>• Safety meeting dates and times</li> <li>• Emergency phone numbers</li> <li>• QHSE policies</li> <li>• Safety alerts</li> </ul>	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 work for all workers	Provided at 04 locations	Provided at 04 locations

<b>Sl. No.</b>	<b>Description</b>	<b>Till previous month</b>	<b>During the month of April 2019</b>
	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**

<b>Sl. No.</b>	<b>Description</b>	<b>Status</b>	<b>Planned</b>
1	4 <sup>th</sup> March 2018 – National safety day	Conducted	
2	7 <sup>th</sup> April 2018 – World health day	Conducted	
3	14 <sup>th</sup> April 2018 – First safety day	Conducted	
4	5 <sup>th</sup> June 2018 – World environmental day	Conducted	
5	15 <sup>th</sup> August 2018 – Independence Day celebration and Planting of saplings	Conducted	
6	5 <sup>th</sup> March 2019- National Safety day	Conducted	