

## Minutes of Meeting # 13

**Project** : Development of STPs and TTP Projects along with associated infrastructure in Mathura under Hybrid Annuity based PPP mode, Uttar Pradesh

**Date** : 6<sup>th</sup> and 7<sup>th</sup> February 2019

**Location** : Office of the Project Manager, Drainage and Sewerage Unit, UPJN, Mathura and Conference room at 16 MLD UASB STP.

### List of Attendees:

1. Mr. Deepak Chauhan, Project Manager YPCU (E&M), UP Jal Nigam, Agra.
2. Mr. Waseem Athar, Project Engineer (D&SU), UP Jal Nigam, Mathura.
3. Mr. A. Srinivasan, General Manager – MACE
4. Mr. Amit Ghosh, Project Manager - MACE
5. Mr. M. Jaya Krishnan, Project Engineer, MACE
6. Mr. Mohammed Rayyan, Project Engineer, MACE
7. Mr. K.C. Agarwal, GM, Triveni
8. Mr. Kailash Chand Dhawan, AGM - Triveni
9. Mr. Sunil Bhargava, Process Engineer, Triveni
10. Mr. Rana sudir kumar singh, AGM, MWMPPL
11. Mr. Anshul Khandelwal, MWMPPL, Noida
12. Mr. Biswajit Majumdar, MWMPPL, Noida
13. Mr. Gopal Mani Jha, Manager Triveni
14. Mr. S.K. Thakur, DGM, Triveni

### Agenda of the Meeting:

- To Review the status of the project

The following points were discussed during the meeting held on 6<sup>th</sup> and 7<sup>th</sup> January 2019 at Office of the Project Manager, Drainage and Sewerage Unit, UPJN, Mathura and Conference room at 16 MLD UASB STP.

Sr. No.	Description	Action by	Remarks
A	Hydraulic flow diagram and calculation of 30 MLD STP at Masani		
1	MACE and UPJN requested to explain the decanter methodology	MWMPPL , MACE	MWMPPL to provide the detailed decanting methodology during

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	<p>during lean, average and peak flow conditions as the cycle time is reduced from the approved Process design calculation cycle and informed that is not acceptable.</p> <p>MWMPL informed that the finalization of vendor is in progress. Upon finalization, they will provide the detailed methodology inline with the approved process design calculation.</p> <p>MACE informed that SBR GA cannot be finalized without finalization of decanter type and methodology</p>	and UPJN	<p>lean, average and peak flow conditions inline with the approved process design calculation and arrange for a meeting with the decanter supplier at Mathura at the earliest.</p> <p>MACE and UPJN agreed to provide the conditional approval subject to fulfilment of the above conditions while carrying out the design detail Engineering. In case of non-adherence of these conditions UPJN reserves the right to withdraw the approval provided which will be decided during that time</p> <p>MWMPL agreed and assured to finalise the decanter vendor at the earliest</p>
2	<p>MACE and UPJN informed that the provided weir type to achieve the weir length of 12.5 m to reduce the head over weir is of non-standard and not acceptable.</p> <p>MWMPL agreed to revise the baffle direction and utilize the entire width of the tank for achieving more weir length.</p> <p>After detailed discussion and calculation provided by MWMPL, it was decided to increase the depth of the CCT to 2.6 m from 2.5 m to maintain the same size and to meet the hydraulic requirement. MWMPL informed that required head increase will be compensated in the margin provided in CCT cutout.</p>	MWMPL	<p>MWMPL agreed to incorporate the same in the HFC, HFD and PDC. Accordingly, MWMPL submitted the revised HFC, HFD and PDC for approval on 7<sup>th</sup> February 2019 and the same is approved subject to the fulfillment of the point no.1 after finalization of vendor.</p>
3	<p>MACE informed that alternate arrangement to be provided for sludge discharge / disposal in case of</p>	MWMPL	<p>MWMPL agreed to do the needful at the earliest</p>

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Sr. No.	Description	Action by	Remarks
	Gravity thickener is shutdown as agreed during BEP approval stage. The same should be reflected in the Layout drawing, pump head calculation, overall piping drawings, etc.		
4	MACE and UPJN requested to resubmit the revised HFC, HFD and process design calculation immediately to provide the approval	MWMPL	MWMPL agreed to submit the revised HFC, HFD and process design calculation latest by 7 <sup>th</sup> February 2019.
B	P&ID for 30 MLD STP at Masani.		
5	All the points as mentioned in CRS were discussed and MWMPL agreed to incorporate the following changes and resubmit the P&ID		
5.1	All the tanks shall have a provision to drain them and drain valves need to be shown and the diversion to the other tanks need to be clearly shown. For example, inlet chamber, screens, distribution chamber, etc.,	MWMPL	MWMPL agreed to provide drain pipe and further connection to the drain system for all facilities above GL
5.2	Containment of the Chlorine Area and chemicals areas need to be drained and to be located the flow streams with valves, sumps, pumps etc. Similarly need to be shown on the layout drawings.	MWMPL	MWMPL agreed to connect with the storm drain system which will be discharged into existing 6.8 MLD WSP STP
5.3	All the LCPs and Vendor SCADA Panels are to be tied to the main SCADA System.	MWMPL	MWMPL agreed to include a note in the P&ID
5.4	As per CA clause 1.5.1 conductivity meter need to be provided at inlet and outlet channel.  MWMPL informed that they need to discuss with their process team and confirm.	MWMPL	MWMPL to provide the conductivity meter as per CA
5.5	Level indicator need to be provided at receiving chamber and to be connected to PLC/SCADA	MWMPL	MWMPL agreed to provide Level indicator
5.6	The analysers for BOD/COD/TSS/Total Nitrogen/ Total phosphorus (AE-01 to AE-04 & AE-018) shall be suitable for exporting real time data and status to PLC.	MWMPL	MWMPL to provide the same in the revised P&ID

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Sr. No.	Description	Action by	Remarks
	MWMPL informed that they need to discuss with their process team and confirm. MACE and UPJN informed that TN, TP are process requirement and other required as per KPI and SoW. Hence all analyzer needs to be provided with suitable to exporting real time data and status of PLC.		
5.7	Flow Meter at Masani MPS and Jaisinghpura MPS rising main need to be shown.  MWMPL informed that PLC logic need to be arrived by MWMPL based on the level indicator in receiving chamber / MPS & IPS flow meters	MWMPL	MWMPL shall include the level indicator in receiving chamber / flow meters in the raising from MPS & IPS in the revised P&ID
5.8	SG01 - SG06 should be provided with actuators and controllable from plant PLC.	MWMPL	MWMPL agreed to provide motorized valve for SG-01-04.
5.9	DLIT need to be provided for manual screen also.	MWMPL	MWMPL agreed to provide the same
5.10	Screen motor and belt conveyor to be remote operated from plant PLC/SCADA. Feedback signal (ON/OFF/TRIP) from motor circuit of Mechanical screen to be hooked up to plant PLC	MWMPL	MWMPL agreed to include the same
5.11	Grit chamber- Motor and Torque measurements need to be monitored and need to be connected to SCADA.	MWMPL	MWMPL agreed to include the same
5.12	Grit washing, and collection system is not labelled & shown clearly.	MWMPL	MWMPL agreed to include the same
5.13	SV02 should be motorized valve and operation/regulation of the valve should be from plant PLC based on feedback signal from FT 001.	MWMPL	MWMPL informed that suitable PLC logic shall be arrived and incorporated in the P&ID
5.14	FM-01 should also be FT with FI & FQ	MWMPL	MWMPL informed that the flowmeter shall be replaced with Parshall flume and necessary FT with FI & FQ shall be provided
5.15	Distribution Chamber - All these gates to be remote operated from plant PLC/SCADA.	MWMPL	MWMPL agreed to include the same
5.16	VFD operation of blowers need to be linked with PLC/SCADA	MWMPL	MWMPL agreed to include the same

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Sr. No.	Description	Action by	Remarks
5.17	Temperature scanner, vibration sensor and differential pressure gauge to be provided and linked with PLC/SCADA.	MWMPL	MWMPL agreed to provide as per the clause 2.2.2 of CA
5.18	Temperature gauge need to be provided at each blower delivery line.	MWMPL	MWMPL agreed to provide as per CA requirement
5.19	Air blower- After cooler with bypass provision need to be provided.	MWMPL	MWMPL agreed to provide as per CA requirement
5.20	Pressure transmitter and temperature transmitter with indicator to be provided at air header lines and linked with PLC/SCADA.	MWMPL	MWMPL agreed to cross check with the vendor and provide as per CA requirement
5.21	Air Flow Meters to be provided in air line for each SBR basin.	MWMPL	MWMPL agreed to provide flow meter at both the header lines
5.22	MBFV01-04 to be linked with PLC/SCADA.  Air vent need to be provided after the MBFV at each SBR basin airline.	MWMPL	MWMPL agreed to provide the same
5.23	No. and size of down comer to be connected with diffusers to be specified.	MWMPL	MWMPL agreed to provide the same after finalization of vendor and the same shall be indicated in the notes
5.24	All the wetted parts should be of Stainless steel. The same is not indicated in the P & ID. Kindly provide.	MWMPL	MWMPL agreed to incorporate the same
5.25	Drain arrangement for SBR tank need to be shown.	MWMPL	MWMPL informed that Notes indicating dewatering pump will be provided for draining of SBR basin
5.26	SAS pumps to be connected with PLC/SCADA and VFD controlled. The same to be specified.	MWMPL	MWMPL agreed to provide VFD compatible pump. If required VFD shall be provided at later date without any additional cost
5.27	No details on the decanter valve and its I&C. Only one decanter shown per basin, where as we were informed about two decanters per basin in the meeting.	MWMPL	MWMPL requested to keep this under hold until finalization of vendor
5.28	Decanter operation through PLC/SCADA is not shown and the same need to be indicated as per operational and control philosophy.	MWMPL	MWMPL requested to keep this under hold until finalization of vendor
5.29	Decanter operation through PLC/SCADA is not shown and the same need to be indicated as per operational and control philosophy.	MWMPL	MWMPL requested to keep this under hold until finalization of vendor

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Sr. No.	Description	Action by	Remarks
5.30	Motorized gate at each SBR effluent channel interception point need to be provided.  Decanter type to be finalized before submission of GA of SBR basin	MWMPL	MWMPL requested hold this until finalization of vendor since the same will depend upon the decanter type and agreed to finalise the type of decanter prior to submission of GA for SBR basin
5.31	How each basin is isolated from decant cycle on effluent side channels?	MWMPL	MWMPL requested to keep this under hold until finalization of vendor
5.32	Flow meter need to be provided for SAS header line from SBR basins.	MWMPL	MWMPL informed that they will discuss with their process team and provide the same
5.33	The cyclic operation of P-01 & P-08 shall be configurable through Plant PLC and SCADA.	MWMPL	MWMPL agreed to incorporate the same
5.34	Gravity sludge thickener- It is not clearly indicated that where the skimming to be disposed. This shall be indicated.	MWMPL	MWMPL informed that the scum shall be disposed off suitably as per CA requirement
5.35	Gravity sludge thickener- Equipment like Torque indicating device, Overload alarm device, auto lifting device and chain & sprocket with guard is not shown.	MWMPL	MWMPL agreed to indicate the same in the drawing
5.36	T-01 to be linked with SCADA/PLC. Legend to be added in the list.	MWMPL	MWMPL agreed to incorporate the same
5.37	Dilution/ Service Water Pump - Flow meter need to be provided.	MWMPL	MWMPL agreed to incorporate the same
5.38	Thickened Sludge Sump - The motor needs to be monitored for tripping. Need to be connected to PLC/SCADA	MWMPL	MWMPL agreed to incorporate the same
5.39	Alternate arrangement for thickener standby to be shown as mentioned in the BEP approval and the branch line & its valve etc. to be shown in the P&ID.	MWMPL	MWMPL agreed to incorporate the same and informed that it will be disposed off in the existing 6.8 MLD WSP pond
5.40	Kindly check the pipe material and dia branching to CF-02. Correct it.	MWMPL	MWMPL agreed to incorporate the same
5.41	Please mention the pipe material and size after KVG06-07, DV09-10 & SV09-10	MWMPL	MWMPL agreed to incorporate the same
5.42	AG-01 & AG-02 of polyelectrolyte dosing tank need to be linked with PLC/SCADA	MWMPL	MWMPL agreed to incorporate the same
5.43	Valves to be shown in level gauge Polyelectrolyte dosing tank	MWMPL	MWMPL agreed to incorporate the same

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Sr. No.	Description	Action by	Remarks
5.44	Flushing valve connection need to be provided in suction and delivery header in PE dosing system.	MWMPL	MWMPL agreed to incorporate the same
5.45	Pulsation dampener need to be provided in PE dosing system delivery line. Strainer, calibration port to be provided in suction.	MWMPL	MWMPL agreed to incorporate the same
5.46	CF-01 & CF-02 and P-15 & 16 need to be linked with SCADA/PLC and CF-01&02 also need to be interlocked with PE dosing system.	MWMPL	MWMPL agreed to incorporate the same
5.47	Centrifuge feed pump-P-14 & P-13 to be linked with PLC/SCADA	MWMPL	MWMPL agreed to incorporate the same
5.48	Legend and nomenclature to be provided for entire chlorination system.	MWMPL	MWMPL informed that the same shall be provided after finalization of vendor
5.49	Chlorine neutralization cum detection system in case of leakage need to be provided.	MWMPL	MWMPL informed that the same shall be provided after finalization of vendor
5.50	Dosing system need to be linked with PLC/SCADA	MWMPL	MWMPL agreed to incorporate the same
5.51	Level measurement in weir at CCT is recommended.	MWMPL	MWMPL agreed to incorporate the same
5.52	Treated effluent pipe line need to be revised as per the latest design calculation. Please correct it	MWMPL	MWMPL agreed to incorporate the same
5.53	Flameproof zone indicating Diesel tank, diesel transfer pumps, and DG with instrumentation work as required as per CA need to be included in the drawing.	MWMPL	MWMPL informed that the same shall be indicated as part of SLD
5.54	Instrument for Inlet and outlet flow measurement of Existing 6.8 MLD WSP STP need to be provided and the same need to be linked with SCADA/PLC	MWMPL	MWMPL agreed to incorporate the same
5.55	Analysers as per CA requirement need to be provided at Inlet and outlet of Existing 6.8 MLD WSP STP and the same need to be linked with SCADA/PLC	MWMPL	MWMPL agreed to incorporate the same
5.56	1) The HS shall not directly not control the motors and shall make / break only the control signals of the respective motor starters 2) All instruments shall be provided	MWMPL	MWMPL agreed to incorporate the same  MWMPL agreed to incorporate the bypass facilities at the following

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	with power source with redundancy 3) All instrument earthing shall be done as per the applicable standards 4) All instrument tubings shall be of appropriate MOC and dia meter and shall be provided with support stand / bracket 5. The By-pass scheme of STP shall be explained.		locations and detailed hydraulic calculation and site layout, P&ID and detail drawings indicating the same shall be  a. Plant Inlet chamber, b. After Grit Removal Units														
5.57	In general 1) The details of actuators (quarter turn / full turn, also needs to be specified, 2) All the instruments (field / line / unit / skid mounted shall be of appropriate IP category. 3) All instrument data cables shall be with suitable screening 4) All instrument earthing shall be done as per standards 5) All instrument power supply shall be with redundancy 6) All instruments shall be of appropriate MOC and flexible class.	MWMPL	MWMPL agreed to incorporate the same														
5.58	The PLC HMI shall also display the basins which are working at any given point of time along with the level & positional measurements	MWMPL	MWMPL agreed to incorporate the same														
5.59	A table showing the following information shall be included in the drawing.	MWMPL	MWMPL agreed to incorporate the same														
5.60	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">SR. NO</th> <th style="text-align: center;">INTERLOCK NO</th> <th style="text-align: center;">INPUT OF INSTRUMENT/EQUIPMENT</th> <th style="text-align: center;">LOCATION</th> <th style="text-align: center;">SET POINT</th> <th style="text-align: center;">SET POINT TYPE</th> <th style="text-align: center;">ACTION</th> </tr> </thead> <tbody> <tr> <td> </td> </tr> </tbody> </table>			SR. NO	INTERLOCK NO	INPUT OF INSTRUMENT/EQUIPMENT	LOCATION	SET POINT	SET POINT TYPE	ACTION							
SR. NO	INTERLOCK NO	INPUT OF INSTRUMENT/EQUIPMENT	LOCATION	SET POINT	SET POINT TYPE	ACTION											
5.61	All analysers shall be with RS 485 or other similar communication ports for real time data transmission to plant PLC and SCADA	MWMPL	MWMPL agreed to incorporate the same														
5.62	All pipe sizes and MOC are subject to review and approval of pipe sizing calculation	MWMPL	MWMPL agreed to incorporate the same														
5.63	PFD also to be submitted.	MWMPL	MWMPL agreed to submit the same														
5.64	Separate legend shall be provided as furnished in P&ID of TTP	MWMPL	MWMPL agreed to submit the same														

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5.65	There shall be dedicated dosing pump to each centrifuge with one common standby. The pumps shall be interlocked with centrifuge so that it can only be running in auto when centrifuge is on and should shut down when centrifuge stops. The dosing system shall be housed in centrifuge house itself. The same should be reflected in P&ID and other related drawings	MWMPL	MWMPL agreed to incorporate the same
5.66	MACE and UPJN requested to resubmit the P&ID after incorporating the above points at the earliest	MWMPL	MWMPL agreed to resubmit the P&ID latest by 11 <sup>th</sup> February 2019
C	Vrindavan gate IPS and its associated infrastructure		
6	MACE and UPJN informed that based on the final pump head calculation, the incoming electrical line shall be of HT. Accordingly, Metering room, Transformer Yard, HT / LT panel room need to be provided in the layout of Vrindavan gate IPS	MWMPL	MWMPL agreed to incorporate the same in the layout and resubmit on or before 15 <sup>th</sup> February 2019
7	MACE and UPJN requested to cross check the Krishan Ganga IPS gravity main routing in the Vrindavan gate IPS. The existing line can be identified after emptying the Vrindavan gate IPS sump and accordingly the same can be included in the drawing	MWMPL	MWMPL agreed to incorporate the same in the layout and resubmit on or before 15 <sup>th</sup> February 2019
8	MACE and UPJN informed that the level of weir indicated in the L section gravity sewer from Shahganj need to be corrected as per GA	MWMPL	MWMPL agreed to incorporate the same and resubmit the entire drawings of Vrindavan gate IPS and its associated infrastructure on or before 11 <sup>th</sup> February 2019
9	MACE and UPJN informed that calculation for necessary creep length required to be provided for each I&D works and accordingly the same need to be mentioned whether the existing available creep is sufficient or not. If not the same shall be provided by MWMPL	MWMPL	MWMPL agreed to incorporate the same and resubmit the entire drawings of Vrindavan gate IPS and its associated infrastructure on or before 11 <sup>th</sup> February 2019
10	MACE and UPJN informed that minimum submergence required to be	MWMPL	MWMPL agreed to do the needful at the earliest

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Sr. No.	Description	Action by	Remarks
	finalized prior to submission of GA drawing for Vrindavan gate IPS sump		
11	MACE and UPJN informed that the weir dimensions mentioned in the I&Ds is of non-standard type and necessary modification to meet the standard as per CPHEEO manual need to be carried out	MWMPL	MWMPL informed that they will change the weir type as rectangular and necessary modification shall be carried out and revised drawings shall be submitted on or before 11 <sup>th</sup> February 2019
12	MACE and UPJN informed that necessary calculation to be provided to showcase the sufficiency of weir height to handle the peak flow for each I&D works.	MWMPL	MWMPL agreed to incorporate the same
13	MACE and UPJN informed that the pump head calculation for other pumping stations need to be modified in line with the procedure adopted for Vrindavan gate IPS	MWMPL	MWMPL agreed to do the needful
D	MACE and UPJN informed that necessary chlorination system if required to be provided for meeting the KPI at the outlet of existing 6.8 MLD WSP STP.	MWMPL	MWMPL informed that they are studying the outlet parameters of the plant and if required the same shall be provided
E	MACE and UPJN requested to submit Master document list along with the submission dates in order to ensure that there is no back log occurs	MWMPL	MWMPL informed that the same is ready for first milestone activities and the same shall be submitted along with list of drawings and documents for the remaining milestones on or before 12 <sup>th</sup> February 2019. The submission dates for the remaining drawings and documents shall be provided after approval of BEP.
F	MACE and UPJN requested to submit the methodology to be adopted for monitoring the interim availability from 15 <sup>th</sup> March 2019 onwards	MWMPL	MWMPL informed that internal discussion on this is in progress and expected to finalise within 10 to 15 days
G	MACE and UPJN requested to submit the CRS hardcopy based on the conditional approval provided for technical description, process design calculation and Process flow diagram cum Mass balance diagram for approval	MWMPL	MWMPL informed that the same shall be submitted on or before 7 <sup>th</sup> February 2019
H	Pump capacity and pump head calculation for MPS's		

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14	MACE and UPJN informed that there is no change in the pump capacity for Dairy farm MPS. Pump head shall be arrived considering two working and two standbys from Dairy farm MPS to Existing sewer manhole near BPT and one more pump head shall be arrived to pump up to BPT which will be utilized in emergency and incase of breakdown in the existing sewer line	MWMPL	MWMPL agreed to do the needful accordingly
15	MACE and UPJN informed that there is no change in the pump capacity for Bengali ghat MPS. Pump head shall be arrived considering two working from Bengali ghat MPS to BPT	MWMPL	MWMPL agreed to do the needful accordingly
16	MACE and UPJN informed that Masani pump capacity shall be decided during next meeting	MACE and UPJN	MWMPL to provide the proposal to handle the peak flow of STP after deducting the Jaisinghpura MPS capacity.  MACE, UPJN & MWMPL to discuss and finalise the pump capacity of Masani MPS accordingly
17	MACE and UPJN informed the revise the gravity sewer line from Ambakar Nalla to Dairy farm MPS as 1000 mm as mentioned in CA	MWMPL	MWMPL agreed to do the needful accordingly
I	<p>After detailed discussion UPJN informed that creep length to be provided for the following I&amp;D works.</p> <ul style="list-style-type: none"> <li>• Shahganj</li> <li>• Chakratirth</li> <li>• Octroi</li> <li>• Ambakar</li> <li>• Daula moula</li> <li>• Ranighat</li> <li>• Dairy farm</li> <li>• Cant Nalla</li> <li>• Mahadev ghat</li> <li>• Dhruv ghat</li> <li>• Bengali ghat</li> </ul> <p>Since the RCC drain is already available at the following locations, the length of creep needs to cross checked and confirmed by MWMPL. If</p>	MWMPL	MWMPL informed that they will provide precast structure for the same without any additional cost

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	<p>the existing length is not sufficient, then same will be provided by MWMPL</p> <ul style="list-style-type: none"> <li>• Jaisinghpura</li> <li>• Masani</li> <li>• Satrangi</li> <li>• Swamighat</li> <li>• Askunda ghat</li> <li>• Visramghat</li> <li>• Krishan Ganga</li> <li>• Gaughat</li> <li>• Chintaharan</li> </ul>		
J	P&ID for 20 MLD TTP		
18	All the points as mentioned in CRS were discussed and MWMPL agreed to incorporate the following changes and resubmit the P&ID		
18.1	Existing flow meter to be linked with SCADA / PLC system for further communication and display	MWMPL	MWMPL agreed to incorporate the same
18.2	<p>As per clause 1.3 of schedule 9 of CA pH, Turbidity, BOD, Total Suspended Solids, Chemical Oxygen Demand, Total Dissolved Solids, M alkalinity as CaCO<sub>3</sub>, Calcium as CaCO<sub>3</sub>, Magnesium as CaCO<sub>3</sub>, Total Hardness as CaCO<sub>3</sub>, Chloride as Cl, Sulphate as SO<sub>4</sub>, Silica as SiO<sub>2</sub>, Total Iron as Fe, Organic Matter as KmnO<sub>4</sub> are to be tested and checked for compliance with KPI's as defined in KPI by analyzing the results of the online monitoring system. Hence the analysers should include to analyse and measure all the parameters.</p> <p>Further it was agreed that each party will discuss further on the availability prior to submitting the revised document to avoid delay in further approval process</p>	MWMPL	MWMPL to ensure the same is adhered as per CA requirement
18.3	It is recommended to connect the overflow to the river discharge which will help to avoid the flooding in case of Disc filter feed pumps failure and	MWMPL	MWMPL to provide a bypass line with necessary control measures to avoid uncontrolled overflow

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Sr. No.	Description	Action by	Remarks
	the pipe line along with its tag to be included		from the channel feeding to treated effluent tank
18.4	<p>Inlet pipeline to filter water storage tank - The provided valve should be motorized operated and should be connected to PLC / SCADA MWMPL informed that they are providing pneumatic valve.</p> <p>MACE requested to change the type of valve and show the airline in the P&amp;ID</p>	MWMPL	MWMPL agreed to incorporate the same in the revised P&ID
18.5	<p>Removal of Basket strainer – MWMPL informed that the basket strainer shall be provided as per CA requirement.</p> <p>MACE and UPJN informed that Basket strainer micron size less the size of disc filter outlet micron size is acceptable and above is not acceptable and if not provided variation clause shall be applicable</p>	MWMPL	MWMPL agreed to proceed with the variation clause
18.6	ZSC/ZSO symbol and standard is not provided. Similarly, CT symbol and standard is not provided. The same need to be included in the P&ID	MWMPL	MWMPL agreed to incorporate the same in the revised P&ID
18.7	UF Blower - Blower type, discharge temperature, etc are to be finalised to decide whether high discharge air temperature switch is required or not. Can be finalised upon selection of the vendor and hence to be kept under hold until then	MWMPL	MWMPL agreed to incorporate the blower type and necessary instrumentation as per vendor requirement
18.8	<p>In order to remove the moisture content in the instrumentation air - Filter and dryer is to be included. Compressor numbering and labelling to be provided and status to be connected with PLC / SCADA system. How many numbers of compressors are provided. Whether standby is provided or not</p> <p>Further it is informed that dryer is provided in the revised P&amp;ID where as</p>	MWMPL	MWMPL agreed to incorporate the filter and mention the number compressors in the revised P&ID

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	the filter and number compressors are not shown																
18.9	Process compressed air line - Necessary air vent and drain at appropriate location to be provided  Further it is informed that drain is provided in the revised P&ID where as there is no air vent provided	MWMPL	MWMPL agreed to incorporate the same														
18.10	Degasser Blower - Blower type, discharge temperature, etc are to be finalised to decide whether high discharge air temperature switch is required or not. Can be finalised upon selection of the vendor and hence to be kept under hold until then	MWMPL	MWMPL agreed to incorporate the blower type and necessary instrumentation as per vendor requirement														
18.11	As per clause 9.14 c of CA, the quantity of Treated Water finally delivered to IOCL shall be measured by a meter installed at the IOCL Discharge Point.	MWMPL	MWMPL agreed to incorporate the same														
18.12	One more set of analysers to be provided at the discharge point in IOCL premises to identify any contamination in the system during transmission and ensure the quality supplied to IOCL	MWMPL	It was agreed that there is no need for one more set of analyzers at the discharge point as per CA														
18.13	All pipe sizes are subject to review and approval of pipe sizing calculation.  MWMPL informed that detailed pipe sizing calculation is already provided.  MACE and UPJN informed that the same is not received to be submitted by MWMPL	MWMPL	MWMPL agreed to submit the same														
18.14	A table showing the information as indicated in sheet 8 of 9 shall be included in the drawing.	MWMPL	MWMPL agreed to incorporate the same														
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">SR. NO</th> <th style="width: 10%;">INTERLOCK NO</th> <th style="width: 15%;">INPUT OF INSTRUMENT/EQUIPMENT</th> <th style="width: 15%;">LOCATION</th> <th style="width: 10%;">SET POINT</th> <th style="width: 10%;">SET POINT TYPE</th> <th style="width: 10%;">ACTION</th> </tr> </thead> <tbody> <tr> <td> </td> </tr> </tbody> </table>				SR. NO	INTERLOCK NO	INPUT OF INSTRUMENT/EQUIPMENT	LOCATION	SET POINT	SET POINT TYPE	ACTION							
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## Minutes of Meeting # 13

Sr. No.	Description	Action by	Remarks
K	Structural calculation, Reinforcement drawings of CCT, sludge thickener and Air blower building		
19	MACE enquired MWMPL that the observations on the Structural calculation, Reinforcement drawings of CCT, sludge thickener and Air blower building were provided long back, and no revised submission is received.  Also enquired whether any further clarification is required to submit the revised drawings	MWMPL	MWMPL informed that the queries are clear and agreed to incorporate in the revised drawings.  MWMPL informed that the revised drawings shall be submitted shortly

UPJN informed that if there is any discrepancy in the minutes of meeting content then the same need to be raised by the concern person within a day from the date of receipt of MOM. Otherwise it is deemed that the minutes of meeting is accepted by everyone and there should not be discussion / apprehension on the same in the upcoming meetings.

MWMPL

UPJALNIGAM

PROJECT ENGINEER