

Minutes of the Technical Committee meeting (for desiltation of reservoirs)
convened on 06-03-2018 at 10.30 am in the Board Room of IDRB

The list of members/ officials who attended the meeting is attached. After the opening remarks, Chief Engineer, IDRB, informed the members that the following agenda are proposed.

- i. EMP presentation by M/S Ultra Tech cochin
- ii. Technology/ technologies to be selected for desiltation of Mangalam and Chulliyar dams
- iii. Preparation of Bid and DPR by field authorities
- iv. Status of investigation works by NCESS official
- v. The method for Chulliar desiltation, Turn Key/ Work Contract method

- I. EMP preparation of Mangalam dam was ^{presented} ~~done~~ by representative of M/s Ultra tech.

After making the presentation, they informed that sediment deposition in Mangalam dam is more than ~~in~~ ^{Mangalam} Chulliyar and more than 2 years will be required for complete desilting of ~~the~~ ^{Mangalam} reservoir. They have identified 3 locations for deposition of sediments of which 2 sites are suitable with respect to land availability and ~~presence of road in the vicinity~~ ^{accessibility}.

They also suggested to prepare the desiltation pattern depending on the drainage pattern. This should include the places where desiltation should be started and to what depth to be desilted. A detailed plan for desilting of reservoir should be evolved. They also suggested that the top soil of the lands identified for separation process ^(cynids) should be stacked aside and should be utilised for development of green belt and catchment area treatment.

They also informed that turbidity in the reservoir caused by dredging will be small when compared with the waste water generated after the different process of stacking, separation, packing etc. Hence the above water will have to be adequately treated, as per Water Authority norms, using coagulants (eg.alum), settling ponds, tanks etc. Outcrops being weathered rock, do not contain sediments and should be excluded from desiltation area. Also regular and continuous monitoring of desiltation operations are to be ensured, so that only sediment deposits are removed.

It was also suggested by the firm that dry method of sediment removal can be considered during summer, when water level lowers and to control pollution suitable mitigation measures has been suggested in the EMP. From January to May by analysing the reservoir levels of 10 years, only 40% of the reservoir is full with water and 60% are dry areas.

emailed to
TC members,
field officers,
SD hydrology,
22-03-18.

The firm also suggested for formation of Environment Management cell, including members as stake holders, for (1) monitoring environment degradation if any, (2) ensuring that the mitigation measures as suggested in EMP are followed, (3) ensuring that desiltation is carried out only to the depth and area specified by project authorities.

The firm has also presented the budget estimate for mitigation measures.

The Technical Committee members after hearing the presentation made the following suggestions/ decisions.

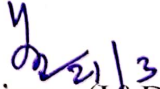
1. Complete desiltation plan to be made by field authorities.
2. Conservation of top soil to be included.
3. Treatment plan for treatment of waste water generated from different process to be made.
4. In the bid, the area to be desilted and depth up to which to be desilted as per established coordinates to be specified.
5. Dry method can be used in areas outside water spread area and wet method in reservoir water filled area.
6. Taking into account the difficulties in taking samples from grid size of 50m x 50m, it was suggested that the grid size can be increased.
7. Formation of environment management cell is to be carried out.
8. For monitoring of environment, data testing is to be done in NABL accreditation labs and it should be made to be contractor's responsibility.
9. Regarding budgetary requirement, M/s Ultra Tech was requested to prepare a detailed estimate for the requirements as per DSR/ market rate in the final EMP report so that it can be incorporated in the DPR.
10. The DPR was directed to be prepared including desiltation plan, layout of sites identified, storage, road, separation plant etc. by field authorities.
11. The draft report of EMP is approved with the changes as suggested during the discussion.


II. Regarding EOI received the Chief Engineer, Mechanical informed that even though pneumatic pumps is available, record of its usage in India is not available and cutter suction dredge may not develop as much turbidity as inferred.


- III. Chief engineer, IDRDB raised the query on measurement of sediment by volume as due to bulking of sand, wet sand measurement by volume will not be feasible. Chief Engineer, I&A and members discussed the issue and a decision to measure bulking of sand and incorporate it for wet sediments was taken.
- IV. Official from NCESS informed that sample collection of Chulliyar dam will be completed by next week and Mangalam by April 2018.
- V. The Technical Committee members also discussed on which method of tendering to be adopted, for the two reservoirs as in the SOP, two methods of tendering viz. Turn Key method and Work Contract method are specified to be adopted one method for each dam. The committee decided to adopt Work Contract method for Chulliar reservoir and Turn Key method for Mangalam reservoir.
- VI. The Technical Committee members then discussed about the probability of taking up desiltation in other reservoirs, as suggested by the Hon'ble Minister for Water Resources.

Hon'ble Minister for Water Resources has suggested taking up Kallada and Malampuzha dams. Chief Engineer, I&A opined that since both the above dams have large reservoir area, it may take ^{long time} ~~more year~~ to completely desilt the dams and one or two smaller dams may also be included. Depending on the sediment accumulation and presence of sand, Kuttiyadi, Kanjirapuzha, Peechi and Neyyar was accepted by the committee.

It was decided to report the list of dams to Government. It was also decided to report to Government regarding wet separation proposed for wet sediments and dry separation proposed for dry sediments and reasons thereof, as it was not included in SOP.


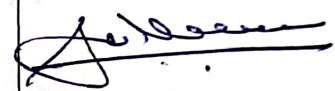





Chief Engineer (I&D), IDRDB

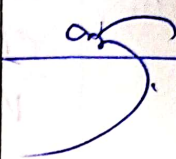


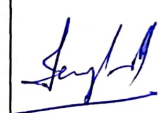
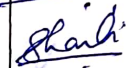
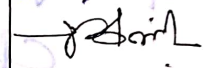



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Desiltation of Mangalam and Chulliar reservoirs - Technical Committee meeting on 6/3/2018

Sl.No.	Name & Designation	Mobile No. & e-mail ID	Signature
1.	Gerrence Antony Chief Engineer, I&D, IPRB. Vikar Bhawan, Tulum	9447388351	<u>Gerrence.</u>
2.	S S Radhakrishnan, SAC, Coimbatore Food & Drug Division, Mangalore	9447944309	
3.	Sudheer S Executive Engineer Irrigation Division Chittur	9447862150	
4.	V. S. SHAJI Chief Engineer Mechanical Irrigation Dept, Tulum	9447103753	
5.	Dr. Raji Seelaras Scientist NCRSS, Govt of India Chennai	9846223737	
6.	Thambu Cherian Deputy Director Water & Geology Dept Tulum	9447161895	
7.	Jasraj, K. S. Chief Engineer (Irrigation & Administration)	9946203644	

Sl.No.	Name & Designation	Mobile No. & e-mail ID	Signature
8.	V. Chandrasekharan Chief Engineer (HR) & G KWA, Talekharan Pon-33	9447795252 cegtkwah@gmail.com	
9.	K.H. Shamsudeen Director, IDRB		
10	Dr. V.N. Sivasankaran Pillai	9847151631 sivasankaranpillai@gmail.com	
11	JAYASREE.K.K., AEE, IDRB	AEE 8281827598	
12.	Shauki. M. Khan, AE, IDRB	9446101749	
13.	Bisnu. T. D' Souza, AEE, IDRB	9947955840	
14.	Abundul.K., Asst Engr. Chulliar Dam	9633840333 aechulliyar@gmail.com	
15.	Kiran Abraham Thomas Assistant Executive Engineer Irrigation Sub Division I Chittur	9447389905 subdivn1cpp@yahoo.com	
16.	Mytheen Kurji. V Asst. Engineer Dam Section, Mangalam Dam.	9446830119 mytheen.1962@gmail.com	