

W.11017/08/2011-WQ
Government of India
Ministry of Drinking Water & Sanitation

9th Floor, Paryavaran Bhawan,
CGO Complex, Lodhi Raod,
New Delhi -110003.

Dated: 23rd January, 2012

To

All participants as per list

Subject: - Minutes of 25th meeting of Research & Development Advisory Committee and Project Sanctioning Committee held on 10.01.2012 at 2.30 PM under the Chairpersonship of Secretary (MDWS) in Nirman Bhawan, Room No. 247, New Delhi.

Sir/Madam,

Please find enclosed a copy of the minutes of 25th meeting of Research & Development Advisory Committee and Project Sanctioning Committee held on 10.01.2012 at 2.30 p.m under the Chairpersonship of Secretary (MDWS) in Nirman Bhawan, Room No. 247, New Delhi, for information and necessary action.

Yours faithfully,


(S.K. Verma)

Under Secretary to the Government of India
Phone No. 011 24361052.
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Copy to :- PS to HMRD, PPS to Secy.(MDWS), PPS to AS&FA, PS to JS(VB),
PS to JS(TSC), Dir (Water), Dir (TSC), DS(WQ), DS(Fin.),
Addl.Adv.(DC), DA(DR), DA(DC), AA(AK),

Technical Director (N.I.C.) for hosting on Website

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Minutes of 25th meeting of Research & Development Advisory Committee and Project Sanctioning Committee held on 10.01.2012 at 2.30 PM under the Chairpersonship of Secretary (MDWS) in Nirman Bhawan, Room No 247, New Delhi.

At the outset Secretary (MDWS) welcomed the members of the R&D Advisory Committee and the Project Sanctioning Committee. Seven research projects, all from the drinking water sector, were put up of which three projects had already been approved by R&DAC as well as sanctioned by the PSC in the meeting held on 30.08.2011; but the PI's had sought for revision in the budget allowed. The other four projects have been shortlisted for presentation by the respective PIs. JS, DWS informed the members that preliminary screening of these projects had been done by the Technical Officers of the Ministry.

- 1. The first Project presented was by Dr Srimanth , on behalf of Dr Pawan. K. Labhasetwar, Scientist and head of Geo-Environment Management Division, NEERI, CSIR, Nagpur, on " Development and application of surfactants for reduction in evaporation losses from surface water reservoirs".**

Secretary, DWS asked him for the reasons for enhancement in the project cost especially for the consumables. PI replied that as per DST guidelines Rs 2.0 lakh per year is allowed for purchase of consumables, however this was disagreed by member from DST. Secretary sought the details of consumables'. Member from DST also sought the names & price of consumables. Member, DST told the PI that these were not within 10% of the project cost. PI also asked for payment to daily wagers to which Secretary (MDWS) said that it should be a part of contingency. Finally the project was approved (by allowing two JRF's at DST rates) and sanctioned for Rs 18.86400 lakh as per the

following details:-

S. No	Details and break-up of the R & D Project	Budget proposed by PI prior to meeting of RADC	Budget proposed by PI after RADC meeting/ suggestions	Approved by Project sanctioning Committee	Revised Budget suggested by PI vide his letter dt 27.09.2011	Revised budget now proposed	Reasons for revision, if any In Rs
1	Equipment Cost	1,00,000/-	3,00,000 /-	100000/-	3,00,000/-	3,00,000/-	As per Budget proposed after RDAC meeting.
2	Salary	6,72,000/- 2 JRF net qualified	6,72,000/-@ Rs 14000/pm No HRA	5,76,000/- (@ Rs.12000/-pm	6,72,000/- @ Project Asstt.III as per CSIR rates @ Rs. 14,000/- p.m.	6,72,000	Earlier the amount was calculated @12,000/-as against 14,000/-
3	Travel	2,00,000/-	3,80,000/-	2,00,000/-	2,00,000/-	2,00,000/-	
4	Consumable/ raw materials/ components	1,00,000/-	6,00,000/-	1,00,000/-	6,00,000/-	4,00,000/-	

5	Report preparation communication charges, pay, to daily wage labourers ment				2,28,000	Nil	
6	Project Cost	10,72,000/-	19,52,000/-	9,76,000/-	20,00,000/-	15,72,000/-	
7	Contingency @ 10 % of the Project cost	2,00,000/-	4,50,000/-	97,600/-	2,00,000/-	1,57,200/-	
8	Overhead charges @ 10%	1,90,800/-	3,60,300/-	Rs 97,600	3,00,000/- @15%	1,57,200/-	
9	Total cost	14,62,800/-	27,62,300/-	11,71,200/-	25,00,000/-	18,86,400/-	
10	Duration		Two years			Two years	

*CSIR Qualifications - M.Sc./BE or equivalent plus two years experience or M.Pharm/ M.Tech.

2. **The second project proposal was from Dr. Ashis Sen IIT Guwahati on "Domestic water meters and study of water loss in piped water supplies for rural areas."**

Secretary (MDWS) was informed that there was no response from the PI side as he had left the Institute and had joined IIT Madras. During discussion on the project member DST expressed his views that the project being a similar project as at Sl. NO 5, (by Dr. Gautam Barua) it could be rejected. However, it was pointed out that this Project merely related to development of domestic water meters. A view was also expressed that the PI could carry out the project from IIT Madras if he wanted to. It was decided to write to the PI for his willingness to continue the project.

3. **The third project was presented by Prof. P.S.V.Natraj, System & Control Engineering Group, IIT, Bombay on "Design of manually readable domestic water meters suitable for Rural areas"**

The PI asked for two JRF's as the project was to be completed within two years. Since there was a difference only in the salary component, the committee agreed to this. However member, DST opined to give Rs 22,000,23000pm for 1st & 2nd year respectively. PI requested that more qualified candidates were required for the project for which higher emolument of Rs 24,000 pm is sought to be paid to which the committee agreed. Finally the project was approved & sanctioned (with 2RA+1JRF+1PA) for Rs 42,85,440/- .

S. No	Details and break-up of the R & D Project	Budget suggested by PI In Rs	Approved by Project Sanctioning Committee (in Rs)	Revised Budget suggested by PI after PSC meeting	Budget proposed (in Rs)	Reasons for revision, if any
1	Equipment	11,50,000/-	9,50,000/-	11,50,000/-	9,50,000/-	
2	Salary of research team+30% HRA	24,33,600/- (for three persons)	11,23,200/- (Rs 24,000 pm for one person for 3 years + HRA	24,33,600/-	23,71,200/-	PI hiring 2RA + 1 JRF +1 PA hence revised salary
3	Travel expenses	1,00,000/-	1,00,000/-	1,00,000/-	1,00,000/-	
4	Cost of consumable Stationery etc	1,50,000/-	1,50,000/-	1,50,000/-	1,50,000/-	
5	Total cost	38,33,600/-	23,23,200/-	38,33,600/-	35,71,200/-	
6	Contingency c@ 10%	4,50,000/-	2,32,320/-	4,50,000/-	3,57,120/-	
7	.Overhead charges 10% of the project	8,56,720/-@ 20%	2,32,320/-	8,56,720/-	3,57,120/-	
8	Grand Total	51,40,320/-	27,87,840/-	51,40,320/-	42,85,440/-	
9	Duration		Two years		Two Years	

2 RA-III 24000 x24x2 = 11,52,000
 1JRF 18000X24 = 4,32,000
 1PA(project assistant)10000x24 = 2,40,000
 + 30% HRA
 18,24,000 + 5,47,200 =23,71,200

The fourth presentation was by Dr. Sudhakar M. Rao (PI) , Professor & Chairman Centre for Sustainable Technologies, Department of Civil Engineering, Indian Institute of Science ,Bangalore on his Project proposal entitled “Remediation of Chromium contaminated ground water using Ferro-particles based technology”.

Ground water being a major source of drinking water, industrial pollution is a major cause of chromium contamination of ground water resources. The present proposal aims to improve the Cr(VI) reduction efficiency in the contaminated ground water by developing copper deposited ZVI for treating Cr(VI) contamination.

The main objectives of the project are

- To improve the efficiency of ZVI towards Cr(VI) reduction by synthesizing & employing Cu-ZVI bimetallic particles through laboratory experiments.
- Identify the optimum amount of copper deposition on the surface of ZVI [articles to remediate to (VI) contaminated water.]
- Examine the influence of ZVI morphology(fineness/surface area) on Cr(VI) reduction efficiency of Cu-ZVI particles.

Explaining the salient features of the project proposal the PI said that in Vellore (TN), Kanpur etc many industries are directly discharging the effluent in the river soil thereby contaminating the water. Chromium is very harmful for human beings hence this proposal is submitted to take up detailed study of chromium contamination & its removal to make water fit for human consumption. PI also explained about the management of the sludge generated from the treatment for chromium removal. He explained that local soil is mixed with cement & sludge generated during the process used for brick formation which is locally used for construction purpose. To a query by the Secretary (MDWS) whether the brick leaches with passage of time, the PI replied that it is a good quality of brick & does not have any harmful effects. Member DST asked if there were any BIS standards for this brick. the PI replied that so far there were no BIS standards for the same but is under consideration for the future . Project was finally approved & sanctioned for Rs 14.58Lakh

The budget details are as follows:

S.No	Budget given by PI Details of items/service	Amount requested In Rs.	Suggested budget as per norms In Rs	Remarks
1	Equipment (UV-Visible spectrophotometer)	2,50,000	2,50,000	
2	Salary of Research team JRF (1No)@ Rs 14000/month ,30 months=Rs 4,20,000 Field trainer (1 No) @Rs 6500/month,30 months= 1,95000	6,15,000	6,15,000	
3	Travel Expenses	1,00,000	1,00,000	
4	Cost of Stationery/printing/chemicals/glassware/fabrication	2,50,000	2,50,000	
5	Total cost of project	12,15,000/-	12,15,000	
6	Contingency expenditure	1,25,000	1,21,500	10% of total budget
7	10% overhead charges	1,34,00/-	1,21,500	
8	Grand Total	14,74,000	14,58,000	
9	Duration of project			Two & half years

4. The next presentation was by Dr Gautam Barua Department of Civil Engineering IIT, Guwahati, project proposal entitled "Estimation of Water Waste/pilferage & unaccounted water losses in two selected piped rural water supply schemes in the State of Assam"

In the present study it was proposed to evaluate the causes, extent, estimate & process of water losses occurring due to leakage , wastage, pilferage & any non metered unaccounted water in two selected rural piped water supply locations in Assam, as pilot study to understand the problem in depth & to explore mitigation measures.

The PI explained the main feature of the study taken up by him for the State of Assam where one third of India's natural water resources exist. It was on the request of the Ministry of Drinking Water & Sanitation that this project was proposed. The project involves travelling for studying two piped water supply schemes which are taken into consideration for this project. After detailed deliberations the project was **approved & sanctioned for Rs 5, 97,600/-**.

Project budget details are as follows:

S.No	Budget given by PI Details of items/service	Amount requested In Rs	Suggested budget as per norms In Rs	Difference/ Remarks In Rs
1	Equipment	2,50,000	50,000	
2	Salary of Assistant Project Engineer/ Assistant project Scientist:	4,24,200 Rs 14000x24=3,36,000/-	2,88,000/- One Project Asstt.II / CSIR/norms	
3	Travel Expenses	1,89,500	1,50,000	
4	Cost of Stationery / printing / typing / computer processing	60,000	60,000	
5	Total project cost	9,23,700/-	4,98,000/-	
6	Contingency expenditure	90,000	49,800/-	10% of the budget
7	10% overhead charges	1,01,370	49,800/-	10% of the total budget
8	Grand Total	11,15,070/-	5,97,600/-	
9	Duration of project			Two years

*11,000+1,000(Medical)X24 = 2,88,000

Project Asstt. II- M.Sc or B.E equivalent.

5. **Dr. B.C Meikap, Associate Professor, Department of Chemical Engineering, IIT Kharagpur. Project proposal "Development of Mobile Water Treatment Plant for Drinking water Supply in Calamity Affected Areas".**

The present study would develop technology for water treatment plant suitable for calamity affected areas. Main aim of the study are to:

- Develop a mobile water treatment plant
- Performance analysis of the plant in terms of removal of TSS, heavy metals etc.
- Process parameters optimization.
- Demonstration in the field for testing.

PI made the presentation explaining the important points of the project. During floods the main technologies used are adsorption & filtration, these were, however, not suitable for the rural areas where there is power scarcity. In the present work a hollow box type filter containing activated carbon & sponge iron is used for removal of contaminants. In reply to a query by Secretary, DWS regarding mobile treatment plant, the PI told that treatment plant need be mounted on the boats or other means of transportation using diesel or kerosene. Member from DST asked him as to what & how heavy metals were going to be tested as this required Atomic Absorption Spectrophotometer for measurement (AAS). It was informed by the PI that they will measure COD, BOD, Suspended matter, bacteria etc. . In response to PI's explanation that chlorine is used as disinfectant after treatment, Member from DST said that chlorine is not suitable as disinfectant during calamity because of high turbidity, rather it has a adverse health effect. Members were of the opinion that this is not going to be different from other treatment plants. Many such plants are already in operation in the country . After deliberations this Committee **did not recommend project.**

6. Dr P. Mondal. Assistant Professor , Chemical Engineer Department, IIT Roorkee for the project entitled "Development of low cost treatment of arsenic& fluoride contaminated ground water for rural communities"

Main aims of the project :

1. Design & Fabrication of laboratory scale/ pilot scale/ down flow & up flow units.
2. Performance evaluation of laboratory scale/pilot scale with simulated ground water.
3. Verification of the performance with real ground water samples collected from Uttar Pradesh / West Bengal.
4. Engineering modification of these systems for maximum performance.
5. Preparation of design & operation & maintenance for these systems.

The PI explained the salient features of the low cost treatment for Arsenic & Fluoride removal . He said that due to government's initiative some treatment technologies are available in the affected areas of West Bengal & Assam , but still many areas require safe drinking water. Therefore, the project had been proposed in an affected area. He gave details of the equipment required for the project to which Member from DST said Muffle furnace would be already available in their labs. PI replied that Muffle furnace was required for heating at high temperature of 1200°C . After detailed discussions the project was approved & sanctioned for Rs 6,71,400/-.

S.No	Budget given by PI Details of items/service	Amount requested In Rs	Suggested budget as per norms In Rs	Difference/ Remarks In Rs
1	Equipment (pump,	2,00,000	1,42,700	Restricted to 25% of the total budget
2	Salary of Research team /Faculty Top up	1,98,000 (JRF for 2yrs + 10% HRA, net qualified	3,16,800/-** JRF for 2 years Net qualified.	
3	Consumables	1,50,000	1,50,000	
4	Travel Expenses	1,60,000/-	1,00,000/-	
5	Total cost	6,28,000/-	5,59,500/-	
6	Contingency expenditure	75,000	55,950/-	10% of the total budget
7	10% overhead charges	70,300	55,950/-	
8	Grand Total	7,73,300	6,71,400/-	
9	Duration of project			Two years

$$\begin{aligned}
 & **12000 \times 24 && \text{Rs. } 2,88,000/- + \\
 & 10\% \text{ HRA} && \text{Rs. } 28,800/- && = \text{Rs. } 3,16,000/-
 \end{aligned}$$

The meeting ended with a vote of thanks to the Chair.

List of Participants

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