



Government of West Bengal
Irrigation & Waterways Department
Jalasampad Bhaban, 3rd Floor, Western Block
Bidhannagar, Salt Lake City, Kolkata 700091

Memo No. 350 – IB
IW/O/IB/Misc-02/2018-19 (Part)

Dated, 27th August 2018

From: D SenGupta
Joint Secretary to the
Government of West Bengal

To: The Chief Engineer (South)
Irrigation & Waterways Directorate
Government of West Bengal
Email: cel@wbiwd.gov.in

Sub: Administrative approval to the project – “Dredging in river Muriganga in PSs Kakdwip & Sagar, District South 24-Parganas”.

The undersigned is directed to accord administrative approval to the project – “Dredging in river Muriganga in PSs Kakdwip & Sagar, District South 24-Parganas”, envisaging Capital dredging to commence in 2018-19 followed by Maintenance dredging over a period of 7 (seven) years, thereby covering total 8 (eight) years (2018-19 to 2025-26) at a total estimated cost of ₹ 120.30 crore, as finalized by the Project Clearance Committee (PCC) under the State Finance Department.

2. In view of the limited availability of working period before Gangasagar Mela 2019, work plan for both Capital & Maintenance dredging in the said river along with the plan of disposal had to be reworked, keeping in consideration the ultimate project development objective of ensuring 24x7 navigability in between Kakdwip and Sagar island as paramount, and it has now been decided to execute the project in two phases, both in respect of Capital and Maintenance dredging, while Phase-I of the Capital dredging is to be executed before Gangasagar Mela 2019, activities in Phase-II may be taken up after Mela period.

3. A copy of the Modified Work Plan highlighting target timelines of major activities along with primary estimation of various components to be undertaken, as finalized in consultation with all concerned including the Consultant, WAPCOS Ltd. and approved in this Department, is enclosed herewith as Annexure – I (3 sheets) for his perusal and necessary action.

4. A comparative statement showing items, rates and quantities finalized by the PCC of the Finance Department, vis-à-vis those assessed primarily as per the Modified Work Plan, is enclosed as Annexure – II (2 sheets). Execution of the project should, in no case, cause any quantitative excess beyond the ceiling limits fixed by the PCC.

5. Consequent upon modification of Work Plan, yearwise phasing of expenditure would vary to some extent from that stated in the concurrence of the Finance Department, without any modification of the total project cost as shown below:

(₹ in Crore)

Year	Phasing of expenditure as stated in the concurrence of the Finance Department			Modified ceiling limit of expenditure as per Modified Work Plan		
	Capital Dredging	Maintenance Dredging	Total	Capital Dredging	Maintenance Dredging	Total
2018-19	30.46	0.00	30.46	20.73	0.00	20.73
2019-20	0.00	11.93	11.93	9.73	11.93	21.66
2020-21	0.00	11.93	11.93	0.00	11.93	11.93
2021-22	0.00	11.93	11.93	0.00	11.93	11.93
2022-23	0.00	11.93	11.93	0.00	11.93	11.93
2023-24	0.00	14.04	14.04	0.00	14.04	14.04
2024-25	0.00	14.04	14.04	0.00	14.04	14.04
2025-26	0.00	14.04	14.04	0.00	14.04	14.04
Total	30.46	89.64	120.30	30.46	89.64	120.30

6. The undersigned is further directed to request him to modify the bid documents, in accordance with the modification of the Work Plan. Considering the necessity of wider participation in the tendering process and maturing of the tender with sufficient number of participants (three or more) at the first call, it has been decided to further relax the Financial Prequalification criteria by lowering percentage of average annual turnover of the bidders with respect to the amount put to tender, from 50% to 40%. This may also be incorporated in the modified bid documents. The tender may be floated as early as possible, with wide publicity in print media, especially all-India edition of leading English dailies, after observing other usual formalities.

7. The work is chargeable to the Head of Account “4711-03-103-107 (Dredging of Drainage Channel including purchase of new machinery & equipment) -53-V”, whereunder there is sufficient budget provision during the current financial year and necessary provision for subsequent years would be made in due course.

8. This issues with the concurrence of the Finance Department vide U.O. No. Group-F/2018-19/0067 dated 17.08.2018, and with the approval of Additional Chief Secretary of this Department.

9. All concerned are being informed.

Sg/
D SenGupta
Joint Secretary to the
Government of West Bengal

Encl. Annexure I & II

Memo No.350/1(5) – IB

Dated, 27th August 2018

Copy forwarded for information to the:

1. Principal Accountant General (A&E), West Bengal
Treasury Building, 2, Government Place (West)
Kolkata 700001
2. Principal Accountant General
(Economic & Revenue Sector Audit), West Bengal
CGO Complex, MSO Building (5th Floor)
Block-DF, Sector-I, Bidhannagar
Kolkata 700064
3. OSD to Chief Secretary
Government of West Bengal
Nabanna, 325, Sarat Chatterjee Road
Shibpur, Howrah 711102
Fax: (033) 2214 5300
4. Finance (Audit) Department, Group-F
Government of West Bengal
Nabanna, 325, Sarat Chatterjee Road
Shibpur, Howrah 711102
5. District Magistrate, South 24-Parganas
Administrative Building
25, Belvedere Rd, Alipore Police Line,
Alipore, Kolkata 700027
Email: dm-ali@nic.in

Sg/
D SenGupta
Joint Secretary to the
Government of West Bengal

Copy with copy of Annexures forwarded for information to the:


1. PS to Minister-in-charge
Irrigation & Waterways Department
2. Sr. PA to Additional Chief Secretary
Irrigation & Waterways Department
3. Sr. PA to Secretary
Irrigation & Waterways Department

Hon'ble MIC, ACS & Secretary may please be kept apprised.

4. Financial Adviser
Irrigation & Waterways Department
5. Superintending Engineer
Eastern Circle
Irrigation & Waterways Directorate
Email: secciwd2010@gmail.com
6. Executive Engineer
Kakdwip Irrigation Division
Irrigation & Waterways Directorate
Email: eekisd@gmail.com

- ✓ 7. OSD & Ex-officio Deputy Secretary – III
Irrigation & Waterways Department

– with a request to upload in the departmental website.


D SenGupta
Joint Secretary to the
Government of West Bengal

Encl. as stated

Modified Work Plan and Timelines of Muriganga Dredging

(Sheet 1)

Activity	Date	Day Count
1 Probable date of invitation of Tender	27th August 2018	0 day
2 Culmination of the tender process and issue of Work Order	31st October 2018	66 days
3 Mobilisation Period upto	21st November 2018	21 days
4 Physical commencement of dredging operation (Capital, Phase I)	26 th November 2018	6 days
5 Capital Dredging (Phase I) to be continued upto	7th January, 2019	43 days
6 Effective working period of dredging (leaving 3 days out)		40 days
7 Gangasagar Mela period when dredging would remain suspended	8th Jan to 22nd Jan 2019	15 days
8 Defect liability period for capital dredging (Phase I) during which depth of dredging would again be verified	8th Jan to 31st Jan 2019	24 days
9 Rectification/ re-dredging in case observed depth is 15% or less than the depth recorded during execution of the Capital Dredging (Phase I)	23rd Jan to 31st Jan 2019	9 days
10 Capital Dredging (Phase II) to resume from	1st February 2019	
11 Capital Dredging (Phase II) to be continued upto	31st May 2019	
12 Time allowed for Capital Dredging (Phase II)	4 months	120 days
13 Defect liability period for capital dredging (Phase II) during which depth of dredging would be verified	1st June to 30th June 2019	30 days
14 Rectification/ re-dredging in case observed depth is 15% or less than the depth recorded during execution of the Capital Dredging (Phase II)	22nd June to 30th June 2019	9 days
15 Maintenance Dredging (Phase I-Yr-1) to start from	1st February 2019	
16 Maintenance Dredging (Phase I-Yr1) to be continued upto	7th January 2020	
17 Time allowed for Maintenance Dredging (Phase-I-Yr-1)		341 days
18 Maintenance Dredging (Phase II-Yr1) to start from	1st July 2019	
19 Maintenance Dredging (Phase II-Yr-1) to be continued upto	7th January 2020	
20 Time allowed for Maintenance Dredging (Phase-II-Yr-1)	-	191 days
21 Defect liability period for Maintenance Dredging (Phase I & II-Yr1) during which depth of dredging would again be verified	8th Jan to 31st Jan 2020	24 days
22 Rectification/ re-dredging in case observed depth is 15% or less than the depth recorded during execution of the Maintenance Dredging (Phase-I&II-Yr1)	23rd Jan to 31st Jan 2020	9 days
23 Maintenance Dredging (Yr-2) to start from	1st February 2020	
24 Maintenance Dredging (Yr2) to be continued upto	7th January 2021	
25 Defect liability period for Maintenance Dredging (Yr2) during which depth of dredging would be again verified	8th Jan to 31st Jan 2021	24 days
26 Rectification/ re-dredging in case observed depth is 15% or less than the depth recorded during execution of the Maintenance Dredging (Phase-I&II-Yr1)	23rd Jan to 31st Jan 21	9 days
27 Maintenance Dredging (Yr-3) to start from	1st February 2021	

Same cycle of Maintenance Dredging (Yr-2) to be repeated for all the coming years upto 7 th January 2026

Primary Calculation of Modified Dredging Quantity (phase-wise and year-wise) and checking the timelines (Sheet 2)

1 Effective working period of dredging (leaving 3 days out) before GS mela 2019	40 days	
2 Accordingly, dredging (capital as well as maintenance) is to be done in two phases	400 hours	
2 Number of dredgers (of capacity 750 cum solids/hour)	2 Nos.	
3 Capital Dredging (Phase I) to be completed before GS Mela 2019 will include:		
(i) Channel-I (LCT to Kachuberia) (Ft 3200 m X 40 m X 2.5 m) (50% Qty)	272500 cum	
(ii) Channel -3 (original section was 1.4km X 50m X 2.5m having full quantity as 343,000 cum, modified to 1.4km X 30m X 2.5m, involving quantity = $1.1 \times 30 \times 343000/50$ (width reduced considering limited use of connecting channel ,only in Gangasagar Mela period, when temporary jetty nos. 5,3,2 & 1 become operational). 10% increase due to transition.	226380 cum	
(iii) Patch on Kachuberia side (Area 106567 sqm)	50000 cum	
4 Total volume of Capital Dredging (Phase I)	548880 cum	
5 Volume that can be dredged by 2 nos. of dredgers stated at Sl.2 above	600000 cum	Hence
6 Total volume of Capital Dredging (Phase II) (full quantity of Channel-2 3,03000 cum + Balance quantity of Channel-1, i.e. 2,72,500 cum)	575500 cum	Ok
7 Total Capital Dredging (Phase I + Phase II)	1124380 cum	
	Say	1124380 cum
8 Maintenance dredging (Phase I-Yr-1)		46980 cum
Channel volume (cum)	Say	47000 cum
Channel-3 34980 = $(226,380 \times 53,000)/343,000$		
Patch-1 12000 (as originally considered in DPR)		
Total= 46980 cum		
9 Maintenance dredging (Phase II-Yr-1)		329000 cum
Channel-1 189000 (full quantity as originally considered in DPR)		
(Although capital dredging is done in two phases, maintenance will be done at one go)		
Channel-2 140000 (as originally considered in DPR)		
Total= 329000 cum		
10 Total quantity of Maintenance Dredging in Year-I(2019) i.e. Phase I-Yr-1 +Phase II-Yr-1		376000 cum
11 Total quantity of Maintenance Dredging in Subsequent 3 years		
Year Quantity (cum)		
2nd (2020) 386000 (addition of 10000 cum over previous year)		
3rd (2021) 396000 (addition of 10000 cum over previous year)		
4th (2022) 406000 (addition of 10000 cum over previous year)		
12 Total quantity of Maintenance Dredging within stipulated contract period of 4 years		1564000 cum
13 Total quantity of Maintenance Dredging in next 3 years (extended contract period)		1278000 cum
5th (2023) 416000 (addition of 10000 cum over previous year)		
6th(2024) 426000 (addition of 10000 cum over previous year)		
7th (2025) 436000 (addition of 10000 cum over previous year)		
Total 1278000		

Note:One dredger may be released after Capital Dredging (Ph- I) and the other may continue Capital Dredging (Ph- II) as well as the Maintenance Dredging (Ph- I-Yr-1) till completion of Capital Dredging (Ph- II) i.e. upto 30th June 2019. Thereafter, this dredger may be replaced by 1 new dredger for subsequent maintenance

1	It has been considered to dump 25% of the volume of dredged material from Channel-2 and 100% from Channel-3 into the Dumping Ground, wherefrom it would be disposed by trucks/ other modes of transport.	
2	Capacity of Dumping ground to be developed with 2 m height of spoil (as per DPR)	208630 cum
3	Quantity of dumping for Capital dredging	
	(i) Phase I (involving Channel-1(50%), Channel-3 (100%) & Patch-1)	226380 cum
	(ii) Phase II(involving balance 50% of Channel-1 & Channel-2 (100%)	75750 cum
	Total dumping out of Capital dredging	302130
4	Disposal relating to Capital dredging (SL3-SL2)	
5	Quantity of dumping for Maintenance dredging (Year-1 i.e. 2019)	69980 cum
	(i) Phase I (involving Channel-3 (100%) & Patch-1)	34980 cum
	(ii) Phase II(involving Channel-1 (100%) & Channel-2 (100%)	35000 cum
	Total dumping out of Maintenance dredging in Year-1(2019)	69980 cum
6	Disposal relating to Maintenance dredging in Year-1 (2019) (same as SL5 above)	69980 cum
7	Disposal relating to Maintenance dredging in Year-2 (2020) (Proportionate to increment of Maintenance dredging quantity on year to year basis)	71841 cum
8	Following the same principle, disposal for Maintenance dredging in Year-3 (2021)	73702 cum
9	Following the same principle, disposal for Maintenance dredging in Year-4 (2022)	75563 cum
10	Total quantity of disposal for Maintenance dredging during 2019-2022	
11	Following the same principle, disposal for Maintenance dredging in Year-5 (2023)	77424 cum
12	Following the same principle, disposal for Maintenance dredging in Year-6 (2024)	79241 cum
13	Following the same principle, disposal for Maintenance dredging in Year-7 (2025)	81101 cum
14	Total quantity of disposal for Maintenance dredging during 2023-2025	
		237766 cum

Comparative Statement of the provisions of DPR in Muriganga Dredging as approved
by the Finance Department *vis-à-vis* the Primary Estimation as per Modified Work Plan

(lakh of Rs)

Broad Description	As approved by the Fin. Dept.				As per Modified Work Plan			
	Quantity	Unit	Rate	Amount	Quantity	Unit	Rate	Amount
Capital Dredging	12.4	lakh cum	238.61 per cum	2958.80	11.2438	lakh cum	238.61 per cum	2682.88
Maintenance Dredging (2019-22)	16.36	lakh cum	240.73 per cum	3938.30	15.64	lakh cum	240.73 per cum	3765.02
Maintenance Dredging (2023-25)	13.32	lakh cum	240.73 per cum	3206.50	12.78	lakh cum	240.73 per cum	3076.53
Sub-Tot Dredging				10103.60				9524.43
Construction/Maintenance /Renewal of Dumping Ground								
(i) Supplying EUC Bulla at site	74372.5	m	230.13 per m	171.15	74372.5	m	230.13 per m	171.15
(ii) Labour for driving bullah	55430	m	111.35 per m	61.72	55430	m	111.35 per m	61.72
(iii) Supplying, fitting, fixi half split wailing pieces	6675	m	110.29 per m	7.36	6675	m	110.29 per m	7.36
(iii) Fitting, fixing bitume drum sheet walling	6675	m	463.44 per m	30.93	6675	m	463.44 per m	30.93
(iii) Making filter with well graded 40 mm down ballasts etc.	600.75	cum	1981.01 per cum	11.90	600.75	cum	1981.01 per cum	11.90
Sub-Tot Dumping Grond.				283.06				283.06
Disposal (from Dumping Ground)								
Capital Dredging disposal	210210	cum	124.08 per cum	260.72	93500	cum	124.08 per cum	116.01
Maintenance Drdg (2019-22) disposal	365400	cum	132.99 per cum	485.95	291086	cum	132.99 per cum	387.12
Maintenance Drdg (2023-25) disposal	297502	cum	144.98 per cum	431.32	237766	cum	144.98 per cum	344.71
Sub-Tot Disposal				1177.99				847.84
Project Management Consultancy	LS			118.00	LS			118.00
Summary of Cost including GST & Cess (A)				11682.65				10773.33
Total excluding Cess(B)=(A)/1.01				11565.82				10666.66
Contingency (C) 3% on (B)				346.97				320.00
Total Provision				12029.30				11093.33
Say Rs. 120.30 crore					Say Rs. 110.93 crore			