



**DIRECTOR GENERAL PROJECT SEABIRD
IHQ MoD(NAVY), NEW DELHI**

TENDER NO. DGSB/01 of 2015

FOR

SELECTION OF AGENCY

FOR

MARINE GEO PHYSICAL SURVEY

FOR

**PROJECT SEABIRD PHASE IIA
AT NAVAL BASE KARWAR**

2015

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SECTION I

INVITATION TO TENDER



Tel: 011 26174312

Headquarters
Project Seabird
West Block V, RK Puram
New Delhi 110066

Ref. No. SB/5/555/Marine Geo Physical Survey

Date: 2015

M/s.....

**SUB: MARINE GEO PHYSICAL SURVEY FOR PROJECT SEABIRD
PHASE IIA, AT KARWAR**

1. DETAILS OF TENDER

A.	Tender Enquiry No.	DGSB – /2015-16
B.	Item Description	Tender for Marine Geo Physical Survey for Project Seabird Phase IIA, at Karwar.
C.	Due Date & Time of Submission Of Tender	: 28 Jul 2015 up to 1500 Hours
D.	Date & Time of Opening of Tender	: 28 Jul 2015, 1530 Hours
E.	Place of Submission of Your Tender	Office of: Director General, Project Seabird, West Block V, R K Puram, New Delhi -110066
F.	Earnest Money Deposit	Rs. 80,000/-
G.	Performance Security	10% of Contract value.
H.	Time Schedule	2 Months from the Commencement Date
J.	Commencement Date	Date notified by the Engineer after the issue of Letter of Award



Dear Sir(s),

We have pleasure in enclosing the following tender documents for the above work and would invite you to submit your best binding offers;

Section 1	Invitation of Tender
Section 2	General Conditions of Contract
Section 3	Special Terms of Contract
Section 4	Technical Specifications and scope of work
Section 5	Bills of quantities/Price Format
Section 6	Drawings

2. **SUBMISSION OF TENDER**

2.1 Tender shall be prepared and submitted in **separate sealed covers in two parts** as follows:

2.1.1 **Part-I: Complete tender (including EMD, technical part duly filled in)**

2.1.2 Tenderer is requested to submit Tender Part-1 under a covering letter indicating clearly details of tender, chapters, annexure/schedules of complete Tender. Total Technical Offer including drawings and documents, EMD are to be included in this packet. **Part-I: complete tender (including EMD, Technical part duly filled in)**. This shall also contain the un-priced bid i.e. bill of quantities of the bid duly filled up but blanking the price figures. The price and rates shall be submitted in Part II.

Part –II: PRICE PART

2.2 Price Part should consist of only price schedule supplied by Project Seabird/Engineer under a covering letter and no other documents. Schedule of price shall be read with work description, relevant specifications, invitation to tender, General Conditions of Contract and Special Conditions of Contract.

2.2.1 **Part-II: Price Part:** No soft copy of the tender documents can be given. Tenderer shall photocopy Project Seabird/Engineer's price format (bill of quantities) and fill up the rates in figures and words. Tenderer shall not retype the bill of quantities.

The price format given along with Specification should only be filled, stamped and signed.

2.3 Tender must be submitted as under:

2.3.1 Part-I in 3 (three) copies and

2.3.2 Part-II in 3 (three) copies in a separate Sealed Covers as mentioned above, super scribing the Tender No., Part No. (i. e. Part – I or Part-II), and the last date of receipt of tender on the cover.

Both sealed packet of part-I & part-II shall be sent in another cover duly sealed indicating tender no., description and due date of opening.

2.4 Insertion, post-script, addition and alteration shall not be recognized unless confirmed by tenderer's signature and stamp.

2.5 Incomplete tender or tenders (not submitted as per requirement as indicated in the 'Invitation to Tender') are likely to be rejected.

2.6 **Tenderer shall submit Earnest Money along with Part-I as detailed in the Tender for consideration of the offer.**

2.7 The tenders as submitted will consist of the following:

2.7.1 Earnest Money Deposit in line with Para 1.0 of Invitation to Tender.

2.7.2 Power of Attorney in favour of a person signing the tender documents duly notarised in original. This will be in a stamp paper and the signature of the person shall be duly attested. Private/Public Limited companies shall enclose the relevant Board Resolution.

2.7.3 One set of entire tender documents duly signed on each page as a token of acceptance of all the tender terms and conditions mentioned therein including priced bill of quantities.

2.7.4 Duly filled in annexure enclosed

2.7.5 Details of work of similar nature carried out by the tenderer in past.

2.7.6 Details of present work Contracts under execution by the Tenderer with their date of completion and any other commitment (work-load if any) as per the Form -III enclosed duly signed by **Auditor**.

2.7.7 Quality Assurance Plan

2.7.8 Man power and tools and equipment deployment programme (category wise and month wise).

2.7.9 Any other technical information the tenderer wishes to furnish.

- 2.7.10 Latest Sales Tax Clearance Certificate along with PAN and Sales Tax numbers;
- 2.7.11 Deviations to the Technical Specification/Commercial terms, if any, to be spelt out separately.
- 2.7.12 Specific confirmation (**Annexure-A**)
- 2.7.13 Duly filled Check List (**Annexure-D**)
- 2.8 Tenders prepared in any other form may be liable for rejection
- 2.9 The tenders will be received at the office of -

**Director General,
Project Seabird,
West Block V, R K Puram,
New Delhi -110066**

3. SCOPE OF WORK

- 3.1 The scope of work, inter alia, covers :-
 - 3.1.1 Carry out Geophysical Surveys (Bathymetry, Seismic Reflection, Side Scan Sonar & Magnetic) using proper vessel for the same and
 - 3.1.2 Preparation of draft and final reports in both soft (electronic) and hard copy including all the drawings and figures as laid down in these specifications.

For further details refer to Section IV Technical Specifications and Scope of Work

4. PRICE

- 4.1 The tenderer shall quote lump sum price in respect of fixed scope of work of each mobilization of equipment & with unit rates duly filled up in price format given in tender documents for variable scope of work. The Contract will be operated on lump sum basis for fixed scope of work and on unit rate basis for variable scope of work. The lump sum price for the fixed scope of works shall be firm and binding for the detailed scope of works as per specifications and drawings.
- 4.2 For the variable scope of work, the contract price shall be adjusted based on the actual quantity executed under various items of work as per the schedule of items and the unit rates as agreed.



- 4.3 The tenderer shall quote the prices/unit rates both in figure and words. No material modification to the specifications, item description in schedule of items, contract clauses shall be entertained. However, any deviation and financial implications may be reflected in covering letter of tender under Part-I of tender.
- 4.4 In case of difference in the rates mentioned in words and figures, the rate mentioned in words shall be considered.
- 4.5 All the taxes & duties and other Government levies as applicable shall be included in the above price, as explained in Clause 5.1 & 5.2 hereinafter.
- 4.6 The tenderer shall quote the prices considering supply of all materials by tenderer.
- 4.7 Any work which is not specifically included in drawings/schedule of items but required to be executed to complete the scope of work within the minimum engineering practice shall be done at no extra cost. In case of any additions/deletions in defined scope of work beyond the drawings for lump sum scope or to variable scope of work as per schedule of quantities, the valuation of deviation shall be made as per Condition 62 of General conditions of Contract. The total contract price shall be adjusted accordingly.

5. TAXES AND DUTIES

- 5.1 All the taxes & duties are to be included in the enclosed Schedule of rates. The Schedule of rates quoted shall bear all applicable taxes (such as value added or sales tax, service tax or income taxes, duties, fees, levies) including tax on Works contract.
- 5.2 All existing taxes and duties like Excise Duty, Sales Tax, Service Tax, Works Contract Tax, Entry Tax, Fees, levies, octroi or other charges levied on the tenderer in connection with the contract work shall be borne by the tenderer. All new taxes on the Contract as a whole imposed by Govt. legislation during the Contract period shall be reimbursed at actual by Project Seabird (PSB) against documentary evidence. However, such reimbursement shall not apply for any intermediate components/items including raw materials.

6. TERMS OF PAYMENT

- 6.1 Subject to any deductions which are authorized to be made under the contract, the contract price shall be payable as indicated in the enclosed General Conditions of Contract.

7. TIME OF COMPLETION



7.1 Time of completion is the essence of the contract. Tenderer shall complete the work in accordance with the Completion Schedule indicated in the Specification to Tender.

8. LIQUIDATED DAMAGES

8.1 Liquidated Damages shall be applicable as per enclosed General Conditions of Contract.

9. PERIOD OF VALIDITY OF TENDER

9.1 Unless otherwise specified, the Tenderer shall keep his tender valid initially for a period of 120 days from the date on which the tenders are due to be submitted.

10. LANGUAGE

10.1 The tender shall be submitted in English language.

11. EARNEST MONEY DEPOSIT

11.1 The Contractor(s) shall submit Earnest Money Deposit as detailed in Invitation to tender in one of the following form along with their tender.

11.2 DD/FDR/Banker's Cheque/ Bank Guarantee as per Form DPM-13 from any Indian Nationalized bank/Scheduled Commercial Bank permitted to carry out business in India, in favour of Director General, Project Seabird Payable at New Delhi. The DD/FDR/Banker's Cheque/ Bank Guarantee shall be kept valid initially for a period of 06 (six) months from the due date for submission of tender.

Non-submission of Earnest Money will render the Tender as invalid and consequently ignored.

12. CAPACITY OF THE TENDERER

12.1 TECHNICAL CAPACITY

The Tenderer shall satisfy Employer's Representative/Engineer that he possesses the necessary technical experience and qualification and that he has at his disposal suitable modern facilities and properly qualified staff to ensure that he can undertake the work to the best of quality and workmanship. The Tenderer shall furnish necessary particulars with documentary proof in this regard with the Tender.

12.2 LEGAL CAPACITY

The Tenderer shall satisfy Employer's Representative/Engineer that he is competent and authorized to submit Tender and/or to enter into a legally binding Contract with Accepting Officer. To this effect any person giving a Tender shall



render documentary evidence that his signature on the Tender submitted by him is legally binding upon himself, his firm or company, as the case may be.

12.3 AUTHORITY OF PERSON SIGNING DOCUMENTS

Even in case of firm or companies which have already granted power of Attorney to an individual authorizing him to sign tender and in pursuance of which tenders are being signed by such person as a routine, fresh power of Attorney duly executed in his favour stating specifically that the person has authority to bind such partners of the firm or the company as the case may be to the condition relating to Arbitration Clause, should be submitted with the tender unless such authority has already been given by the firm or the company.

13. ARRANGEMENT OF TENDER

13.1 The Tender shall be neatly arranged, plain and intelligible, type-written on white paper with consecutively numbered pages in solid binding and each page stamped and signed. They should not contain any terms and conditions, printed or otherwise, which are not applicable to the tender.

14. NO CLAIM OR COMPENSATION FOR SUBMISSION OF TENDER

14.1 The Tenderer, whose Tender is not accepted, shall not be entitled to claim any costs, charges, expenses of and incidental to or incurred by him through or in connection with his submission of Tenders, even though DG Project Seabird may withdraw the Invitation to Tender.

15. SALES TAX CLEARANCE CERTIFICATE

15.1 The Tenderer shall furnish the Sales Tax Clearance Certificate with the tender duly countersigned by the respective officer. Tenders submitted without valid Sales Tax Clearance Certificate will not be considered valid.

16. SIGNING OF CONTRACT

16.1 On the Tender being accepted by the Accepting Officer, a Contract will be signed and executed by and between the Accepting Officer and the successful Tenderer, on the basis of the Terms and Conditions indicated in the Invitation to Tender, Technical Specification and Correspondence exchanged along with other relevant documents.

17. PERFORMANCE SECURITY

17.1 Upon acceptance of tender, the contractor within the time specified in the Letter of Acceptance, shall deposit with the EMPLOYER Bank Guarantee as per Proforma, at **Annexure H**, from any Indian Nationalized Bank / scheduled Commercial Bank authorised to carry out business in India, for an amount equivalent to 10% (Ten percent) of the total value of the Contract. The contractor shall ensure that Bank

Guarantee against Performance Security shall remain valid till successful completion of work.

- 17.2 Whenever the Employer determines on addition to the Contract Price as a result of variation, the Contractor at the request of the - Employer, shall promptly increase the value of the Security Deposit by an equal percentage.

18. GENERAL INSTRUCTION FOR COMPLIANCE

- 18.1 In case a 'BLANK TENDER' is submitted, it should be indicated by endorsement 'BLANK' made prominently on the envelope and signed by the tenderer.

- 18.2 In view of postal and other delays, it is suggested that the tender be sent by a special messenger if necessary or posted sufficiently in advance of the date and time fixed for receipt of tenders. Tenders received late will not be considered. Telegraphic/ Electronic offers will not be considered even if they are received in time.

- 18.3 Tenders will be opened in the presence of tenderers on the due date and time for opening of the tender. Tenderers, who have submitted their tenders and are desirous of being present at the time of opening of the tenders, may do so at the appointed time.

18.4 Critical Path Method (CPM)

18.4.1 The tender is based on CPM.

18.4.2 The tenderers are expected to be fully conversant with the technique and employ technical staff who can use the technique in sufficient details. Sufficient books and other literature on the subject are widely available which the tenderer may make use of.

18.4.3 The time allowed for the completion of the work has been worked out through CPM after dividing the work in broad stages.

18.4.4 The tenderer's attention is drawn to special conditions of the tender regarding preparation of the detailed network and time schedule, for the work and it is his liability for employing sufficient resources to adhere to this schedule. Any inability on the part of the tenderer in using the technique will be taken as his technical insufficiency.

18.4.5 The Employer may issue amendments/errata to the tender documents before due date of submission of tenders. The tenderer is required to read the tender documents in conjunction with the amendments, if any, issued by the Employer. The Tenderer is not supposed to incorporate the amendments/errata

in the body of the tender documents either in ink or pencil. In case the amendments /errata issued are incorporated by the Tenderer in the body of the tender, these shall not be considered and the amendments/errata to tender documents as issued by the Employer shall only hold good.

19. Under no circumstances will close relations who have business dealing with one another/sister concern be allowed to tender for the same contract as separate competitors. A breach of this condition will render the tenders of both the parties liable for rejection.
20. The DG, Project Seabird, West Block V, R K Puram, New Delhi – 110066 will be the Accepting Officer here-in-after referred to as such for the purpose of this contract.
21. DG, Project Seabird shall return the Earnest Money where applicable to all unsuccessful tenderers by endorsing an authority on the deposit receipt for its refund. The DG, Project Seabird will return the earnest money to the successful tenderer by endorsing on the deposit receipt for its refund on receipt of an appropriate amount of security deposit.
22. The Accepting Officer reserves his right to accept a tender submitted by a public undertaking giving a purchase preference over other tender(s) which may be lower as are admissible under the Government Policy. No claim for any compensation or otherwise shall be admissible from such tenderers whose tenders may be rejected on account of the said policy.
23. The tenderers are advised to visit the site by making prior appointment with Employer's Representative/Engineer.
24. A tenderer shall be deemed to have full knowledge of all related documents, samples, site etc. whether he has inspected them or not.
25. Any tender which proposes any alterations to any of the conditions laid down or which proposes any other conditions of any description whatsoever is liable to be rejected. The specific confirmation sheet enclosed as **ANNEXURE –A** shall be duly signed and submitted.
26. The submission of a tender by a tenderer implies that he had fully read this notice and other communications of contract and has made himself/herself aware of the scope, specifications of and local condition of the work that may be awarded to him and other factors likely to have bearing on the execution of the work.
27. Tenderers must be very careful to deliver a bona fide tender or in the alternative return blank tender complete with all the documents forming part of the tender. A bona fide tender must satisfy each and every condition laid down in this notice.
28. The Accepting Officer does not bind himself to accept the lowest or any Tender or to give reason for not doing so.



29. PRE-QUALIFICATION (PQ) CRITERIA

29.1 The tenderers meeting the requirements of PQ criteria stated in the enclosed **Annexure–B** only shall be considered for further evaluation. The tenderer shall furnish the **Forms I, II, IIA, III, IV, V, VI & VII** duly filed in with all the supporting documents such as annual reports/balance sheets, work order copies and completion certificates from Employers in support of meeting the PQ criteria.

30. ACKNOWLEDGEMENT

Please acknowledge receipt of this Invitation to Tender and confirm that you will submit the tender on due date. If you are not in a position to quote please return the Tender Document to us.

Thanking you,

Yours Sincerely,
For and on behalf of
DG PROJECT SEA BIRD

Encl: As above.

1. Annexure A
2. Annexure B
3. Forms I, II, IIA, III to VII
4. Check List



ANNEXURE - A

**SPECIFIC CONFIRMATION
(TO BE SIGNED BY TENDERER)**

WE HEREBY CONFIRM THE FOLLOWING:

1. Our quotation is in total conformity with the tender stipulations and we do not have any additional technical or commercial conditions.
2. We have familiarised ourselves with the site conditions and have satisfied ourselves of the availability of the specified equipment required for the Survey.
3. We are submitting the bar chart for the project activities, details of manpower and equipment to be deployed, in line with the indicated completion schedule.
4. We accept all your technical & commercial terms and conditions.

SIGNATURE OF TENDERER

SEAL

PLACE:

DATE



ANNEXURE - B

NOTICE INVITING TENDER

Ref No: SB/5/555/ Marine Geo Physical Survey

Dated:-.....

Sealed tenders are invited from eligible contractors/firms under two bid system for the work of **“Marine Geo Physical Survey for Project Seabird Phase IIA, at Karwar.”** as per the details furnished hereunder:-

Estimated Cost of Work: Rs 39.95 lakhs

Cost of tender document: Rs 1000/- (Rupees one thousand only)

EMD: Rs - 80,000/ (Rupees eighty thousand) in favour of Director General Project Seabird New Delhi-110066. EMD will be submitted along with offer in the form of DD/FDR/Bankers cheque/Bank Guarantee from any Indian Nationalised Bank/Scheduled commercial Bank permitted to carryout business in India. Exemption from submission of EMD is allowed for SSI units registered with NSIC against valid NSIC certificate.

Site of Work: Naval Base at Karwar located at 110 KM South of Goa on the Western Coast of India.

Completion period: 2 Months from the Commencement Date

Non-transferable tender documents with relevant details can be obtained from the office of DG, Project Seabird, West Block V, RK Puram, New Delhi 110066 between **26 June 2015 to 24 July 2015**, during working hours, on payment of non-refundable fee of Rs 1000/- in the form of Demand Draft drawn in favour of Director General Project Seabird New Delhi payable at New Delhi

Eligibility and Qualification Criteria:

1. Should have an average annual turnover of at least 30% of the estimated cost of work being tendered, during the last 3 years (as on 31st March 2015)

Notes:

- (i) The above information is to be submitted in the attached FORM-I.
- (ii) The Bidders should note that the average turnover shall be calculated by adding the turnover of the last three financial years and dividing the same by 3.
- (iii) Documentary proof for turnover such as audited balance sheet, profit & loss account statement for annual turnover shall be submitted with the tender (copies duly notarized).

2. Should have successfully completed **“similar works in India”** of values listed below during the last 7 Financial Years (as on 31 March 2015).



a) Three similar completed works each costing not less than 40% of the estimated cost of work being tendered

(or)

b) Two similar completed works each costing not less than 50% of the estimated cost of work being tendered

(or)

c) One similar completed work costing not less than 80% of the estimated cost of work being tendered

Notes:

- (i) List of similar works shall be provided in the attached FORM-II and details of each works shall be provided in FORM-IIA
- (ii) “**Similar Work**” means **Geo Physical Survey** carried out for more than 360 Hectares in river/sea.
- (iii) In case of 3 similar works stated at 2 a) above, the total area of all the 3 works for which the marine geophysical survey was carried out, should not be less than 360 hectares in river / sea.
- (iv) Similarly in case of 2 similar works stated at 2 b) above, the total area of both the works for which the marine geophysical survey was carried out, should not be less than 360 hectares in river / sea.
- (v) Documentary proof in support of executed works such as work order along with completion certificate or Employer’s Certificate for such experience should be submitted by the Bidder.

3. Bidder shall provide the information about its current contract commitments for the next two years (beyond March 2015) in FORM-III.

Note: In case the Bidder has a total of current contract commitments, for the next 2 years beyond March 2015, more than 6 times⁵ of the total of its turnover for the financial year 2014-15, the Bidder shall not be considered for further evaluation due to lack of Bid Capacity.

4. Bidder shall have at least the following equipment for conducting the surveys:-

SN	Description of Equipment /Plant	Minimum Number required
1.	DGPS Positioning System	1

SN	Description of Equipment /Plant	Minimum Number required
2.	Navigation and data logging system	1
3.	Data Processing system	1
4.	Multi beam Eco Sounder System	1
5.	Single Beam Eco Sounder Stem	1
6.	Sub Bottom Profiler System (Pinger/Sparker/Boomer)	1 each
7.	Side Scan Sonar System	1
8.	Digital Geophysical Data Acquisition system.	1
9.	Magneto Meter System	1
10.	Automatic Tide Gauge System	1
11.	Survey Boat	1

Notes:

- (i) The Bidders should provide the information of equipment in FORM-IV.
- (ii) For the owned equipment /plants, the Bidder should submit proof of ownership such as purchase order / warranty document etc. In the absence of purchase order / warranty document the Bidder can submit an affidavit on the appropriate stamp paper listing the details of the equipment/plants owned by him. The affidavit should be notarised.
- (iii) If the Bidder does not own the equipment / plants, he should attach the confirmatory letter or hiring agreement from the owner of the equipment/plants for hiring it/ utilization of service.

5. Bidder shall provide the information about the personnel/staff proposed for the execution of this contract. As a minimum the Bidder is required to engage the following personnel /staff for conducting the surveys and processing of data/submitting the reports:

S.N.	Position	Minimum number required	Minimum Qualification	Minimum Experience in similar works (in years)
1	Project Manager	1	Degree in Civil Engineering or MSc (Geology)	10 years of experience in Geophysical Survey Works
2	Surveyor	1	Diploma in Civil Engineering or Survey Recorder Grade II, Indian Navy	3 years of experience in Geophysical Survey Works
3	Geophysicist	1	MSc (Geology)	5 years of experience in Geophysical Surveys

Notes:-

- (i) The Bidder shall provide information about the personnel/staff proposed for the execution of this contract in FORM-V.
 - (ii) The Bidder shall also submit the CVs of the proposed personnel/staff.
6. The Bidder shall submit a brief Site Organisation Chart in FORM-VI describing the duties of each personnel/staff.
7. The Bidder shall submit a brief methodology of conducting the surveys which inter alia shall include the following:-
- Survey Planning, Preparation and Transportation to Site
 - Equipment Setup, Configuration and Calibration
 - Data Accusation and Quality Control
 - Data Processing, Charting and Quality Check
8. In addition to the above, the Bidder shall submit the following documents also:-
- A simple Work Plan showing how the Bidder proposes to organize and carry out the Works and to achieve Stages and complete the whole of the Works within time.
 - A brief Safety Plan
 - A brief Quality Assurance Plan

The bids of those firms which do not meet the Eligibility and Qualification Criteria stated in Paragraphs 1 to 8 above, shall be considered non-responsive. Accordingly their Price Bid (under Cover II) shall not be considered and shall be returned to them unopened.

Please note that the above criteria shall be evaluated on Pass/Fail basis and no marks shall be assigned to any criteria.

Miscellaneous:

1. The Contractor will either have an office at site or make adequate arrangements at Karwar for effective interaction with the Employer /Engineer.
2. Project Seabird takes no responsibility for delay or non-receipt of offers sent by post. Offers received after due date and time will not be considered.
3. Project Seabird reserves the absolute right to reject any or all offers and cancel the tendering process without assigning any reasons whatsoever. The opinion/decision of Project Seabird shall be final and conclusive. Project Seabird shall neither be held liable for such action nor be under any obligations to inform the applicant of the reasons for the same.
4. Purchase preference policies as per the latest Government of India guidelines will be applicable.



5. Offers from Joint Ventures/ Consortium will not be considered.

Last date for Submission of tender: 1500 hrs on 28 Jul 2015 at HQ, Project Seabird.

Date of opening of tender: 1530 hrs on 28 Jul 2015 (Part-I) at HQ, Project Seabird.

For any further details, enquiry can be made from DG, Project Seabird on any working day during working hours.



ANNEXURE - C

LETTER FROM THE CONTRACTOR

To,

Director General
Project Seabird
West Block V
RK Puram
New Delhi 110066

Dear Sir,

I/we have examined the following documents and site relating to the Marine Geo-Physical Survey for Project Seabird at Karwar:

1. Invitation of Tender with Annexures and Forms
2. General Conditions of Contract
3. Special Conditions of Contract
4. Technical Specifications, Scope of Work, Drawings
5. Bills of Quantities/Price Format

I/we hereby tender for the works referred to in the aforesaid documents upon the terms and conditions contained or referred to therein and in accordance, in all respect with the specifications of quantities and within the period of completion.

I/we hereby agree to submit Earnest Money Deposit (EMD) in favour of Director General Project Seabird, New Delhi, along with Tender. I/ We agree to keep the EMD as the Security Deposit, which is not to bear any interest for the due executing of the contract works.

Having examined the tender documents (containing hereto) relating to the works specified in the memorandum here in after set out and having visited and examined the site of the works specified in their said memorandum and having acquired the requisite information relating thereto as affecting the tender. I/We hereby offer to execute the works specified in the said memorandum at the rates mentioned in the schedule of quantities here to and in accordance with all respects of the specifications, design, drawings and instructions in writing referred to in the tender schedule and with such material as are provided with for by and in all other respects in accordance with such conditions so for as they may be applicable.

I/We hereby agree that if the work is not commenced within 2 weeks from the Commencement Date, the Employer has the right to cancel the Letter of Acceptance, Notice to Commencement Work, Contract Agreement, if any, entered with me/us and the EMD deposited by me/us can be forfeited without giving any notice to me/us. The



Employer has also the right to execute the work through other agencies at our risk and expense if I/We fail to commence the work within 2 weeks from the date of issuing the notice of Commencement Date.

My/Our Address is;

My/Our Bankers are:

The names of the partners of our firms are:

The name of the authorized person to sign the contract is:

Or, Name of the person having the power of attorney to sign the contract is:

Latest Income tax clearance certificate No., issued date, ward no., place:

Yours Sincerely,

Signature of the Tenderer along with seal

The undersigned declares that the statement made and the information provided in the application being submitted, are complete, true and correct in every detail.

Sign

Name

For and on behalf of

Note: Certified true copies as proof for power of attorney, is certified to be enclosed along with tender documents.

Signature of the Contractor with seal



FORM – I

Annual turnover data form

(SHOULD BE COUNTERSIGNED BY AUDITOR)

Name of Applicant:	
Annual turnover data for the last 3 years	
Year	Annual Turnover in Rs. In Lakhs
2012-2013	
2013-2014	
2014-2015	

AUDITOR'S SIGNATURE

**TENDERER'S SIGNATURE
WITH STAMP**

Attach: - Copies of audited balance sheets for the year as mentioned above.

FORM – II

PARTICULAR EXPERIENCE RECORD

(List of “Similar Works” to the proposed works for which the pre-qualification is sought. Should contain only the works awarded and completed from 1-4-2010 onwards). Please see definition of “Similar Works” in Para 2 of Notice Inviting Tender.

(FURNISH INFORMATION IN THIS FORM FOR ALL SIMILAR WORKS UNDERTAKEN. USE SEPARATE SHEET FOR EACH ITEM)

Name of the Applicant:				
SL. NO.	Work Description	Date of award	Value in Rs (in Lakhs)	Whether Form II A furnished Yes/No
				Yes/No
				Yes/No
				Yes/No
				Yes/No
				Yes/No
				Yes/No
				Yes/No
				Yes/No
				Yes/No
				Yes/No

Signature of the Tenderer

In the above Table, list only those works which have similar nature and complexity to the nature of work under this contract. The details of each of the works mentioned in the above table must be provided separately in **Form IIA**.

Where ever Form IIA is not furnished for any item, the item will not be considered.

FORM – IIA

DETAILS OF CONTRACTS OF SIMILAR NATURE AND COMPLEXITY

(FURNISH INFORMATION IN THIS **FORM** FOR ALL THE ITEMS LISTED IN **FORM II**. USE SEPARATE SHEET FOR EACH ITEM)

Name of the Applicant:		
1	Name of the Contract	
2	Country	
3	Name of the Employer	
4	Employer's Address	
5	Name of works and special feature relevant to this contract	
6	Value of the total contract (Rs. In lakhs)	
7	Date of Award	
8	Date of completion	
9	Specified requirements	
10	Were there any penalties/fines /stop-notice /compensation/ liquidated damages imposed? (Yes/No) If yes, give amount and explanation	

Notes:-

1. Documentary proof in support of executed works such as work order along with completion certificate or Employer's Certificate for such experience should be submitted by the Tenderer.
2. Provide completion certificates/satisfactory progress for above mentioned work. In the absence of documentary proof, the details will be ignored.

**TENDERER'S SIGNATURE
WITH STAMP**



FORM – III

CURRENT CONTRACT COMMITMENTS

(TO BE COUNTERSIGNED BY AN AUDITOR)

Name of the Applicant:					
Name of Contract	Name of Employer	Value of Firm's portion of total contract (Rs. Lakhs)	Stipulated date of completion	Value of outstanding work for the next 2 years (Rs. Lakhs) (Beyond March 2015)	Estimated completion date
Total value					

SIGNATURE OF AUDITOR

TENDERER'S SIGNATURE WITH STAMP

1. Details of all works which are at various stages of execution, including works for which work orders have been received but work is yet to start, or works approaching completion but for which full completion certificates are yet to be issued, are to be provided.
2. Details as available at the time of preparation of this documents have to be provided.
3. Enclose copies of Work Orders.

FORM – IV

Equipment proposed for the work

The tenderer will provide adequate information to demonstrate clearly that it has the capability to meet the requirements for each and all items of equipment listed below.

SN	Description of Equipment /Plant	Minimum Number required	Owned/Hired
1.	DGPS Positioning System	1	
2.	Navigation and data logging system	1	
3.	Data Processing system	1	
4.	Multi beam Eco Sounder System	1	
5.	Single Beam Eco Sounder Stem	1	
6.	Sub Bottom Profiler System (Pinger/Sparker/Boomer)	1 each	
7.	Side Scan Sonar System	1	
8.	Digital Geophysical Data Acquisition system.	1	
9.	Magneto Meter System	1	
10.	Automatic Tide Gauge System	1	
11.	Survey Boat	1	

In addition to the above, the Tenderer should also list all other key/important equipment /plants which he intends to mobilise/use to execute the Works.

Notes:

- (i) For the owned equipment /plants, the Tenderers should submit proof of - ownership such as purchase order / warranty document etc. In the absence of purchase order / warranty document the Tenderer can submit an affidavit on the appropriate stamp paper listing the details of the equipment/plants owned by him. The affidavit should be notarised.
- (ii) If the Contractor does not own the equipment / plants, he should attach the confirmatory letter or hiring agreement from the Employer of the equipment/plants for hiring it/ utilization of service.
- (iii) The above 'List of Equipment /Plants' is indicative only. The Tenderers shall be responsible for all Equipment/Plants required for completion of the Work.

DATE:

TENDERER'S SIGNATURE WITH STAMP



FORM – V

Personnel/Staff proposed for the Project

(Here specify the qualification and experience summary of the Key Personnel proposed to be employed for the work)

S.N.	Position	Proposed No.	Qualification	Experience in similar works (in years)
1	Project Manager			
2	Surveyor			
3	Geophysicist			

The Bidder shall provide the CVs of the proposed personnel/staff

DATE:

TENDERER'S SIGNATURE WITH STAMP



FORM – VI

Proposed Site Organisation

(Here narrate the Site Organisation Chart)

DATE:

TENDERER'S SIGNATURE WITH STAMP



FORM – VII

Additional Information

Please add any further information that you consider to be relevant to the evaluation of your application for qualification. If you wish to attach any other documents, please list below.

Tenderers should not enclose testimonials, certificates and publicity material with their applications. They will not be taken into account in the evaluation of qualifications and will be discarded.

DATE:

TENDERER'S SIGNATURE WITH STAMP

ANNEXURE - D

**CHECK LIST FOR THE INFORMATION TO BE FURNISHED BY THE TENDERER
ALONG WITH OFFER FOR MARINE GEO PHYSICAL SURVEY**

Sl. No	DESCRIPTION	FURNISHED	NOT FURNISHED
1	Earnest Money Deposit in line with Clause 1 of Invitation to Tender.		
2	Power of Attorney in favour of a person signing the tender documents duly notarized in original. This will be in a stamp paper and the signature of the person shall be duly attested. Private/Public Limited companies shall enclose the relevant Board Resolution.		
3	One set of entire tender documents duly signed on each page as a token of acceptance of all the tender terms and conditions mentioned therein including unpriced BOQ and including tender drawings.		
4	Duly filled-in Form I, II, IIA, III to VII with all the supporting documents such as annual reports/balance sheets, work order copies and completion certificates from Employers in support of meeting the PQ criteria enclosed.		
5	Details of present work Contracts under execution by the Tenderer with their date of completion and any other commitment (work-load if any) as per the Form-III enclosed duly signed by Auditor.		
6	Quality Assurance Plan		
7	Man power and tools and equipment deployment programme (category wise and month wise)		
8	Any other technical information the tenderer wishes to furnish		
9	Latest Sales tax Clearance Certificate along with PAN and Sales Tax numbers as applicable		
10	Deviations if any, to be spelt out separately		
11	Site organization chart		
12	Specific confirmation (Annexure-A)		
13	Duly signed all correspondence letters received from PSB in token of its acceptance.		



SECTION II

GENERAL CONDITIONS OF CONTRACT

PART I

1. DEFINITIONS

1.1 The “Contract” means the documents forming the tender and acceptance thereof, together with the documents referred to therein including these Conditions, Schedules and/or General Summary attached to the form of tender, the Specifications and the drawings, and all these documents, as applicable taken together shall be deemed to form one Contract and shall be complementary to one another,

1.2 The “tender documents” means the form of tender, the applicable Schedules and/or General Summary, these Conditions, and the Specifications and/or Drawings as loaned to Contractors for the purpose of preparing their tenders.

1.3 The “Works” means the works described in the tender documents, or in individual Works Orders and/or accompanying Drawings and Specifications as may be issued from time to time to the Contractor by the Engineer within the powers conferred upon them, including all modified extra or additional works and obligations to be carried out either on the Site or at any factory or workshop or other place for subsequent incorporation, as required for the performance of the Contract.

1.4 The “Site” means the lands and/or other places on, in, into or through which work is to be executed under the Contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the Contract.

1.5 The “Contractor” means the individual or firm or company, whether incorporated or not, undertaking the Works and shall include the legal personal representatives of such individual or the persons comprising such firm or company, or the successors of such individual or firm or company and the permitted assigns of such individual or firm or company.

1.6 “Government” means the President of India, represented by Director General Project Seabird, his successors in office and assigns and the “Accepting Officer” means the duly authorised officer who signs the contract on behalf of the President for this contract, Director General, Project Seabird.

1.7 Blank

1.8 The “Engineer” means the qualified Engineer appointed by the DG, PSB to supervise the Works or part of the Works. Consultant M/s AECOM India Pvt Ltd has already been appointed as the Engineer.

1.9 “Approved” and “directed” mean the approval or direction of the DG, PSB or person deputed by him for the particular purpose.

1.10 “MoD.” means the “Government of India (Ministry of Defence)”.

1.11 "I.S." means "Indian Standards" as issued by the Indian Standards Institution. In the case of Measurement and Term Contracts, "Specifications" means those contained, in the contract together with any amendments, etc., authorised thereto by the tender documents, "Drawings" refer to those accompanying the tender documents and/or any Works Orders referred to therein.

1.12 The "Contract Sum" means: -

1.12.1 In the case of Lump Sum Contracts, the sum for which the tender is accepted;

1.12.2 In the case of Item Rate Contracts for Works by Measurement, the total cost of the work arrived at after extension (multiplying) of the quantities shown in Schedule by the item rates quoted by the tenderer for the various items.

1.13 The "Final Sum" means the amount payable under the contract by Government to the Contractor for the full and entire execution and completion of the Works.

1.14 "Accepted Risks" mean the risk on the Site accepted by the Accepting Officer of riots (otherwise than among Contractor's employees), war, invasion, act of foreign enemies, hostilities, civil war, rebellion, revolution, insurrection, military or usurped power, damage from air craft and acts of God such as earthquake, lightning, unprecedented floods and tornado.

1.15 The "Date for Completion" is the date or dates for completion of the whole or any part of the works, set out or ascertained in accordance with the individual Works Orders or the tender documents, or any subsequent amendment thereto as provided in the condition 9 and 11 hereinafter.

1.16 A "Week" means seven days without regard to the number of hours worked or not worked in any day in that week.

1.17 A "Day" means a day of 24 hours irrespective of the number of hours worked or not worked in that day.

1.18 A "Working Day" means any day other than that prescribed by the Negotiable Instruments Acts as being a holiday and consists of the number of hours of labour as commonly recognised by good employers in the trade in the district where the work is carried out.

1.19 "Emergency Works" mean any urgent measures which, in the opinion of the Engineer, become necessary during the progress of the Works to obviate any risk of accident or failure or which become necessary for security, or rectifications to essential services like water supply and electrification during the maintenance period of the contract.



1.20 “Provisional Items” mean items for which approximate quantities have been included in the tender documents.

1.21 “Day work” means items of labour and/or materials which, in the opinion of the Engineer, are not capable of being evaluated by the accepted methods of measurement or assessment.

1.22 Delete

1.23 “Work Instruction” means instruction to start the actual work at Site after the Contractor submits the work plan, methodology of execution, safety & Quality Assurance Plan, list of necessary equipment / plants and key personnel and any other submittals required under the Contract and the Engineer gives its consent to all these items.

PART II - SCOPE OF CONTRACT

2. Headings and Secrecy to the Conditions

2.1 The headings to these Conditions shall not affect the interpretation thereof.

2.2 The Contractor shall take all steps necessary to ensure that all persons employed on any work in connection with the Contract have taken due notice that the Indian Official Secrets Act, 1923 (XIX of 1923) applies to them and will continue so to apply even after the execution of such works under the Contract.

3. Contract Documents

3.1 The Contract is confidential and must be strictly confined to the Contractor's own use (except so far as confidential disclosure to sub-contractors or suppliers is necessary) and to the purposes of the Contract.

3.2 The Accepting Officer, empowered to issue the Work Order shall furnish to the Contractor free of cost two copies of the signed Drawings, the Specifications, the blank Bills of Quantities, if any, and two copies of all further drawings issued during the progress of the Works. The Contractor shall keep one copy of all Drawings and the Specifications on the Site and the Engineer or his representative shall at all reasonable times have access to them.

3.3 All documents, copies thereof and extracts there from furnished to the Contractor shall be returned to the Engineer/PSB on the completion of the Works or the earlier determination of the Contract.

4. Works to be carried out (Applicable generally to Measurement and Lump Sum Contracts)

4.1 The Contracts shall, except as provided under Schedules include all labour materials, tools, plant, equipment and transport which may be required in preparation for, and for and in the full and entire execution and completion of the Works. The descriptions given in Schedules and the Bills of Quantities shall, unless otherwise stated, be held to include waste on materials, carriage and cartage, carrying in, return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion aforesaid in accordance with good practice and recognised principles.

4.2 The Contractor shall be deemed to have satisfied himself as to the nature of the Site, local facilities of access and all matters affecting the execution and completion of the Works. No extra charges consequent on misunderstanding or otherwise will be allowed.

5. Blank

6. Provisional Items

6.1 The full amount of provisional lump sums and the value annexed to each provisional item inserted in the tender documents shall be deducted from the Contract Sum and the value of work ordered and executed there under shall be ascertained by measurement or valuation as for deviations.

6.2 No work under these items is to be begun without instructions in writing from the Engineer.

6.3 The extent of quantities or items described as “provisional” shall not be varied beyond the limits laid down in Condition 7.

6.4 No addition or deduction shall be made by the Contractor to the amount of the provisional lump sums as included in the tender documents.

6A. Discrepancies and Adjustment of Errors (Applicable generally to Measurement and Lump Sum Contracts)

6.5 The several documents forming the contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawings and figured dimensions in preference to scale.

6.6 In the case of discrepancy between Schedule, the Bills of Quantities, the Specifications and/or the Drawings, the following order of precedence shall be observed:-

6.6.1 Description of Schedule /Bills of Quantities.

6.6.2 Technical Specification.

6.6.3 Drawings.

6.7 If there are varying or conflicting provisions made in any one document forming part of the Contract DG Seabird shall be the sole deciding authority with regard to the intention of the document and his decision in this respect shall be final and binding.

6.8 Any error in description, quantity or rate in Schedules and Bills of Quantities, or any omission there from shall not vitiate the Contract or relieve the Contractor from the execution of the whole or any part of the Works comprised therein according to the Drawings and Specifications or from any of his obligations under the Contract. Any error in quantity, rate or amount in Schedule/Bills of Quantities and general summary shall be adjusted in accordance with the following rules:-

6.8.1 *General (applicable to all types of contracts):-*

6.8.1.1 In the event of a discrepancy between description in words and figures quoted by a tenderer the description in words shall prevail.

6.8.1.2 In the event of an error occurring in the amount column of Schedule or Bill of Quantities as a result of wrong extension of unit rate and quantity, the unit rate whether inserted by Engineer prior to issue of tenders or quoted by tenderers, shall be regarded as firm and the extensions shall be amended on the basis of the rate. Where Provisional Lump Sum, Provisional Sum and/or "Prime Cost" Sum is/are inserted by Engineer is required to quote a percentage as well as an amount of addition/deduction thereon, and there is any Discrepancy between the percentage and the corresponding amount of addition/deduction, the percentage quoted by the Contractor shall be regarded as firm, the amount and total shall be amended on the basis of the percentage.

6.8.1.3 All errors in totalling in the amount column and in carrying forward totals shall be corrected.

6.8.1.4 Any omissions to include in the totals or to carry forward, the Prime Cost Sums and the percentage thereon, or the Provisional Sums, shall be corrected, if no percentage on Prime Cost Sums is quoted by the Contractor, the percentage shall be considered as 'NIL'.

6.8.1.5 Blank

6.8.1.6 The totals of Bills of Quantities, as amended above, shall be carried over to Schedule. Similarly, totals of various sections of Schedule as amended shall be carried over to the General Summary and the tendered sum amended accordingly. The tendered sum so altered shall, for the purpose of the tender, be substituted for the sum originally tendered and considered for acceptance instead of the original sum quoted by the Contractor. Any rounding off of totals in various sections of Schedule or in General Summary by the tenderer shall be ignored.

6.8.2 *Lump Sum Contracts based on Drawings and Specifications and Item Rate Contracts* – The Contractor shall be deemed to have calculated his own details from Drawings and Specifications before quoting unit rates against different items of Schedule. Notwithstanding any errors or inaccuracies in the unit rates quoted by the Contractor those rates shall be deemed to include for the full and entire completion of the items of Work in accordance with the provisions of the Contract and no adjustment shall be made on account of any errors in those rates.

7. Variations (Applicable specifically to Measurement and Lump Sum Contracts)

7.1 The contractor shall not make any alteration in, addition to or omission from the Works as described in the tender documents except in pursuance of the written instructions of the Engineer.

7.2 No work that radically changes the original nature & scope of the Contract shall be ordered as a Variation and in the event of disagreement between the Contractor and Engineer, the decision, of the DG, Project Seabird shall be final and binding on the Contractor.

7.3 The Accepting Officer, or person specially authorised by him on his behalf, may vary either by way of addition to and/or deduction from the Works so described provided that the Contract Sum be not thereby varied on the whole by more than the percentage set out in the tender documents (referred to herein below as the 'Variation Limit'), subject to the following restrictions:-

7.3.1 The Variation Limit referred to above is net effect (algebraic sum) of all additions and deductions ordered.

7.3.2 In no case shall the Additions/ Deductions (arithmetical sum) exceed twice the variation limit.

7.3.3 The variations ordered on items of any individual trade included in the Contract shall not exceed plus/ minus 25% of the value of that trade in the Contract as a whole or half the Variation Limit, whichever is less.

7.3.4 The value of additions of items of any individual trade not already included in the Contract shall not exceed 10% of the Variation Limit.

7.4 All additions and deductions will be priced as per Condition 62 hereof and added to or deducted from the Contract Sum. Whenever the Accepting Officer intends to exercise such right his intention shall be communicated to the Engineer whose order in writing shall specify the deviations which are to be made, the lump sum assessment or the proposed basis of payment, the change, if any, in the date or completion of the relevant phase and/or the entire Contract. Any objection by the Contractor to any matter concerning the Variation Order, shall be notified by him in writing to the Engineer within fifteen days from the date of receipt of such order, but under no circumstances shall the progress of the Works be stopped (unless so ordered by the Engineer) owing to differences or controversy that may arise from such objection. In default of such notification the Contractor will be deemed to have accepted the order and the conditions stated therein without in any way affecting the right of the parties to rectify any mistake on the basis of payment only to the extent it differs from Condition 62. In the event of the Contractor failing to agree with the Engineer regarding the proposed alteration of time, the objection shall be referred to the DG Seabird whose decision shall be final and binding.

8. Emergency Works

8.1 If any Emergency Works become necessary and the Contractor is unable (in respect whereof the decision of the Engineer shall be final and binding) or unwilling at once to carry them out, the Engineer may by his own or other work-people, carry them out as he may consider necessary. If the Emergency Works shall be such as the Contractor is liable under the Contract to carry out at his own expense or which are included in the Contract rates for Works being executed by the Contractor, all expenses incurred on them by Employer shall be recoverable from the Contractor, and if necessary, be adjusted or set off against any sum payable to him under this or any other Contract.

9. Suspension of Works

9.1 The Contractor shall, on receipt of the order in writing of the Engineer, suspend the progress of the Works or any part thereof for such time and in such manner as the Engineer may consider necessary for any of the following reasons :

9.1.1 on account of any default on the part of the Contractor; or

9.1.2 for proper execution of the Works or part thereof for reasons other than the default of the Contractor; or

9.1.3 for safety of the Works or part thereof.

9.2 The contractor shall, during such suspension, properly protect and secure the Works to the extent necessary and carry out the instructions given in that behalf by the Engineer.

9.3 If the suspension is ordered for reasons (9.1.2) and (9.1.3) in Sub-para (9.1) above:

9.3.1 The Contractor shall be entitled to an extension of time equal to the period of every such suspension plus 25% for completion of the item or group of items of work for which a separate period of completion is specified in the Contract and of which the suspended work forms a part, and

9.3.2 If the total period of all suspensions in respect of an item or group of items of work for which a separate period of completion is specified in the Contract exceeds 60 days the Contractor shall, in addition, be entitled to compensation, as the Engineer may on the basis of facts consider reasonable, in respect of salaries and/or wages paid by the contractor to his employees & labour at site actually remaining idle during the period of suspension.

9.4 If the Works or part thereof is suspended on the orders of the Engineer for more than four months at a time, except when suspension is ordered for reason in Sub-para 9.1.1 above, the Contractor may after 60 days from receipt

of such order serve a written notice on the Engineer requiring permission within fifteen days from receipt by the Engineer of the said notice, to proceed with the Works or part thereof in regard to which progress has been suspended and if such permission is not granted within that time, the Contractor, if he intends to treat the suspension, where it affects only a part of the Works as an omission of such part by government under Condition 7 or where it affects the whole of the works, as an abandonment of the Works by Government, shall within ten days of expiry of such period of 15 days give notice in writing of his intention to the Engineer. In the event of the Contractor treating the suspension as an abandonment of the Contract by Government, he shall have no claim to payment of any compensation on account of any profit or advantage which he may have derived from the execution of the work in full but which he could not derive in consequence of the abandonment. He shall, however, be entitled to compensation, as the Engineer may on the basis of facts consider reasonable, in respect of salaries and/or wages paid by him to his employees and labour at Site actually remaining idle in consequence and also for loss on materials collected which could not be utilised on these or other Works including 5% as overheads on materials, salaries and wages.

10. Blank

EngineerEngineerEngineerEngineerEngineerEngineerEngineerEngineerEngineer

11. Time, Delay and extension –

11.1 Time is of the essence of the Contract and is specified in the contract documents or in each individual Works Order.

11.1.1 As soon as possible after the Contract is let or any substantial Works Order is placed and before Work under it is begun, the Engineer and the Contractor shall agree upon a Time and Progress Chart. The Chart shall be prepared in direct relation to the time stated in the contract documents or the Works Order for completion of the individual items thereof and/or the Contract or Works Order as a whole. It shall indicate the forecast of the dates for commencement and completion of the various trade processes or sections of the work, and shall be amended as may be required by agreement between the Engineer and the Contractor within the limitation of time imposed in the contract documents or Works Order. If the Works be delayed.

11.1.1.1 by force majeure, or

11.1.1.2 by reason of abnormally bad weather, or

11.1.1.3 by reason of serious loss or damage by fire, or

11.1.1.4 by reason of civil commotion, local combination of workmen, strike or lockout, affecting any of the trades employed on the work, or

11.1.1.5 by reason of delay on part of nominated sub-contractors, or nominated suppliers which the Contractor has, in

the opinion of Engineer, taken all practicable steps to avoid, or reduce, or

11.1.1.6 by reason of delay on the part of Contractors or tradesmen engaged by Government in executing works not forming part of the contract, or

11.1.1.7 by reason of any other cause, which in the absolute discretion of the DG Seabird is beyond the Contractor's control; then, in any such case the Officer hereinafter mentioned may make fair and reasonable extension in the completion dates of individual items or groups of items of Works for which separate periods of completion are mentioned in the contract documents or Works Order, as applicable.

11.1.2 Upon the happening of any such event causing delay, the Contractor shall immediately, but not later than 30 days of the happening of the event, give notice thereof in writing to the Engineer but shall nevertheless use constantly his best endeavour to prevent or make good the delay and shall do all that may reasonably be required to the satisfaction of the Engineer to proceed with the works. Extension of time shall be granted by Accepting Officer of the Contract

11.1.3 In case the Contractor fails to notify the Engineer of happening of an event(s) causing delay within the period of 30 days stipulated in sub-para 11.1.2 above, he shall forfeit his right to claim extension of time for the delay caused due to such event(s).

11.1.4 Extension of time, as granted above, shall be communicated to the Contractor by Engineer in writing and shall be final and binding.

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11.3 No claim in respect of compensation or otherwise, howsoever arising, as a result of extensions granted under Condition 11 above shall be admitted.

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15. Plant and Equipment

15.1 The contractor shall at his own cost and expense, supply all tools, plants and equipment (hereinafter referred to as T & P) required for the execution of work.

16. Transport (Applicable only to Measurement and Lump sum Contracts).

16.1 The Contractor shall at his own expense supply all transport required for the execution of the Contract.



17. Assignment or Transfer of Contract.

17.1 The Contractor shall not without the prior written approval of the DG Seabird assign or transfer the Contract, or any part thereof or any share, or interest therein. No sum of money to become payable under the Contract shall be payable to any person other than the Contractor unless the prior written approval of the DG Seabird to the assignment or transfer of such money is given.

18. Sub-contracts

18.1 The Contractor shall not sub-let any portion of the Contract without the prior written approval of the DG Seabird. The DG Seabird may invite offers for performance by sub-contractors of any work in satisfaction of prime cost sums included in the tender documents. In the exercise of this option, offers will be made returnable to the DG Seabird who shall select the firm to do the Work and inform the Contractor, who will be required to conclude a Contract with the nominated sub-contractor for the execution of the Work as specified by the DG Seabird to the sub-contractor. The DG Seabird shall not nominate any sub-contractor against whom the contractor shall make reasonable objection.

18.2 The Contractor shall be responsible for any sub-contractor or contractor who may carry out any work or supply any material in connection with the Contract, whether such person be selected by the Accepting Officer or by the Contractor. The Contractor shall make good any loss or damage suffered by Government by reason of any default, neglect or failure on the part of such person in relation to such work or material.

18.3 Nothing herein contained shall relieve the Contractor of his liabilities and obligations under the Contract or in any way affect the Contractor's direct responsibility to Government nor shall it render Government in any way responsible to such sub-contractor.

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PART III - PERFORMANCE OF THE CONTRACT

22. Performance Security Deposit.

22.1 The Contractor, within fifteen calendar days of the receipt of Letter of Acceptance of his tender, shall submit a Performance Bank Guarantee (PBG) of the value of 10% of the contract amount, valid till completion of work and payment of Final Bill.

22.2 Earnest Money will be refunded to the Contractor after the PBG has been received.

23. Orders under the Contract.

23.1 All orders, notices, etc., to be given under the Contract shall be in writing, typescript or printed and if sent by registered post to the last known place of abode or business of the Contractor shall be deemed to have been served on the date when in the ordinary course of post it would have been delivered to him. The Contractor shall carry out without delay all orders given to him.

24. Admission to Site.

24.1 The Contractor will not be permitted to enter on (other than for inspection purposes) or take possession of the Site until instructed to do so by the Engineer. The portions of the Site to be occupied by the Contractor will be clearly defined and/or marked on the Site plan, and the Contractor will on no account be allowed to extend his operations beyond these areas.

24.2 The Contractor shall provide if necessary or if required on the Site all temporary access thereto and shall alter, adapt and maintain the same as required from time to time and shall take up and clear away as and when no longer required and make all good.

24.3 Engineer shall have power to execute other Works (whether or not in connection with the Works) on the Site contemporaneously with the execution of the Works and the Contractor shall give reasonable facilities for such purpose.

24.4 The DG Project Seabird reserves the right of taking over, at any time, any portion of the Site which it may require and the Contractor shall at his own expense clear such portion forthwith. No photographs of the Site or of the Works or any part thereof shall be taken, published or otherwise circulated, without the prior written approval of the Engineer. No such approval shall however exempt the Contractor from complying with any statutory provisions in regard to the taking and publication of such photographs.

24.5 DG Project Seabird's. Officials connected with the Contract shall have right of entry to the Site at all time.

24.6 The Engineer shall have the power to exclude from the site any labour whose admission thereto may in his opinion be undesirable for any reason

whatsoever. Engineer shall have the power to exclude from the site any person whose admission thereto may in his opinion be undesirable for any reason whatsoever. The Contractor shall not be allowed any compensation on account of the foregoing.

25. Contractor's Supervision –

25.1 The Contractor shall either himself supervise the execution of the Contract or shall appoint a competent Agent approved by the Engineer to act in his stead.

25.2 Where the Contractor is not a qualified Engineer or even if he is so qualified, he cannot, in the opinion of the Engineer, give his full personal attention to the Works, he shall at his own expense, employ a person, possessing the adequate qualifications and/or experience as his accredited Agent to supervise the Works and to receive instructions from the Engineer.

25.3 The employment of Agent as aforesaid shall be to the approval of the Engineer who may verify his qualifications and experience by referring to original degree /diploma /testimonials which shall be made available to him by the Contractor or by the individual employed or proposed to be employed.

25.4 If the Contractor fails to appoint a suitable Agent on being ordered to do so, the Engineer shall have full powers to suspend the execution of the Works until such date as a suitable Agent is appointed and the Contractor shall be held responsible for the delay so caused to the Works.

25.6 Orders given to the Contractor's Agent shall be considered to have the same force as if they had been given to the Contractor himself.

25.7 The Contractor or his Agent shall be in attendance at the Site during all working hours and shall superintend the execution of the Works with such additional assistance in each trade as the Engineer may consider necessary.

25.8 The Contractor or his accredited Agent shall attend, when required and without making any charge for doing so, either at the office of the Engineer or on the Works to receive instructions.

25.9 The Engineer shall have full powers, and without giving any reason, to require the Contractor immediately to cease to employ in connection with this Contract any Agent, servant or employee whose continued employment is in his opinion undesirable. The Contractor shall not be allowed any compensation on this account.

26. Labour

26.1 The Contractor shall employ labour in sufficient number to maintain the required rate of progress and of quality to ensure workmanship of the degree required by the Specifications and to the satisfaction of the Engineer.



26.2 The Contractor shall remain liable for the payment of all wages or other moneys to his work-people or employees under the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employer's Liability Act, 1938, Workmen's Compensation Act, 1923, or any other Act or enactments relating thereto and rules framed there under from time to time. The Contractor shall work only on and during the hours of a working day unless he obtains the prior written approval of the Engineer to do otherwise. If such approval is given no liability in respect of any excess cost arising there from shall be incurred by Government.

26.3 The Contractor shall furnish to the Engineer every morning a distribution return of the number and description by trades of his work-people employed on the Works.

26.4 The Contractor shall during the progress of the Works comply at his own expense with all the rules and provisions contained in the Govt. Model Rules for the protection of health and sanitary arrangements for workers employed by contractors (appended hereto as Annexure "G" to these Conditions) and shall at his own expense provide for all facilities in connection therewith to the satisfaction of the Engineer and on his failure to do so, the Engineer shall be entitled to provide the same and recover the cost thereof from the contractor.

26.5 The Contractor shall not employ in connection with the Works any person who has not completed eighteen years of age.

26.6 The Contractor shall at his own expense arrange for all the safety provisions as per the Govt. Safety Code (appended to these Conditions as an Annexure "F") and shall at his own expense provide for all facilities in connection therewith to the satisfaction of the Engineer and on his failure to do so, the Engineer shall be entitled to provide the same and recover the cost incurred in that behalf from the Contractor. Provided further that in case of failure to arrange for the safety provisions as above the contractor should in addition be liable to pay a penalty of Rs. 50 for each default.

27. Maternity Benefit Rules for Female Workers employed by Contractor-

Leave and pay during leave shall be regulated in accordance with the Labour laws and will be the responsibility of the contractor.

28. Anti-malarial Precautions

28.1 The Contractor shall, at his own expense conform to all anti-malarial instructions given to him by the Engineer, including the filling up of borrow-pits.

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30. Nuisance

30.1 The Contractor will not at any time do, cause or permit any nuisance or the Site or do anything which shall cause unnecessary disturbance or

inconvenience to the Employers, tenants or occupiers of other properties near the Site and to the public generally and will secure the efficient protection of all streams and waterways against pollution.

31. Water

31.1 Water will not be arranged by Government. Contractor shall make his own arrangements for all requirements of water. The contractor shall make his own arrangements for storing the water required for the works, labour & workmen etc at his own expense. Potable water shall be used to fulfil the requirements.

32. Temporary Workshops, Stores, etc.

32.1 The Contractor shall during the progress of the Works provide, erect and maintain at his own expense all necessary temporary workshops, stores, offices, etc., as are required for the proper and efficient execution of the Works. The planning, siting and erection of these buildings shall be to the approval of the Engineer and they shall at all times be kept tidy and in a clean and sanitary condition to the entire satisfaction of the Engineer and at the Contractor's expense.

32.2 On completion of the Works the whole of such temporary buildings shall be cleared away and the Site reinstated and left clean and tidy to the entire satisfaction of the Engineer and at the Contractor's expense.

32.3 Additionally, the Engineer may at his discretion permit the Contractor to occupy as workshops and stores such Government buildings as may be available at the Site or Station for that purpose and, in the event of the Contractor occupying such accommodation, the prescribed rent for the same shall be recoverable from him. The Contractor undertakes to maintain such premises at his own expense in a clean and sanitary condition and to deliver up the same on the completion of the Works or the termination of the Contract, or in the event of the said buildings being required by the Engineer within one month of an order to that effect, in a clean state complete in every particular (damage from the accepted risks and fair wear and tear excepted).

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34. Tools and Plant on Site

34.1 All tools, plant and equipment brought to the Site shall become the property of Government and shall not be removed off the Site without the prior written approval of the Engineer. But whenever the Works are finally completed or the Contract is determined for reasons other than the default of the Contractor, the Contractor shall forthwith remove from the Site all tools, plant and equipment (other than such as may have been provided by Government) and upon such removal, the same shall revert in, and become the property of the Contractor.

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36. Precautions against Risks

36.1 The Contractor shall be responsible at his own expense, for precautions to prevent loss or damage from any and all risks other than for Accepted Risks and to minimize the amount of any such loss or damage and for the provision of all protective works, casings, coverings, etc., required for the purpose, until the Works have been handed over complete to the Engineer.

36.2 All Government buildings rented to the Contractor for workshops or stores shall be insured by the Contractor in favour of Government to their full value against risk of loss or damage from whatsoever cause arising other than the accepted risk, and the policy of insurance and receipts for premiums shall be produced when required by the Engineer; provided always that where part only of a building is rented to the contractor, he will be required to ensure the building only if used by him for the purpose of storing or using materials of a combustible nature, as to which the decision of the Engineer shall be final and binding.

36.3 The Contractor shall provide all watchmen necessary for the security and protection of the Site, the Works and of materials and plant and all things on the Site during the progress of the Works, and shall solely be responsible for and shall take all reasonable and proper steps for protecting, securing, lighting and watching all places on or about the Works and the Site which may be dangerous to any person whomsoever.

37. Notices and Fees

37.1 Statutory clearance / notices /fees in respect of buildings, water and electricity will be taken care by Project Seabird. All the rest will be responsibility of contractor.

37.2 The Contractor shall give all notices required by any statutory provisions or by the regulations and/or bye-laws of any local authority and/or of any public service, company or authority affected by the Works or with whose systems the same are or will be connected and he shall pay and indemnify Government against any fees, or charges demandable by law under such acts, regulations and/or bye-laws in respect of the Works and shall make and supply all drawings and plans required in connection with any such notices.

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43. Approval of Works by Stages

43.1 All Work embracing more than one process, shall be subject to examination and approval at each stage thereof and the Contractor shall give

due notice in writing to the Engineer when each stage is ready. In default of such notice being received, the Engineer shall be entitled to appraise the quality and extent thereof and in the event of any dispute the decision of the Engineer thereon shall be final and binding.

44. Execution of the Works

44.1 The works shall be executed in a workmanlike manner and to the satisfaction in all respect of the Engineer. In the case of Measurement and Lump Sum Contracts, the Engineer will communicate or confirm his instructions to the Contractor in respect of the execution of work in a "Works Site Order Book" maintained at his office and the Contractor shall visit this office daily and shall confirm receipt of such instructions by signing the relevant entries in this book. Such entries will rank as orders or notices in writing within the intent and meaning of these conditions.

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46. Inspection of the Works

46.1 DG Project Seabird's Officers concerned with the contract shall have power at any time to inspect and examine any part of the Works and the Contractor shall give such facilities as may be required to be given for such inspection and examination.

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48. Damage and Loss

48.1 All plant, temporary building, equipment, and things on the Site provided by or on behalf of the Contractor for the construction of, but not for incorporation in the Works shall stand at the risk and be in the sole charge of the Contractor and the Contractor shall be responsible for, and with all possible speed make good, any loss or damage thereto arising from any cause whatsoever, including the accepted risk.

48.2 Save as above, the works and all materials and things whatsoever including such as may have been provided by Government on the Site in connection with and for the purpose of the Contract shall stand at the risk and be in the sole charge of the Contractor and the Contractor shall be responsible for, and with all possible speed make good, any loss or damage thereto arising from any cause whatsoever, other than the accepted risks and shall deliver up all the Works to the Engineer in a clean state, complete in every particular. In the event of any loss or damage to Works & materials on the Site from any of the accepted risks, or loss or damage from accepted risk and fire to Govt. buildings handed over to contractor for execution of works referred to in Condition 47, the following provisions shall have effect:-



48.2.1 the Contractor shall, as may be directed in writing by the Engineer, remove from the Site any debris and so much of the Works as shall have been damaged, taking to the Engineer's store such articles and/or materials as may be directed;

48.2.2 the Contractor shall, as may be directed in writing by the Engineer, proceed with the erection and completion of the Works under and in accordance with the provisions and conditions of the contract; and

48.2.3 there shall be added to the Contract Sum the net amount due, ascertained in the same manner as for deviations, or as prescribed for payment, in respect of the re-execution of the Works lost or damaged, the replacement of any materials and things lost or damaged but not incorporated in the Works at the date when the loss or damage occurred, and the removal by the Contractor as provided above the debris and damaged Work referred to therein.

48.2.4 Provided always that the Contractor shall not be entitled to payment under this Condition in respect of so much loss or damage as has been occasioned by any failure on his part to perform his obligations under the Contract.

48.3 Save as provided above, the Contractor shall at his own expense reinstate and make good to the satisfaction of the Engineer or make compensation for any injury, loss or damage occasioned to any property or right whatever including property and rights of Government (or agents, servants, or employees of Government) being injury, loss or damage arising out of or in any way in connection with the execution or purported execution of the Contract and further, the Contractor shall indemnify Government against all claims enforceable against Government (or any agent, servant or employee of Government) or which would be so enforceable against Government were Government, a private person, in respect of such injury (including injury resulting in death), loss or damage to any person whomsoever or property, including all claims which may arise under the Workmen's Compensation Act or otherwise.

49. Completion

49.1 The Works shall be completed to the entire satisfaction of the Engineer and in accordance with the Contractor's forecast of time and progress where operative.

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50. Compensation for Delay

50.1 If the Contractor fails to complete the Works and clear the site on or before the date(s) fixed for completion, he shall, without prejudice to any other right or remedy of Government on account of such breach, be liable to pay compensation and not as penalty at 1 % (one percent) of the Contract value of the item or group of items of Work (excluding the contract value of such individual items as are completed and taken over by Engineer on or before the date(s) fixed for completion, in terms of Condition 49 hereof) for which a separate period of completion is given in the Contract, for every week that the whole of the work in respect of the item or group of items of Works concerned remains uncompleted, even though the Contract as a whole be completed by the latest date-specified in the Contract for any item or group of items of Works.

50.2 For the purpose of this condition the "Contract Value" shall be the value at contract rates of the work as actually ordered including all deviation orders on the Contractor. When the delay is not a full week or in multiples of a week but involves a fraction of a week the compensation payable for that fraction shall be proportional to the number of days involved. Provided always that the total amount of compensation to be paid under this Condition shall not exceed to 10% (Ten percent) of the contract value of the item or group of items of Work for which a separate period of completion is given.

50.3 The provision under this Clause shall not apply in the cases of delay for which CONTRACTOR is entitled to extension of completion time as per contract.

50.4 The Project Seabird may without prejudice to any other method of recovery, deduct the amount of liquidated damages from any money in his hands due or become due to the CONTRACTOR.

50.5 The payment or deduction of such liquidated damages shall not relieve the CONTRACTOR of his obligation to complete the work or any other of his obligations and liabilities under the Contract.

51. Laws Governing the Contract

51.1 This Contract shall be governed by the Indian Laws for the time being in force.

52. Cancellation of Contract for Corrupt Acts

52.1 The Accepting Officer whose decision shall be final and binding, shall, without prejudice to any other right or remedy which shall have accrued or shall accrue thereafter to Government, cancel the Contract in any of the following cases and the Contractor shall be subject to payment of any loss or damage resulting, from any such cancellation to the like extent as is provided in the case of cancellation for default:

If the Contractor shall –

52.1.1 offer or give or agree to give to any person in Government service any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other Contract for Government service, or

52.1.2 enter into a Contract with Government in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of payments thereof have previously been disclosed in writing to the Accepting Officer, or

52.1.3 obtain a contract with Government as a result of ring tendering or other *non bona fide* methods of competitive tendering without first disclosing the fact in writing to the Accepting Officer.

53. Cancellation of Contract for Insolvency, Sub-letting, etc

53.1 The Accepting Officer may, without prejudice to any other right or remedy which shall have accrued or shall accrue thereafter to Government, cancel the Contract in any of the following cases: -

53.1.1 If the Contractor –

53.1.1.1 being an individual or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be granted by him for behalf of his creditors ;

or

53.1.1.2 being a company shall pass a resolution or the Court shall make an order for the liquidation of its affairs or a receiver or manager on behalf of the debenture holders shall be appointed or circumstances shall arise which entitle the Court or debenture holders to appoint a receiver or manager;

or

53.1.1.3 assigns, transfers, sub-lets or attempts to assign, transfer or sub-let, any portion of the Works without the prior written approval of the Accepting Officer.

53.2 Whenever the Accepting Officer exercises his authority to cancel the Contract under this condition, he may complete the Works by any means at the Contractor's risk and expense provided always that in the event of cost of completion or after alternative arrangements have been finalised by the

Government to get the Works completed, estimated cost of completion (as certified by Engineer) being less than the Contract cost, the advantage shall accrue to the Government. If the cost of completion or after alternative arrangements have been finalised by the Government to get the Works completed, estimated cost of completion (as certified by Engineer) exceeds the moneys due to the Contractor under this Contract, the Contractor shall either pay the excess amount ordered by Engineer or the same shall be recovered from the Contractor by other means.

53.3 The Government shall also be at liberty to hold and retain in their hands materials, tackle, machinery and stores of all kinds on Site, as they may think proper and may at any time sell any of the said materials, tackle, machinery and stores and apply the proceeds of sale in or towards the satisfaction of any loss which may arise from the cancellation of the Contract as aforesaid.

53.4 The Government shall also be at liberty to use the materials, tackle, machinery and other stores on site of the contractor as they think proper in completing the work and the Contractor will be allowed the necessary credit. The value of the materials and stores and the amount or credit to be allowed for tackle and machinery belonging to the Contractor and used by the Government in completing the work shall be assessed by the Engineer and the amount so assessed shall be final and binding.

53.5 In case the Government completes or decides to complete the Works under the provisions of this Condition the cost of such completion to be taken into account in determining the excess cost to be charged to the Contractor under this Condition shall consist of the cost or estimated cost (as certified by Engineer) of materials purchased or required to be purchased and/or the labour provided or required to be provided by the Government as also the cost of the Contractor's materials used with an addition of such percentage to cover superintendence and establishment charges as may be decided by the Accepting Officer whose decision shall be final and binding.

54. Cancellation of Contract in part or in full for Contractor's Default

54.1 If the Contractor:-

54.1.1 makes default in commencing the Works within a reasonable time from the date of the handing over the site, and continues in that state after a reasonable notice from Engineer.

or

54.1.2 in the opinion of the Engineer at any time, whether before or after the date or extended date for completion, makes default in proceeding with the Works, with due diligence and continues in that state after a reasonable notice from Engineer.

or

54.1.3 fails to comply with any of the terms and conditions of the Contract, or after reasonable notice in writing with orders properly issued there under,

or

54.1.4 fails to complete the Works, Work order and items of Works, with individual dates for completion and clear the Site on or before the date of completion.

54.2 The Accepting Officer may, without prejudice to any other right or remedy which shall have accrued or shall accrue thereafter to Government, cancel the Contract as a whole or only such Work Order(s) or items of Work in default from the Contract. Whenever the Accepting Officer exercises his authority to cancel the Contract as a whole or in part under this Condition he may complete the Work by any means at Contractor's risk and cost, provided always that in the event of cost of completion or after alternative arrangements have been finalised by the Government to get the Works completed, estimated cost of completion (as certified by Engineer) being less than the Contract cost, the advantage shall accrue to the Government. If the cost of completion or after alternative arrangements have been finalised by the Government to get the Works, completed, estimated cost of completion (as certified by Engineer.) exceeds the moneys due to Contractor under this Contract, the Contractor shall either pay the excess amount ordered by Engineer or the same shall be recovered from the Contractor by other means. The Government shall also be at liberty to hold and retain in their hands materials, tackle, machinery and stores of all kinds on Site, as they may think proper and may at any time sell any of the said materials, tackle, machinery and stores and apply the proceeds of sale in or towards the satisfaction of any loss which may arise from the cancellation of the Contract as aforesaid.

54.3 The Government shall also be at liberty to use the materials, tackle, machinery and other stores on Site of the Contractor as they think proper in completing the work and the Contractor will be allowed the necessary credit. The value of the materials and stores and the amount of credit to be allowed for tackle and machinery belonging to the Contractor and used by the Government in completing the work shall be assessed by the Engineer and the amount so assessed shall be final and binding. In case the Government completes or decides to complete the Works or any part thereof under the provision of this Condition, the cost of such completion to be taken into account in determining the excess cost to be charged to the Contractor under this Condition shall consist of the cost or estimated cost (as certified by Engineer) of materials purchased or required to be purchased and/or the labour provided or required to be provided by the Government as also the cost of the Contractor's materials used with an addition of such percentage to cover superintendence and establishment charges as may be decided by the Accepting Officer, whose decision shall be final and binding.

55. Termination of Contract for Death

55.1 Without prejudice to any of the rights or remedies under this contract, if the Contractor dies, the Accepting Officer shall have the option of terminating the Contract without compensation to the Contractor.

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57. Special Powers of Determination (Applicable only to Measurement and Lump Sum Contracts)

57.1 If at any time after the acceptance of the tender, the Government shall for any reason whatsoever not require the whole or any part of the Works, to be carried out, the Accepting Officer shall give notice in writing of the fact to the Contractor, who shall have no claim to any payment of compensation or otherwise howsoever on account of any profit or advantage which he might have derived from the execution of the Works in full but which he did not derive in consequence of the foreclosing of the Works.

57.2 He shall be paid at Contract rates for the full amount of the Work executed including such additional Works, e.g., clearing of Site, etc., as may be rendered necessary by the said foreclosing. He shall also be allowed a reasonable payment (as decided by the Accepting Officer) for any expenses sustained on account of labour and materials collected but which could not be utilised on the Works as verified by the Engineer.

58. Fair Wage

58.1 The contractor shall pay not less than the "fair wage" as defined below or the minimum wage fixed under the Minimum Wages Act, whichever is higher to labourers engaged by him on the Work.

"Fair Wage" means wage whether for time or piece work notified at the time of inviting tenders for the Work and where such wages have not been so notified the wages prescribed by the Accepting Officer for the stations at which the Work is done.

58.2 The Contractor shall notwithstanding the provision of any Contract to the contrary, cause to be paid a "fair wage" or minimum wage fixed under the Minimum Wages Act whichever is higher to labourers indirectly engaged on the Work including any labour engaged by his sub-contractors in connection with the said Work, as if the labourers had been directly employed by him.

58.3 In respect of all labour directly or indirectly employed on the Works for the performance of the Contractor's part of this Agreement, the Contractor shall comply with or cause to be complied with the Contractor's Labour Regulations (appended hereto as Annexure "A" to these Conditions) in regard to all matters provided therein and with all other Labour Laws as may be applicable.

58.4 The Engineer concerned shall have the right to deduct, from the moneys due to the Contractor, any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfilment of the Conditions of the Contract for the benefit of the workers, non-payment of wages or of deductions made from his or their wages, which are not justified by the terms of the Contract or non-observance of the Regulations.



58.5 Vis-à-vis the Government, the Contractor shall be primarily liable for all payments to be made under and for the observance of the Regulations aforesaid without prejudice to his right to claim indemnity from his sub-contractors.

58.6 The Regulations aforesaid shall be deemed to be a part of this Contract and any breach thereof shall be a breach of this Contract.

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PART IV - VALUATION AND PAYMENT

61. Records and Measurement

61.1 All items having a financial value shall be entered in the Measurement Book or other approved Form, as applicable so that a complete record is obtained of all Work performed under the Contract.

61.2 Mobilisation/ demobilisation, etc priced in Schedule /Bill of quantities as a unit lump sum will be entered by number as the unit lump sum.

61.3 Work carried out for agreed lump sums will be described and similarly recorded.

61.4 Measurement shall be restricted to that required to ascertain the financial liability of Government under the Contract.

61.5 Work which falls to be measured in details shall be measured physically, without reference to any local custom that may obtain, excepting where it may otherwise be directed in the tender documents. The measurements shall be taken jointly by any person or persons duly authorized on the part of the Engineer and by the Contractor.

61.6 The Engineer shall give reasonable notice in writing to the Contractor of appointment for measurement.

61.7 The contractor shall, without extra charge, provide assistance with every appliance and other things necessary for measurement.

61.8 The Contractor shall bear all the costs of his own measurement.

61.9 Measurements shall be entered in the Measurement Book or other approved Form as applicable and signed and dated by both parties each day on the Site on completion of measurement. If the Contractor objects to any of the Measurements recorded on behalf of the Engineer a note to that effect will be made in the Measurement Book or other approved Form as applicable against the item or items objected to; and such note shall be signed and dated by both parties engaged in taking the measurements.

61.10 If as a result of such objection, it becomes necessary to re-measure the Work wholly or in part the expense of such re-measurement shall be borne by the party requiring the measurements to be retaken provided that a net error is found by this re-measurement to amount to less than 5 per cent of the value as recorded by the first measurements. But where the net errors amount to 5 per cent or over of the said value, then the cost is to be borne by the other Party. In any case, if the net value of errors found exceeds Rs.500, the expense of re-measurement is to be borne by the other party.

61.11 If the Contractor's representative fails to attend when required, the Engineer shall have power to proceed by himself to take measurements and in that case, these measurements shall be accepted by the Contractor as final.

62. Valuation of Variations

62.1 Should it be found necessary to execute any item of work (either in fixed scope or variable scope) which is not included in the scope of contract/drawings, the rates for such item of work shall be fixed as follows:-

62.1.1 Where the extra works are of similar character and of equivalent value and/ or executed under similar conditions as to any item of work appearing at schedule of quantities, then the rates for such extra items shall be equal to the rates of such items or lower rate of the identical item

62.1.2 If the extra works are of similar character but differing in particulars and value then the rate of such item or items as modified by the applicable price variation or at direct pro-rata rates shall be derived from Schedule of Quantities.

62.1.3 Where items of similar character are not contained in the schedule of quantities and none of the foregoing methods are applicable, rates shall be based on the MES standard schedule of rates (SSR) 2010 (Part II – Rates) together with up-to-date amendments as applicable to said schedule plus 20 % increase.

62.1.4 If the rate cannot be obtained by any of the methods referred above, the rates shall be decided on the basis of the cost to the Contractor at site of work plus 15% to cover overheads and profit.

63. Re-imburement/refund on variation in price

63.1 The contract price/agreed rates shall be firm and binding and shall not be subject to any variation/escalation due to change in cost of materials, labour rates, any exchange variations fluctuations in railway freight and any conditions whatsoever during the tenure of the contract.

64. Blank

65. Final Bill (Applicable only to Measurement and Lump Sum Contracts)

65.1 The Final Bills shall be submitted by the Contractor in duplicate within three months of physical completion of the works to the satisfaction of the Engineer.

65.2 It shall be accompanied by all abstracts, vouchers, etc., supporting it and shall be prepared in the manner prescribed by the Engineer -in -Charge.

65.3 No further claims shall be made by the Contractor after submission of the Final Bill and these shall be deemed to have been waived and extinguished.



65.4 The Contractor shall be entitled to be paid the final sum less the value of payments already made on account, subject to the certification of the final bill by the Engineer.

65.5 No charges shall be allowed to the Contractor on account of the preparation of the final Bill.

66. Payments of Bills

66.1 Payment of undisputed items of the Final Bill shall be made within the period specified hereunder, the period being reckoned from the date of receipt of the Bill by the Engineer:-

66.1.1 Contract amount not exceeding Rs.5 lakhs – Four months

66.1.2 Contract amount exceeding Rs.5 lakhs – Six months

66.2 After payment of the amount of the final bill payable as aforesaid has been made, the Contractor, may if he so desires, reconsider his position in respect of the disputed portion of the final bill and if he fails to do so within 90 days, his disputed claim shall be dealt with as provided in the Contract.

66.3 All payments due under this Contract shall be affected through NEFT. The Contractor shall provide his Account Number, Name of Account Holder, Bank's Name, Branch Name and Address, IFSC Code and type of account to DG Seabird.

66.4 The Contractor is required to acknowledge receipt of all cheques issued in his favour. With regard to Cheques sent to him by post, he shall acknowledge receipt within fifteen days from the date of their receipt. Failure on the part of the Contractor to acknowledge receipt will render him liable to forfeit the facility of receiving cheques by post and unless the Contractor furnishes a satisfactory explanation for his default in this respect payment through cheques sent by post shall not be resumed, and the Contractor shall be required to obtain cheques for future payments on this Contract from the office of the Accepting Officer after rendering proper receipt.

67. Recovery from Contractor

67.1 Whenever any claim(s) for payment of sum of money arise(s) out of or under this Contract against the contractor, the Contractor shall on demand make the payment of the same or agree for effecting adjustment from any amounts due to him by the Government. If, however, he refuses or neglects to make the payment on demand, or does not agree for effecting adjustment from any amounts due to him, Government shall be entitled to withhold an amount not exceeding the amount of the claim(s), from any sum when due or which at any time thereafter may become due to the Contractor, under this or any other Contract with the Government or from any other sum due to the Contractor from the Government (which may be available with the Government) or from the Contractor's Security Deposit or Security Bond amount, and retain the same by way of lien till such time, payment is made by the Contractor or till the claim(s)

is/are settled or adjudicated upon, or till the Contractor, at his expense furnishes Fixed Deposit Receipt(s) duly endorsed as directed by the Accepting Officer, or a Guarantee Bond from a Scheduled Bank for an amount equal to the amount of the claim(s) in the form as directed by the Accepting Officer.

67.2 It is an agreed condition of this Contract that the sum of money so withheld or retained as and by way of lien under this condition by the Government, will be kept withheld or retained as such by the Government, till the claim(s) arising out of or under this Contract is/are settled or adjudicated upon and that the Contractor will have no claim for interest or damages whatsoever on any account in respect of such sum so withheld.

67.3 For the purpose of this Condition, where the contractor is a Partnership Firm, the Government shall be entitled to withhold in whole or in part as may be necessary to cover the amount claimed, any sum found payable to any partner of the Firm, whether in his individual capacity or otherwise.

67.4 Any amount due to the Contractor under this contract may be withheld by way of lien against any amount claimed or which may at any time hereafter be claimed by the Government from the contractor on any account whatsoever, under this or any other contract between them and retained, till the claim(s) is/are settled or adjudicated upon.

67.5 Government reserves the right to carry out post-payment audit and technical examination of the works and Final Bill, including all supporting vouchers, abstracts, etc. Government further reserve the right to carry out the aforesaid examination and enforce recovery when detected, notwithstanding the fact that the amount of the Final Bill may have been included by one of the parties as an item of dispute before an Arbitrator appointed under the Arbitration clause of the Contract and notwithstanding the fact that the amount of the Final Bill figures in the Arbitrator's award.

67.6 If, as a result of such audit and technical examination, any over-payment is discovered in respect of the work done under this Contract, the contractor shall on demand make payment of a sum equal to the amount of over-payment or agree for effecting necessary adjustment from any amounts due to him by Government. If however, he refuses or neglects to make the payment on demand or does not agree for effecting adjustment from any amounts due to him, Government shall be entitled to take action as in sub-para (67.1) hereinbefore. If as a result of such audit and technical examination any under payment is discovered, the amount of under payment shall be duly paid to the Contractor by Government.

67.7 Provided, that, nothing hereinbefore contained shall entitle the Government to recover any over payment in respect of any price agreed between the Accepting Officer or the Engineer-in-Charge and the Contractor under the circumstances specifically prescribed for such method of assessment and that the said right of the Government to adjust over-payment from any sum due or from any sum which may become due to the Contractor or from Security Deposit or Security Bond amount and adjust under payment, shall not extend

beyond a period of two years from the date of payment of the undisputed portion of the Final Bill or in the case of a minus Bill, from the date, the net amount of the final bill is communicated to the Contractor.

67.8 All notices under this condition shall be given by the Engineer/Accepting officer.

68. Refund of Security Deposit.

68.1 The Performance Security Deposit mentioned in Condition 22 above may be refunded to the Contractor after the satisfactory completion and issue of Completion Certificate and payment of the Final Bill provided there are no claims outstanding against the Contractor.

69. Issue of notices.

69.1 Subject as otherwise provided in this Contract, all notices to be given on behalf of the President of India and all other actions to be taken on his behalf may be given or taken on his behalf by the Accepting Officer/ENGINEER-IN-CHARGE or any officer for the time being entrusted with the functions, duties and powers of the Accepting Officer/ENGINEER-IN-CHARGE.

70. Arbitration.

70.1 In accordance with the Arbitration and Conciliation Act, 1996, all disputes, between the parties to the Contract (other than those for which the decision of the Accepting Officer or any other person is by the Contract expressed to be final and binding) shall, after written notice by either party to the Contract to the other of them, be referred to the sole arbitration of a serving officer having degree in engineering or equivalent or having passed final/ direct final examination of Sub Division II of Institution of Surveyors (India) recognised by the Govt. of India to be appointed by Addl. Secretary, Government of India, Ministry of Defence.

70.2 Unless both parties agree in writing such reference shall not take place until after the completion or alleged completion of the Work or termination or determination of the Contract under Condition Nos. 55 and 57 hereof.

70.3 Provided that in the event of abandonment of the Works or cancellation of the Contract under Condition 52, 53 or 54 hereof, such reference shall not take place until alternative arrangements have been finalized by the Government to get the Works completed by or through any other Contractor or Contractors or Agency or Agencies.

70.4 Provided always that commencement or continuance of any arbitration proceeding hereunder or otherwise shall not in any manner militate against the Government's right of recovery from the contractor as provided in Condition 67 hereof.

70.5 If the Arbitrator so appointed resigns his appointment or vacates his office or is unable or unwilling to act due to any reason whatsoever, the authority appointing him may appoint a new Arbitrator to act in his place.

70.6 The Arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties, asking them to submit to him their statement of the case and pleadings in defence.

70.7 The Arbitrator may proceed with the arbitration, *ex parte*, if either party, in spite of a notice from the Arbitrator fails to take part in the proceedings.

70.8 The Arbitrator may, from time to time with the consent of the parties, enlarge, the time up to but not exceeding one year from the date of his entering on the reference, for making and publishing the award.

70.9 The Arbitrator shall give his award within a period of six months from the date of his entering on the reference or within the extended time as the case may be on all matters referred to him and shall indicate his findings, along with sums awarded, separately on each individual item of dispute.

70.10 The sole Arbitrator shall have its seat in New Delhi or such other place in India as may be mutually agreed to between the parties.

70.11 The award of the Arbitrator shall be final and binding on both parties to the Contract.

70.12 The Arbitrator shall give reasons for the award in each and every case irrespective of the value of the claims or counter claims.

71. Jurisdiction of Courts

71.1 Irrespective of the place of issue of Tenders, the place of acceptance of Tenders, the place of execution of Contract or the place of payment under the Contract, the Contract shall be deemed to have been made at the place from where the acceptance of Tenders has been issued and the work is executed/executable. The Courts of the place from where the acceptance of the Tender has been issued or the place where the work is executed/under execution shall alone have jurisdiction to decide any dispute arising out of or in respect of the Contract.

72. Insurance

72.1 Contractor's liability and insurance

72.1.1 From commencement of completion of the works, the Contractor shall take full responsibility for the care thereof and for taking precautions to prevent loss or damage to the greatest extent possible and shall be liable for any damage or loss that may happen to the works or any part thereof from any cause whatsoever and shall at his own cost repair and make good the same so that at completion, the works shall

be in good order and condition and in conformity in every respect with the requirements of the contract and instructions of the Engineer.

72.1.2 Without limiting his obligations and responsibilities under Condition 47 prior to the commencement of work, the Contractor shall insure in the joint name of the Government and the Contractor against all loss or damage from whatever cause for which he is responsible under the terms of the contract and in such manner that the Employer and the Contractor are covered during the period of construction of the works and that defects liability prior to the commencement of the damage caused by the Contractor in the course of any operation carried by him for the purposes of complying with his obligations on safety code.

72.1.2.1 The works and the temporary works to the full value of such works executed from time to time.

72.1.2.2 The materials constructional plant and other things brought to site by the Contractor to the full value of such materials, constructional plant and other things.

72.2 **Damage to persons and property**

72.2.1 The Contractor shall indemnify and keep indemnified the Government against all losses and claims for injuries or damage to any person or any property whatsoever which may arise out of or in consequence of the construction and maintenance of the works and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto.

72.2.2 Before commencing the execution of the work, the Contractor shall without in any way limiting his obligations and responsibilities under the conditions, insure any damage, loss or injury which may occur to any property including that of the Government or to any person (including any employee of Govt.) by or arising out of carrying out of the contract.

72.2.3 Where a Government's building or a part thereof is rented to the Contractor, he shall insure the entire building if the building or any part thereof is used by him for the purpose of storing or using materials of combustible nature. In case of doubt in the matter, the decision of the Engineer shall be final and binding on the Contractor.

72.2.4 All the aforesaid insurance policies shall provide that they shall not be cancelled till the Government has agreed to their cancellation.

72.2.5 The Contractor shall prove to the Engineer or his authorized representative from time to time that he has taken out all the insurance policies referred to above and has paid the necessary premium for keeping the policies alive till the expiry of the Defects Liability period.



72.3 **Remedy on Contractors failure to insure**

72.3.1 If the Contractor and / or his sub-Contractors (if any) shall fail to effect and keep in force the insurance referred to above or any other insurance which he/they may be required to effect under terms of the contract then and in any such case Government required to effect under terms of the contract then and in any such case Government may without being bound to, effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the Government for any moneys due or which may become due to the Contractor or recover the same as a debt due from the Contractor Insurance to be taken with.

PART V - EVALUATION OF PRICE BID ISSUES

73. Evaluation Criteria:

The broad guidelines for evaluation of Bids will be as follows:

- (a) Only those Bids will be evaluated which are found to be fulfilling all the eligibility and qualifying requirements of the tender, both technically and commercially.
- (b) In respect of Two-Bid system, the technical Bids forwarded by the Bidders will be evaluated by the DG Project Seabird with reference to the technical characteristics of the equipment as mentioned in the tender. The compliance of Technical Bids would be determined on the basis of the parameters specified in the tender. The Price Bids of only those Bidders will be opened whose Technical Bids would clear the technical evaluation.
- (c) The Lowest Bid will be decided upon the all-inclusive lowest price quoted by the particular Bidder. The ultimate cost to the DG Project SeabirdDG Project would be the deciding factor for ranking of Bids.
- (d) The Bidders are required to spell out the rates of Customs duty, Excise duty, VAT, Service Tax, etc., in unambiguous terms; otherwise their offers will be loaded with the maximum rates of duties and taxes for the purpose of comparison of prices. If reimbursement of VAT is intended as extra, over the quoted prices, the Bidder must specifically say so. In the absence of any such stipulation it will be presumed that the prices quoted are firm and final and no claim on account of such duties will be entertained after the opening of tenders. If a Bidder chooses to quote a price inclusive of any duty and does not confirm of such duty so included is firm and final, he should clearly indicate the rate of such duty and quantum of such duty included in the price. Failure to do so may result in ignoring of such offers summarily. If a Bidder is exempted from payment of VAT duty upto any value of supplies from them, they should clearly state that no duty will be charged by them up to the limit of exemption which they may have. If any concession is available in regard to rate/quantum of VAT, it should be brought out clearly. In respect of the Bidders who fail to comply with this requirement, their quoted prices shall be loaded with the quantum of VAT which is normally applicable on the item in question for the purpose of comparing their prices with other Bidders.
- (e) If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price will prevail and the total price will be corrected. If there is a discrepancy between words and figures, the amount in words will prevail for calculation of price.
- (f) The Lowest Acceptable Bid will be considered further for placement of contract / Supply Order after complete clarification and contract negotiations as decided by DG Seabird.



74. Price Bid Format:

The Price Bid Format is given in Section V. Bidders are required to fill this up correctly with full details:

- (a) Basic cost of the item/items:
- (b) Is VAT extra?
- (c) If yes, then mention the following:
 - i. Total value on which VAT is leviable:
 - ii. Rate of VAT:
 - iii. Total value of VAT leviable:
- (d) Is Service Tax extra?
- (e) If yes, then mention the following:
 - i. Total value of Services on which Service Tax is leviable:
 - ii. Rate of Service Tax leviable:
 - iii. Total value of Service Tax leviable:
- (f) Any other Taxes / Duties / Overheads / Other costs:
- (g) Grand Total:

ANNEXURE - E

CONTRACTOR'S LABOUR REGULATIONS

1. **Short Title-** These regulations may be called "Contractor's Labour Regulations."

2. **Definitions-**

In these Regulations, unless otherwise expressed or indicated, the following words and expressions shall have the meaning hereby assigned to them respectively, that is to say:-

(a) "Labour" means workers employed by a Contractor directly or indirectly through a sub-contractor or other person or by an agent on his behalf, on a payment not exceeding Rs. 500 per day and will not include supervisory staff like overseers, etc.

(b) "Fair Wages" means wages whether for time or piece work notified at the time of inviting tenders for the Work and where such Wages have not been so notified, the Wages prescribed by the Chief Engineer for the stations at which the Work is done.

(c) "Contractor" shall include every person whether a Sub-Contractor or headman or agent, employing labour on the Work taken on Contract.

(d) "Wages" shall have the same meaning as defined in the payment of Wages Act and includes time and piece rate wage.

3. **Display of Notices regarding Wages, etc.-**

The Contractor shall-

(a) before he commences his Work on Contract, display and correctly maintain and continue to display and correctly maintain, in a clean and legible condition in conspicuous places on the Work, notices in English and in the local Indian Languages, spoken by the majority of the workers, giving the rate of wages which have been certified by the ENGINEER-IN-CHARGE. as fair wages and the hours of Work for which such wages are earned, and

(b) send a copy of such notices to the certifying officers.

4. **Payment of Wages-**

(a) Wages due to every worker shall be paid to him direct.

(b) All wages shall be paid in current currency or coin or in both.

5. **Fixation of Wage Periods-**



- (a) The Contractor shall fix the wage period in respect of which the wages shall be payable.
- (b) No wage period shall exceed one month.
- (c) Wages of every workman employed on the Contract shall be paid before the expiry of seven days, after the last day of the wage period in respect of which the wages are payable.
- (d) When the employment of any worker is terminated by or on behalf of the Contractor, the wages earned by him shall be paid before the expiry of the second working day from the day on which his employment is terminated.
- (e) All payments of wages shall be made on a working day except when the Work is completed before the expiry of the wage period, in which case final payment shall be made within 48 hours of the last working day. *Note.-* The term “working day” means a day on which the work on which the labour is employed is in progress.

6. Wage Book and Wage Slips, etc.-

- (a) The Contractor shall maintain a Wage Book of each worker in such form as may be convenient, but the same shall include the following particulars: -
 - (i) Rate of daily or monthly wages,
 - (ii) Nature of work on which employed.
 - (iii) Total number of days worked during each wage period.
 - (iv) Total amount payable for the work during each wage period.
 - (v) All deductions made from the wages with an indication in each case of the ground for which the deduction is made. (vi) Wages actually paid for each wage period.
- (b) The Contractor shall also maintain a Wage Slip for each worker employed on the Work.

7. Fines and Deductions which may be made from Wages: -

- (a) The Wages of a worker shall be paid to him without any deductions of any kind except the following: -
 - (i) Fines
 - (ii) Deductions for absence from duty, i.e., from the place or places where by the terms of his employment he is required to work. The amount of deduction shall be in proportion to the period for which he was absent.

(iii) Deductions for damage to or loss of goods expressly entrusted to the employed person for custody or for loss of money for which he is required to account, where such damage or loss is directly attributable to his neglect or default.

(iv) Any other deductions which the Central Government may from time to time allow.

(b) No fines shall be imposed on a worker and no deduction for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deduction.

(c) The total amount of fines which may be imposed in any one wage period on a worker shall not exceed an amount equal to three Paise in a rupee or three percent (3%) of the wages payable to him in respect of that wage period.

(d) No fine imposed on any worker shall be recovered from him by instalments or after the expiry of 60 days from the date on which it was imposed.

8. **Register of Fines, etc. –**

(a) The contractor shall maintain a Register of Fines and of all deductions for damage or loss. Such register shall mention the reason for which fine was imposed or deduction for damage or loss was made.

(b) The Contractor shall maintain a list, in English and in the local Indian language clearly defining acts and omissions for which penalty or fines can be imposed. He shall display such list and maintain it in a clean and legible condition in conspicuous places on the Work.

9. **Preservation of Registers-** The Wage Book, the Wage Slip and the Register of Fines and Deductions required to be maintained under these Regulations shall be preserved for 12 months after the date of last entry made in them.

10. **Powers of Labour Welfare officers to make investigation or enquiry-** The Labour Welfare Officer or any other person authorised by the Government of India on their behalf shall have power to make enquiries with a view to ascertaining and enforcing due and proper observances of the fair wage clauses and the provisions of these Regulations. He shall investigate into any complaint regarding the default made by the Contractor or sub-contractor in regard to such provisions.

11. **Report of Labour Welfare Officer-** The Labour Welfare Officer or other person authorised as aforesaid shall submit a report of the results of his investigation or enquiry to the Engineer concerned, indicating the extent, if any, to which the default has been committed, with a note that necessary deductions from the Contractor's bill be made and the wages and other dues be paid to the labourers concerned. In case an appeal is made by the Contractor under clause 12 of these Regulations, actual

payment to labourers will be made by the Garrison Engineer after the Regional Labour Commissioner has given his decision on such appeals.

12. **Appeal against the decision of Labour Welfare Officers:** - Any person aggrieved by the decision and recommendation of the Labour Welfare Officer or other person so authorised may appeal against such decision to the Regional Labour Commissioner within 30 days from the date of decision, forwarding simultaneously a copy of his appeal to the Garrison Engineer concerned but subject to such appeal, the decision of the Officer shall be final and binding upon the Contractor.

13. (a) A workman shall be entitled to be represented in any investigation or enquiry under these Regulations by-

(i) an officer of a registered trade union of which he is a member ;

(ii) an officer of a federation of trade unions to which the trade union referred to in clause (i) is affiliated ;

(iii) where the worker is not a member of any registered trade union, by an officer of a registered trade union connected with or by any other workman, employed in the industry in which the worker is employed.

(b) The Employer shall be entitled to be represented in any investigation or enquiry under these regulations by –

(i) an officer of an association of employers of which he is a member ;

(ii) an officer of a federation of associations of employers to which the association referred to in clause (i) is affiliated ;

(iii) where the employer is not a member of any association of employers, by an officer of an association of employers connected with or by any other employer, engaged in the industry in which the employer is engaged. (c) No party shall be entitled to be represented by a legal practitioner in any investigation or enquiry under these Regulations.

14. **Inspection of Registers-** The Contractor shall allow inspection of the Wage Book, the Wage Slips and the Register of Fines and Deductions to any of his workers or to his agent at a convenient time and place after due notice is received or to the Labour Welfare Officer, or any other person authorised by the Government of India on his behalf.

15. **Submission of Return** – The Contractor shall submit periodical returns as may be specified from time to time.

16. **Amendment-**The Government of India, may from time to time, add to or amend these Regulations and on any questions as to the application, interpretation or effect of these Regulations the decision of the Chief Labour Commissioner or Deputy Chief Labour Commissioner to the Government of India or any other person authorised by the Government in that behalf shall be final.

ANNEXURE - F

GOVERNMENT SAFETY CODE

1. Suitable scaffolds should be provided for workmen for all Works that cannot safely be done from the ground or from solid construction except such short period Work as can be done safely from ladders. When a ladder is used an extra Mazdoor / labour shall be engaged for holding the ladder and if the ladder is used for carrying materials as well suitable foot-holds and hand-holds shall be provided on the ladder and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 ($\frac{1}{4}$ horizontal and 1 vertical).
2. Scaffolding or staging more than 3.5 Metres above the ground or floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached, bolted, braced and otherwise secured at least 1 Metre high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside, and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
3. Working Platform, Gangways and Stairways should be so constructed that they should not sag unduly or unequally, and if the height of the Platform or the Gangway or the Stairway is more than 3.5 Metres above ground level or floor level they should be closely boarded, should have adequate width and should be suitably fenced, as described in (2) above.
4. Every opening in the floor of a building or in a working platform be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 1 Metre.
5. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 Metres in length while the width between side rails in rung ladder shall in no case be less than 30 cms. for ladder upto and including 3 Metres in length. For longer ladders this width should be increased at least 6 mm for each additional 30 cms. Uniform step spacing shall not exceed 30 cms. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the Sites of Work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The Contractor shall also provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and costs which may be awarded in any such suit, action or proceedings to any such person or which may with the consent of the Contractor be paid to compromise any claim by any such person.
6. **Excavation and Trenching-** All trenches 1.2 Metres or more in depth, shall at all times be supplied with at least one ladder for each 30 Metres in length or fraction after thereof ladder shall be extended from bottom of the trench to at least 1 Metre above the surface of the ground. The sides of the trenches which are 1.5 Metres or

more in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides to collapse. The excavated materials shall not be placed within 1.5 Metres of the edge of the trench or half of the depth of the trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances undermining or under cutting shall be done.

7. **Demolition-** Before any demolition work is commenced and also during the process of the work-

- (a) All roads and open areas adjacent to the Work Site shall either be closed or suitably protected;
- (b) No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by the operator shall remain electrically charged;
- (c) All practical steps shall be taken to prevent danger to persons employed from risk or fire or explosion or flooding. No floor, roof or other part of the building shall be so over-loaded with debris or materials as to render it unsafe.

8. All necessary personal safety equipment as considered adequate by the Engineer should be kept available for the use of the persons employed on the Site and maintained in a condition suitable for immediate use; and the Contractor should take adequate steps to ensure proper use of equipment by those concerned.

- (a) Workers employed on mixing Asphaltic materials, Cement and lime mortars shall be provided with protective footwear and protective goggles.
- (b) Those engaged in white washing and mixing or stacking of cement bags or any materials which are injurious to the eyes shall be provided with protective goggles.
- (c) Those engaged in welding works shall be provided with Welder's protective eye shields.
- (d) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
- (e) When workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that the manhole covers are opened and are ventilated at least for an hour before the workers are allowed to get into the manholes and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the Public.
- (f) The contractor shall not employ men below the age of 18 and women on the work of painting with products containing lead in any form. Whenever men above the age of 18 are employed on the Work of lead painting, the following precautions should be taken: -

- (i) No paint containing lead or lead products shall be used except in the form of paste or ready made paint.
- (ii) Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scraped.
- (iii) Overalls shall be supplied by the Contractors to the workmen and adequate facilities shall be provided to enable the working painters to wash during and at cessation of Work.

9. When the work is done near any place where there is risk of drowning, all necessary equipment should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision should be made for prompt first-aid treatment of all injuries likely to be sustained during the course of the Works.

10. Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standard or conditions: -

- (a) (i) These shall be of good mechanical construction, sound *material* and adequate strength and free from patent defect and shall be kept in good repairs and in good working order.

(ii) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength and free from patent defects.
- (b) Every crane driver or hoisting appliance operator shall be properly qualified and no person under an age of 21 years should be in-charge of any hoisting machine including any scaffold winch or give signals to the operator.
- (c) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or lowering or as means of suspension the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of hoisting machine having a variable safe working load, each safe working load of the conditions under which it is applicable shall be clearly indicated. No part of any machine or of any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.
- (d) In case of departmental machine, the safe working load shall be notified by the Electrical Engineer. As regards contractor's machines the Contractor shall notify the safe working load of the machine to the Engineer whenever he brings any machinery to Site of Work and get it verified by the Electrical Engineer concerned.

11. Motor, Gearing, Transmission, Electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards, hoisting appliances

should be provided with such means as will reduce to the minimum the risk of accidental descent of the load, adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energised, insulating mats, wearing apparel such as gloves, sleeves and boots as may be necessary should be provided. The workers should not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

12. All scaffolds, ladders and other safety devices, mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities shall be provided at or near places of work.

13. These safety provisions should be brought to the notice of all concerned by display on a Notice Board at a prominent place at the work spot. The persons responsible for compliance of the safety code shall be named therein by the Contractor.

14. To ensure effective enforcement of the rules and regulations relating to Safety precautions, the arrangements made by the Contractor shall be open to inspection by the Labour Officer, Engineer of the department or their representatives.

15. Notwithstanding the above clauses from (1) to (14) there is nothing in these to exempt the Contractor, to exclude the operations of any other Act or Rules in force in the Republic of India.

ANNEXURE - G

GOVT. MODEL RULES FOR THE PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS FOR WORKMEN EMPLOYED BY CONTRACTORS

1. Application-

These rules shall apply to all the building and construction Works.

2. Definitions-

(a) "Workplace" means a place at which on an average fifty or more workers are employed in connection with construction Work.

(b) "Large Workplace" means a place at which on an average, 500 or more workers are employed in connection with construction Work.

3. First-Aid.

(a) At every workplace, there shall be maintained in readily accessible place first-aid appliances including an adequate supply of sterilized dressings and sterilized cotton wool. The appliances shall be kept in good order and in large work places; they shall be placed under the charge of a responsible person who shall be readily available during working hours.

(b) At large workplaces, where hospital facilities are not available within easy distance of the Works, First-aid posts shall be established and be run by a trained compounder.

(c) Where large workplaces are remote from regular hospitals, an indoor ward shall be provided with one bed for every 250 employees.

(d) Where large workplaces are situated in cities, towns or in their suburbs and no beds are considered necessary owing to the proximity of city or town hospitals, suitable transport shall be provided to facilitate removal of urgent cases to these hospitals. At other workplaces, some conveyance facilities such as a car shall be kept readily available to take injured person or persons suddenly taken seriously ill, to the nearest hospitals.

4. Accommodation of Labour-

The Contractor shall during the progress of the Works provide, erect and maintain at his own expense and to approved standards and scales all necessary temporary-

(a) living accommodation.

(b) bazar.



5. Drinking water-

- (a) In every workplace, there shall be provided and maintained at suitable places easily accessible to labour a sufficient supply of cold water fit for drinking.
- (b) Where drinking water is obtained from an intermittent public water supply, each workplace shall be provided with storage where such drinking water shall be stored.
- (c) Every water supply of storage shall be at a distance of not less than 15 Metres from any latrine, drain or other source of pollution. Where water has to be drawn from an existing well, which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door, which shall be dust and water proof.
- (d) A reliable pump shall be fitted to each covered well, the trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

6. Washing and Bathing Places-

- (a) Adequate washing and bathing places shall be provided separately for men and women.
- (b) Such places shall be kept in clean and drained condition.

7. Scale of Accommodation in Latrine and Urinals-

There shall be provided within the precinct of every workplace latrines and urinals in an accessible place and the accommodation, separately for each of them, shall not be less than the following scales: -

	<u>No.of Seats</u>
(a) Where the number of persons does not exceed 50	2
(b) Where the number of persons exceeds 50. . but does not exceed 100	3
(c) For every additional 100.	3 per hundred

In particular cases the Engineer shall have the power to vary the scale, where necessary.

8. Latrines and Urinals for Women-

If women are employed, separate latrines and urinals screened from those for men and marked in the vernacular in conspicuous letters "FOR WOMEN ONLY" shall be provided on the scale laid in Rule 7. Those for men shall be similarly marked "FOR MEN ONLY". A poster showing the figure of a man and woman

shall also be exhibited at the entrance of latrines for each sex. There shall be adequate supply of water close to the latrines and urinals.

9. Latrines and Urinals-

Except in workplaces provided with water flushed latrines connected with a water borne sewage system all latrines shall be provided with receptacles on dry earth system which shall be cleaned at least four times Project Seabird daily and at least twice during working hours and kept in a strictly sanitary condition. The receptacle shall be tarred inside and outside at least once a year.

10. Construction of Latrines-

The inside walls shall be constructed of masonry or some suitable heat resisting non-absorbent material and shall be cement washed inside and outside at least once a year. The dates of cement washing shall be noted in a register maintained for this purpose and kept available for inspection.

11. Disposal of Excreta-

Unless otherwise arranged for by the local sanitary authority, arrangements for proper disposal of excreta by incineration at the workplace shall be made by means of a suitable incinerator approved by the local Medical, Health and Cantonment Authorities. Alternatively excreta may be disposed off by putting a layer of night soil at the bottom of pucca tank prepared for the purpose and covering it with a 15 cms layer of waste or refuse and then covering it up with a layer of earth for a fortnight (when it will turn into manure).

The Contractor shall at his own expense carry out all instructions issued to him by the Engineer to effect a proper disposal of soil and other conservancy work in respect of the Contractor's work people or employees on the Site. The Contractor will bear the cost of any charges levied by the Cantonment Authority for the execution of such Work on his behalf.

12. Provision of shelters during rest.- At every workplace there shall be provided free of cost four suitable sheds two for meals and two other for rest separately for men and women for the use of labour. The height of the shelter shall not be less than 3.5 Metres from the floor level to the lowest part of the roof.

13. Creche

(a) At every workplace, at which 50 or more women workers are ordinarily employed, there shall be provided two huts for the use of children under the age of 6 years, belonging to such women. One hut shall be used for infant's games and play, and the other as their bed room. The huts shall not be constructed on a lower standard than the following: -

- (i) thatched roofs,
- (ii) mud floors and walls,

(iii) plants spread over mud floor and covered with mattings.

(b) Where the number of women workers is more than 25 but less than 50, the Contractor shall provide at least one hut and one Dai to look after the children of women workers.

(c) The size of creche or creches shall vary according to the number of women workers.

(d) The creche or creches shall be properly maintained and necessary equipment like toys, etc. shall be provided.

The huts shall be provided with suitable and sufficient openings for light and ventilation. There shall be adequate provision of sweepers to keep the places clean. There shall be two „dais“ in attendance. Sanitary utensils shall be provided to the satisfaction of the local Medical, Health and Cantonment Authorities. The use of the huts shall be restricted to children, their attendants and mothers of the children.

14. **Canteen-** A cooked food canteen on a moderate scale shall be provided for the benefit of workers wherever it is considered expedient.

15. The planning, siting and erection of the above buildings shall be approved by the Engineer and the whole of such temporary accommodation shall at all times during the progress of the works be kept tidy and in a clean and sanitary condition to the entire satisfaction of the Engineer and at the Contractor's expense. The Contractor shall conform generally to the sanitary requirements of the local Medical, Health and Cantonment Authorities and at all times Seabird adopt such precautions as may be necessary to prevent soil pollution of the Site. On completion of the Works the whole of such temporary buildings shall be cleared away, all rubbish burnt, excreta or other disposal pits or trenches filled in and effectively sealed off and the whole of site left clean and tidy to the entire satisfaction of the Engineer and at the Contractor's expense.

16. Notwithstanding the above the Contractor shall take all precaution required while working over / in the water.



SECTION III

SPECIAL CONDITIONS OF CONTRACT

1. GENERAL

The following Special Conditions shall be read in conjunction with General Conditions of Contracts. If any provision in these Special Conditions is at variance with that of the aforesaid documents, the former shall be deemed to take precedence there over.

2. SCOPE OF WORK

2.1 The scope of work is as per Section IV.

2.2 The scope of work to be carried out by the CONTRACTOR shall also include the following but not limited to:-

- (a) Setting out of the works in respect of position, level, dimensions, alignments, etc., including establishment of bench marks, reference points etc.
- (b) Blank
- (c) Blank
- (d) Disposal of debris, excavated materials, etc as per instructions of the Engineer-in -Charge.
- (e) All temporary/enabling work such as water supply, drainage and sewerage, power, supply including diesel generator set, temporary offices, stores, construction yards, canteens, toilet blocks, labour camp, fencing, watch and protection of work etc.
- (f) Blank
- (g) Any other work required in connection with the execution of the contract work.
- (h) The cost of all the work mentioned above shall be considered, to be included in the rates for various items of work although such inclusion may not be specifically spelt out.
- (j) The tenderers shall note that the entire work covered under this tender is a time-bound work and shall be completed within the contract period.

2.3 Along with the offer, the tenderer should submit a CPM indicating their programme of work. On award of contract, the contractor shall, within 15 days after the date of the Letter of Acceptance – Work order, submit to the Engineer for his consent a programme, in such form and detail as the Engineer shall reasonably prescribe, for the execution of the works. The contractor shall whenever required by the Engineer, also provide in writing for his information a detailed description of the arrangements and methods which the contractor proposes to adopt for the execution of the works. If at any time it should appear to

the Engineer's representative that the actual progress of the works does not conform to the programme to which consent has been given the contractor shall produce, at the request of the Engineer's representative, a revised programme showing the modifications to such programme necessary to ensure completion of the works within the time for completion. The contractor shall submit to the Engineer within 15 days after the date of Letter of Acceptance and in any case prior to the commencement of the work, three copies of CPM which shall be based on this preliminary programme submitted with the tender. The CPM shall be updated by the contractor every month. The contractor shall submit to the Engineer on the first day of each week or such longer period as the Engineer may from time to time direct, a progress report in an approved form shown up-to-date total progress, progress achieved against planned progress, during the previous week and progress forecast for the following week for all important items in each section or portion of the works, in relation with the approved bar chart.

2.4 The Geo Physical Survey shall be carried out without hindrance to the movement of other activities of PSB. The mobilized system shall be capable of handling personnel, and equipment. The contractor shall get written approval prior to mobilizing the appropriate equipment and submit a detailed methodology to carry out the work by satisfy the environmental conditions at the proposed site.

2.5 Suitable care shall be taken during Survey by providing safety devices to prevent any accidents and onsite life insurance protection policies for the personnel involved. The contractor shall, have sufficient cash flow for carrying out the Survey Work. The submission to and consent to by the Engineer such programme or the provision of such general descriptions or cash flow estimates shall not relieve the contractor of any of his duties or responsibilities under the contract.

2.6. The tender shall have boat facilities to the site of work to their employees and port employees/Officers to supervise the work. A limited space without affecting the day to day activities of the nearby area will be made available to the contractor. In addition, water front area to the required extent will be made available to load the equipment on to the boat to the site of work. No rental charges will be levied for the working area and water front area spared to the contractor during the tenure of the contract including extended period, if any granted. During the contract period, necessary safety measures have to be taken for the men working at site. However the contractor shall at their cost arrange for the transportation of men and materials to the site of work.

3. CONTRACT PRICE

3.1 The contractor is deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for works and of the rates and prices quoted in the priced bill of Quantities and the schedule of rates and prices (if any) which rates and prices shall except insofar as they are otherwise provided in the contract, cover all his obligations under the contract apart from all matters and things necessary for the proper completion of the work. The rate quoted shall be inclusive of all taxes, levies, duties, cost of insurance etc. Apart from the cost of

materials to be procured by the contractor and also labour, tools, plants, fuel, consumables, etc.

3.2 As per the Service Tax Act 2001, the major and minor Ports are exempted from levy of service tax vide notification No.19/2006 dated 25.04.2006 for the construction work taken part in the Port infrastructures. In case Service Tax is payable by the contractor, the amount of Service Tax will be reimbursed by the PSB only on production of documentary evidence

3.3 "Value Added Tax (VAT) will be applied to this contract as per provision of the act and will be recovered from the works bills as per the Karnataka Govt. VAT provision. Necessary certificate towards such "Tax deduction at source" will be issued by the PSB's Account department.

3.4 If any temporary item of work is needed for the execution of the contract, the required details shall be submitted by the tenderer with the proposals and connected drawings along with the tender in Cover I. No payment shall be made for any temporary items of work. Before any Temporary works are commenced, the contractor shall submit sufficiently in advance to the Engineer or his representative for approval, his proposals for all temporary works including drawings and design calculations. The Engineer or his representative shall be at liberty to make any modifications to the temporary works in accordance with the conditions of the contract and the contractor shall carry out such modifications. In the event of the contractor considering that such modifications required by the Engineer or his representative will affect the security of the temporary works, or increase the contractor's liability under the contract, he shall give notice in writing to the Engineer within seven days of receipt of such communication. The Engineer will thereupon consider the matter and communicate his decision, which shall be final and binding on the contractor. Notwithstanding the approval by the Engineer or his representative of any submitted design for any of the temporary works the contractor shall remain entirely responsible for such works in all respects.

3.5 The description of the item of work given in the schedule of quantities should be read along with the specifications, drawings and the conditions of contract.

3.6 It is to be expressly understood that the measured work is to be taken net (notwithstanding any custom or practice otherwise) according to the drawing or as may be directed from time to time by the Engineer or his representative and that the value of the work done will be calculated by the measurement of various items at the respective rates without additional charges for any necessary incidental or contingent work connected therewith as detailed in specifications and conditions of contract.

3.7 The quantities given under the Bill of Quantities are those upon which the approximate estimated cost of work are based but they are subject to alterations, omissions, deduction and additions and not necessarily show the actual quantities of work to be done and can be increased or decreased at the discretion of the Engineer. However, the consequent variation in the total contract value will be

limited to 10% under normal circumstances. The rates quoted shall be firm for such variation. In case the variation results in the total contract value exceeding the prescribed percentage, the revision of rates, if any, shall be applicable only for that portion of contract carried out in excess of the permissible percentage.

3.8 Drains, pipes, cables, overhead wires and similar services encountered in the course of the work shall be guarded from injury by the contractor at his own cost, so that they may continue in full and uninterrupted use to the satisfaction of the Engineer or his representative thereof and the contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.

3.9 Should any damage be done by the contractor to any mains, pipes, cables or lines (whether above or below structure) whether or not shown in the drawing, the contractor must make good or bear the cost of making good the same without delay, to the satisfaction of the Engineer or his representative.

3.10 The Employer shall not be held liable for any damages or compensation payable under the law in respect or in consequence of any accident or injury to any workmen or other persons in the employment of the contractor or any sub-contractor and the contractor shall indemnify and keep indemnified the Employer against all such damages and compensation and against all claims, demands, proceedings, costs, charges, expenses whatsoever in respect thereof or in relation thereto.

4. TERMS OF PAYMENT

4.1 Subject to any deductions, which the Engineer/ Project Seabird may be authorized to make under this Agreement, the CONTRACTOR shall receive payment as follows:

Payment Stages	On Completion of Activity	Payment
I	On completion of field survey work and submitting the survey data to the Employer	40%
II	On submission of draft survey report & charts	20%
III	On submission of final survey report & charts after incorporating the Employer's comments/ observations	40%

4.2 Retention Money:

4.2.1 As and by the way of retention money from every progressive on account bill of the contractor 10% of the value of work executed shall be deducted and kept as retention money until the total of the amount so deducted is 10% of the value of work. This amount so retained will be released at the time of Final Bill.

4.2.2 Blank

4.2.3 Any other amount outstanding at the completion of the works also can be converted into Bank Guarantee.

4.3 Performance Bank Guarantee (PBG):

4.3.1 The security deposit furnished by the Contractor will be subject to the terms and conditions of the contract and the Project Seabird/ Engineer shall not be liable for payment for any interest for the PBG or depreciation thereof.

4.3.2 If the Contractor shall duly and faithfully carry out the provisions of this Agreement and shall duly satisfy all claims properly chargeable against him hereunder, the PBG made by him in terms of the Agreement shall be returned to him in the manner detailed herein below.

4.3.3 Should the Contractor fail to perform the contract work in terms of the Agreement or fail to maintain the contract work during the maintenance guarantee period and if the Project Seabird incurs any expenditure or likely to incur any expenditure for completion of the work or rectification of defects, then the Project Seabird shall be entitled to deduct such sum or sums as may be necessary for such completion or rectification from the PBG made by the Contractor under this Agreement.

4.3.4 The PBG shall be released on satisfactory completion in terms of Clause 17 of Invitation to Tender:-

4.4 Progress Payments:

4.4.1 Blank

4.4.2 Blank

4.4.3 All invoices for progress payments as well as for final payments shall be submitted in seven copies in prescribed printed computerized forms using any software as approved by ENGINEER (cost of forms to be borne by the CONTRACTOR) supported by detailed measurement of items of work. Measurement of work will be taken only for variable items of work and site deviation and shall be taken jointly and signed by contractor and consultant.

4.4.4 The computerized final bill shall be submitted by the CONTRACTOR within 3 (three) months from the date of completion of the works accompanied by:

(a) Completion certificate issued by the Engineer /Employer.

(b) Measurement Books/Registers in respect of variable scope of work and variation to fixed scope of work.



- (c) No claim certificate by the Contractor.
- (d) A copy of the drawings showing there on additions and alterations (to be shown in red) made during the execution of the work.
- (e) Recovery statements in respect of Electric, Water, Income Tax at source etc.
- (f) Statement for reconciliation of all the payments and recoveries made in progressive bills.
- (g) Copies of variation statement and order of extension of time, if granted.
- (h) Original guarantees furnished by CONTRACTOR'S suppliers for applicable item.
- (i) Test Certificate for items and materials.
- (j) Original purchase voucher of materials required for the work.
- (k) Return all documents/drawings received from engineer/ Project Seabird.

4.5 Payments due and payable by the Employer shall generally be made within 45 (forty five) days from the date of receipt by Engineer/Employer of complete, proper and presentable invoices and documents supported by requisite details of measurements.

4.6 All payments due under this Contract shall be affected through NEFT. The Contractor shall provide his Account Number, Name of Account Holder, Bank's Name, Branch Name and Address, IFSC Code and type of Account to DG Seabird.

4.7 Bank Guarantees only from Indian Nationalised Banks/ Scheduled Commercial Bank permitted to carry out business in India shall be accepted by the Employer.

4.8 In case Contractor fails to submit computerized bill (for IPC and final), the certification and payment of bills may be inordinately delayed for which the Contractor shall be solely responsible.

5. ADMISSION TO SITE BY CONTRACTOR AND RESPONSIBILITY TO ASCERTAIN HIS OWN INFORMATION

a) The tenderer shall inspect and examine the site and its surroundings and shall satisfy himself before submitting his tender as to the nature of the site and movement of the traffic, the quantities and nature of work and equipment

necessary for the completion of the works and the means of access to the site, the accommodation he may require and in general, shall himself obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect his tender. No extra charges consequent to any wrong assumptions / assessment by the tenderer or otherwise shall be allowed. The tenderer shall take into account all these aspects before quoting their rates and shall not hold the PSB responsible for any details that might have been omitted to be mentioned in the tender schedule which may affect the pricing of the tender and any claim by the tenderer on this account will not be entertained by the PSB. In case any additional investigations are required to be done at site by the tenderer, he may do so at his own cost with the prior approval of the Engineer.

(b) The tenderers shall be deemed to have visited the site(s) and made themselves familiar with the working conditions, whether they actually inspect the site(s) or not.

6. SECURITY AND PASSES

6.1 The contractors shall employ his representatives, servants and workmen and verify their antecedents and loyalty before employing them for the works. He shall ensure that no person of doubtful antecedents and nationality is, in any way associated with work. If for reasons of technical collaboration or other consideration, the employment of any foreign national is unavoidable, the contractor shall furnish full particulars to this effect to the Accepting Officer at the time of submission of his tender.

6.2 The contractor shall, on demand by the Engineer, submit list of his agents, employees and work people concerned and shall satisfy the Engineer as to the bona fide of such people. The contractor shall obtain and submit police verification of their staff/personnel for issuance of pass by the Naval authorities.

6.3 The Engineer/Station Commander, Karwar shall at his discretion have the right to issue passes as per rules and regulations of the installation area in force to control the admission of the contractor, his agents, employees and work people to the site of the work or any part thereof. Passes should be returned at any time on demand by the Engineer or the authorities concerned and in any case on completion of work.

6.4 The contractor and his agents, employees and work people shall observe all the rules promulgated by the authority controlling the installation/area in which the work is to be carried out e.g. prohibition of smoking and lighting, fire precaution, search of persons on entry and exit, keeping to specific routes, observing specified timing etc. Nothing extra shall be admissible for any man hours etc. lost on this account.

Photography of the site or works is strictly prohibited.

7. CONDITIONS OF WORKING

7.1 The work lies in **RESTRICTED AREA**. However the contractor, his agents, employees, work people and vehicles may pass through the unit lines in which case the Engineer/Station Commander, Karwar shall, at his discretion have the right to issue passes, control their admission to the site of work or any part thereof. The contractor shall on demand by the Engineer submit a list of personnel etc. concerned and shall satisfy the Engineer as to the bona fide of such people. Passes shall be returned at any time on demand by the Engineer and in any case on completion of work.

7.2 The contractor and his agents, employees and work people shall observe all the rules promulgated by the authority controlling the area in which the work is to be carried out e.g. prohibiting of smoking, lighting and fire precaution, search of persons at entry and exit, keeping to specified routes, restricted hours of working etc. Any person found violating the security rules laid down by the authority, shall be immediately expelled from the area without assigning any reasons whatsoever and the contractor shall have no claim on this account. Nothing shall be admissible for any man hours etc. lost on this account.

7.3 WORKING HOURS

7.3.1 Contractors are permitted to work all the 24 hours on shift basis if approved by the Engineer. A suitable programme with various schedules of activities to be carried out to synchronise the work during different shift shall be drawn in consultation with Engineer before commencement of work. Movement of materials and transport to/out of work site shall be permitted during night subject to special permission is obtained from the unit authorities under intimation and approval from Accepting Officer and Engineer, in advance.

7.4 WORK ON HOLIDAYS

7.4.1 The contractors is authorized to carry out any work on Gazetted/weekly holidays but with prior intimation and approval from Accepting Officer and Engineer in advance.

8. MINIMUM WAGES PAYABLE

8.1 Refer condition 58 of General Conditions of Contract (GCC). The contractor shall not pay wages lower than Minimum Wages for labour as fixed by the Government of India/State Government/Union Territory under minimum wages Act as amended from time to time or Contract Labour (Abolition and Regulation Act), whichever is higher.

8.2 The fair wages referred to in condition 58 of GCC will be deemed to be the same as the minimum wages payable as referred to above.

8.3 The contractor shall have no claim whatsoever, if on account of local factors and/or regulations, he is required to pay the wages in excess of minimum wages as described above during the execution of work.

9. ROYALTIES

9.1 Reference Condition 14 of General Conditions of Contracts

10. LAND FOR TEMPORARY WORKSHOP, STORES ETC.

10.1 The contractor shall be allotted free of the charge the area as marked on the layout plan for the purpose of erection of temporary workshop, stores etc. No MoD land is available for accommodation of labour and canteen in restricted area for which the contractor shall make his own arrangement at his own expenses. However, land for accommodation of labour and canteen in unrestricted area may be allotted to him”.

11. WATER

11.1 Water will not be arranged by Govt. Contractor shall make his own arrangements for all requirements of water. The contractor shall make his own arrangements for storing the water required for the works, labour & workmen etc at his own expense. Potable water shall be used to fulfill the requirements.

12. COOPERATION WITH OTHER AGENCIES

The contractor shall permit free access and generally afford reasonable facilities to other agencies or department workmen engaged by the Government to carryout their part of the work, if any under separate arrangements.

13. ELECTRIC SUPPLY

13.1 Construction Power supply required for the work will not be arranged by Govt. Contractor shall make his own arrangements for all requirements of Construction Power supply. The contractor shall make his own arrangements for the Construction Power supply required for the works, labour & workmen etc at his own expense.

14. NETWORK ANALYSIS

14.1 The time and progress chart to be prepared as per Condition 11 of General Conditions of Contracts shall consist of detailed network analysis and a time schedule. The critical path network will be drawn jointly by the Engineer and the contractor soon after acceptance of tender. The time scheduling of the activities will be done by the contractor so as to finish the work within the stipulated time. On completion of the time schedule a firm calendar date schedule will be prepared and submitted by the contractor to the Engineer who will approve it after due scrutiny. The schedule will be submitted in four copies within two weeks from the date of handing over the site.

14.2 During the currency of the work, the contractor is expected to adhere to the time schedule and this adherence will be a part of his / their performance under the contract. During the execution of the work, the contractor is expected to participate in the reviews and updating of the network undertaken by the Accepting officer/Engineer. These reviews may be undertaken at the discretion of the Accepting Officer/Engineer either as a periodical appraisal measure or when the quantum of work ordered on the contractor is substantially changed through deviation orders or amendments. Any revision of the time schedule as a result of the review will be submitted by the contractor to the Engineer within a week for his approval after due scrutiny.

14.3 The contractor shall adhere to the revised time schedule thereafter. In case of contractor disagreeing with revised schedule, the same will be referred to the Accepting Officer, whose decision shall be final, conclusive and binding. Accepting Officer's approval to the revised schedule resulting in a completion date beyond the stipulated date of completion shall not automatically amount to a grant of extension of time. Extension of time shall be considered and decided by the appropriate authority mentioned in Condition 11 of GCC and separately.

14.4 Contractor shall mobilize and employ sufficient resources to achieve the detailed schedule within the broad frame work of the accepted method of working and safety. No additional payment will be made to contractor for any multiple shifts through the time schedule is approved by the department.

15. PERIOD FOR KEEPING THE TENDER OPEN

15.1 The tender shall remain valid for acceptance for a period of 120 (one hundred twenty) days from the date on which the tenders are due to be submitted.

16. SECURITY OF CLASSIFIED DOCUMENTS

16.1 Contractor's special attention is drawn to Conditions 2 and 3 of General Conditions of Contracts. The contractor shall not communicate any classified information regarding the work either to subcontractors others without prior approval of the Engineer. The contractor shall also not make copies of the design/drawings and other documents furnished to him in respect of the work, and shall return all documents on completion of the works or either on determination of the contract. The contractor shall along with the final bill, attach a receipt of his having returned the classified documents as per condition 3 of the General Condition of Contract.

17. OFFICIAL SECRETS ACT

17.1 The contractor shall be bound by the Official Secret Act-1923.

18. BLANK

19. BLANK

20. DAMAGE TO EXISTING STRUCTURES

20.1 Any damage done to the existing pavement and structures etc., during the execution of the work shall be made good by the contractor at his own expense and site of work left clean and tidy on completion. Rectification, reinstatement, replacement, making good and touching up etc., shall be carried out to conform to the materials and workmanship originally as provided and to the satisfaction of the engineer.

21. Blank

22. VARIATION LIMIT

22.1 Deviations in the work may be ordered by Accepting officer vide Condition 7 of General Condition of Contracts up to maximum of TEN Percent of the Contract Sum.

23. TESTING CHARGES

23.1 Testing charges of all specified in technical specifications to be carried out during execution of work departmentally in any laboratory/test house shall be borne by the contractor.

24. MILITARY ENGINEERING SERVICES (MES) STANDARD SCHEDULE OF RATES (SSR):

24.1 Military Engineering Services (MES) Standard Schedule of Rates 2009 (Part I – Specifications) and 2010 (Part II – Rates) (here in after and in General Condition of Contracts referred to as the “MES Schedule”) shall form part of the Contract for valuation of deviations as specified in Condition 62 of GCC.

25. LABOUR LICENSE

25.1 Before engaging labour for execution of works at site the contractor through Engineer shall request DDG(PI) Project Seabird, Karwar for issue of Labour License (Form V-Certificate by Principal employer) to comply with Contract Labour (Regulation & Abolition) Act 1970 requirements. DDG(PI), Karwar shall issue Form V to Assistant Labour Commissioner, Mangalore/Udipi on the recommendations of Engineer”.

26. PHOTOGRAPHIC RECORDS

26.1 The contractor shall if and in so far required by Engineer before commencing and during the progress of works, take photographs of such sites, erection works, machinery, plant etc., Negatives or the prints there from shall be

untouched. The photographs shall be of size 5" by 8" and 12 Nos shall be supplied in three copies to Engineer.

26.2 The negatives/DVD are to remain the property of the Project Seabird to whom they shall in due course be handed over and the copy right and all rights of reproduction shall be reserved to the Engineer.

27. EMPLOYMENT OF LOCAL PERSONNEL

27.1 The Contractor is encouraged to the extent practicable and reasonable to employ staff and labour from sources within Karnataka.

28. EMPLOYMENT OF PERSONS OF PROJECT AFFECTED FAMILIES

28.1 The Contractor shall endeavour to provide employment to project affected families at the maximum level up to their skills.

29 SITE CONDITIONS

29.1 Karwar is the district Headquarters of North Kannada located nearly 270 km North of Mangalore and about 120 kms South of Goa. National Highway No. 66 connecting Mangalore and Goa passes through Karwar. Konkan Railway has a railway station at Karwar.

Maximum Temperature	:	35.3 °C
Maximum Humidity	:	90%
Altitude	:	Less than 5m with respect to sea level.
Atmosphere	:	Highly Corrosive due to seawater

29.2 Location:

The Project area is spread over a coastal area South and South East of Karwar Town, in North Kannada District, in the State of Karnataka.

The site is well connected by existing National Highway NH-66 and is approximately 5 km from Karwar Town. Approximately Geographical Co-ordinates of Project Seabird area can be taken as:

Latitude	:	14°44'41.55" N
Longitude	:	74°13'46.26" E

29.3 Topography:

The terrain in proximity to sea shore is flat only to a limited extent. Topography is highly undulating with elevations ranging from Mean Sea Level to approximately +50m. To the east of NH-66 high hills with peaks up to +200 m are seen.

There is a hillock on the eastern fringe of the Project area having an elevation of 373.80 m above MSL. This is the highest ground level in the Project area. The

lowest level -0.30m above MSL of the Project is nallah bed level, which falls in the south –west fringe.

29.4 Climate:

The weather conditions at site are typically representative of Konkan region viz. heavy rains and extreme humidity.

Monsoon in this area starts around last week of May and continues up to middle of October. The region receives on an average about 320 cm rainfall. South-West monsoon period i.e. June to September. The number of rainy days has been estimated to be 104.

The lowest monthly mean temperature was 15.5 °C in the months of January and highest monthly mean temperature has been recorded as 35.3 °C in the months of February. However, the possibility of the ambient temperatures going as low as 11° C during winters exists.

The mean wind speed of 13.1 Km/hr has been observed at Karwar during the monsoon period and average wind speed of 7.9 km/hr and 6.1 km/hr has been observed during pre-monsoon and post-monsoon period respectively. In the period between June to September, Relative humidity varies from 60% to 90%. In the winter months, Relative humidity varies from 60% to 70%.

29.5 Blank

29.6 Regional Geology:

Parent rocks observed in Project Seabird area are Granite; Granite Gneiss and associates weathered varieties of these two rocks. Predominant soil types are silty sand, sandy silt. In some boreholes falling in agricultural land clayey-silt, silty clay were observed overlaying weathered rock formalities.

Geologically rocks around Karwar fall under Younger Gneiss complexes. Their geological age is 2500 million years to 2700 million years. This younger complex is composed mainly of granodiorite and granite types of rocks.

29.7 Seismicity:

Karwar falls under Zone III as per IS: 1893-1984. No recorded seismic history for Karwar is available in literature.

29.8 Quality of Materials:

All materials to be used and all equipment to be supplied and installed shall be new and the best of their respective kinds and shall be of the class most suitable for the purpose for which they are intended. They shall conform to the specifications laid down in the Tender. The Tenderer shall, as far as possible make best of efforts to adhere to the preferred makes indicated elsewhere in this Tender. However, the Tenderer shall have the option to change the makes of

the hardware/ software, if any subject to unambiguously establishing the reasons for the change and confirming the time & cost benefits are being transferred to the Project in proportionate manner, where admissible.

29.9 Cleaning & Painting:

Metal parts of all the equipment shall be protected against corrosion of any kind. Surface of all equipment which are intended to be painted shall be thoroughly cleaned of rust & scale, immediately covered with requisite coats of relevant primer and painted with two coats of finished paint.

The metal enclosures shall be all weatherproof and dust proof and special care shall be taken to render all the equipment proof against entry of rats, lizards and other vermins.

29.10 Blank

30. TIDAL CONDITIONS:

30.1 The tides are diurnal and the average interval between high tide and low tide is about six and quarter hours. The mean tidal range is of the order of 0.32 m to 1.90 m at spring tides and 0.92 m to 1.64 m during Neap tides. There is no influence of floods

30.2 Wave conditions in the sea:

Normally the sea conditions are calm with ordinary waves of 0.46 m to 0.61m height. The dimension and frequency of the waves varies according to the seasons. Generally during South West monsoon period, the waves have a northerly trend at an angle of 30° out of parallelism with shore line and the maximum height of waves during this period vary from 1.22m to 1.83m outside the harbor the wave period varies from 8 to 30 seconds. However, the highest significant wave height observed during July month was 4.6 m with mean wave period of 4.7 and 7 sec and mean wave direction varied between 217^o to 251^o.

30.3 Swells:

During northeast monsoon period (October to January) the swells in the sea outside harbour vary from 0.91 m to 1.22 m during South West monsoon (April to June) from 0.61 m to 0.91 m. During cyclones which are of short duration the swell goes over 1.5 m and for the rest of the period the conditions are calm.

30.4 Currents:

During North East monsoon period the direction of the current is generally southerly with an average speed of 0.1m/s with current speed upto 0.54m/s During south west monsoon period the current is generally in the northerly direction with an average speed of 0.08m/s with current speed upto 0.3m/s. For the rest of the period the direction of the current is variable with negligible velocity.

30.5 Temperature and relative humidity:

The climates generally dry, particulars regarding humidity and temperature may be get from the meteorological department. The climate is Tropical with the maximum mean temperature at 33°C. Relative humidity varies from 64% to 86%.

30.6 Influence of monsoon:

The South West monsoon is generally more severe and is accompanied by heavy rains and rough sea. However, there is no major disturbance during the monsoon period except cyclones are anticipated, as the work is proposed to be carried out in the sheltered basin.



ANNEXURE – H

FORM OF PERFORMANCE BANK GUARANTEE
(To be stamped as per the stamp act)

To:

The President of India acting through
The Director General Project Seabird.
West Block – V, RK Puram,
New Delhi 110066

(hereinafter referred to as the 'Government')

Dear Sir (s),

1. WHEREAS (Name and Address of Contractor) -----
----- (hereinafter called the Contractor) has undertaken, in pursuance of LOA No, ____ dated ____ (Contract No. DGSB----- /--- ---) of Project Seabird for Construction of ----- at Karwar (hereinafter called "the Contract") AND WHEREAS as per terms of the said Contract that he is required to furnish a Bank Guarantee from an approved Bank for the sum of Rs. _____ (Rupees _____) as security for compliance with his obligations in accordance with the Contract.
2. We _____(hereinafter referred to as "the Bank") at the request of _____ (Contractors) do hereby undertake to pay the Government an amount of not exceeding Rs. _____, against any loss or damage caused to or suffered or would be caused to or suffered by the Government by reason of any breach by the said Contractor of any of the terms or conditions contained in the said Agreement.
3. We _____, do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Government stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Government by reason of breach by the said Contractor (s), of any of the terms or conditions contained in the said contract or by reason of the Contractor' (s), failure to perform the said contract. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____
4. We, _____ (the Bank) hereby, as primary obligor and not merely as surety unconditionally and irrevocably, undertake to pay to the Government any money so demanded notwithstanding any dispute or disputes raised by the Contractors(s)/ supplier(s) in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal. The payment so made by us under this guarantee shall be a valid discharge of our liability for payment there under and the Contractor(s) / supplier(s) shall have no claim against us for making such payment.



5. We, _____ further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said contract and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till The President of India acting through The Director General – Project Seabird. West Block – V, RK Puram, New Delhi certifies that the terms and conditions of the said Contract have been fully and properly carried out by the said Contractors’(s) and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the _____ we shall be discharged from all liability under this Guarantee thereafter.

6. We, _____ further agree with Government that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligations here under to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Contractors’(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said Contractors’(s) and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contract(s) or for forbearance, act or omission on the part of the Government or any indulgence by the Government to the said Contractors’(s) or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

7. This guarantee will not be discharged due to any change in the constitution of the bank or the Contractor.

8. We, _____ lastly undertake not to revoke this guarantee during its currency except with the previous consent of the government in writing.

Dated the _____ day of _____, 2015

for _____
(indicate the name of the bank)

Bank Guarantee No. _____

Bank's Postal Address _____

NOTE	The Bank Guarantee in original shall be accompanied with the Banker’s covering letter in their printed letterhead confirming that they are issuing the Bank Guarantee as per the request of the party for the prescribed amount.
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SECTION IV

TECHNICAL SPECIFICATIONS AND SCOPE

OF WORK

1. STANDARDS

Unless otherwise specified in the Contract, the relevant provisions of the appropriate Bureau of Indian Standards shall apply for all materials and workmanship.

2. STANDARD PRODUCTS

If mention is made in the Contract of named products of individual manufacturers, this indication of the standard or type and workmanship of goods, which are satisfactory to the Engineer. The Contractor may substitute similar Products of at least equal quality and suitability, subject to the approval of the Engineer provided that the Contractor has submitted with his Tender proposals for such substitution with full particulars of the proposed alternative products; otherwise, the Contractor's proposals may not be considered. Proposals by the Contractor for the supply of manufactured products shall be accompanied by certification that the manufacture's products are approved by the relevant standards authority.

3. TECHNICAL SPECIFICATION

3.1 General

This specification covers all the works required for field works and preparation of detailed report in respect to ascertain geophysical survey at Naval Base, Karwar. The work shall include mobilization of necessary equipment, providing necessary qualified technical personnel, skilled and unskilled labour, and such others as required to carry out geophysical survey works and analysis interpretation of data and results and preparation of a detailed survey report as and when called for by the Engineer.

3.2 Scope of Work

Scope of work for this assignment shall be as specified below:

3.2.1 Geophysical Survey

- a) Carry out Bathymetry Survey of the area demarked in the drawing DELD14065-PSB-DWG-10-PMC01-CP-0003
- b) Carry out Seismic Reflection Survey of the area demarked in the drawing DELD14065-PSB-DWG-10-PMC01-CP-0004
- c) Carry out Side Scan Sonar Survey of the area demarked in the drawing DELD14065-PSB-DWG-10-PMC01-CP-0004
- d) Carry out Magnetic Survey of the area demarked in the drawing DELD14065-PSB-DWG-10-PMC01-CP-0004

3.3 Codes and Standards

All works shall be carried out strictly in accordance with the technical specifications unless otherwise approved or instructed by the Engineer or his representative in writing. The latest editions of one or more of the followings Indian Standards, shall apply to the work for guidelines to achieve best possible result.

For Geophysical Surveys, except where separately described, survey data acquisition and analysis shall comply with standards described in the UKOOA publications 'Guidelines for Offshore Marine Geophysical Site Investigations: Volume 1 (issued 1996) and Volume 2 (issued 1997)'.

Contractor shall keep all the relevant Indian standard codes and British standard at site/on vessels.

3.4 Geophysical & Bathymetric Survey

The Contractor shall complete all the relevant Geophysical and Bathymetric Surveys field work and report submissions to the Employer as stated in Section 5, Time Schedule.

However, given the tight schedule, the Contractor will be required to submit intermittently, preliminary drawings and reports of the interpreted bathymetric and ground conditions based on the geophysical survey data obtained.

3.4.1 Bathymetric Survey

3.4.1.1 General Survey Method

The Contractor shall carry out bathymetric surveys of the seabed within the survey area, where water depth and vessel draft permit, using an Echo Sounding technique approved by the Employer. Unless otherwise approved a frequency of both 33 kHz and 210 KHz shall be used. The equipment used shall be Single Beam dual frequency Knudsen 320 M, DESO 25 depth sounder system or similar.

Where the water depths are greater than about 4 m the contractor shall use a SWATH multi beam system to get a dense coverage of the seabed.

The surveys shall either be required on their own, or simultaneously with other marine geophysical surveys. Seismic reflection, side scan sonar and magnetic surveys shall include echo sounding in order to complete the full interpretation required.

3.4.1.2 Shallow Water Survey Method

Where water depth and vessel draft restrict the use of Echo Sounding techniques other methods will be permitted subject to the prior approval of the Employer. Whatever method is approved, the data gathered shall be

presented to the Employer in the form of X, Y and Z co-ordinates on a CD ROM or DVD ROM.

3.4.1.3 Vessels

The vessel used for bathymetric surveys shall be of such a design as to provide a stable and sufficient platform for bathymetric surveys and shall be of sufficient size to carry, in addition to the equipment and staff required by the Contractor to carry out the survey, at least two members of the Employer's Staff.

The survey equipment and the vessel's manoeuvring ability shall be compatible with the requirements of this Specification.

3.4.1.4 Method Positioning

The Contractor shall install and maintain an electronic positioning system of a type approved by the Employer to enable positioning of the survey launch.

The accuracy of the electronic positioning system shall be + or - 2 metres and shall be calibrated at weekly intervals to the satisfaction of the Employer.

Read out of the electronic positioning system shall be in 1 metre increments.

3.4.1.5 Eco Soundings

The Contractor shall carry out a multi-beam echo sounder survey using a system such as the Simrad Em 100 or similar approved. The transducer shall be positioned to minimize distortion of the data by vessel motion. The system shall have a pitch stabilization system capable of dealing with $\pm 10^\circ$ pitch at vessel speeds up to 10 knots.

The beam forming system shall have the capability of providing a swath width of up to 120° and shall be capable of operating in water depths at least as shallow as 4 metres.

Real time output shall be available to provide quality control checks on the data. Raw data shall be recorded in digital format for subsequent processing in true X, Y, Z format.

The plotting software shall be capable of providing maps at various scales from 1:100 to 1:10,000, selected black and white and colour contour intervals, seabed reflectivity and be capable of providing three dimensional views of the data.

Echo soundings will be taken on a machine which shall be a multi-

frequency echo-sounder with frequency ranges of + or - 33 kHz and + or - 210 KHz as approved by the Employer. Heave compensation shall be applied as required.

The required accuracy of echo soundings shall be such to resolve the bathymetry of the seabed to within $\pm 0.10\text{m}$. Calibration of the equipment shall be to the approval of the Employer and shall be carried out at the start and end of each survey day, unless otherwise instructed by the Employer.

3.4.1.6 Tide Board

The Contractor shall if necessary, to properly control the survey, erect a tide gauge for each survey location in addition to those specified elsewhere. The siting, fixing and calibration of any additional tide boards or gauges will be to the approval of the Employer prior to the commencement of survey.

Each of the tide gauges shall be erected or calibrated with its "zero" point levelled to Chart Datum. The tide gauge(s) shall be of the automatic recording type and regularly checked for satisfactory operation. These tide gauge(s) shall be located within 1 km of survey area unless otherwise agreed by the Employer. The gauge(s) shall be read hourly during surveys to ensure the accuracy of final depth calculations.

3.4.1.7 Approval from Employer

At least one week prior to the commencement of the first bathymetric survey, the Contractor shall submit to the Employer for approval full details of the Echo Sounding technique proposed to be used. Details will include:

- a) Type of Echo Sounder
- b) Method of conning and fixing the vessel
- c) Detail of shore base control
- d) Detail of means of recording data
- e) Method of shallow and deep water survey

Once approved, the methods will not be amended for subsequent hydrographic surveys without the express approval of the Employer.

3.4.1.8 Spacing of Sounding Lines

Bathymetric survey in the area having water depth 4m or less shall be conducted by one Dual Frequency Eco sounder along with associated DGPS positioning system. Individual survey lines shall be planned at 50m spacing and a similarly specified number of tie lines shall be run perpendicular to these lines for verification.

Bathymetry survey in water depth more than 4m shall be conducted using Multi beam Eco sounder system and associated DGPS positioning system. Individual survey lines shall be planned in such a manner that 100%

seabed coverage is achieved in swathe bathymetry data.

Fix numbers are to be neatly annotated onto the sounding record at least every tenth fix. Any changes in equipment settings shall be annotated neatly onto the original record at the fix where the change occurred, as well as reported in the field work records. Generally soundings shall be recorded at intervals of 2 seconds (typically every 3 to 4 m of distance travelled) unless otherwise instructed by the Employer.

3.4.1.9 Survey Plot

Surveys shall be plotted by the Contractor to show the vessel track plot and the fix points along the traverses (if different from the traverse lines for the other types of geophysical surveys carried out). Such plots shall also show the position of control stations and list their coordinates.

3.4.1.10 Contoured Plot

In addition to the survey plot, a contoured plot shall be produced by the Contractor for each frequency of echo sounding with the tidally corrected bathymetric values plotted at a maximum frequency of every 1 m (on the seabed) at scales and with contours at intervals as specified in the Schedule of Survey Requirements or as agreed with the Employer. All plots shall be produced to show all forms and features and shall where appropriate clearly indicate the + 0.0 m line. A contoured plan showing the thickness of interpreted material between the two frequencies shall also be prepared.

The above drawings shall be plotted at the same scale as any other drawings contained in the preliminary report.

3.4.1.11 Submission of Plots

Plots shall be submitted to the Employer in four paper copies and one "mason" film. Each drawing shall carry a title box indicating the Employer's name, the Contractor's name, the Project Title and a Drawing Title and number. The plot shall include and convert to local UTM but may also have superimposed a local grid approved by the Employer. Notes on the drawing shall include the date, the scale, number of the survey and the type of equipment used.

3.4.1.12 Reporting

When an echo sounding survey only has been carried out, a preliminary report shall be submitted within 7 working days of completion of fieldwork including a paper print and the corrected echo sounding data in digital format. Where echo sounding is carried out in conjunction with other marine geophysical survey techniques the above factual and interpretive drawings shall be produced as part of the combined preliminary report.

The Final Report shall contain a factual description of the Works including details of positional control, location and performance of tide gauges, calibration method and the frequency at which echo sounding has been carried out and all recording parameters such as vessel speed, fix interval, swell filter settings, any known source of disturbance, a discussion of the results and the limitations where necessary. All drawings described above shall be included in the Final Report regardless of whether a preliminary report has been produced. The Contractor shall submit to the Employer four paper copies of the Final Report complete with all relevant plots and factual description of the works and sources of information. A magnetic copy of all plots shall also be provided in CAD compatible format.

3.4.2 Seismic Survey

3.4.2.1 General Requirement

Continuous seismic reflection profiling within the survey area shall be employed for determining sub-seabed lithology. It shall be capable of determining the depths to all significant seismic reflectors, particularly those that can be correlated to changes in lithology (the thickness of the recent seabed sediments, the base of the recent seabed sediments, the thickness and base of the superficial sediments down to a depth of at least 30 m below seabed).

Generally seismic reflection surveys shall be carried out simultaneously with an echo sounding survey. The survey area to be covered by the geophysical surveys is shown in Drawings.

3.4.2.2 Equipment

The Contractor shall provide sufficient seismic profiling equipment to ensure that satisfactory progress of the Works is achieved. The Contractor shall use the most appropriate and the most suitable profiler, such as the LVB low voltage high resolution boomer system, which is capable of delineating individual bedding planes, to obtain detailed sub seabed profile of the site. The reflected acoustic returns shall be filtered and recorded at an appropriate scale to provide adequate resolution within the upper superficial sediments down to 5 m below seabed, and up to 30 m below seabed in sand and clays. A variety of high resolution profilers shall be available if required including:

- a) Pinger - the pinger shall consist of a high frequency source (e.g. 3-8 kHz) together with amplification, filtering and recording system including a thermal recorder. The pinger shall be capable of resolving all significant changes in impedance generating reflectors to within 0.3m up to a depth of 15m below the seabed.
- b) Chirp profiler - the Chirp system shall be capable of operating over a frequency range of 2-20 kHz. The processed Chirp data shall be

presented in real-time during data acquisition by means of a colour monitor. A colour printer and thermal recorder shall also be provided. The Chirp shall be capable of resolving all significant changes in impedance generating reflectors to within 0.2m, up to a depth of 15m below the seabed.

- c) Surface-tow boomer - the system shall consist of a catamaran, a hydrophone, facilities for firing a range of rates and energies (e.g. 100-300J), an amplifier, high and low bandpass filters and a thermal recorder (>25cm width). The high resolution boomer shall be capable of resolving all significant changes in impedance generating reflectors to within 0.6 m, up to a depth of 30m below the seabed.

All equipment shall be capable of operating effectively in up to 15 m of water.

When instructed by the Employer, the Contractor shall provide a multi-tip sparker or mini-tip sparker or mini-airgun as a seismic source in order to provide information on gaseous sediments. .

Unless otherwise instructed by the Employer, a boomer shall be employed for seismic reflection surveys. Specifications for equipment settings, e.g. sweeps, shall be discussed with the Employer prior to a throughout survey following an assessment of the requirement. The equipment shall be set to obtain the optimum quality of data.

The data acquisition system used with the boomer, sparker or airgun sources shall be capable of wide-band analogue recording onto magnetic tape. Both the seismic channel and the trigger pulses shall be simultaneously recorded.

The survey communication system shall be capable of automatic fix marking onto the thermal printer during data acquisition.

Time variant gain (TVG), time-variant filtering (TVF) and swell filter equipment shall be available for use. The TVG equipment shall be capable of a minimum of 70 dB of active gain.

The type of hydrophones used for the profiling, including the length of active section and the number of elements and channels shall enable the penetration and resolution requirements to be met.

3.4.2.3 Surveying

Surveys shall be made by the contractor in the area specified in the drawings, unless otherwise agreed with the Employer. Positional control for the traverses shall be the responsibility of the Contractor. During a survey, track modifications may be instructed by the Employer following preliminary interpretation of the data. Sweep speeds, power deployed, band pass

settings, TVG settings, TVF settings and source-receiver geometry (including feather angle) shall be set to obtain the optimum quality of data and shall be reported in the field work records. Changes in settings may be instructed by the Employer during the course of the surveys.

An initial survey shall be carried out to generally define the limit of any masked areas and submitted for the Employer's approval. The areas unaffected by masking as agreed with the Employer shall then be re-surveyed in more detail.

The acquired seismic data shall be recorded onto a thermal printer and shall be simultaneously digitally recorded to preserve the bandwidth of the data. The raw recorded data shall not be band-pass filtered, filtered by TVF or amplified by TVG. The data recording and processing shall be carried out using C-View Seabed Data Management Package or similar.

The Contractor shall ensure that the recorder is reversed at the end of each seismic line so that the profiles are all presented consistently, with the western end of each seismic line at the left hand end of the paper roll and the eastern end of the seismic line at the right hand end. For predominantly North-South lines, the northern end of each line shall appear at the left hand end, and the southern end at the right hand end of the paper roll.

Fix numbers shall be clearly and neatly annotated onto the seismic records at least every tenth fix. For individually numbered lines these fix numbers shall be recorded ascending from one end of the line to the other. Any changes in equipment settings whilst recording is in progress shall also be annotated neatly onto the original record at the fix where the change occurred as well as reported in the field work record for the day. Other factors such as passing ships which affect the quality of the data obtained shall also be noted neatly on the original record and in the field work record for the day.

The track of the survey vessel shall be plotted as the survey proceeds. The source and receiver layback relative to the survey vessel positioning equipment shall be recorded in the field work records.

The position of the principal traverse lines within a survey shall be orientated to obtain the most useful seismic information relative to the geological structure or anomaly. The initial stages of the survey shall, wherever possible, ascertain the optimal line orientation for the survey as a whole. If a change to the orientation of the traverse lines is required in the Contractors opinion, the Employer shall be informed before the survey is commenced.

3.4.2.4 Preliminary Report

The results of each survey shall be presented initially in a preliminary report. It shall incorporate factual drawings, existing drillhole and CPT data, together with a preliminary interpretation of the seismic records. The

following drawings shall be submitted with the preliminary report:

- a) A plan showing the survey vessel and/or hydrophone track plots and the fix points along the traverses.
- b) Contoured plans defining the base of each geological unit in terms of elevation and the isopachs of each of these units. These units are (but not limited to), the very recent sedimentary unit, comprising very soft to very loose recent seabed sediments, medium dense and medium stiff superficial sediments belonging to the Holocene and Pleistocene geological sub-periods, and the dense and very dense sand.
- c) Contoured plans showing the thickness (isopachs) of each seismo-stratigraphic unit.

Contoured plans shall be plotted at a scale to suit the traverse line spacing carried out. If the line spacing is considered too great for contouring to be carried out at a reasonable scale with any degree of certainty, then the Contractor shall immediately inform the Employer.

Where an echo sounding survey has been carried out as well as the seismic profiling, all the relevant drawings, factual and interpretive information required for an echo sounding survey shall also be presented. The depths to interpreted strata boundaries for the seismic profiling shall be calculated from the tidally corrected echo sounding results immediately below the hydrophones. If other marine geophysical surveys have been carried out as well as seismic profiling, then the relevant drawings, factual and interpretive information required for these surveys shall also be presented.

A photocopy of the preliminary interpretation carried out by the Contractor on the seismic records shall also be submitted with the preliminary report, with the Contractor's interpreted strata boundaries clearly marked on the photocopies. Each traverse line shall also be clearly marked on these copies as well as the positions of crossover survey lines, including the line numbers (if applicable) and fix numbers (to one decimal) of the crossing line positions.

3.4.2.5 Final Report

The Final Report shall contain a factual description of the Works carried out, also including details of all recording parameters such as vessel speed, fix interval, sweep speed, hydrophone layback, filter settings, gain setting, assumed velocity for seismic units, any known source of disturbance, masking or returned signal, a discussion of the results and the limitations where necessary. Any relevant drillhole, PCPTs, CPTs (Piezocone Penetration Tests or Cone Penetration Tests), vibrocore information supplied by the Employer shall be inspected by the Contractor and included in the final interpretation of the field data. The Final Report shall include all the drawings produced in the preliminary report, including the locations of

relevant drillholes, PCPTs and vibrocores marked on the plans.

The Final Report shall be accompanied by the original thermal paper copy of the seismic records. Further copies of the original records may also be instructed by the Employer.

Additional drawings shall also be included showing sectional profiles along traverse lines (up to a maximum of 40 lines or 40 km, whichever is the lesser). The sectional profiles shall present the interpreted lithological and stratigraphical units. Where drillhole, PCPT and vibrocore data has been supplied, the sections shall include the geology encountered in all drillholes, PCPTs and vibrocores within a distance of 10m from the section line. The drillhole offset from the relevant traverse line shall be shown. The relevant fix number shall also be shown on each profile.

When instructed by the Employer, the Contractor shall provide the seismic data in digital form, either in a SEGY (Society of Exploration Geophysicists), XTF standard formats or an equivalent format. In addition the contour plots shall be provided in GIS and AUTOCAD compatible data disks. The format must be approved by the Employer before the data is submitted. The storage medium shall be to the approval of the Employer but shall normally be in CD ROM or DVD ROM disks. Continuous microfilm of field data shall be submitted with the Final Report when instructed by the Employer.

The Contractor shall submit to the Employer four paper copies of the Final Report complete with all relevant plots and factual description of the works and sources of information including existing ground investigation information.

Following completion of further ground investigation (to be carried out under different phases of ground investigation), the Contractor shall recalibrate the seismic survey, update the Final Report including text, plots and sections and resubmit four paper copies of the Final Report complete with all relevant plots and factual description of works and sources of information. The Contractor shall submit to the Employer four paper copies of the Final Report complete with all relevant plots and factual description of the works and sources of information. A magnetic copy of all plots shall also be provided in CAD compatible format.

3.4.3 Side Scan Sonar Survey

3.4.3.1 General Requirement

Side scan sonar surveys shall be carried out to produce qualitative and quantitative data on seabed topography and reflectivity, including the location and delineation of any man-made objects, pits or disturbance to the seabed.

Generally side scan sonar surveys shall be carried out simultaneously with

a bathymetric survey and/or with other types of marine geophysical surveys.

3.4.3.2 Equipment

The Contractor shall provide sufficient equipment to ensure that satisfactory progress of the Works is achieved. The equipment shall be capable of high quality resolution for all scan widths undertaken.

Suitable equipment shall include a dual frequency towfish with a pulse length of less than 0.25 milliseconds and a suitable recorder capable of printing images onto thermal paper at better than 200 dpi. When instructed by the Employer the side scan sonar data shall be digitally recorded for the production of seabed floor plans at various scales.

3.4.3.3 Surveying

Surveys shall be made by profiling along a series of traverse lines. Positional control for the traverses shall be the responsibility of the Contractor. During a survey, track modifications may be instructed by the Employer following preliminary interpretation of the data. The towfish shall be towed in a stable manner and interference from or to other geophysical equipment shall be eliminated. The slant range and frequency adopted for the survey shall be set to obtain the optimum quality of data for the survey proposed and shall be reported in the field work records. Changes in settings may be instructed by the Employer during the course of the surveys.

Fix numbers shall be neatly annotated onto the side scan records at least every tenth fix. Any changes in equipment settings whilst recording is in progress shall be avoided where possible. If necessary these shall also be annotated neatly onto the original records at the fix where the change occurred as reported in the field work record for the day.

Other factors such as passing ships which affect the quality of the data obtained shall also be noted nearby on the original records at the fix where they occurred and in the field work record for the day.

The track of the survey vessel shall be plotted as the survey proceeds. The towfish position relative to the survey vessel positioning equipment shall be noted in the field work records.

The Contractor shall carry out adjacent sweeps with a minimum overlap of 25% unless instructed otherwise by the Employer.

3.4.3.4 Preliminary Report

Unless otherwise instructed by the Employer, the results of each survey shall be presented initially in a preliminary report. It shall incorporate factual drawings and an initial delineation of any seabed objects and

topographic features. The following drawings shall be submitted with the preliminary report :

- a) A plan showing the survey vessel and/or towfish track plots and the fix points along the traverses.
- b) Interpretive plans, profiles and sections showing the outline and definition of any sunken objects, topographic features, seawall profiles and areas of different or significant reflectivity

Where a side scan sonar survey has been carried out simultaneously with any other marine geophysical survey, the relevant drawings and factual and interpretive information required for these surveys shall also be presented. If echo sounding has been carried out as well, the bathymetry results obtained shall be used to aid interpretation of seabed features shown on the side scan records.

When instructed by the Employer, a photocopy of the preliminary interpretation carried out by the Contractor on the side scan records shall be submitted with the preliminary report, with the Contractor's interpreted seabed features clearly marked on the photocopies. Each traverse line shall be clearly marked on these copies as well as the position of crossover survey lines, including the line numbers (if applicable) and fix numbers (to one decimal) of the crossing line positions.

3.4.3.5 Final Report

The Final Report shall contain a factual description of the Works carried out, also including all recording parameters such as vessel speed, fix interval, towfish depth, source frequency and level, length, gain setting and slant range, a discussion of the results and the limitations where necessary. The Final Report shall also include all the drawings produced in the preliminary report.

The Final Report shall be accompanied by the original paper copy of the side scan records.

Continuous microfilm of field data shall be submitted with the Final report when instructed by the Employer. The Contractor shall submit to the Employer four paper copies of the Final Report complete with all relevant plots and factual description of the works and sources of information. A magnetic copy of all plots shall also be provided in CAD compatible format.

3.4.4 Magnetic Survey

3.4.4.1 General Requirements

Marine magnetic surveys shall be carried out with the general objective of detecting magnetic anomalies, indicative of any metallic or magnetised object which may be present on or buried in the seabed. They may also be

required to delineate magnetic anomalies caused by regional and local geological features.

Generally marine magnetic surveys will be carried out simultaneously with a side scan sonar survey and/or with other types of marine geophysical surveys.

3.4.4.2 Equipment

The Contractor shall provide sufficient equipment to ensure that satisfactory progress of the work is achieved. A proton precision marine magnetometer with an absolute accuracy of better than 0.5 nT and a resolution of not less than 0.1 nT is considered suitable to carry out the surveys (e.g. Overhauser Effect Magnetometer or similar). The sampling rate of the magnetometer shall be at least 2 Hz and the data shall be stored digitally on hard drives, CDs or DVDs. as ASCII text.

The marine cable used shall have low magnetic properties and be of sufficient length to avoid interference from the ships' own magnetic field or that of other geophysical equipment.

The magnetometer shall have an in-built depth sensor accurate to within \pm 1 m. The magnetometer system shall be capable of digitally recording the depth of the magnetometer during the survey.

The base-station magnetometer shall be capable of storing temporal magnetic field variations in a digital format for transfer to DVDs as ASCII code when instructed by the Employer.

3.4.4.3 Surveying

Surveys shall be made by profiling along a series of traverse lines and at a spacing as stipulated in the sections above or as agreed with the Employer. Positional control for the traverses shall be the responsibility of the Contractor. The magnetometer shall be towed a minimum of 2.5 boat lengths behind the survey vessel to prevent interference from magnetic materials on board. The operating height of the magnetometer above the seabed will be dependent upon the requirements of individual surveys and the range of water depths encountered.

Fix numbers shall be clearly annotated onto the magnetometer records at least every tenth fix. Any factors such as stationary or passing ships which affect the quality of the data obtained shall be noted neatly on the original magnetometer records at the fix where they occurred and also in the field work record for the day.

During surveying the base station magnetometer shall be set up on land near the survey area to measure the diurnal variation of the Earth magnetic drift and the intensity of any magnetic storms for correcting field data. This land based magnetometer shall continuously record the magnetic drift

during the period of field work.

If severe magnetic variations occur during a survey the Contractor shall immediately inform the Employer who may instruct the Contractor to suspend surveying. The land based magnetometer shall then be left for at least three further days to monitor the variations and if there is no reduction in the high magnetic activity the Contractor shall demobilise the equipment with the approval of the Employer. On instruction from the Employer, the survey equipment may be remobilised at a later date.

The track of the survey vessel shall be plotted as the survey proceeds. The magnetometer layback relative to the survey vessel positioning equipment shall be recorded in the field work records.

3.4.4.4 Preliminary Report

The results shall be presented initially in a preliminary report. It shall incorporate factual drawings, together with a preliminary interpretation of any magnetic anomalies identified. The following drawings shall be submitted with the preliminary report.

- a) A plan showing the survey vessel and/or magnetometer track plots and the fix points along the traverses.
- b) A contoured plan showing the total magnetic intensity.
- c) A plot of the land base magnetometer record of magnetic drift.
- d) The location and interpretation of any seabed or sub-seabed magnetic anomalies shall be shown on a separate plan.

Where the magnetic survey has been carried out in conjunction with any other marine geophysical survey, then the relevant drawings, factual and interpretive information required for these surveys shall also be presented.

3.4.4.4 Final Report

The Final Report shall contain a factual description of the Works carried out, also including all recording parameters such as vessel speed, fix interval, magnetometer location and performance, a discussion of the results and the limitations where necessary. The Final Report shall include all the drawings produced in the preliminary report. The Contractor shall submit to the Employer four paper copies of the Final Report complete with all relevant plots and factual description of the works and sources of information. A magnetic copy of all plots shall also be provided in CAD compatible format.

3.4.5 Other Requirements

3.4.5.1 Insurance and Third Party Claims

The Contractor shall fully insure their personnel, survey vessel/craft for the work and indemnify the Employer against any injury, damage or loss.

The Contractor shall indemnify the Employer against any third party claim for any property, accidents and personnel.

3.4.5.2 Personnel

Sufficient equipment, craft and competent survey personnel shall be retained to ensure maintenance of good performance levels, efficiency and accuracy over the projected period of the survey.

All personnel are expected to be familiar with the Contractor's safety procedures while working in the harbour and be medically fit. The safety procedures to be followed shall comply with the safety procedures and guidelines generally applicable internationally. Where training is required for any local staff on safety aspects, the contractor shall carry out such safety training in-house before mobilizing such staff to carry out site work.

All Geophysical survey shall be carried out under the direction and supervision of a competent and experienced geophysicist and his assistants.

3.4.5.3 Lighting, Marking, Buoying & Watching

The Contractor shall be responsible for complying in every way with the requirements of any statutory or other authority having jurisdiction in respect of the requirements of markings, lighting and watching the Works or any structure craft or offshore plant which may be used in connection with the Works and for the issue of local notices to Mariners and Ferries.

The Contractor shall be responsible for ensuring that all moorings have lights and marker buoys that conform to the Guidelines produced by the International Association of Marine Aids to Navigation and Lighthouse Authorities. The Contractor shall ensure that all his vessel / craft and offshore plant carry at all times the correct lighting, markers, signals, radar reflectors, etc., as required by the local authorities commensurate with the nature of the work in which they are engaged.

The Contractor shall provide all buoys and other markers required for the proper indication of submerged work and moorings for his vessel / craft and offshore plant. The Contractor shall maintain all such lights, markers, buoys, guards, fencing and lighting in sound condition until either the Works are completed or the Employer decides that such services are no longer required.

All vessel / craft and offshore plant working or moored shall be attended at all times. If such attendance is not possible the craft or offshore plant must be moved to a safe location.

All lights required by the Contractor shall be so placed or screened so as not to interfere with or be mistaken for any navigation lights or with or for any signal lights.

The Contractor shall provide all vessel / craft and offshore plant with approved fog warning devices that shall be operated in accordance with the requirements of the local authorities.

The Contractor will be held responsible for any damage that may arise from any neglect of the above matters or from insufficient or inefficient arrangements with regard to them and must indemnify himself and the Employer against any damage arising from any such neglect or insufficient or inefficient arrangements.

3.4.5.4 Navigation & Movement around the Survey Areas

The Contractor shall be responsible for complying in every way with the requirements of any statutory or other authority of The Republic of India having jurisdiction with respect to the navigation and movement of his vessel / craft and plant as needed to undertake the survey.

The Contractor shall be responsible for co-coordinating with all relevant authorities and statutory bodies of The Republic of India to gain, if required, the necessary permissions and permits for access to the area of the Survey and to operate in the area required to undertake the survey.

The Contractor shall give due notice to the Employer on Site of his intention to move vessel / craft or offshore plant and shall comply with all orders and directions given to him from time to time by the Employer in respect of navigation.

3.4.5.5 Liability of Damage

The Contractor shall be held responsible for any damage or injury caused to shipping or craft of whatever description which may occur during the execution of the Contract through any act or omission or default of the Contractor or of any person in his employ or for whom he is responsible.

Any claims for damage, losses resulting from the damage or making good any damage shall be borne by the contractor

3.4.5.6 Survey Vessel/Craft

The survey vessel / craft and floating plant shall have been purpose built or suitably converted to undertake survey operations in the designated survey area.

The Employer reserves the right to have a Health, Safety and Environmental audit of the craft carried out prior to acceptance for survey work.

The survey craft shall be proven to be acoustically quiet to enable good quality seismic data to be acquired. The acoustic noise signature shall be outside the acoustic frequency range of the survey equipment to be deployed from the craft.

Deck areas used for survey operations shall have good lighting and be free of trip hazards. All areas of the craft used for the survey equipment deployment/recovery shall be either visible from the bridge, or good quality closed-circuit television pictures of such areas shall be provided on the bridge at all times of such operations.

The vessel / craft shall be fully classed and equipped to meet International safety requirements. All safety equipment shall be fully certified. Notices shall be displayed in appropriate locations throughout the craft and in languages that can be understood by all on board.

Personnel joining the vessel / craft shall be fully briefed on the location and use of the safety equipment and lifeboat and fire drill shall be undertaken on passage to site at the commencement of a survey cruise.

The vessel / craft shall have work areas which should be clean and tidy and have adequate space for the work to be carried out. If appropriate all cabins and internal work areas shall be adequately ventilated to ensure a comfortable and healthy work environment. The ventilation system shall be supported by a suitable air conditioning system.

3.4.5.7 Floating Plant & Craft

Whenever floating plant or craft are employed by the Contractor for the purpose of the Works, such plant shall be maintained in a satisfactory and seaworthy condition, shall have adequate attendance by competent seamen at all times, shall be fully provided with sound and satisfactory ropes, lines and moorings and shall be fully equipped with lights. At all times the Contractor shall be wholly responsible for the protection and safety of all floating craft engaged by him.

The vessel / craft shall have a minimum transit speed of 10 knots and shall be capable of surveying for extended periods at less than 4 knots. A stabilized AC power supply shall be available for running survey equipment. This shall be separate from the craft services power supply.

The craft shall be equipped with the following minimum communication equipment in accordance with the requirements of any statutory or other authority having jurisdiction with respect to the navigation and movement of his craft and offshore plant, which must be operational at all times whilst the craft is under way :

- (i) Multi-channel VHF R/T capable of working all frequencies and with a dual watch facility.

- (ii) Ship-shore R/T with a minimum range of 300 kilometres or capable of communicating with the nearest offshore support base offering emergency response facilities, whichever is the greater range

If in the opinion of the Coastguard from the local authority any craft is unsafe to be used to transport staff, for diving operations or as a safety boat, they may order the craft to be withdrawn and replaced by another, which, in his opinion is in all respects suitable for the work. The costs involved in such replacement shall be borne entirely by the Contractor.

3.4.5.8 Safety Equipment

The Contractor shall provide life jackets on the Site of the Works at all times in easily accessible to all workers.

3.4.5.9 Avoidance of Nuisance

Karwar Naval Harbour is MARPOL compliant. The Contractor shall ensure at all times that spillage does not occur of oils or other deleterious material into any new or existing water course. The Contractor shall absolve the Employer from any spillage into the sea caused by the contractor's vessel or equipment. Nevertheless, should any water course be fouled by such materials the Contractor shall clean and reinstate the water course to the satisfaction of the Employer at his own expense.

The Contractor shall ensure that there is no spillage of oil or other contaminant into the sea. Before commencing any work which could involve spillage into the sea, the Contractor shall consult the Employer and provide such effective antipollution measures as may be required to prevent such spillage. In the event of any such spillage it must be immediately reported to the relevant authority.

3.4.5.10 Underwater Obstructions

The Contractor shall mark all temporary underwater obstructions with buoys and lights and do all things necessary for the safety of navigation while the obstruction remains and shall remove any such obstruction at the earliest possible time, all at his own expense.

3.4.5.11 Temporary Moorings

The Contractor shall not lay down or provide moorings for his craft and offshore plant apart from temporary moorings in such position and laid or provided in such a manner and such conditions as may be permitted by the Employer.

The Contractor shall not lay down or provide moorings at any locations where they may present a hazard to any shipping. The Contractor shall

submit to the Employer detailed sketches showing the dispersal of his proposed moorings and shall not lay down any such moorings before he has received the Employer's approval in writing.

3.4.5.12 Harbour Dues

The Contractor shall be responsible for payment of all import duty, dock charges, wharf-age, anchorage charges, charges on craft and offshore plant, charges on goods, conservancy charges, pilot-age fees and other charges in respect of the conveyance of his vessel / craft to the Site, and for all materials and plant required for use in or in connection with the Works.

3.4.5.13 Diving

No diving operations shall take place without the prior authorization of all authorities having jurisdiction over the area concerned.

The Contractor shall be responsible for obtaining all necessary approvals from all statutory or other authorities prior to undertaking diving operations.

3.4.5.14 Removal of Sunken Craft & Offshore Plant

The Contractor shall forthwith and with dispatch raise and remove any craft or offshore plant belonging to him or to any of his Sub-Contractors or to any person employed by him which may be sunk or stranded or gone adrift in the course of the Works or otherwise deal with the same as the Employer may direct until the same shall be raised, removed or recovered.

The Contractor shall buoy and light, and do such things for the safety of navigation as may be required by the Employer or any statutory or other authority having jurisdiction. In the event of the Contractor not carrying out the obligations imposed upon him by this Clause or in the event of the said authorities electing to buoy and light such sunken craft and offshore plant and raise and remove or otherwise recover the same, the Employer shall deduct the amount of such costs incurred by the Employer in arriving at the Contract Sum. The fact that the craft and offshore plant sunk, stranded or gone adrift is insured or has been declared an actual or constructive loss shall not absolve the Contractor from his obligation under this Clause.

The Contractor shall give both the Employer and the local authority immediate notice of the occurrence of any such sinking, stranding or going adrift as is referred to in this Clause.

3.4.5.15 Emergency Arrangement

The Contractor shall maintain arrangements whereby he can quickly call out labour outside normal working hours to carry out work needed for an emergency associated with the Works. The Employer shall be provided at



all times with a list of addresses and telephone numbers of the Contractor's staff who are currently responsible for organizing emergency work.

The Contractor shall acquaint himself and his employees with any relevant local arrangements that are in existence for dealing with emergencies.

3.4.5.16 Tide levels

The Works will be affected by tidal conditions. The Contractor should make himself fully aware of times, ranges and depths of tides and make due allowance in his manner and mode of working.

The Contractor shall be deemed to have satisfied himself with regard to likely tidal variations including surges and wave set-up in preparing his Bid.

3.4.5.17 Survey Equipment

The Contractor shall supply and maintain in full working order during the progress of the works all necessary surveying equipment and the supply of expendable surveying material as required from time to time in connection with the works.

3.4.5.18 Existing Services

The Contractor shall satisfy himself as to the exact nature and position of services within the survey area.



SECTION V

BILL OF QUANTITIES / PRICE FORMAT

CHAPTER I - PREAMBLE TO BILL OF QUANTITIES

1. GENERAL

1.1 The contractor's attention is drawn to the conditions of contract, the specifications and the drawings all of which are to be read in conjunction with the Bill of Quantities hereinafter. Directions and descriptions of work and material given in the other parts of the Contract Documents are not necessarily repeated in the Bill of Quantities. The total cost of complying with all the provisions, conditions, obligations and liabilities, etc., described in the contract and of carrying out the works as specified including, but not by way of limitation, all charges are to be included in the rates and prices inserted in the Bill of Quantities hereinafter unless expressly otherwise provided for in the contract. Consequently, the Contractor shall have no claim for further or extra payment in respect of any work. The rates and prices set against each item are to be for full and / or for the total work described in the specification which can reasonably be inferred there from and are to cover the cost of provision of all labour, materials, tools, tackles, plants, equipment, fuel etc. all as per conditions stipulated elsewhere. The rates shall also include all contingent cost and charges whatsoever including all taxes such as sales tax and general tax and all the contractor's obligations under the contract and all matters and things necessary for the proper completion and maintenance of the works.

1.2 The quantities given in the Bill of Quantities are estimated and provisional with the exception of lump sum items. The basis of payment shall be the actual quantities of work ordered and carried out as measured by the contractor and verified by the Engineer or his representative and valued at the rates and prices quoted/ specified in the Bill of Quantities, where acceptable and otherwise at such rates and prices as the Engineer may fix within the terms of the contract.

1.3 The quantities of work and materials stated in the Bill of Quantities shall not be considered as limiting or extending the amount of work to be done or material to be supplied by the contractor. The contractor is deemed to be familiar with all site conditions at the harbour Site, weather all site investigation records, available means of access and the locality of any existing services and working restrictions due to testing site features or other contractor's works in order to execute the works. General directions and descriptions of work and materials are not necessarily repeated or summarized in the Bill of Quantities. The contractor is deemed to have referred to the relevant sections of the contract documentation and prices incorporated against each item in the Bill of Quantities. The method of measurement is described in the following preambles and / or is demonstrated in the measured items included in the Bill of Quantities. Provisional Sums included and so designated in the Bill of Quantities shall be expanded in whole or in part at the direction and discretion of the Engineer. Unless separate items are measured, rates and prices must include for all testing in accordance with the specification.

1.4 The following abbreviations have been used:



LS	-	Lump Sum
m	-	metre
m ²	-	square metre
mm ²	-	Square millimeters
m ³	-	cubic metre
T/t /Te/ te/MT	-	tonne
wk	-	week
No./Nos	-	Number/ Numbers
Rs.	-	Indian Rupee
KG	-	Kilogram
RM/Rm	-	Running metre
mm	-	Millimeter
Km	-	Kilometre
M ² /day	-	Square meter per day
sum	-	Sum
nr	-	Number
h	-	Hour
v.wk	-	Vehicle week
item	-	Item
day	-	Day

2. MEASUREMENT

2.1 General

Unless stated or billed otherwise, quantities shall be measured in accordance with IS: 1200 and are net as they are finished and fixed in the works. The rates and prices shall include whatever allowance is considered by the contractor to be necessary for working area, construction slopes, batter etc. The method of measurement shall comply with the provisions hereafter.

3. MODE OF MEASUREMENT AND PAYMENT

3.1 General

Payment shall be made on the recorded measurements and the contractor will have to prepare and submit by himself the bills in the prescribed form as per the payment schedule. On completion of the work or on the prior termination of the contract final measurement will be taken and account adjusted accordingly. The net amount payable means gross amount less all statutory levies such as Income tax, Sales tax on works contract and any other amount due to the Employer.



CHAPTER II - PRICE FORMAT/BILL OF QUANTITIES

PRICE SCHEDULE FOR MARINE GEO PHYSICAL SURVEY FOR PROJECT SEABIRD PHASE IIA, AT KARWAR (RATES INCLUSIVE OF ALL TAXES & DUTIES)

Item NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE PER UNIT	AMOUNT
	GEOPHYSICAL SURVEY WORKS				
1.	Mobilisation & Demobilisation of equipment & personnel for carrying all survey work	LS		Rs (Rupees -----)	Rs.
2.	Set up and commission recording tide gauge	LS		Rs (Rupees -----)	Rs.
3.	Carry out Bathymetric survey with in the area shown on Drawing DELD14065-PSB-DWG-10-PMC01-CP-0003*	Ha	1,100	Rs (Rupees -----)	Rs.
4.	Carry out Seismic Reflection survey with in the area shown on Drawing DELD14065-PSB-DWG-10-PMC01-CP-0004	Ha	425	Rs (Rupees -----)	Rs.



Item NO.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE PER UNIT	AMOUNT
5.	Carry out Side Scan Sonar survey with in the area shown on Drawing DELD14065-PSB-DWG-10-PMC01-CP-0004	Ha	425	Rs (Rupees -----)	Rs.
6.	Carry out Magnetic survey with in the area shown on Drawing DELD14065-PSB-DWG-10-PMC01-CP-0004	Ha	425	Rs (Rupees -----)	Rs.
7.	Preparation & submission of four hard copies of draft & final reports including drawings as per specifications and as directed by Employer, along with one soft copy of all raw and processed data.	LS		Rs (Rupees -----)	Rs.

(Rupees _____ only for total work
for Geophysical Survey Works)

Signature of contractor



SECTION VI

DRAWINGS