

Assam Petro-chemicals Limited

Namrup. Assam

Enquiry Document No

APL/Proj04/Site Grading/Tanker Parking/2016/407

SITE GRADING WORK

ENQUIRY DOCUMENT FOR SITEGRADING WORKS

OWNER / CLIENT: ASSAM PETROCHEMICALS LIMITED

PROJECT: INTEGRATED METHANOL-ACETIC ACID PLANT

Enquiry No:- APL/Proj04/Site Grading/Tanker Parking/2016/407

LOCATION: NAMRUP, ASSAM

SITE GRADING WORK**CONTENTS**

SECTION	TITLE	Page No
A	SCOPE OF ENQUIRY	4-5
A	DEFINITION OF TERMS AND SPECIFICATION DOCUMENTS	6-14
A	LIST OF ABBREVIATIONS	15-17
A	CHECK LIST FOR SUBMISSION OF BID	18-23
A	INSTRUCTIONS TO BIDDERS	24-45
A	SPECIFIC TECHNICAL REQUIREMENTS	46-46
A	PROFORMA FOR BID SUBMISSION LETTER	47-47
A	PROFORMA OF LETTER OF AUTHORITY FOR ATTENDING PRE-BID MEETING	48-48
A	PROFORMA OF LETTER OF AUTHORITY FOR ATTENDING TECHNICAL BID OPENING AND PRICE BID OPENING	49-49
A	INFORMATION ABOUT BIDDER	50-50
A	PROFORMA OF DECLARATION OF BLACK LISTING / HOLIDAY LISTING	51-51
A	CERTIFICATE AS PER SEC. 297/299 OF COMPANIES ACT	52-53
A	INTEGRITY PACT	54-59
A	UNDERTAKING-1	60-60
A	UNDERTAKING-1	61-61
A	LETTER OF AUTHORITY	62-62
B	PROJECT INFORMATION	63-63
C	GENERAL NOTES TO BE READ WITH SCHEDULE OF QUANTITIES & RATES	64-66
C	SCHEDULE OF QUANTITIES	67-68
C	SCHEDULE OF RATES	69-69
C	LIST OF BID DRAWINGS	70-70
C	SPECIAL CONDITIONS OF CONTRACT	71-82
C	VENDOR DOCUMENT REVIEW STATUS CODE FOR STAMP & STICKER	83-84
C	B.G FORMAT FOR SECURITY /PERFORMANCE GUARANTEE/DEFECT LIABILITY	85-87
C	PERFORMA FOR CONTRACT	88-89
C	PERFORMA FOR COMPLETION CERTIFICATE	90-90
C	PERFORMA FOR NO DEMAND CERTIFICATE	91-92
C	PERFORMA FOR DUE CERTIFICATE	93-93
C	PERFORMA FOR SITE CLEARANCE CERTIFICATE	94-94
C	PERFORMA FOR LABOUR LIABILITIES	95-95
D	EARTHWORK IN EXCAVATION , BACKFILLING & DEWATERING	96-108
E	GENERAL CONDITIONS OF CONTRACT	109-139
E	SAFETY CONDITIONS FOR UNDERTAKING SITE WORK	140-149
E	CONTRACTOR'S HEALTH AND SAFETY PROGRAMME	150-169

SITE GRADING WORK

SECTION	TITLE	Page No
E	CHECKING CALIBRATION OF THEODOLITE	170-170
E	CHECKING CALIBRATION OF LEVELLING INSTRUMENT	171-171
E	SURVEY CHECK AT START OF CONSTRUCTION	172-172
E	MOISTURE / DENSITY RELATION & STANDARD / MODIFIED PROCTOR TEST OF SOIL	173-173
E	DETERMINATION OF DRY DENSITY OF SOIL BY CORE CUTTER METHOD	174-174
E	DETERMINATION OF DRY DENSITY OF SOIL BY SAND REPLACEMENT METHOD	175-175
E	CLEARANCE CARD FOR MURRUM FILLING	176-176
F	DETAILED SITE PROGRESS REPORT	177-177
F	SCHEDULE OF DEVIATIONS FROM TECHNICAL SPECIFICATIONS	178-178
F	SCHEDULE OF DEVIATIONS FROM GENERAL CONDITIONS	179-179
F	SCHEDULE OF EQUIPMENT AND MACHINERY	180-180
F	SCHEDULE OF RATES FOR LABOUR	181-181
F	SCHEDULE OF BIDDER'S EXPERIENCE	182-182
F	PRE-FILLED AGREED TERMS AND CONDITIONS	183-188
F	NOTICE INVITING TENDER	189-189
G	PROFORMA FOR PRESENT COMMITMENT	190-190
G	PROFORMA FOR PAST PERFORMANCE	191-191

SITE GRADING WORK

SECTION: A

1.0 SCOPE OF WORK

- 1.1 The Contractor's scope of work shall cover furnishing all materials, handling of material, equipment, plant, labour, transport, approach roads, tools and all other services necessary for the complete execution of works, including all surveying and setting out necessary for the works including transfer of levels from existing available bench mark and clean up of working areas after completion of the works.
- 1.2 The works are to be carried out adjacent to the operational plant within the existing premises of the client. Bidder is advised to visit the site to get acquainted with the existing site condition and to assess the amount of work before submission of the Priced Bid. Contractor shall bring out any variation in the details furnished in this document prior to submission of bid. Any extra claim on account of any variation from the details furnished in this tender document will not be entertained. Contractor shall understand the complete scope of work as stipulated in the Bid Document.
- 1.3 The scope of this enquiry shall consist of filling up of the site up to the desired FGL along with the embankments required for the roads.
- 1.4 Borrow areas shall be as per the guidelines and confirmation from Owner or Engineer in charge. Similarly if any material has to be disposed off; it shall be as specified by Owner or Engineer in charge.
- 1.5 The various items of work shall be as per the schedule of quantity given in Section C and specification and as directed by the engineer in charge.
- 1.6 All works shall be carried out in accordance with the technical specifications of this document and as directed by Engineer in charge
- 1.7 Any working space required for storing of construction materials, equipment, tools and tackles shall be arranged by Contractor, at his own cost and time. All the materials, tools and tackles required for successful completion and installation of the works shall be in the scope of Contractor.
- 1.8 The Contractor is required to strictly follow all the rules and regulations of Government of India and State of Assam and all local rules and bye-laws, etc.

SITE GRADING WORK

- 1.9 Bidder shall provide necessary barricading while carrying out the construction works.
- 1.10 The labour colony shall be provided by the Contractor outside the plot premises at his own cost.
- 1.11 Construction power and Construction water shall be arranged by the contractor at his own cost including power for labour colony. If Contractor has to set up a DG (Diesel Generator); it has to be as per the Local Statutory Norms.
- 1.12 Price shall be submitted for all items and the quoted price shall be firm. The price shall include all materials, handling of material, plants, machineries and equipment, labour, tools, & services, royalty, transport, supervision, taxes, insurance, overheads, profits, etc. and every incidental and contingent cost and charges whatsoever required to complete the items of work in all respect and as per specification and to Owner's satisfaction. The tax component as per the statutory requirements to be indicated separately by Bidder as described in Section C.
- 1.13 There is no free issue material to the contractor. Supply of all material, Labour, tools, equipment etc shall be in the scope of the contractor.
- 1.14 Contractor shall ensure local participation to the extent possible for execution of works.
- 1.15 Owner reserves the right to split the contract; however the rates/ prices shall remain valid.
- 1.16 Handing over the site to the complete satisfaction of the Engineer in charge/Owner.
- 1.17 Contractor shall strictly use Murram for site grading works. In case Murram is not available, contractor shall use River Sand with detailed justification submitted in writing to Owner.

2.0 TIME OF COMPLETION

The completion of the activities in a time bound manner is the principal requirement as far as the civil construction contract is concerned. The requirement would be to carry out the job uninterruptedly, irrespective of the seasonal changes and also to work during extended hours during the working days/ holidays to achieve the above target. Total duration of works shall be 3 (Three) months from the date of award of contract.

SITE GRADING WORK

DEFINITION OF TERMS AND VARIOUS SECTIONS OF ENQUIRY DOCUMENT

1.0 SCOPE

This specification covers Definitions of Terms used and Description of various Sections in the Enquiry Document.

2.0 DEFINITIONS OF TERMS

2.1 The PURCHASER shall mean the CLIENT/OWNER. The PURCHASER shall include his successors and assigns, as well as his authorized officers and representatives. Term OWNER used in some documents shall also mean the PURCHASER.

2.2 The BIDDER shall mean the company, firm or party who bids or quotes against the ENQUIRY DOCUMENT.

2.3 The VENDOR or the CONTRACTOR shall mean the successful BIDDER whose BID the PURCHASER has accepted and on whom a PURCHASE ORDER or a WORK ORDER has been issued by the PURCHASER. The VENDOR and the CONTRACTOR shall include their successors and assigns, as well as his authorized officers and representatives. Instead of a WORK ORDER being issued, the PURCHASER and the successful BIDDER may alternatively sign a CONTRACT. Normally, the term VENDOR is used for 'Supply of an Item' and the term CONTRACTOR is used where only the site work is involved or site work is also included in the 'Scope of Services' in addition to 'Supply of an Item'. However, the terms the VENDOR and the CONTRACTOR may be interchangeably used in some documents.

2.4 The SUB-VENDOR and the SUB-CONTRACTOR shall mean the company, firm or party, named in the PURCHASE ORDER or the WORK ORDER or the CONTRACT, undertaking a part of the supply and/or site work, on whom a part of the PURCHASE ORDER or the WORK ORDER or the CONTRACT has been sublet, with the written consent, of the PURCHASER. The SUB-VENDOR and the SUB-CONTRACTOR shall include their successors and assigns, as well as his authorized officers and representatives.

2.5 The MANUFACTURER shall mean the company, firm or party who is the actual fabricator or the producer of an item and supplies the item directly to the PURCHASER or through the VENDOR or the CONTRACTOR.

2.6 The OTHERS shall mean the other successful BIDDERS whose BIDS the PURCHASER has accepted and on whom PURCHASE ORDERS or WORK ORDERS

SITE GRADING WORK

have been issued by the PURCHASER or the CONTRACTS have been signed between the PURCHASER and such OTHER BIDDERS.

2.7 The INSPECTOR shall mean the authorized representative appointed by the PURCHASER for the purpose of inspection of materials, equipment or site works.

2.8 The PROJECT shall mean the project specified in the 'Project Information- General', Section-B of the ENQUIRY DOCUMENT.

2.9 The SITE shall mean the actual place of the PROJECT where the PLANT or the EQUIPMENT or the material ordered needs to be supplied and/or where the WORK has to be executed under the CONTRACT.

2.10 The ENQUIRY DOCUMENT shall mean collectively the 'Covering Letter', or the 'Invitation to Bid' or the 'Notice Inviting Tender' and various Sections viz. A, B, C, D, E and F as applicable. An ENQUIRY DOCUMENT may not necessarily contain all the sections. The Contents Sheet indicates the sections included in an ENQUIRY DOCUMENT and also lists various specification modules contained therein.

2.11 The BID shall mean the proposal or the quotation that the BIDDER submits to the PURCHASER and/or the OWNER in response to the ENQUIRY DOCUMENT.

2.12 The PLANT or the EQUIPMENT or the WORK shall mean the goods to be supplied or the services to be provided by the VENDOR/SUB-VENDORS or the CONTRACTOR/SUB-CONTRACTORS under the PURCHASE ORDER or the WORK ORDER or the CONTRACT.

2.14 The PURCHASE ORDER or the WORK ORDER or the CONTRACT shall mean the document issued by the PURCHASER or jointly signed by the PURCHASER and the CONTRACTOR, authorizing the VENDOR or the CONTRACTOR to supply the PLANT or the EQUIPMENT or execute the WORK as indicated in the PURCHASE ORDER or the WORK ORDER or the CONTRACT.

2.15 The ORDER VALUE or the CONTRACT PRICE shall mean the amount of compensation payable by the PURCHASER to the VENDOR or the CONTRACTOR for supply of the PLANT or the EQUIPMENT or execute the WORK as indicated in the PURCHASE ORDER or the WORK ORDER or the CONTRACT.

2.16 The DATE OF CONTRACT shall mean the calendar date on which the PURCHASER and the CONTRACTOR have signed the CONTRACT. EFFECTIVE DATE OF CONTRACT may be different from the DATE OF CONTRACT and shall be as mutually agreed to between the PURCHASER and the CONTRACTOR.

SITE GRADING WORK

2.17 The DELIVERY PERIOD or the CONTRACT PERIOD shall mean the period indicated in the PURCHASE ORDER or the WORK ORDER or the CONTRACT by which the ordered PLANT or the EQUIPMENT needs to be delivered or the WORK needs to be completed by the VENDOR or the CONTRACTOR.

.2.18 The MONTH shall mean a calendar month.

2.19 The GUARANTEE/DEFECTS LIABILITY PERIOD or simply the GUARANTEE PERIOD shall mean the period during which the PLANT or the EQUIPMENT supplied by the VENDOR or the WORK executed by the CONTRACTOR shall give the performance guaranteed by the VENDOR or the CONTRACTOR in the 'Schedule of Guarantees' submitted as part of the BID and subsequently made part of the PURCHASE ORDER or the WORK ORDER or the CONTRACT.

2.20 The words APPROVED or APPROVAL used in the ENQUIRY DOCUMENT shall mean, APPROVED BY or APPROVAL BY the PURCHASER or the OWNER. When the words 'Approved', 'Approval', 'Subject to Approval', 'Satisfactory', 'Equal To', 'Proper', 'Requested', 'As Directed', 'Where Directed', 'When Directed', 'Determined by', 'Accepted', 'Permitted' or words and phrases of similar meaning are used, the approval, judgment and direction etc., are understood to be a function of the PURCHASER or the OWNER.

2.21 The PURCHASER's INSTRUCTIONS shall mean any drawings and/or instructions, oral and/or in writing, details, direction and explanations issued by the PURCHASER or the OWNER from time to time during the CONTRACT PERIOD.

2.22 The WRITING shall include any manuscript, typewritten or printed statement, under or over signature and/or seal as the case may be.

2.23 The NOTICE IN WRITING or the WRITTEN NOTICE shall mean a notice in written, typed or printed characters sent or delivered personally or otherwise proved to have been received by registered post or courier service to the last known private or business address or registered office of the addressee and shall be deemed to have been received when in the ordinary course of post it would have been delivered.

2.24 The VENDOR's WORKS or the CONTRACTOR's WORKS or the MANUFACTURER's WORKS shall mean and include the land and other places which are used by the VENDOR or the CONTRACTOR or their SUB-VENDORS or SUB-CONTRACTORS for the manufacture of the PLANT or the EQUIPMENT or executing the WORK.

SITE GRADING WORK

2.25 The VIRTUAL COMPLETION shall mean that all work is completed as directed and the SITE is cleared to the satisfaction of the PURCHASER/ OWNER.

2.26 The MECHANICAL COMPLETION shall mean a state or readiness for PRELIMINARY OPERATION after due erection of all the PLANT and the EQUIPMENT covered under the scope of the CONTRACT.

2.27 The COMMISSIONING shall mean integrated activity covered under PRELIMINARY OPERATION, INITIAL OPERATION and TRIAL OPERATION and carrying out PERFORMANCE TESTS.

2.28 The PRELIMINARY OPERATION shall mean all activities undertaken as part of commissioning after MECHANICAL COMPLETION up to commencement of INITIAL OPERATION and shall include mechanical and electrical checkouts, calibration of instrument and protection devices, commissioning of sub and supporting systems and chemical cleaning of the plant, system and equipment covered under the CONTRACT.

2.29 The INITIAL OPERATION shall mean all operations undertaken as part of the COMMISSIONING after completion of PRELIMINARY OPERATION and up to commencement of TRIAL OPERATION. It shall be the first integral operation of the complete plant, system or equipment covered under the CONTRACT and shall include first light-up, initial equipment rolling, equipment stretch-out, dry out and operational chemical cleaning, no load, partial load, full load runs for mechanical and electrical try-out and gathering of operational data, calibration, setting and commissioning of control systems, and shutdown inspection and adjustment of the plant, system and equipment covered under the CONTRACT.

2.30 The TRIAL OPERATION shall mean the integrated operation of the plant, system and equipment covered under the CONTRACT for a specified period at specified load for proving trouble-free operation of the plant, system and equipment covered under the CONTRACT.

2.31 The PERFORMANCE TESTS shall mean such tests as are prescribed in the ENQUIRY DOCUMENT to be carried out by the VENDOR/CONTRACTOR/MANUFACTURER before the PLANT and the EQUIPMENT is taken over by the PURCHASER.

SITE GRADING WORK

2.32 The COMMERCIAL USE shall mean use of the PLANT and the EQUIPMENT, which the CONTRACT contemplates or that for which the PLANT and the EQUIPMENT is commercially capable.

2.33 The MINOR MODIFICATION as applied to the CONTRACTS other than civil works, shall mean the modification work required to be carried out on the PLANT and EQUIPMENT, which needs a maximum of 48 man-hours per item of work. In the case of civil works, it shall be work, which needs a maximum of 8 man-hours per item of work.

2.34 The MAJOR MODIFICATION as applied to the CONTRACTS other than civil works, shall mean the modification work required to be carried out on the PLANT and EQUIPMENT, which needs more than 48 man-hours per item of work. In the case of civil works, it shall be work, which needs more than 8 man hours per item of work.

2.35 Words meaning 'Persons' shall include Firms, Companies Corporations and other Bodies whether incorporated or not.

2.36 Words meaning the 'Singular' shall also include the 'Plural' and vice-versa where the context requires.

3.0 ENQUIRY DOCUMENT

3.1 The Enquiry Document shall mean collectively the 'Covering Letter', or the 'Invitation to Bid' or the 'Notice Inviting Tender' and various Sections viz. A, B, C, D, E and F as applicable. An Enquiry Document may not necessarily contain all the sections. The Contents Sheet indicates the sections included in an Enquiry Document and also lists various specification modules contained therein. All these sections need to be considered together for correct understanding and interpretation of the Enquiry Document.

3.2 SECTION-A

3.2.1 For equipment supply and/or erection contracts, Section-A covers the scope of the Enquiry Document and Applicability of Codes and Standards. It also includes this very specification module which gives Definition of Terms and Various Sections of the Enquiry Document.

3.2.2 For civil works section-A covers the scope of the Enquiry Document and Instructions to Bidders. It also includes this very specification module which gives Definition of Terms and Various Sections of the Enquiry Document.

3.3 SECTION-B

SITE GRADING WORK

Section-B is a project-specific section and includes relevant 'Project Information'.

3.4 SECTION-C

3.4.1 Section-C is an Enquiry Document-specific section.

3.4.2 For equipment supply and/or system supply and erection contracts or purely site works contracts it covers the following, if not covered in Section-D.

(a) Brief description of the equipment or system to be supplied or the type of site work involved

(b) System performance, design, layout, erection, operation and maintenance requirements

(c) Specific manufacturing process

(d) Applicable Codes and Standards

(e) Shop and site Inspection, performance tests and guarantee requirements

(f) Quantity variation and contract price variation

(g) Bid evaluation criteria, like cost loading for power and consumables etc. and penalty criteria

(h) Scope of supply and description of battery limits

(i) Provision of site facilities by the PURCHASER and chargeability of these

(j) Approved makes, brands and sub-vendors for critical items

3.4.3 For civil works, Section-C contains Schedule of Quantities.

3.5 SECTION-D

3.5.1 Section-D covers the detailed technical specifications of the equipment or system to be supplied, services to be performed and site work activities to be carried out.

3.5.2 A typical module of technical specifications may consist of a write-up and/or data sheets A, B and C. Data sheet A includes the data specified by the PURCHASER/OWNER. Data sheet B specifies the data to be furnished by the BIDDER along with the BID. Data sheet C specifies the data to be furnished by the VENDOR or the CONTRACTOR after the issue of the PURCHASE ORDER or the WORK ORDER or the award of CONTRACT.

SITE GRADING WORK

3.6 SECTION-E

Section-E includes general specifications like:

- (a) Responsibilities of Various Agencies Involved during Project Execution
- (b) General Conditions of Contract
- (c) Drawings, Engineering Documents and Instruction Manuals
- (d) Shop Inspection and Tests
- (e) Guarantee and Patent Rights
- (f) Packing, Marking and Transport Instructions for Equipment
- (g) Spares and Maintenance Tools and Tackles
- (h) Training of Purchaser's Personnel
- (i) Storage of Mechanical and Electrical Equipment at Site
- (j) Erection of Turbine Generator and Auxiliary Equipment
- (k) General Technical Requirements for Mechanical Completion
- (l) General Technical Requirements for Equipment Start-up upto Taking Over
- (m) Progress Schedule and Reports
- (n) Performance Tests at Site
- (p) Health and Safety Requirements for Site Work
- (q) General Technical Requirements for Maintenance of Plant during Guarantee/Defects Liability Period

3.7 SECTION-F

Section-F includes schedules to be filled-in and submitted by the Bidder along with the Bid. Some of the typical schedules are listed below:

- (a) Schedule of Essential and Recommended Spares
- (b) Schedule of Maintenance Tools and Tackles
- (c) Schedule of Start-up and Commissioning Spares

SITE GRADING WORK

- (d) Schedule of Instruments for Performance Tests
- (e) Schedule of Personnel for Supervision of Erection, Commissioning, Start-up and Performance Testing
- (f) Schedule of Time for Manufacture, Dispatch and Shipment to Site
- (g) Schedule of Deviations from Technical Specifications
- (h) Schedule of Deviations from General Conditions
- (i) Schedule of Equipment and Erection Machinery
- (j) Schedule of Rates for Labour
- (k) Schedule of Places of Test and Inspection
- (l) Schedule of Weights and Dimensions
- (m) Schedule of Bidder's Experience
- (n) Schedule of Prices and Delivery or Completion Period
- (o) Schedule of Unit Prices
- (p) Schedule of Performance Guarantees
- (q) Schedule of Distribution of Documents
- (r) Schedule of Sub-Vendors or Sub-Contractors.

3.8 The BIDDER shall be deemed to have carefully examined complete Enquiry Document and to have fully informed and satisfied himself as to the details, nature, character and quantities of the work to be carried out, site conditions and other pertinent matters and details.

3.9 In case of contradiction between the Write-up and Data Sheet A of a specification module, requirements indicated in Data Sheet A shall govern.

3.10 In case of contradiction between technical specifications indicated in Section C and the write-up of a specification module under Section D, requirements indicated in Section C shall govern.

3.11 In case of contradiction between general specifications indicated in Section C and those covered in Section E, requirements indicated in Section C shall govern.

SITE GRADING WORK

3.12 The Bidder, before submission of the Bid, shall bring any other contradiction in the Enquiry Document, which is not resolved by the paras 3.9 to 3.11 above, to the notice of the PURCHASER/OWNER. Such contradictions need to be resolved by the PURCHASER/OWNER before the Bid Due Date.

3.13 It is the intent of the Purchaser to incorporate the Enquiry Document as part of the Purchase Order or the Work Order or the Contract.

SITE GRADING WORK**LIST OF ABBREVIATION**

This specification covers comprehensive List of Abbreviations in this ENQUIRY document. The Abbreviations not covered in this specification are described under respective sections of ENQUIRY document.

1.0 LIST OF ABBREVIATION

- 1.1 "BIS" means Bureau of Indian Standard
- 1.2 "BEC" means Bid Evaluation Criteria
- 1.3 "BG" means Bank Guarantee
- 1.4 "BQC" means Bidders' Qualification Criteria.
- 1.5 "C&F" means Cost & Freight
- 1.6 "CAD" means Cash against Documents
- 1.7 "CD" means Compact Disc
- 1.8 "CDD" means Contractual Delivery / Completion Date
- 1.9 "CIF" means Cost Insurance & Freight
- 1.10 "CPBG" means Composite Performance Bank Guarantee
- 1.11 "CST" means Central Sales Tax
- 1.12 "DD" means Demand Draft
- 1.13 "DGM" means Deputy General Manager
- 1.14 "DTAA" means Double Taxation Avoidance Agreements
- 1.15 "ECC" means Excise Control Code
- 1.16 "EMD" means Earnest Money Deposit
- 1.17 "FEED" means Front End Engineering Design
- 1.18 "FCA" means Free Carrier
- 1.19 "FOB" means Free on Board
- 1.20 "FOR" means Free on Road
- 1.21 "FOT" means Free On Truck
- 1.22 "GC" means Goods Consignment
- 1.23 "GCC" means General Conditions of Contract
- 1.24 "HSE" means Health, Safety & Environment
- 1.25 "ICB" means International Competitive Bidding

SITE GRADING WORK

- 1.26 "IFP" means Invitation for Pre-qualification
- 1.27 "ISO" means International Organization for Standardization
- 1.28 "ITB" means Instructions to Bid
- 1.29 "L/C" means Letter of Credit
- 1.30 "LD" means Liquidated Damages
- 1.31 "LIB" means Letter Inviting Bid
- 1.32 "LIT" means Letter Inviting Tender
- 1.33 "LOI" means Letter of Intent
- 1.34 "MVL" means Master vendor List
- 1.35 "NCB" mean National Competitive Bids
- 1.36 "NIB" means Notice Inviting Bidding
- 1.37 "NIT" means Notice Inviting Tender
- 1.38 "NSIC" means National Small Scale industries corporation
- 1.39 "OEM" means Original Equipment Manufacturer
- 1.40 "O & M" means Operation & Maintenance
- 1.41 "PATC" means Pre-filled Agreed Terms and Conditions
- 1.42 "PBG" means Performance Bank Guarantee
- 1.43 "PO" means Purchase Order
- 1.44 "PMC" means Project Management Consultant
- 1.45 "PPE" means Personal Protective Equipment
- 1.46 "PSU" means Public Sector Undertaking
- 1.47 "PVC" means Price Variation Clause
- 1.48 "QAP" means Quality Assurance Plan
- 1.49 "QMS" means Quality Management System
- 1.50 "RA" means Running Account
- 1.51 "RFQ" means Request for Quotation
- 1.52 "RR" means Railway Receipt
- 1.53 "SOQ" means Schedule of Quantities
- 1.54 "SOP" means Schedule of Price(s)

SITE GRADING WORK

- 1.55 "SOR" means Schedule of Rate(s)
- 1.56 "SCC" means Special Conditions of Contract
- 1.57 "SSI" means Small Scale and ancillary units
- 1.58 "T&C" means Terms & Conditions
- 1.59 "TIN" means Tax Information Network
- 1.60 "TR" means True Receipt / Transport Receipt
- 1.61 "UOM" means Unit of Measurement
- 1.62 "VAT" means Value Added Tax

SITE GRADING WORK

CHECK LIST FOR SUBMISSION OF BID

Bidder is requested to fill this check list and ensure that all details/documents have been furnished as called for in the Bidding Document along with this duly filled in, signed & stamped checklist **with each copy of the “Techno-Commercial bid”**.

I. CONFIRM THE FOLLOWING (tick the box):

(1.0) Bid / Offer have been neatly punched & differently filed as Integrity Pact &/or BID Fee & /or EMD File, Commercial Bid file, Technical Bid file and Priced Bid file with required number of copies (Refer Appendix – I). Offer submitted in loose / stapled papers and / or insufficient documents / details / copies as mentioned in above Appendix will not be accepted and may lead to rejection of bid

YES

(2.0) All pages of the bid have been page numbered in a sequential manner at the top right portion in a format (page no. / Total page)

YES

(3.0) Complete ENQUIRY document (original + copy) duly signed and stamped by the Bidder in token of having received and read all the parts of the Bidding documents and having accepted and considered the same in preparing and submitting the Bid and submission of an undertaking that no pages have been altered / changed with respect to the ENQUIRY documents and all subsequent amendments

YES

(4.0) Corrigendum / Addendum / Amendment (if applicable) along with its Compliance letter, submitted duly signed and stamped on each page

YES

(5.0) Declaration By Bidder regarding whether he is a Director or is related to any Director of owner firm, present or retired within the past three years

SUBMITTED

II. Please tick relevant box and ensure compliance:

PART-I: COMMERCIAL BID

(1.0) Pro-Forma of Declaration of blacklisting / holiday listing

SUBMITTED

(2.0) BID Fee (if applicable) as mentioned in the Instruction to bidder (ITB)

Submitted

Not Applicable

Bidder Name, Sign & Company Seal:

SITE GRADING WORK

- (3.0) EMD (if applicable) as mentioned in the Instruction to bidder (ITB)
Submitted **Not Applicable**
- (4.0) Integrity Pact (if applicable) as mentioned in the ITB
Submitted **Not Applicable**
- (5.0) Power of Attorney in Favor of the person who has signed the bid on stamp paper of Appropriate value as mentioned in clause 30.4 of ITB
Submitted **Not Applicable**
- (6.0) Submission of documents to establish conformity with Bidder's Qualification Criteria as per Instruction to bidder (ITB) under head "Bidder's Pre- Qualification Criteria"
Submitted **Not Applicable**
- (7.0) Partnership Deed in case of partnership firm and Article of Association (AOA) / Memorandum of Association (MOA) in case of limited company if NCB / ICB ENQUIRY
Submitted **Not Applicable**
- (8.0) Present/ Concurrent Commitments as per ITB
Submitted
- (9.0) Schedule of Deviations from General conditions as per ITB
Submitted
- (9.0) Commercial Details/ Documents specified in the ITB
Submitted
- (10.0) Blank copy (without price) of schedule of Rates & Quantities indicating Quoted" duly signed and stamped on each page
Submitted

Bidder Name, Sign & Company Seal:

SITE GRADING WORK

(11.0) Copy of VAT & Service Tax registration certificate

Submitted

(12.0) PAN Details, EPF, ESI registration certificate, income tax return (ITR) copy, solvency certificate

Submitted

(13.0) National small scale industries corporation (NSIC) registration Certificate

Submitted

Not Applicable

(14.0) Financial balance sheet, profit and loss account, Assets / Liability sheet as per ITB in case of NCB / ICB ENQUIRYs

Submitted

Not Applicable

(19.0) Information about Bidder and details of similar work done

Submitted

(20.0) Certificate of approval for compliance to ISO:9001 standard submitted by contractor in case of NCB / ICB ENQUIRY

Submitted

Not Applicable

(21.0) Schedule of Bidders Experience in case of NCB / ICB ENQUIRY

Submitted

Not Applicable

PART-II: TECHNICAL BID

(1.0) Schedule of Deviations to technical specifications as per ITB

Submitted

(2.0) Technical Details/ Documents as specified in ITB

Submitted

(3.0) Overall schedule for completion of work in the form of Bar Chart

Submitted

Bidder Name, Sign & Company Seal:

SITE GRADING WORK

(4.0) Details of tool, tackles & equipment available with bidder for use in this work

Submitted

(5.0) Manpower estimation for job, deployment chart with bio-data / Experience / qualification of all supervisory staff

Submitted

(6.0) Proposed site Organization Chart

Submitted

(7.0) Quality Assurance plan and safety assurance plan with detailed bio-data / experience of "Quality Assurance Supervisor" & "Safety Supervisor"

Submitted

Bidder Name, Sign & Company Seal:

SITE GRADING WORK

CHECK LIST FOR SUBMISSION OF BID – SUPPLY & ERECTION

BID	ENVELOPE	FILE NO. & TITLE FILE CONTENT	FILE CONTENT
Un Priced	Envelope - 1	File – 1 : Integrity Pact &/ or EMD Document (Original)	Duly filled, Signed & Stamped copy of Integrity Pack &/or Bid Fee &/or EMD Document, if applicable as per ITB.
	Envelope - 2	File-2: Un-priced Complete BID Document (Original)	Complete BID document duly stamped and signed on each page
		File-3: Un-priced Complete BID Document (Copy)	Copy of File-2
		File-4:Un-priced Commercial Bid (Original)	Checklist for submission of Bid (original) ii. Schedule of Deviations from General Conditions iii. Pre-filled agreed terms and conditions, if applicable iv. Schedule of rates & quantities indicating quoted items (original) v. Certificate as per sec. 297/299 of companies act (un-priced) vi. Document Related to Bidders Qualification Criteria, if applicable vii. Other documents as mentioned in Part I - Commercial, if any
		File-5 & 6: Un-priced Commercial Bid (Copy)	Copy of all documents in File-4
		File-7: Un-priced Technical Bid (Original)	i. Checklist for submission of Bid (copy) ii. Schedule of Deviations from Technical Specifications iii. Technical Datasheets / Drawings

SITE GRADING WORK

			<ul style="list-style-type: none"> iv. Schedule of Price indicating quoted items (copy) v. Overall schedule for completion of work in the form of Bar Chart vi. Details of tool, tackles & equipment available with Bidder for use in this work vii. Manpower estimation for job, deployment chart with bio-data / Experience / qualification of all supervisory staff viii. Proposed Site Organization Chart ix. Makes of major bought out items, if any x. Other documents as mentioned in Part II – Technical, if any
		File-7 & 8: Un-priced Technical Bid (Copy)	Copy of all documents in file-6
Priced	Envelope - 3	File – 9: Priced Bid	<ul style="list-style-type: none"> i. Schedule of price (SOP) with duly filled prices in original. ii. Certificate as per sec. 297/299 of companies act (priced)

Bidder Name, Sign & Company Seal:

SITE GRADING WORK**INSTRUCTION TO BIDDERS****1 INTRODUCTION**

- 1.1 Assam Petro-Chemicals Limited, a public Sector Undertaking under the State Govt. of Assam, India was set up in the year 1976 with facilities for production of 30 TPD of Methanol and 50 TPD Formaldehyde based on Natural Gas (NG). After establishing itself as a successful Company in the Petrochemical Sector, the Company expanded the business by setting up a new Methanol plant of capacity 100TPD based on I.C.I. Technology in the year 1986 and a new Formaldehyde plant of capacity 100 TPD with technology from DERIVADOS, Spain which has then been revamped to 125 TPD in the year 2012. The Company has ever since been running with excellent operational and financial performances achieving capacity utilization from the plant at the level of 95 to 100% on yearly basis and consistently earning profit. The Company now intends to further expand the business by setting up a new 500 TPD Methanol Plant & 200 TPD Acetic Acid Plant along with captive power Unit and then to go for setting up plants for downstream value added products like D.M.E, V.A.M, Polyvinyl Acetate, Polyvinyl Alcohol etc. to establish itself as a major Petrochemicals Complex in the region.
- 1.2 **The site for the New Plant:**
The new 500 TPD Methanol Plant & 200 TPD Acetic Acid Plant will be set up in the land area adjacent to existing location of APL factory at Namrup.
- 1.3 **Approach to site:**
The APL factory is situated at Namrup in the district of Dibrugarh, Assam, India. Namrup is connected with Dibrugarh by national Highway NH-37 and is at a distance of around 70 KM from Dibrugarh and around 65 KM from Dibrugarh Air Port. The nearest railway Station is Namrup Station and is at a distance of 9 KM. The Station has siding facilities suitable for handling Project equipments. The Railway Track is Broad Gauge.
- 1.4 The Plot area has an existing Natural ground level of **122.55m** from the MSL. The finished ground level is proposed to be at 123.500 m from MSL. The tender covers the filling up of the site up to the desired FGL along with the embankments required for the roads.
- 1.5 Assam Petrochemicals invites sealed bids under two bid system for the entire work covered in the bidding document. All bids are to be completed and returned in accordance with ENQUIRY requirements within the duration as mentioned below.

SITE GRADING WORK

2 IMPORTANT POINTS TO BE NOTED

- 2.1 Date of issue of the press advertisement: **28-01-2016**
- 2.2** Last date & time of receipt of Written queries : **10-02-2016**
- 2.3 Due date & time for submission of bids: 14:00 Hrs of **18-02-2016** at **APL's Namrup office.**
- 2.4 Technical un-priced bid opening: 14:30 Hrs of **18-02-2016** at **APL's Namrup office.**
- 2.5 Bid Submission Address:

To,
The Managing Director
Assam Petrochemicals Limited,
Namrup. P.O- Parbatpur.
Dibrugarh. Assam
Pin786623

- 2.6 Pre-Bid Meeting (only if desired by Bidders by written request) : **10-02-2016** at Namrup Site, Assam
- 2.7 Bid Validity: Bids shall remain valid for 6 months from the due date for bid submission.
- 2.8 Bidder to submit duly filled, stamped & signed copy of Integrity Pact along with the offer.
- 2.9 Earnest Money Deposit (EMD): **Rs. 70,000/- (Rupees Seventy thousand Only)** in the form of Demand Draft (DD) (from Nationalized Bank) in favour of "**Assam Petrochemicals Limited**" payable at **Namrup (SBI, UCO)** or non-revocable Bank Guarantee (BG) from Nationalized Bank as per the APL format (annexure-I). EMD shall not bear any interest.
- 2.9.1 EMD validity (For BG Only): EMD shall initially be valid for 6 months from the due date for bid submission. Bidder shall extend EMD Validity on its expiry as per requirement of APL till the order is not placed on Vendor / Contractor (Successful Bidder); failing to provide Extension in EMD Validity shall lead to rejection of bid. The Claim date of BG to be 2 month after expiry / end of validity.
- 2.9.2 Exceptions: The following categories of tenderers are exempted from EMD; Necessary Provisions shall be made in Tender Documents:

- Public sector Enterprises
- Vendors registered with National Small Scale Industries Corporation (NSIC)

For this purpose, in the event of the tendering company being a Public Sector Enterprise, a declaration to that effect and in the case of vendors registered with NSIC, a copy of the registration certificate should be obtained.

SITE GRADING WORK

- 2.9.3 Refund of EMD: After acceptance of order by Vendor / Contractor (successful bidder), APL shall return the EMD to all unsuccessful bidders. EMD shall be returned to the Vendor / Contractor (successful bidder) after its submission of the security deposit of required amount and in stipulated time.
- 2.10 Price Bid Opening: Will be intimated later to the techno-commercially acceptable bidders.
- 2.11 The offers submitted by bidders shall be either neatly spiral bounded or hard bounded. Offers submitted in loose/stapled papers will not be accepted.
- 2.12 Price Bid Opening: Will be intimated later to the techno-commercially acceptable bidders.
- 2.13 The offers submitted by bidders shall be either neatly spiral bounded or hard bounded. Offers submitted in loose/stapled papers will not be accepted.

3 BIDDER'S QUALIFICATION CRITERIA**3.1 COMMERCIAL & FINANCIAL**

- 3.1.1 Average Annual Financial Turnover during the last 3 years, ending 31st march, of the previous financial year, should be at least 30% of the estimated cost.
- 3.1.2 The bidder shall have earned a net positive profit for the last three consecutive years
- 3.1.3 The financial net worth of the bidder as per latest audited annual report shall be positive.

3.2 TECHNICAL

- 3.2.1 Bidders shall have experience in last five years of having successfully carried out and completed similar work during calculated from the month previous to the one in which applications are invited, which experience should be any one of the following:
- Three similar completed works, each costing not less than amount = 40% of the estimated cost
 - Two similar Completed Works, each costing not less than the amount = 50% of the estimated cost
 - One similar completed work costing not less than the amount = 80% of the estimated cost.

4 BIDDERS WHO CAN BID

- 4.1 Parties who are affiliates of one another can decide which affiliate will make a bid. Only one affiliate may submit a bid. Two or more affiliates are not permitted to make separate bids directly or indirectly. If 2 or more affiliates submit a bid, then any one or all of them are liable for disqualification. However up to 3

SITE GRADING WORK

affiliates may make a joint bid as a consortium, and in which case the conditions applicable to the consortium, and in which case the conditions applicable to a consortium shall apply to them.

- 4.2 “Affiliate” of a party shall mean any company or legal entity which:
- a) Controls either directly or indirectly a party, or
 - b) Which is controlled directly or indirectly by a party, or
 - c) Is directly or indirectly controlled by a company, legal entity or partnership which directly or indirectly controls a party. “Control” means actual control or ownership of at least a 50% voting or other controlling interest that gives the power to direct, or cause the direction of, the management and material business decisions of the controlled entity.
- 4.3 Bid may be submitted by:
- a) A single person / entity (called sole bidder)
 - b) A newly formed incorporated joint venture (JV) which has not completed 3 financial years from the date of commencement of business.
 - c) A consortium (including an unincorporated JV) having a maximum of 3 (three) members;
 - d) An Indian arm of a foreign company.
- 4.4 Fulfillment of pre-qualification Criteria and certain additional conditions in respect of each of above 4 types of bidders stated below, respectively:
- a) The sole Bidder (including an incorporated JV which has completed 3 financial years after date of commencement of business) shall fulfill each pre-qualification criterion.
 - b) In case the bidder is a newly formed and incorporated joint venture and which has not completed three financial years from the date of commencement of business, then either the said JV shall fulfill each eligibility criteria or any one constituent member / promoter of such a JV shall fulfill each eligibility criteria. If the bid is received with the proposal that one constituent member / promoter fulfils each eligibility criteria, then this member / promoter shall be clearly identified and he/it shall assume all obligations under the contract and provide such comfort letter / guarantees as may be required by owner. The guarantees shall cover inter alia the commitment of the member / promoter to complete the entire work in all respects and in a timely fashion, being bound by all the obligations under the contract, an undertaking to provide all necessary technical and financial support to the JV to ensure completion of the contract when awarded, and undertaking not to withdraw from the JV till completion of the work, etc.

SITE GRADING WORK

- c) In case the bidder(s) is / are a consortium (including an unincorporated JV), then the following conditions shall apply:
- i. Each member in a consortium may only be a legal entity and not an individual person;
 - ii. The bid shall specifically identify and describe each member of the consortium;
 - iii. The consortium member descriptions shall indicate what type of legal entity the member is and its jurisdiction of incorporation (or of establishment as a legal entity other than as a corporation) and provide evidence by a copy of the articles of incorporation (or equivalent documents);
 - iv. One participant member of the consortium shall be identified as the “prime member” and contracting entity for the consortium; this prime member shall be solely responsible for all aspects of the bid / proposal including the execution of all tasks and performance of all consortium obligations;
 - v. The prime member shall fulfill each eligibility criteria;
 - vi. A commitment shall be given from each of the consortium members in the form of a letter signed by a duly authorized officer clearly identifying the role of the member in the bid and the member’s commitment to perform all relevant tasks and obligations in support of the prime / lead member of the consortium and a commitment not to withdraw from the consortium till completion of all ENQUIRY obligations;
 - vii. No change shall be permitted in the number, nature or share holding pattern of the consortium members after pre-qualification, without the prior written permission of the owner.
 - viii. No change in project plans, timetables or pricing will be permitted as a consequence of any withdrawal or failure to perform by a consortium member;
 - ix. No consortium member shall hold less than 25% stake in a consortium;
 - x. Entities which are affiliates of one another are allowed to bid either as a sole bidder or as a consortium only;
 - xi. Any person or entity can bid either singly or as a member or only one consortium.
- d) In case the bidder is an Indian arm (subsidiary, authorized agent, branch office or affiliate) of a foreign bidder, the foreign bidder shall have to fulfill each eligibility criteria. If such foreign company desires that the contract be entered into with the Indian arm, then a proper back to back continuing (parent company) guarantee shall be provided by the foreign company clearly

SITE GRADING WORK

stating that in case of any failure of any supply or performance of equipment, machinery, material or plant or completion of the work in all respects and as per the warranties / guarantees that may have been given, then the foreign company shall assume all obligations under the contract. Towards this purpose, it shall provide such comfort letter / guarantees as may be required by owner. The guarantees shall cover inter alia the commitment of the foreign company to complete the entire work in all respects and in a timely fashion, being bound by all obligations under the contract, an undertaking to provide all necessary technical and financial support to the Indian arm or to render the same themselves so as to ensure completion of the contract when awarded, an undertaking not to withdraw from the contract till completion of the works, etc.

5 BIDDING DOCUMENTS

- 5.1 The bidder is expected to examine the bidding documents, including all instructions, forms, General Conditions of Contract, Special Conditions of Contract, Technical Specifications, Drawings and other ENQUIRY documents and to fully familiarize itself with the requirements of the bidding documents. Failure to furnish all the information required by the Bidding Documents or the submission of a bid not substantially responsive to the Bidding Documents in every respect may result in the rejection of the Bid.
- 5.2 Immediately on receipt of Bidding Document, Bidder shall acknowledge the receipt and confirm his intention to bid for the ENQUIRY work / scope of supply as per the Acknowledgement format given in Bidding Document.

6 DUE DATE FOR SUBMISSION OF BIDS

- 6.1 As indicated in item clause no. 2 above, the Original bid with required copies must be received by the designated authority on or before the bid due date & time.
- 6.2 APL may, at its discretion, extend the deadline for the submission of bids by amending the bidding documents, in which case all rights and obligations of the APL and bidders previously subject to the deadline, will thereafter be subject to the deadline as extended.
- 6.3 Any request for due date extension shall be received to APL 48 hrs in advance to bid due date in writing clearly indicating the reason for extension. APL will determine to its subjective satisfaction whether the bidder extension request based on the reason mentioned by the bidder to be accepted or not and such determination shall not be open to question.

SITE GRADING WORK**7 MODIFICATION & WITHDRAWAL OF BIDS**

- 7.1 The bidder may modify or withdraw his submitted bid, provided that written notice of withdrawal or modification along with modified bid is received by APL prior to the deadline prescribed for submission of bids.
- 7.2 The bidder's modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions for submission of bids.
- 7.3 All correspondence related to modification or withdrawal shall be routed to the following address in an envelope "Modification or Withdrawal for Enquiry No. "APL/Proj/04/Site Grading/Tank farm/Methanol/2016/405":

To,
Assam Petrochemicals Limited,
Namrup. P.O- Parbatpur.
Dibrugarh. Assam
Pin786623

Contact Person:**Mr. Atul Ch. Barman****G.M. (Project)**

Tel. No.: 0374-2500331

Fax.No.:0374-2500231

Email: barman.ac@assampetrochemicals.co.in**Mr. Jayanta Sharma****Manager (Proj-Civil)**Email: sharma.j@assampetrochemicals.co.in

- 7.4 A bid withdrawn or modified after deadline for submission of bid during the period of bid validity unless invited to do so by APL will lead to rejection of bid and EMD will be forfeited.
- 7.5 If for any reason, whatsoever, a BIDDER withdraws his BID at any time during its validity period or if the selected BIDDER refuses to enter into an agreement and /or to furnish a SECURITY DEPOSIT for faithful performance of the agreement entered into, within the time stipulated, the BIDDER would be deemed to have abandoned the BID and the EMD submitted by him will be forfeited and the amount under the BG/Demand draft will be en-cashed by APL.
- 7.6 If a bid is properly modified within the foregoing provisions, the bid as modified shall constitute the bid offer.

SITE GRADING WORK

LATE BIDS

- 7.7 Any bid received by APL after the deadline for submission of the bids (including any extensions hereof) will be declared "Late" and rejected and returned unopened to the bidder.

8 BID VALIDITY

- 8.1 Bids shall remain valid for a period as indicated in Sr. no. 2 above.
- 8.2 Notwithstanding the above, APL may solicit the bidder's consent to an extension of the period of bid validity. The request and the responses thereto shall be made in writing (by fax/ email).
- 8.3 A bidder accepting the request for extension shall not be permitted to modify his bid because of the extension, unless specifically invited to do so.

9 BID EVALUATION CRITERIA

- 9.1 Bid Evaluation Criteria is covered under section C - "Special Conditions of Contract (SCC)".

10 BID REJECTION CRITERIA

- 10.1 Prior to detailed bid evaluation, CLIENT will determine the substantial responsiveness of each bid with respect to the bidding documents. A substantially responsive bid is one which conforms to the terms, conditions and specification of the Bidding Documents without material deviation. A material deviation is one which affects in any substantial way the scope, quality or performance of the works, or which limits in any substantial way, inconsistent with the bidding documents, the CLIENT's rights or the bidder's obligations as envisaged in the bidding documents, and the rectification of which deviation or reservation would affect unfairly the competitive position of other bidders presenting substantially responsive bids. Further examination of only such bids as are determined to be substantially responsive shall be taken up, unless otherwise determined by CLIENT.
- 10.2 The bidders shall adhere to the following provisions of the Bidding Document without taking any deviations, failing which the Bid shall be considered to be non-responsive and may be rejected.
- (a) Non-responsive bid as mentioned in clause no. 11.1 above.
 - (b) Non Meeting Pre-Qualification criteria
 - (c) Defect liability period.

SITE GRADING WORK

- (d) Bids with Price variation clause (PVC)
- (e) Non-Submission of EMD, if applicable
- (f) Non-Submission of Integrity Pact, if applicable along with the un-priced offer / on or before the bid due date & time as instructed in this Enquiry
- (g) Non-submission of Pre-filled agreed terms and conditions along with the un-priced offer / on or before bid due date & time.
- (h) Submission of prices with erasures or corrections or using white fluids.
- (i) Submission of Prices / rates in SOQ / SOR in un-priced bid.
- (j) Bids submitted in loose / stapled papers
- (k) Rejection note as mentioned under various clauses of this ENQUIRY document

11 CLARIFICATIONS ON BID

- 11.1 Clarifications that the Bidder needs to have on the ENQUIRY specification can be sought from APL in writing within one week from the date of issue of this enquiry.
- 11.2 Bidders requesting clarifications beyond one week from the date of issue of this enquiry will not be entertained. Non-receipt of clarifications from APL for queries raised beyond one week will not be considered for extension of time to submit the bid.

All such correspondence shall be routed to the following address in an envelope

"Clarifications for Enquiry No "APL/Proj/04/Site Grading/Tanker parking/2015/407
"

To,

Assam Petrochemicals Limited,

Namrup, P.O. Parbatpur

Dibrugarh, Assam

Pin 786623

Contact Person:

Mr. Atul Ch. Barman, GM, (Project)

Tel. No.: 0374-2500331

Fax. No.: 0374-2500231

Email: barman.ac@assampetrochemicals.co.in

Mr. J. Sharma, Manager, (Civil/Project)

Email: sharma.j@assampetrochemicals.co.in

- 11.3 Written queries only shall be replied.

SITE GRADING WORK**12 OPENING OF TECHNICAL & UN-PRICED COMMERCIAL BIDS**

- 12.1 Technical and un-priced commercial bids shall be opened at Project office of APL, Namrup office on the due date as mentioned in clause no. 2.2 in presence of the bidder's representatives. Only the name of the bidders who have responded to the enquiry will be read before the bidder's representative(s) duly authorized to attend such opening by a person competent and having the Power of Attorney to bind the Bidder. The Bidder's representative(s) who choose to attend should carry along with them duly filled, signed and stamped "Proforma of letter of authority for attending Technical Bid Opening" and submit it to APL before opening of the Un-priced bid. Bidders who are present during Un-priced bid opening shall sign un-priced bid opening statement evidencing their attendance. If bidder is placed on holiday / blacklisted after issue of enquiry but before un-priced bid opening, their Un- priced bid will not be opened.

13 OPENING OF PRICE BIDS

- 13.1 Techno-Commercially acceptable bidders will be short listed by CLIENT for opening of price part of their bids. Date, time and venue for opening of price bids will be informed to the short listed bidders subsequently. Only the final bid cost will be read before the bidder's representative(s) duly authorized to attend such opening by a person competent and having the Power of Attorney to bind the Bidder. The Bidder's representative(s) who choose to attend should carry along with them duly filled, signed and stamped "Proforma of letter of authority for attending Priced Bid Opening" and submit it to APL before opening of the priced bid. Bidders who are present during priced bid opening shall sign priced bid opening statement evidencing their attendance. If the bidder is placed on holiday / blacklisted after opening of un-priced bid but before opening of priced bid, their price bid will not be opened.

14 COMPLETE SCOPE OF WORK

- 14.1 The complete scope of supplies has been defined in the bidding documents. Only those bidders who take complete responsibility and who bid for the individual item wise total scope of work as contained in the bidding document shall be considered for further evaluation.
- 14.2 Waiver of deviations and conditions (if any), should be submitted by the Bidders before the opening of the Priced Bid failing which the Priced Bid of concerned Bidder shall not be opened.

15 AMENDMENT OF BIDDING DOCUMENTS

SITE GRADING WORK

- 15.1 At any time prior to the deadline for submission of bids as well as up to priced bid opening, APL may, for any reason whether at its own initiative or in response to a clarification or modification requested by any prospective Bidder(s), modify the Bidding documents.
- 15.2 The modifications/amendment will be notified in writing or by fax to all prospective bidders who have been issued the Bidding documents, and shall be part of the Bidding documents and shall be binding on all bidders. The Bidders will be required to acknowledge receipt of any such amendment to the Bidding documents. Bidders shall confirm the inclusion of Addendum / Corrigendum in their bid and shall follow the instructions issued along with addendum / corrigendum.
- 15.3 Bidders shall examine the Bidding documents thoroughly and inform APL of any apparent conflict, discrepancy or error, so that APL may issue appropriate clarification(s) or amendment(s), if required.

16 SITE LOCATION / SITE VISIT

- 16.1 The bidder may at its own discretion can examine the site of works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into the Contract. Claims of any kind due to variation or ignorance of site conditions and environmental conditions will not be eligible in any circumstances.

17 BIDDING DOCUMENTS AND DEVIATIONS

- 17.1 It is expected that bidders will submit bids strictly based on the terms and conditions and specifications contained in the bidding documents and will not stipulate any deviations. However, become unavoidable, deviations should be separately and specifically stipulated only in the "Deviation Sheet". Deviations mentioned anywhere else in the offer other than the "Deviation Sheet" shall not be acceptable and shall not be considered for bid evaluation. APL reserves the right to reject as non-responsive any bid containing major deviation(s).

18 LANGUAGE OF BIDS

- 18.1 The Bid prepared by the bidder, all documents attached to and/or relating to the bid and all correspondence exchanged by the Bidder and CLIENT, shall be written in English language only.
- 18.2 Any printed literature furnished by the bidder may be written in any other language provided that this literature is accompanied by an authenticated English

SITE GRADING WORK

translation, in which case, for purpose of interpreting the Bid, the English translation shall govern.

19 PRICE BID

- 19.1 The item wise Bid prices (if applicable) shall be filled in the "Format for Submitting Prices".
- 19.2 Bidders shall quote indicating basic cost in priced bid only. All taxes, duties, levies, royalties, octroi applicable, packing & forwarding charges, transportation charges etc. Shall be quoted in Un-priced bid only (kindly refer ATC).
- 19.3 This part shall not contain any condition whatsoever failing which the Bids shall be liable to be rejected.
- 19.4 The prices quoted by the bidder shall remain firm and fixed and shall be valid until completion of the Contract and shall not be subject to variation/ escalation on any account except as otherwise specifically provided in the Contract documents.
- 19.5 A Counter trade proposals shall not be considered in the evaluation of Bids or otherwise.
- 19.6 It shall be the duty of the supplier to duly observe and perform all laws, rules, regulations, royalties, orders and formalities applicable to Excise Duty, Sales Tax, VAT, Service tax, Customs Duty, Countervailing Duty etc. on the import, manufacture, sale and/or supply of any material to CLIENT and performance of the works under the Contract. The supplier/contractor shall keep CLIENT indemnified from and against any and all claims, demands, prosecutions, actions, royalties, proceedings, penalties, damages, demurrages and/or other levies whatsoever made or levied by any Court, Tribunal or the Customs or other Authorities with respect to any alleged breach, evasion or infraction of such duties, taxes, royalties, charges or levies or any breach or infraction of any applicable laws, rules, regulations, orders or formalities concerning the same and from the consequence thereof.
- 19.7 The bidder shall indicate the total quoted price both in figures as well as in words in the format for submitting prices.
- 19.8 In case of unsolicited price implication, such offer of Bidder shall not be considered for evaluation and ordering

SITE GRADING WORK**20 FORMAT AND SIGNING OF BID**

- 20.1 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by the bidder or a person or persons duly authorized to sign on behalf of the bidder. Such authorization shall be indicated by written power of attorney accompanying the bid. All pages of the bid, except for un-amended printed literature, shall be initialed by the person signing the bid. The name and position held by each person signing must be typed or printed below the signature.
- 20.2 The Un-priced bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the bidder, in which case, such corrections shall be signed in full by the person or persons signing the bid. However the Priced bid shall not contain interlineations, erasures or overwriting.
- 20.3 In case if the bidder is a Company governed by the Companies Act 2013,(erstwhile Companies Act 1956) a Board Resolution shall be accompanied for the person signing the bid and also for the person attending the bid Over / Opening and above the requirement as stated.
- 20.4 In case if the bidder is a partnership firm / JV firm, Power of attorney having the signature of all the partners / members shall be accompanied for the person signing the bid and also for the person attending the bid over / Opening.

21 ALL PAGES TO BE INITIALLED

- 21.1 All signatures in bids shall be dated and shall bear a seal of the bidder. In addition, all pages of the bids before submission of the bid shall be initialed at lower right hand corner by the Bidder or by a person holding a Power of Attorney authorizing him to sign on behalf of the bidder. The un-priced technical bid shall include all pages of ENQUIRY (commercial part and technical part) duly signed and stamped by the bidder.
- 21.2 The Bidder shall sign and affix its seal on all pages of the Priced bid on lower right hand corner by a person holding a power of attorney.

22 CORRECTIONS AND ERASURES

- 22.1 Bidders are required to fill in the ENQUIRY documents with due care so as to avoid any cuttings/corrections/alterations in the entries made in the ENQUIRY papers.
- 22.2 Un-priced Bid: In case any corrections are required, the original writings shall be neatly cut/ penned through and re-written nearby. No overwriting or erasure of

SITE GRADING WORK

original writings by use of 'white fluid' or the like is permitted. In case any erasure using 'white correcting fluid' is found, the ENQUIRY may be liable to be rejected. All cuttings/ corrections/ alterations shall be signed in full by the BIDDER with date. Numerical figures shall be written both in figures as well in words.

22.3 Priced bid shall not contain interlineations, erasures or overwriting.

23 CLARIFICATIONS ON BIDS

23.1 To assist in the examination, evaluation and comparison of bids, APL may, at its discretion, ask the bidder for a clarification of his bid. All responses to a request for clarification shall be in writing, and no change in the price or substance of the bid shall be permitted unless specifically sought by APL. Bidders not responding to clarification / Queries raised by APL on bids within the stipulated time will not be considered further for evaluation and bids will be rejected.

24 TECHNO-COMMERCIAL EXAMINATION OF BIDS

24.1 APL will examine or cause to be examined the bids to determine whether they are complete, whether the documents have been properly signed, and whether the bids are generally in order.

24.2 APL will determine to its subjective satisfaction whether the bidder has submitted a responsive bid and is qualified to satisfactorily perform the work, and such determination shall not be open to question.

24.3 The determination will also take into account the bidder's financial and technical capabilities, as well as such other qualifications as APL deem necessary and appropriate.

24.4 Bidder(s) techno-commercially accepted will only be communicated for price bid opening.

24.5 Bidder(s) who qualify for the award of contract as per criteria of this BID will only be communicated for the award of contract & subsequent LOI / PO will be issued to them.

25 REBATE

25.1 No suo-moto reduction in price(s) by bidders is permissible after opening of the bid. If any Bidder unilaterally reduces the price(s) quoted by him in his bid after opening of bids, such reduction shall not be considered for comparison of prices but shall be binding on the Bidder if he happens to be selected for award of work.

SITE GRADING WORK

26 CONTACTING CLIENT

- 26.1 A bidder shall not contact CLIENT on any matter relating to his bid from the time of bid opening to the time, that the Contract is awarded, unless requested to do in writing. Any effort by a bidder to influence CLIENT in CLIENT's decisions in respect of bid evaluation or contract award will result in the rejection of that bidder's bid.

27 CLIENT'S RIGHT TO ACCEPT/REJECT BIDS

- 27.1 APL reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to award of Contract without thereby incurring any liability to the affected bidder(s) or any obligation to inform the affected bidder(s) of the ground of APL's action.
- 27.2 APL shall not be obliged to award the Order / Contract to the lowest evaluated bidder if APL apprehends that it will not be in the interest of APL to award the Order / Contract at the lowest evaluated price or to the lowest evaluated bidder.

28 PREPARATION OF BIDS - TWO BID SYSTEM

- 28.1 The bidder is required to prepare bid in a format as outlined in Checklist for Submission of Bid" in order to achieve the objective of maintaining a uniform proposal structure from all bidders.

29 CONFIDENTIALITY OF DOCUMENTS

- 29.1 Bidders shall treat the bidding documents and contents therein as strictly confidential. If at any time, during the bid preparation period, Bidder decides to decline to bid; all documents must be immediately returned to CLIENT.

30 SUBMISSION OF BIDS

- Bidder(s) will be required to submit in their one bigger sealed cover marked as "Offer against Enquiry No. **APL/Proj/04/Site Grading/Tanker Parking/ 2016/407**
- 30.1 **for "Site Grading Work"** containing the following documents in three separate sealed envelopes before the due date & time in APL Registered Office at the address

**To
The Managing Director
Assam Petrochemicals Limited,
Namrup. P.O. Parbatpur
Dibrugarh. Assam. Pin 786623**

SITE GRADING WORK

- 30.2 Cover Envelope containing documents as per clause no. 29 and Checklist for Submission of Bid”:
- a) Envelope 1 : EMD + Integrity Pact
 - b) Envelope 2: Un-Priced Bid containing following documents:
 - i. Two sets (one original + one photo copy) of Un-priced Technical Bid With duly stamped and signed on each page.
 - c) Envelope 3: Price Bid containing Schedule of Rates & Quantities with duly filled prices in Original with duly stamped and signed on each page.
- 30.3 Each envelope shall be super scribed with the names of documents it contains.
- 30.4 The bidders shall ensure submission of prices without any erasures. Bidders shall also specify total bid price, wherever applicable, in figures as well as in words.
- 30.5 Bidder shall indicate Taxes and duties in Prefilled ATC (if applicable) / SOP only. If Bidder indicates taxes & duties elsewhere, it will not be considered for evaluation.
- 30.6 Bids Received by way of Fax or Telex or Telegram or email or in open condition shall not be considered.
- 30.7 Bidder shall strictly follow above mentioned bid submission procedure, failing to which may lead to rejection of bids.

31 OTHER DOCUMENTS & REQUIREMENTS

The Bid, as submitted will consist of the following:

- 31.1 Complete Set of ENQUIRY documents duly filled in, signed and stamped by the bidder as prescribed in different clauses of ENQUIRY documents.
- 31.2 Power of Attorney or a true copy thereof duly attested by Gazetted Officer in case a representative that has signed the ENQUIRY is a person not competent / authorized and bind the bidder.
- 31.3 Bidder shall strictly follow instructions in this section for submitting the envelopes with clearly written information on outside of the envelope, failing which APL will assume no responsibility for the misplacement or premature opening of the envelopes.

32 ORDER OF PRECEDENCE

SITE GRADING WORK

32.1 The following order of precedence shall be followed in case of any conflict between various parts of the ENQUIRY specifications:

- i. Corrigendum, if any
- ii. Instructions to Bidders
- iii. Technical Specification, drawings & datasheets
- iv. Special Conditions of Contract
- v. General Conditions of Contract

The Bidder shall bring to the notice of APL any such variations / conflicts between various parts of the ENQUIRY and obtain approval before proceeding with such information for engineering/design.

CUT-OUT SLIPS TO BE USED BY VENDORS FOR PASTING ON COVER / ENVELOPES CONTAINING BIDS

COVER ENVELOPE CONTAINING

1. Sealed envelope no. 1: Containing EMD + Integrity Pact duly signed.
2. Sealed envelope no. 2: Containing Two sets “Un-priced Technical Bid” and Documents related to Bid Qualification Criteria.
3. Sealed envelope no. 3: Containing Original Priced bid

Client : ASSAM PETROCHEMICAL LIMITED

Project : INTEGRATED METHANOL – ACETIC ACID PLANT

ENQUIRY No. : APL/Proj/04/Site Grading/Tanker Parking /2016/407

Item :

Bid due date & time :

From: <hr/> <hr/> <hr/> <hr/>	To, The Managing Director Assam Petrochemicals Limited, Namrup. P.O- Parbatpur. Dibrugarh. Assam Pin786623
----------------------------------	---

(To be pasted on the sealed cover containing envelope no. 1, 2 & 3)

Assam Petro-chemicals Limited

Namrup. Assam

Enquiry Document No

APL/Proj04/Site Grading/Tanker Parking/2016/407

SITE GRADING WORK
DO NOT OPEN – THIS IS A QUOTATION

(ENVELOPE NO. 1: CONTAINS EMD + INTEGRITY PACT)

Client : ASSAM PETROCHEMICAL LIMITED

Project : INTEGRATED METHANOL – ACETIC ACID PLANT

ENQUIRY No. : APL/Proj04/Site Grading/Tanker Parking /2016/407

Item :

Bid due date & time :

From: _____ _____ _____

(To be pasted on the envelope no. 1 containing EMD+IP)

Assam Petro-chemicals Limited

Namrup. Assam

Enquiry Document No

APL/Proj/04/Site Grading/Tanker Parking/2016/407

**SITE GRADING WORK
DO NOT OPEN – THIS IS A QUOTATION**

**(ENVELOP NO. 2: CONTAINS UNPRICED TECHNICAL BID AND DOCUMENT
RELATED TO BID QUALIFICATION CRITERIA)**

Client : ASSAM PETROCHEMICAL LIMITED

Project : INTEGRATED METHANOL – ACETIC ACID PLANT

ENQUIRY No. : APL/Proj/04/Site Grading/Tanker Parking /2016/407
Item

:

Bid due date & time :

<p>From:</p> <hr/> <hr/> <hr/> <hr/>

(To be pasted on the envelope no. 2 containing Un priced Technical Bid.)

Assam Petro-chemicals Limited

Namrup. Assam

Enquiry Document No

APL/Proj04/Site Grading/Tanker Parking/2016/407

SITE GRADING WORK
DO NOT OPEN – THIS IS A QUOTATION

(ENVELOP NO. 3: CONTAINS PRICE BID)

Client : ASSAM PETROCHEMICAL LIMITED

Project : INTEGRATED METHANOL – ACETIC ACID PLANT

ENQUIRY No. : APL/Proj04/Site Grading/Tanker Parking /2016/407

Item : -----

Bid due date & time : -----

<p>From:</p> <hr/> <hr/> <hr/> <hr/>

(To be pasted on the envelope no. 3 containing Format for Submitting Prices with duly filled prices)

**SITE GRADING WORK
ANNEXURE – I**

PROFORMA FOR EMD

In consideration of Assam Petrochemicals Limited, having its Registered Office at Orion Place, 4th floor, G.S. Road, Guwahati-5, Assam, India (hereinafter called ‘ the Owner’ which expression shall unless repugnant to the subject or context includes its successors and assigns) having agreed to exempt m/s (Hereinafter called ‘the said Tenderer (s)’ which expression shall unless repugnant to the subject or context includes his successors and assigns) from the demand under the terms and conditions of tender no. for hereinafter called ‘the said Tender’ of such earnest money deposit for the due fulfilment by the said Tenderer (s) of the terms and conditions contained in the said tender..... foron production of bank guarantee for an amount of Rs.70,000/- (Rupees seventy thousand only)

We Bank hereinafter referred to as ‘the bank’ do hereby undertake to pay to the owner and amount not exceeding Rs.70,000/- (Rupees seventy thousand only) against any loss or damage caused to or suffered or would be caused to or suffered by the said owner by reason of any breach by the said Tenderer (s) of any of the terms and conditions contained in the said tender (the decision of the owner as to any such breach having been committed and loss suffered shall be binding on us).

1.We..... Bank do hereby undertake to pay the amounts due and payable under this guarantee without any demur merely on a demand from the owner stating that the amount claimed is due by way of loss or damage caused to or would cause to or suffered by the owner by reason of any breach by the said Tenderer (s) of any of the terms and conditions contained in the said tender or by reason of the said Tenderer’s failure to keep the tender open. 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.70, 000/- (Rupees seventy thousand only).

SITE GRADING WORK

2. We..... Bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the finalization of the said tender and that it shall continue to be enforceable till the said tender is finally decided and order placed on the successful tenderer (s) and/or till all the dues of the owner under/or by virtue of the said tender have been fully paid and its claims satisfied or discharged or till a duly authorised officer, of the owner certifies that the terms and conditions of the said tender have been fully and properly carried out by the said Tenderer (s) and accordingly discharges the guarantee. Above provisions are applicable subject to validity mentioned in para 4 (b).

3. We _____ Bank undertake not to revoke this guarantee during the currency except with the previous consent of the Owner in writing. Upon expiration of this Guarantee, this document is to be returned to the Bank for cancellation.

4. NOTWITHSTANDING anything contained hereinabove,

a. Our liability under this guarantee shall be restricted to an amount of Rs.70,000/- (Rupees seventy thousand only)

b. This guarantee shall be valid up to _____.

c. The Bank shall be released and discharged from all liability under this guarantee unless a written claim or demand is received by the Bank on or before _____.

The Bank hereby declares that it has the power to issue this guarantee and the undersigned has fully power to do so.

Dated..... day of..... 20.....

Corporate seal for bank

SITE GRADING WORK

SPECIFIC TECHNICAL REQUIREMENTS

CONTRACTOR SHALL COMPLY TO THE FOLLOWING TECHNICAL REQUIREMENTS

- 1.1. Within 10 days of receipt of Letter of Intent (LOI) the Contractor shall submit a detailed methodology for carrying out all works as per the scope of the tender, details of main equipments, procurement specifications for all materials to be procured which shall be approved by the Engineer in charge before placement of order. These submittals shall be consistent with the general information submitted by the Contractor with his Tender and with modifications, if any, subsequently agreed to by the Engineer-in-Charge and the Contractor.
- 1.2. The Contractor shall take into account the peak demand on materials according to the approved construction schedule.
- 1.3. The Contractor shall build, equip, operate, and maintain an adequate field laboratory for sampling and testing of materials. The laboratory shall be run by Contractor's personnel experienced in sampling and testing of materials, and quality control. All sampling and testing to be undertaken shall be reported to the Engineer-in-Charge.
- 1.4. Contractor shall ensure that latest versions of all relevant IS codes in hard copies are available at Site office for ready reference.
- 1.5. Contractor shall ensure that all necessary construction tolerances shall be adhered during construction as specified in the drawing/Technical specifications or as per relevant IS standards and/or as directed by the Engineer in charge.
- 1.6. Contractor shall submit necessary material consumption calculations to achieve the desired quality as per relevant IS codes which shall be approved by engineer in charge before commencement of work.
- 1.7. Contractor to ensure that all concrete properties are achieved as specified in IS code. And also acceptance criteria of concrete shall be based on IS 456 and other relevant IS codes.
- 1.8. All masonry works shall be carried out with cement mortar mix prepared using Design Mix using mechanical mixers.
- 1.9.1.9. Bidders shall be deemed to be fully conversant with the Specifications including technical specifications, drawings, general conditions, instructions to bidders, etc and all terms and conditions of the Invitation to Bid. The Bid shall be prepared and submitted strictly in accordance with the requirements of this bid document. No deviations with Specifications, general conditions, etc, are allowed.

Assam Petro-chemicals Limited

Namrup. Assam

Enquiry Document No

APL/Proj/04/Site Grading/Tanker Parking/2016/407

**SITE GRADING WORK
PROFORMA FOR BID SUBMISSION LETTER**

Contractor's Ref.: _____

Date: _____

To, Assam Petro-chemicals Limited,

Namrup. P.O- Parbatpur.
Dibrugarh. Assam
Pin786623

Contact Person:

Mr. Atul Ch Barman.GM (Project)

Tel. No.: 0374-2500331

Fax. No.: 0374-2500231

Email: barman.ac@assampetrochemicals.co.in

Mr. J.Sharma, Manager (Civil/Project)

Email : sharma.j@assampetrochemicals.co.in

Sub: Enquiry No- **APL/Proj/04/Site Grading/Tanker Parking /2016/407**

Dear Sir,

With reference to the above invitation by APL we have examined the ITB and related annexure for the above WORK downloaded from your website. We hereby offer to provide the services in conformity with the said ITB conditions and related annexure as per terms and conditions specified in the BID DOCUMENT.

We undertake to carry out the work as per the time schedule in the ITB.

We understand that APL is not bound to accept the lowest of the BIDs received and may reject all or any BID without assigning any reason thereof.

We hereby agree that unless and until a formal agreement is prepared and executed in accordance with the conditions of CONTRACT, this ITB together with your written letter of acceptance thereof (i.e. LETTER OF INTENT) in case our bid is accepted shall constitute a binding CONTRACT between us.

Yours faithfully,

Signature:

Name:

Company's name:

Address:

Dated:

Name of Directors/partners of the Company

(1).....(2)(3)

Assam Petro-chemicals Limited

Namrup. Assam

Enquiry Document No

APL/Proj04/Site Grading/Tanker Parking/2016/407

SITE GRADING WORK

PROFORMA OF LETTER OF AUTHORITY FOR ATTENDING PRE-BID MEETING

Bidder's Ref

Date:

TO,
Assam Petro-chemicals Limited,
Namrup. P.O- Parbatpur.
Dibrugarh. Assam
Pin786623

Contact Person:
Mr. Atul Ch Barman, GM (Proj)
Tel. No.: 0374-2500331
Fax. No.: 0374-2500231
Email: barman.ac@assampetrochemicals.co.in

Mr. J. Sharma, Manager(Proj/Civil)
Email : sharma.j@assampetrochemicals.co.in

Dear Sir,

We.....hereby authorise the following representative(s) to attend the Pre-bid Meeting against your ENQUIRY No **APL/Proj04/Site Grading/Tanker Parking /2016/407**

- 1. Name & Designation & Mobile no.Signature.....
- 2. Name & Designation & Mobile no.Signature.....

We confirm that we shall be bound by all and whatsoever our representative (s) shall commit.

Yours faithfully,
Signature.....
Name & Designation.....
For & on behalf of.....

NOTE:

- I. This Letter of Authority should be on the letterhead of the bidder and should be signed by a person competent and having the power of attorney to bind the bidder.
- II. You must send this letter 48 hrs in advance to scheduled Pre-Bid Meeting as mentioned in the ENQUIRY. Non submission of this letter in stipulated time period will be considered as not willing to attend the Pre-Bid Meeting.

PRE BID MEETING VENUE:
ASSAM PETROCHEMICAL LIMITED,
APL Site, Namrup, Dibrugarh,
Assam, India

Assam Petro-chemicals Limited

Namrup. Assam

Enquiry Document No

APL/Proj04/Site Grading/Tanker Parking/2016/407

SITE GRADING WORK

PROFORMA OF LETTER OF AUTHORITY FOR ATTENDING TECHNICAL BID OPENING AND PRICE BID OPENING

Ref

Date:

TO,
Assam Petrochemicals Limited,
Namrup. P.O- Parbatpur.
Dibrugarh. Assam
Pin786623

Contact Person: Mr. Atul Ch Barman, GM (Proj)
Tel. No.: 0374-2500331
Fax. No.: 0374-2500231
Email: barman.ac@assampetrochemicals.co.in

Mr. J.Sharma, Manager(Proj/Civil)
Email : sharma.j@assampetrochemicals.co.in

Dear Sir,

We.....hereby authorise the following representative(s) to attend the (Un-priced / priced bid) opening against your ENQ. No **APL/Proj04/Site Grading/Tanker Parking /2016/407 Tender for Site Grading.**

1. Name & Designation.....Signature.....

We confirm that we shall be bound by all and whatsoever our representative (s) shall commit.

Yours faithfully,

Signature.....

Name & Designation.....

For & on behalf of.....

NOTE:

- I. This Letter of Authority should be on the letterhead of the bidder and should be signed by a person competent and having the power of attorney to bind the bidder.
- II. Only One representative will be allowed for attending price bid opening.
- III. Bidder's Representative shall carry this letter and submit it to APL / CLIENT at the time of Bid opening.

SITE GRADING WORK

**INFORMATION ABOUT BIDDER
(To be furnished by the bidder)**

A. In case of Individual:

- i) Name of business
- ii) Whether his business is registered
- iii) Date of commencement of business
- iv) Whether he pays Income Tax over Rs. 10,000/- per year
- v) Whether he is a Director or is related to any Director of Owner, present or retired within the past three years
- vi) Whether he has been banned / de-listed by any Government Department / Quasi-Government/ Public Sector Undertaking / Private Firms. If so, give details.

B. In case of Partnership:

- i) Names of partners
- ii) Whether the partnership is registered
- iii) Date of establishment of firm
- iv) If each of the partners of the firm pays income Tax over Rs. 10,000/- a year and if not, which of them pays the same.
- v) Whether any partner or member of the firm is a Director or is related to any Director of Owner, present or retired within the past three years
- vi) Whether he has been banned / de-listed by any Government Department / Quasi-Government/ Public Sector Undertaking / Private Firms. If so, give details.

C. In the case of Limited Company or Company Limited by Guarantees:

- i) Amount of paid-up capital
- ii) Name of Directors
- iii) Date of Registration of Company
- iv) Copies of the balance sheet of the company of the last three years
- v) Whether any Director of the Company is a Director or is related to any Director of Owner, present or retired within the past three years
- vi) Whether he has been banned / de-listed by any Government Department / Quasi-Government/ Public Sector Undertaking / Private Firms. If so, give details.

Signature of BIDDER with seal:

Name and Address of BIDDER:

SITE GRADING WORK

PROFORMA OF DECLARATION OF BLACK LISTING / HOLIDAY LISTING

In the case of a Proprietary Concern

I hereby declare that neither I in the name of my Proprietary concern M/s.....which is submitting the accompanying Bid / Tender nor any other concern in which I am proprietor nor in any partnership firm in which I am involved as a Managing Partner have been placed on black list or holiday list declared by Client, except as indicated below:

(Here given particulars of black listing or holiday listing and in absence thereof state "NIL").

In the case of a Partnership Firm

We hereby declare that neither we, M/ssubmitting the accompanying Bid / Tender nor any partner involved in the management of the said firm either in his individual capacity or as proprietor of any firm or concern have or has been placed on black list or holiday list declared by Client , except as indicated below:

(Here given particulars of black listing or holiday listing and in absence thereof state "NIL").

In the case of Company

We hereby declared that we have not been placed on any holiday list or black list declared by Client, except as indicated below:

(Here given particulars of black listing or holiday listing and in absence thereof state "NIL").

It is understood that if this declaration is found to be false in any particular, Client, shall have the right to reject my / our bid, and, if the bid has resulted in a contract, the contract is liable to be terminated.

Place:

Signature of the Bidder.....

Date:.....

Name of the Signatory.....

SITE GRADING WORK

CERTIFICATE AS PER SEC. 184 / 188 OF COMPANIES ACT 2013

(TO SUBMIT WITH UN-PRICED BID)

CERTIFICATE AS PER SEC. 184/188 OF COMPANIES ACT 2013

This has the reference to our proposed CONTRACT for Site Grading work of APL to be entered into with ASSAM PETROCHEMICALS LIMITED (APL).

For the purpose of section 184/188 of the Companies Act 2013, we certify that to the best of my/our knowledge:

- 1) I am not a relative of any Director of APL.
- 2) We are not a firm in which a Director of APL or his relative is partner.
- 3) I am not a partner in a firm which a Director of APL or his relative is partner
- 4) We are not a private company in which a Director of APL is a member or Director.
- 5) We are not a company in which Directors of APL hold more than 2% of the paid up share capital of our company or vice versa.

PLACE:

SEAL OF THE COMPANY

SIGNATURE OF BIDDER

DATE

Note:

- 1) The second copy of the certificate duly completed, signed and stamped must be submitted with Un-priced BID indicating "QUOTED" in proposed contract.
- 2) The original copy of the certificate duly completed, signed and stamped must be submitted with Priced BID after filling in the value of the proposed CONTRACT.

SITE GRADING WORK

**CERTIFICATE AS PER SEC. 184/188 OF COMPANIES ACT 2013
(TO SUBMIT WITH PRICED BID)**

This has the reference to our proposed CONTRACT for Rs_____ for Site Grading work of APL to be entered into with ASSAM PETROCHEMICALS LIMITED (APL) For the purpose of section 184/188 of the Companies Act 2013, we certify that to the best of my/our knowledge:

- 1) I am not a relative of any Director of APL.
- 2) We are not a firm in which a Director of APL or his relative is partner.
- 3) I am not a partner in a firm which a Director of APL or his relative is partner
- 4) We are not a private company in which a Director of APL is a member or Director.
- 5) We are not a company in which Directors of APL hold more than 2% of the paid up share capital of our company or vice versa.

PLACE:

SEAL OF THE COMPANY

SIGNATURE OF BIDDER

DATE

Note:

- 1) The second copy of the certificate duly completed, signed and stamped must be submitted with Un-priced BID indicating "QUOTED" in proposed contract.
- 2) The original copy of the certificate duly completed, signed and stamped must be submitted with Priced BID after filling in the value of the proposed CONTRACT.

SITE GRADING WORK

INTEGRITY PACT

BETWEEN

Assam Petrochemicals Ltd., hereinafter referred to as "The Principal",

AND

..... hereinafter referred to as "**The Bidder / Contractor**".

Preamble

The Principal intends to award, under laid down organizational procedures, Contract/s for _____ The Principal values full compliance with all relevant laws and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder/s and Contractor/s.

In order to achieve these goals, the Principal will appoint an external independent Monitor who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 -Commitments of the Principal

(1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -

- a) No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for him/herself or third person, any material or immaterial benefit which he/she is not legally entitled to.
- b) The Principal will, during the tender process treat all Bidders- with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidders the same information and will not provide to any Bidder confidential / additional information through which the Bidder could obtain an advantage in relation to the tender process or the tender execution.
- c) The Principal will exclude from the process all known prejudiced persons.

SITE GRADING WORK

2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC / PC Act, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 - Commitments of the Bidder / Contractor

(1) The Bidder / Contractor commits itself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

a) The Bidder / Contractor will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or immaterial benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

b) The Bidder / Contractor will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

c) The Bidder / Contractor will not commit any offence under the IPC / PC Act; further the Bidder / Contractor will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship

d) The Bidder / Contractor will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

(2) The Bidder / Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 - Disqualification from tender process and exclusion from future contracts

If the Bidder, before award of contract has committed a transgression through a violation of Section 2 or in any other form such as to put his reliability or credibility as Bidder into question, the Principal is entitled to disqualify the Bidder from the tender process or to terminate the contract, if already signed, for such reason.

SITE GRADING WORK

(1) If the Bidder / Contractor has committed a transgression through a violation of Section 2 such as to put his reliability or credibility into question, the Principal is entitled also to exclude the Bidder / Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgressions, the position of the transgressors within the company hierarchy of the Bidder and the amount of the damage. The exclusion will be imposed for a minimum of 6 months and maximum of 3 years.

(2) The Bidder accepts and undertakes to respect and uphold the Principal's absolute right to resort to and impose such exclusion

(3) Apart from the above, the Principal may take action for banning of business dealings / holiday listing of the Bidder as deemed fit by the Principal.

(4) If the Bidder / Contractor can prove that he has restored / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal may revoke the exclusion prematurely.

(5) A transgression is considered to have occurred if in light of available evidence no reasonable doubt is possible.

Section 4 - Compensation for Damages

1) Without prejudice to any rights that may be available to the Principal under law or the Contract or its established policies and laid down procedures, the Principal / Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder/ Contractors): Forfeiture of EMD / Security Deposit: If the Principal has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated the Contract or has accrued the right to terminate the Contract according to Section 3, the Principal apart from exercising any legal rights that may have accrued to the Principal, may in its considered opinion forfeit the Earnest Money Deposit / Bid-Security amount of the Bidder / Contractor.

(2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit / Performance Bank Guarantee, whichever is higher.

(3) The bidder agrees and undertakes to pay the said amounts without protest or demur subject only to condition that if the Bidder / Contractor can prove and establish that the exclusion of the Bidder from the tender process or the termination of the contract after the contract award has caused no damage or less damage than the amount of the liquidated damages, the Bidder / Contractor shall compensate the Principal only to the extent of the damage in the amount proved.

SITE GRADING WORK

Section 5 -Previous Transgression

(1) The Bidder declares that no previous transgressions occurred in the last 3 years with any other Company in any country conforming to or with any other Public Section Enterprise in India that could justify his exclusion from the tender process.

(2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can" be terminated for such reason.

(3) If the Bidder / Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal may, at its own discretion as per laid down organizational procedures, revoke the exclusion prematurely.

Section 6 - Equal treatment of all Bidders / Contractors / Sub-Contractors

(1) The Bidder / Contractor undertake to demand from all sub contractors a commitment in conformity with this Integrity Pact. The Bidder / Contractor shall be responsible for any violation(s) of the principles laid down in this agreement / Pact by any of its Subcontractors / Sub-vendors.

(2) The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.

(3) The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7 - Criminal charges against violating Bidders / Contractors / Sub-Contractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Sub-Contractor or of an employee or a representative or an associate of a Bidder, Contractor or Sub-Contractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 - External Independent Monitor / Monitors (number depending on the size of the contract to be decided by the Chairperson of the Principal)

(1) The Principal appoints competent and credible external independent Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

SITE GRADING WORK

(2) The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently.

(3) The Contractor accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Sub-contractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder / Contractor / Sub-contractor with confidentiality.

(4) In case of tenders having an estimated value of Rs.100 Crore, the Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor.

(5) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

(6) The Monitor will submit a written report to the CEO of the Principal within 2 weeks from the date of reference or intimation to him by the 'Principal' and, should the occasion arise, submit proposals for correcting problematic situations.

(7) If the Monitor has reported to the CEO of the Principal substantiated suspicion of an offence under the IPC / PC Act and the CEO has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India,

(8) The word 'Monitor' would include both singular and plural.

Section 9 – Pact Duration

This Pact begins when both the parties have legally signed it. It expires for the Bidder / Contractor 12 months after the completion of work under Contract or till the continuation of guarantee period, whichever is more and for all other bidders, till the contract is awarded.

If any claim is made / lodged during this time, the same shall continue to be valid despite the lapse of this pact as specified it is discharged / determined by the CEO of the Principal.

SITE GRADING WORK

Section 10 - Other Provisions

- 1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. Guwahati.
- 2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 4) Should one or several provision of this agreement turn out to be invalid the remainder of this agreement remains valid. In this the parties will strive to come to an agreement to their original intentions.

BIDDER/CONTRACTOR

FOR THE PRINCIPAL

FOR THE

WITNESS 1

WITNESS 2

Place : _____

Date: _____

SITE GRADING WORK

Ref

Date:

UNDERTAKING-I

**To,
The Managing Director
Assam Petro-chemicals Limited,
P.O. Parbatpur, Namrup
Dibrugarh (Assam), Pin-786623**

Dear Sir,

I/We undertake and confirm that, in case of default on the part of the Contractor in carrying out an instruction of the owner or fails to complete the job within the stipulated time, the owner shall be entitled to employ and pay any other contractor or the owner himself to carry out the same wholly or in parts and all expenses consequent thereon or incidental thereto shall be borne by the Contractor and shall be recoverable from him by the Employer and may be deducted by the Employer from any balance due or which may become due to the Contractor. In that event the owner shall have the right to use of all the contractor's equipments and other things free of charge that may be at any time on the site in connection with the work. If the cost of completing the works or executing the part thereof or of meeting claims of third parties as aforesaid shall exceed the balance due to the contractor, the contractor shall pay such excess to the owner.

Yours faithfully,

Signature.....

Name

Designation.....

For & on behalf of.....

Bidder Name, Sign & Company Seal:

This undertaking should be on the letterhead of the bidder and should be signed by a person competent and having the power of attorney to bind the bidder.

SITE GRADING WORK

Ref

Date:

UNDERTAKING-II

TO,

**The Managing Director
Assam Petro-chemicals Limited,
P.O. Parbatpur, Namrup
Dibrugarh (Assam), Pin-786623**

Dear Sir,

I/We undertake and confirm that, in case of default on the part of the Contractor in engaging any equipments/machineries which is required to execute the work or as per the instruction of the owner, the owner shall be entitled to deploy from his own or hire from other agency to execute the work wholly or in parts and all expenses consequent thereon or incidental thereto shall be borne by the Contractor and shall be recoverable from him by the Employer and may be deducted by the Employer from any balance due or which may become due to the Contractor. If the cost of executing the works or the part thereof or of meeting claims of third parties as aforesaid shall exceed the balance due to the contractor, the contractor shall pay such excess to the owner.

Yours faithfully,

Signature.....

Name

Designation.....

For & on behalf of.....

Bidder Name, Sign & Company Seal:

This undertaking should be on the letterhead of the bidder and should be signed by a person competent and having the power of attorney to bind the bidder.

SITE GRADING WORK

PROFORMA OF LETTER OF AUTHORITY

Ref

Date:

TO,

**The Managing Director
Assam Petro-chemicals Limited,
P.O. Parbatpur, Namrup
Dibrugarh (Assam), Pin-786623**

Dear Sir,

I/We.....hereby authorize the following representative for physical supervision/verification of the work/contract against your Tender No. **APL/Proj/04/Site Grading/Tanker Parking /2016/407** for Site Grading Work.

Name :

Designation :

Signature.....

I/We undertake and confirm that I/we shall be bound by all and whatsoever our representative shall commit. I/We shall further undertake, confirms, approves, ratifies, and accepts the all acts done / caused to be done / performed and/or discharged by virtue of this authorization by the authorized person and shall be binding upon us by virtue of this letter of authority.

Yours faithfully,

Signature.....

Name

Designation.....

For & on behalf of.....

NOTE:

- I. This Letter of Authority should be on the letterhead of the bidder and should be signed by a person competent and having the power of attorney to bind the bidder.

SITE GRADING WORK

**SECTION-B
PROJECT INFORMATION**

1.0 DATA OF ASSAM PETROCHEMICALS LIMITED

1.1 Location

- a) Village : Namrup
- b) Taluka / District : Dibrugarh
- c) State : Assam
- d) Latitude : 27.11° North
- e) Longitude : 95.21° East
- f) Site Elevation : 124 m above MSL

1.2 The Project Site is situated in an Earthquake-prone region

- a) Seismic data : As per IS 1893 - 2002
- b) Zone : Zone-V

1.3 Wind Data - Maximum velocity : 160 kmph

1.4 Ambient Air Temperature : Maximum = 38°C
: Minimum = 5°C
: Flow Sheet = 30°C

1.5 Wet Bulb Temperature : 28°C

1.6 Relative Humidity : Maximum = 95% at 37°C
: Flow Sheet = 70% at 20°C

1.7 Rainfall Intensity : Maximum = 50 mm/hour

1.8 Connectivity

- a) Nearest Railway Station : Namrup 8 Kms.
- b) Road : 70 kms from Dibrugarh by National Highway NH-37
- c) Nearest Airport : 65 kms from Dibrugarh Airport

SITE GRADING WORK**SECTION-C****GENERAL NOTES TO BE READ WITH SCHEDULE OF QUANTITIES AND RATES**

- 1.0 The schedule of Quantities and Rates shall be read in conjunction with the specifications, tender drawings and tender documents. Contractor shall not rely merely on the description given in the Schedule of Quantities and Rates. All the work shall conform to specifications and the quoted rates shall be deemed to include all works necessary to achieve this whether actually indicated under the item description or not. This contract shall be unit rate contract wherein payment will be made as per actual constructed/erected quantities at site.
- 2.0 Quantities of work indicated in the Schedule of Quantities are only approximate and are given to provide a common basis for bidding. The actual quantities of work shall be ordered by Engineer as shown on the final drawings released for construction. No claim shall be entertained from Contractor if the actual quantities or items of work differ from those indicated herein, except where stated otherwise. Contractor shall ascertain for himself the actual quantities of materials required before bidding.
- 3.0 The quotation submitted by Bidder should be based on the approximate probable quantities of the several items of work which are furnished for Bidder's convenience in the Schedule of Quantities. It must be clearly understood that the Contract is not a lump sum contract and that neither the approximate probable quantities nor the values of the individual items nor the aggregate value of the entire tender will form a part of the Contract and the Owner does not in any way assure or guarantee Bidder that the work would correspond thereto.
- 4.0 The quantities of work actually carried out (as evaluated from construction drawings and or field measurements) against each item will be measured and paid at the rates quoted in the Schedule of Quantities, where applicable or otherwise at such rates and prices as may be fixed within the terms of the Contract.
- 5.0 Unit prices shall be quoted for all items and they shall be firm. If unit prices are not quoted against any of the items, it shall be deemed to have been covered in the prices quoted elsewhere. These rates shall include cost of all plant, labour, materials, wastage, supervision, insurance, overheads, profits, royalty, Octroi etc. and every incidental and contingent cost and charges whatsoever required completing the items of work in all respects and as per specifications. The bidder shall also indicate Service Tax and VAT separately. In site grading works royalty is payable on soil. The prices quoted shall include the royalty also. And the contractor is required to submit the royalty payment document along with bill for the soil supplied to APL.
- 6.0 The quantities of work actually carried out (as evaluated from construction drawings and or field measurements) against each item will be measured and paid at the rates quoted in the Schedule of Quantities, where applicable or

SITE GRADING WORK

- otherwise at such rates and prices as may be fixed within the terms of the Contract.
- 7.0 Bidder shall be deemed to have allowed in his rates and prices for the provision, maintenance and final removal of all temporary works of whatsoever nature required for the proper execution of works, except for those temporary works for which specific items have been provided in Schedule of Quantities. The prices inserted against these specific items of particular temporary works shall be for the provision, maintenance and their final removal. The rates shall also be deemed to include cost of any geo-technical survey works that may be required to be carried out for laying out of all the works involved.
- 8.0 Rates and prices shall be written in ink and shall be entered both in figures and in words. Where there is a discrepancy between rates quoted in figures and in words, the rates quoted in words shall prevail. Where there is a discrepancy between the unit rates and the amount entered, the unit rate shall govern for evaluating the correct amount. Rates and prices shall be written only in the Schedule of Quantities and Rates and not given in any other format will be rejected and Bidder will be disqualified.
- 9.0 The rates quoted shall hold good for works above ground level irrespective of elevations including lifts or below ground/grade level inclusive of de-watering where necessary. No extra amount is payable for de-watering under any circumstances. This shall also include the cost of materials utilized for testing.
- 10.0 The rates quoted shall hold good even if the shapes and sizes of members shown on bid drawings are modified while issuing the final drawings stamped 'Released for Construction'. No extra claims shall be entertained in this regard.
- 11.0 Rates quoted by the BIDDER shall be firm for the entire period of construction and is valid even if the contract is split.
- 12.0 All admixtures shall be supplied by the CONTRACTOR and shall be mixed with concrete/grout as directed by ENGINEER.
- 13.0 Tenderer shall quote his rates for all items in Section-C. The OWNER reserves the right to operate/increase or decrease quantities in each item or omit any item included in Section-C2 at his discretion. CONTRACTOR shall have no claim, whatsoever, on grounds of loss of anticipated profit etc. on account of the same.
- 14.0 Rates quoted shall remain firm for a variation of plus (+) or minus (-) 25% of the value of work awarded. In case of variation in qty in excess of estimated qty. the contractor shall inform the OWNER / Owner that the estimated quantity is achieved and seek permission for extra work.
- 15.0 Abbreviations used for the unit of various items are as stated below :

Mt = tonne = 1000 kgs.

kg = kilogram

quintal = 100 kgs

SITE GRADING WORK

Rmt = running metre

m³ /cu.m = cubic metre

m² /sq.m = square metre

No. = Number

km = kilometre

LS = Lumpsum

SITE GRADING WORK**Assam Petrochemicals Limited**

Project Department

SCHEDULE OF QUANTITIES

Name of the work :-Site Grading for proposed Tank Farm Area (for Methanol Tanks) of Integrated Methanol & Acetic Acid Project

Sr. No.	Description of Items	QTY - SOQ	UNIT	Unit Rate (INR)	Total (INR)
1	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared.	16675.00	Sq. M.		
2	Raising low site with approved soil obtained from outside by truck carriage including breaking clods, dressing etc. complete including paying necessary forest royalty, sales tax, land compensation, municipal gate fees etc.	8443.48	Cu. M.		
3	Extra over item no. 2 for mechanical compaction in layers using power roller to achieve at least 90% of proctor density including loosening of soil, grading, leveling, watering etc. as necessary and as directed by the Engineer-in-charge.	11688.48	Cu.M.		
4	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth 1.5 m in width as well as 10 sq. m on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be leveled and neatly dressed.				
	For all kinds of soil	3245.46	Cu. M.		

SITE GRADING WORK

NOTES:

1. QRO = QUOTE RATE ONLY
2. Works shall be done strictly as per the SOQ.
3. Contactor shall not merely on the description given in the schedule of Quantities and Rates. All the work shall confirm to specifications and the quoted rates shall be deemed to include all works necessary to achieve this whether actually indicated under the item description or not. This contract shall be unit rate contract wherein payment will be made as per actual constructed/erected quantities at site.
4. No claim shall be entertained from contractor if the actual quantities or items of work differ from those indicated in SOQ.
5. The quantities of work actually carried out against each item will be measured jointly by APL and authorized person of contractor or contractor himself and paid at the rates quoted in the Schedule of Quantities.
6. If any mismatch in the rate (in words) and rate (in fig), the lowest part shall be taken into consideration.

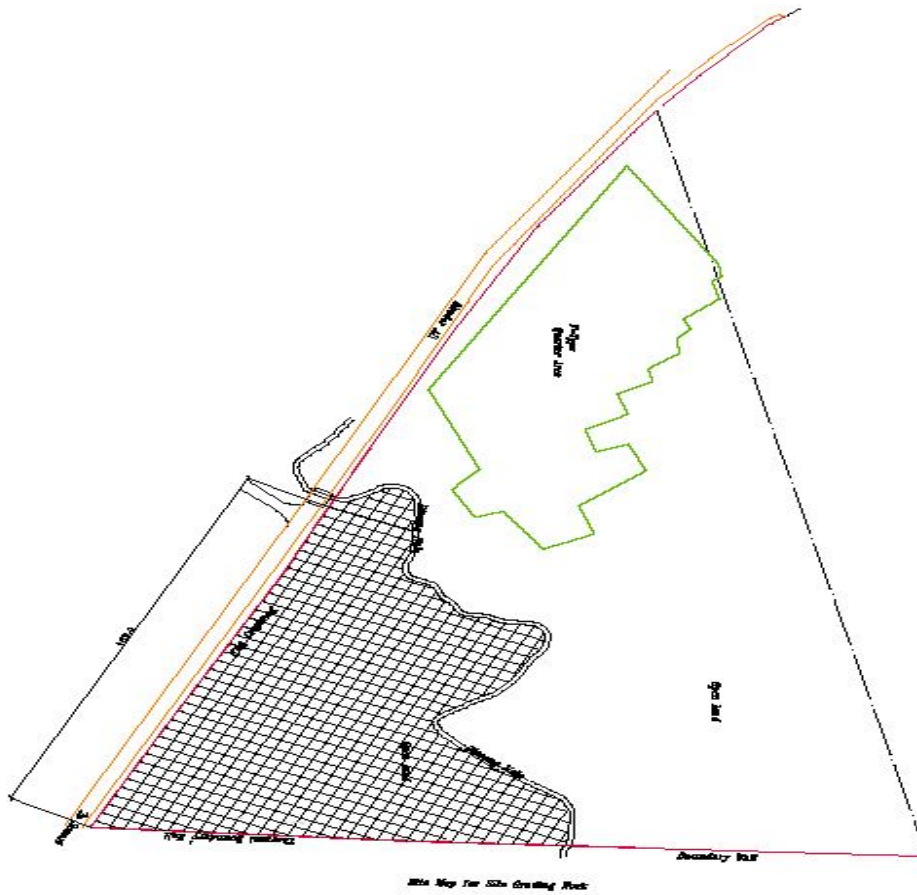
SITE GRADING WORK

Sr. No.	Description	Amount in Figure in Rs.	Amount in Words
1	Total Amount as per Section C Schedule of Quantities (exclusive of VAT and Service Tax)		
2	Add VAT at ____%		
3	Add for Present rate of Service Tax _____ % considered		
4	Total Amount inclusive of all Taxes		

SITE GRADING WORK

LIST OF BID DRAWINGS

APL/Proj/04/Site Grading/Tanker Parking/2016/407/R0



SITE GRADING WORK

SPECIAL CONDITIONS OF CONTRACT

1.0 GENERAL

- 1.1 The General Conditions of Contract (GCC) in Section E are supplemented / super ceded (as described) by this Special Conditions of Contract which together comprise the Contract Conditions.
- 1.2 These Special Conditions of Contract (SCC) shall be read in conjunction with the General Conditions of Contract (GCC), Schedule of Rates, specifications of work, drawings and any other document forming part of this Contract wherever the context so requires.
- 1.3 It will be the Contractor’s responsibility to bring to the notice of Engineer-in-Charge any irreconcilable conflict in the Contract documents before starting the work (s) or making the supply with reference to which the conflict exists.
- 1.4 In the absence of any Specifications covering any material, design or work(s) the same shall be performed/ supplied/ executed in accordance with standard Engineering practice as per the instructions/directions of the Engineer-in-Charge, which will be binding on the Contractor.

2.0 “Engineer- in Charge” shall mean Manager CIVIL designated by APL.

3.0 SUPPLEMENTARY CLAUSES TO GCC

GCC CLAUSE NO.	SUPPLEMENT DESCRIPTION
4.1.	<p><u>New Clause Added:</u></p> <p>4.1.6 It shall be the responsibility of the Contractor to ensure that the materials supplied are procured from proper sources and duties, taxes, royalties or levy by whatever name called is duly paid on those materials. Material shall be free from contamination and shall not violate rules of Environment Conservation Board / Pollution Control Board / Central govt. / State govt. Contractor shall inquire from respective local circle statutory office on execution of its work is fully complying with all statutory requirement.</p> <p>4.1.7 It shall be the responsibility of the Contractor to follow Rules relating to purchase of Soil and Sand, relevant taxes, royalties and clearances required by respective state govt. Or central govt. As may be in force.</p>

SITE GRADING WORK

GCC CLAUSE NO.	SUPPLEMENT DESCRIPTION
	4.1.8 Contractor shall Ensure that vehicles entering the factory premises are accompanied by valid Theft Protection (TP) if required.
6.4	<p><u>Clause shall be read as:</u></p> <p>Construction power, air and water shall be arranged by the contractor at his own cost including power for labour colony.</p>
7.7	<p><u>Clause modified as:</u></p> <p>7.7 FORCE MAJEURE</p> <p>7.7.1 Neither CONTRACTOR/SUB-CONTRACTOR, nor OWNER shall be considered to be in default of the performance of their contracted obligations under the CONTRACT, so long as such performance is prevented or delayed by force majeure. Force majeure shall be understood to be any cause beyond the reasonable control of the PARTY affected such as Acts of god, severe earthquake, typhoon, cyclone (except monsoon), floods, lightning, landslide, fire, explosion, plague, epidemic strike, lockout, sabotage, hostilities(whether war be declared or not) ,civil war, rebellion, revolution, insurrection, military or usurped power or confiscation, trade embargoes, restraining order control, destruction, or requisition by order of any Government or any public authority.</p> <p>7.7.2 The PARTY claiming the benefit of this clause shall forthwith and within 28(twenty eight) DAYS give notice to the other PARTY specifying the event constituting force majeure and explaining to what extent contractual obligations will thereby be prevented or delayed and the further period for which it is estimated that such prevention or delay will continue. CONTRACTOR and OWNER shall as soon as possible in consultation determine the length of delay likely to be caused by such event, and on the basis of available evidence agree in writing on a fair and reasonable extension of time for the completion of WORK, if possible, and any other consequences of Force Majeure. The PARTY claiming force majeure shall notify the other PARTY of the date when the event giving rise to force majeure has ceased to exist.</p>

SITE GRADING WORK

GCC CLAUSE NO.	SUPPLEMENT DESCRIPTION
	<p>7.7.3 OWNER and CONTRACTOR shall be diligent and use their individual and combined efforts in attempting to prevent, overcome, or avoid the causes of force majeure. The PARTIES upon receipt of notice of force majeure shall confer promptly with each other and mutually agree upon a course of action to remove or alleviate such cases.</p> <p>7.7.4 If, in spite of the action taken under clause 7.7.3, the state of force majeure Continues for a period of three (3) months, then the PARTIES shall be entitled to terminate the contract and CONTRACTOR shall be entitled to be paid for all works carried out on or prior to the effective date of force majeure by the OWNER and shall consult each other to decide as to what action should be taken in the circumstances.</p>
8.3.1 (b)	<p><u>First Sentence of the Clause modified as:</u></p> <p>In case of unit rate contracts, if a bill of material is furnished in the enquiry document, the BIDDER shall quote unit rates which will hold good for ± 25% variation from quantities specified.</p>
9.6	<p><u>New Clauses Added:</u></p> <p>9.6.1 The contractor(s) shall not pay less than the minimum wages to the labourers engaged by him/them as per Minimum Wages Act or such other legislation or award of the minimum wage fixed by the respective State Govt. or Central Govt. as may be in force.</p>
9.12	<p><u>First Sentence of the clause modified as:</u></p> <p>The successful BIDDER shall furnish, within 15 days from date of issue of the letter of intent, security deposit equal to 10% of the total accepted tender value for proper fulfillment of the CONTRACT in form of Bank guarantee as per Format covered in Attachment – II of this document.</p>
10.1	<p><u>Clause modified as:</u></p> <p>The terms of payment shall be as below:</p> <p>(a) 90% (Ninety percent) of CONTRACT PRICE as monthly running</p>

SITE GRADING WORK

GCC CLAUSE NO.	SUPPLEMENT DESCRIPTION
	<p>bills (RA) certified by Owner's Engineer-In-Charge.</p> <p>(b) 10% (Ten percent) of CONTRACT PRICE as retention money within a month after completion of 'Guarantee/Defects Liability Period' or within a month after completion of job as per contract against a bank guarantee for the 'Guarantee/Defects Liability'.</p> <p>(c) Payment will be made on actual quantity of job done within the total value of contract & not on the basis of total value of contract.</p> <p>Note: Progressive / milestone Payment is not applicable</p>
11.0	<p><u>Clause title shall be read as:</u></p> <p>MEASUREMENT OF WORK</p>
11.2	<p>Clause deleted</p>
11.6	<p><u>First Sentence of the Clause modified as:</u></p> <p>The measurements so taken and certified correct by the PURCHASER/ OWNER shall be the basis for the payment to the CONTRACTOR.</p>
11.11	<p><u>Clause modified as:</u></p> <p>11.11 <u>PAYMENT OF CONTRACTOR'S BILLS</u></p> <p>11.12 Maximum of Two running account bill shall be admissible against volume of works executed.</p> <p>11.12.1 Payments will be made against Running Accounts bills certified by the Owner's Engineer-in-Charge/Site-in-Charge within 15 days from the date of receipt of the certified bill by the disbursement section of the owner.</p> <p>11.12.2 Running Account Bills and the final bill shall be submitted by the Contractor together with the duly signed measurements sheet(s) to the Engineer-in-Charge/ Site-in-Charge of the Owner in quadruplicate for certification. The Bills shall also be accompanied by quantity calculations in support of the quantities contained in the bill along with cement consumption statement, actual/theoretical,</p>

SITE GRADING WORK

GCC CLAUSE NO.	SUPPLEMENT DESCRIPTION
	<p>wherever applicable duly certified by the Engineer-in-Charge/ Site-in-Charge of the Owner.</p> <p>11.12.3 All running account payments shall be regarded as on account payment(s) to be finally adjusted against the final bill payment. Payment of Running Account Bill(s) shall not determine or affect in any way the rights of the Owner under this Contract to make the final adjustments of the quantities of material, measurements of work and adjustments of amounts etc. in the final bill.</p> <p>11.12.4 The final bill shall be submitted by the Contractor within one month of the date of completion of the work fully and completely in all respects. If the Contractor fails to submit the final bill accordingly Engineer-in-Charge/Site-in-Charge may make the measurement and determine the total amount payable for the work carried out by the Contractor and such a certification shall be final and binding on the Contractor.</p> <p>11.12.5 The Owner/Engineer- in-Charge/Site-in-Charge may take the assistance of an outside party for taking the measurement, the expenses of which shall be payable by the Contractor.</p> <p>11.12.6 Payment of final bill shall be made within 30 days from the date of receipt of the certified bill by the Disbursement Section of the owner.</p> <p>11.12.7 Wherever possible, payment shall be tendered to the contractor in electronic mode (e-payment) through any of the designated banks. The contractor will comply by furnishing full particulars of Bank account (mandate) to which the payments will be routed. Owner reserves the right to make payment in any alternate mode also.</p>
12.0	<p><u>Clause modified as:</u></p> <p>12.0 <u>SUSPENSION</u></p> <p>12.1 OWNER may direct CONTRACTOR in writing to suspend all or any part of WORK for such period of time as may be determined by OWNER to be necessary or desirable for the convenience of OWNER. On receipt of such notice, CONTRACTOR shall take immediate action to wind up the WORK in such a manner that it will cause least damage to OWNER</p> <p>12.2 If such suspension delays the progress of WORK and causes additional expense or cost to CONTRACTOR, the increased costs due to such suspension shall be compensated by the OWNER as</p>

SITE GRADING WORK

GCC CLAUSE NO.	SUPPLEMENT DESCRIPTION
	<p>may be mutually agreed upon by the OWNER and CONTRACTOR in writing. All mobilization & demobilization charges of CONTRACTOR's personnel from site shall be borne by OWNER.</p> <p>12.3 OWNER shall advice CONTRACTOR of the period such suspension is likely to cover. CONTRACTOR shall remobilize his personnel and resume WORK as expeditiously as possible on receipt of instruction from OWNER to resume the WORK.</p>
14.0	<p><u>Clause modified as:</u></p> <p>14.0 <u>ARBITRATION</u></p> <p>14.1 <u>APPLICATION TO GENERAL</u></p> <p>14.1.1 Unless otherwise specified, in all cases of dispute which cannot be settled by mutual negotiation the matter shall be referred for arbitration and the disputes of differences shall be finally settled and binding on both PARTIES by arbitration to be held by two arbitrators appointed one by OWNER and one by CONTRACTOR chosen freely and without any limitations, out of any sources, including international sources.</p> <p>14.1.2 Arbitration will follow the Arbitration & Conciliation Act 1996 or the rules of the Indian Council of Arbitration, as may be agreed by the two PARTIES.</p> <p>14.1.3 Before entering upon the arbitration, the two arbitrators shall appoint an umpire.</p> <p>14.1.4 In case the two arbitrators of the PARTIES are not able to agree and decide on the issue(s) on the disputed matter under their arbitration, the final settlement of such issue(s) of the disputed matter shall be referred to the binding decision of the umpire nominated as provided under clause 14.2</p> <p>14.2 <u>ADDITIONAL CLAUSES TO 14.1</u></p> <p>14.2.1 The arbitrator shall give reasoned award. The award aforesaid shall be final and binding on the PARTIES to the CONTRACT.</p> <p>14.2.2 The PARTY invoking arbitration shall specify the dispute or disputes to be referred to be arbitration.</p>

SITE GRADING WORK

GCC CLAUSE NO.	SUPPLEMENT DESCRIPTION
	<p>14.2.3 Both PARTIES shall continue to fulfill their respective obligation under CONTRACT during the arbitration proceedings.</p> <p>14.2.4 The venue of jurisdiction in case of disputes and arbitration shall be Dibrugarh, India.</p> <p>14.2.5 It is also a term of the CONTRACT that if the CONTRACTOR does not make any demand for arbitration in respect of any claims in writing within 90 days of receiving the intimation from the OWNER that the bill is ready for payment, the claim of the CONTRACTOR will be deemed to have been waived and absolutely barred and OWNER shall be discharged and released of all liabilities under the CONTRACT in respect of these claims. However the CONTRACTOR may accept the payment of bills from the owner without affecting their rights to raise the dispute of claims.</p> <p>14.2.6 Subject as aforesaid, the provision of Indian Arbitration & Conciliation act, 1996 and any statutory modification or re-enactments thereof and unless made their under and for the time being, in force shall apply to the arbitration proceedings under this clause.</p>

4.0 BILLING OF WORKS EXECUTED

4.1 The Contractor will submit a bill in approved proforma in quadruplicate to the Engineer-in-Charge/Site-in-Charge of the work giving abstract and detailed measurement for the various items executed during a month, before the expiry of the first week of the succeeding month. The Engineer-in-Charge/Site-in-Charge shall take or cause to be taken the requisite measurements for the purpose of having the bill verified and/or checked before forwarding the same to the disbursement office of the Owner for further action in terms of the Contract and payment thereafter. The Engineer-in-Charge/Site-in-Charge shall verify the bills within 7 days of submission of the Bill by the Contractor.

5.0 BID EVALUATION CRITERIA

5.1 The Techno-commercial bid (un-priced bid) shall be evaluated based on the quality & quantum of documents submitted by bidder in his offer as outlined in the Section A – Checklist. Bidder shall be read ENQUIRY Document carefully while quoting as deviations (if any) from this ENQUIRY shall lead to rejection / loading as per

SITE GRADING WORK

provisions in various sections of this ENQUIRY Document.

- 5.2 Price bid evaluation: Contract shall be awarded to sole bidder on Overall Lowest Basis for entire scope of ENQUIRY on the basis of effective total cost including all taxes and duties minus CENVAT / Set off benefit available to CLIENT. Techno-commercial loading (if any) as per Section C – Special Conditions of Contract shall be applicable.
- 5.3 CLIENT reserves the right to assess Bidder's capability to execute the work by taking into account various aspects such as Overall Schedule for Completion of work, details of tools, tackles & equipment available, Manpower estimation for job, deployment chart with bio-data/ experience / qualification of all supervisory staff, proposed site organization chart, Quality assurance Plan & Safety assurance plan with detailed bio-data / experience of quality assurance supervisor & safety supervisor, Concurrent Commitments, Past performance etc. and accordingly decide whether respective price bids shall be opened and considered for further evaluation. Past Performance shall be based on in-house data of CLIENT.
- 5.4 Negotiations will be held only if the lowest rate received is not reasonable and the decision of the company regarding reasonableness of rates quoted will be final and binding on the bidders. Work will be awarded to lowest bidder without post tender negotiations if the rates are reasonable. If rates are not reasonable, negotiations with Lowest Bidder only may be undertaken to arrive at a reasonable rate.

6.0 COMMERCIAL LOADING OF OFFERS**6.1 Differential Payment Terms****Liquidated Damages (LD)**

In case the job is delayed beyond the stipulated completion period (mentioned in

Work order) due to negligence, poor workmanship, deployment of unskilled

manpower or any other reason whatsoever on contractor's part, a penalty at the rate of 1% of work order value per week, limited to maximum of 10%, shall be recovered from the contractors bill.

6.2 Differential Taxes/Duties

- (a) Any Differential in taxes and duties will be cost loaded on case to case basis. However, if a vendor states that taxes / duties are not applicable at present and will be charged as applicable at the time of delivery then his bid shall be loaded by the maximum rate of taxes / duties applicable as on date of price evaluation.

6.3 Performance Bank Guarantee (PBG)

The contractor shall, within seven days from the date of issue of Letter of Intent (LOI) or Work order whichever is earlier, deposit an amount equal to 10% of the work value(tendered & accepted value) as **Performance Guarantee** in the form of Demand draft/Banker's cheque or in cash. The sum already deposited by the contractor as Earnest Money shall be treated as part of the performance guarantee money. Upon successful

SITE GRADING WORK

completion of work, the performance guarantee money shall be released to the contractor. The performance guarantee money may also be deposited in the form of an irrevocable bank guarantee bond of any scheduled bank. The bank guarantee shall be valid up to the stipulated date of completion of work. The validity of bank guarantee shall have to be extended further time to time depending upon extension of contract granted.

6.4 Security Deposit (SD):

- (a) The work carried-out by the contractor shall be guaranteed for a period of 12 months (Twelve) from the date of completion. 10% of the gross final bill value payable to the contractor shall be retained as **Security Deposit** and shall be released after completion of this guaranteed period. The security deposit money in the form of a Bank Guarantee bond of any schedule Bank valid till completion of guarantee period shall also be acceptable.

7.0 TECHNICAL LOADING OF OFFERS

- 7.1 Technical loading of offers shall be as per Section C of this ENQUIRY document

8.0 ROUNDING OFF

- 8.1 All payments to and recoveries from the bill of CONTRACTOR shall be rounded off to the nearest Rupee. Wherever the amount to be paid/ recovered consists of a fraction of a Rupee (Paise), the amount shall be rounded off to the next higher rupee if the fraction consists of 50 (fifty) paise or more and if the fraction of a Rupee is less than 50 (fifty) paise, the same shall be ignored.

9.0 TAXES AND DUTIES

- 9.1 Any Statutory variation in Taxes and duties, after due date of submission of bid till the contractual completion period shall be on Owner's account, against submission of documentary evidence. However, in case of delay in completion period beyond the contractual date, for reasons attributable to contractor, any increase in these rates shall be borne by the contractor, whereas any decrease shall be passed on to the owner. OWNER shall take CENVAT benefit as applicable.
- 9.2 Further, in case of delay in completion of work, due to reasons attributable to contractor, any new or additional taxes, duties or levies imposed after the contractual completion date shall be on contractor's account.
- 9.3 Foreign contractors' bid shall be compared considering Bill selling foreign exchange rate as on the date of priced bid opening, as declared on web site of RBI. Copy of such information shall form part of recommendation.
- 9.4 Notwithstanding the foregoing, OWNER shall not bear any liability in respect of:
- i) Personal taxes on the personnel deployed by the Contractor, his Sub Contractor and Agent etc.
 - ii) The Corporate Taxes in respect of Contractor and his Sub-Contractor and other Agents, Indian or foreign based.

SITE GRADING WORK

iii) Any other taxes I duties/ levies

9.5 The CONTRACTOR shall also comply with the provisions of the GCC (General Conditions of Contract)

9.6 **INCOME TAX :** Income tax at the prevailing rate shall be deducted from the CONTRACTOR's bills as per Income Tax Act. OWNER shall issue necessary TDS Certificate to the CONTRACTOR. Bidders Shall provide their PAN No. , Service Tax Registration No. & VAT Registration No. in their un-priced bid.

10.0 COMPLETION DOCUMENTS

10.1 Completion document shall contain following:

- Completion Certificate by Engg. In-charge
- Taking – Over Certificate by Client
- No Demand Certificate from Contractor
- No Due Certificate from Contractor
- Site clearance Certificate
- Labour Liability Certificate
- Indemnity Bond on Rs. 100 stamp paper

11.0 COORDINATION WITH OTHER AGENCIES

11.1 Work shall be carried out in such a manner that the work of other agencies operating at the site is not hampered due to any action of the CONTRACTOR. Proper coordination with other agencies will be responsibility of the CONTRACTOR. In case of any dispute, the decision of Engineer-in-Charge shall be final and binding on the CONTRACTOR

12.0 MOBILISATION ADVANCE:

12.1 No mobilization advance shall be given by APL.

SITE GRADING WORK

ATTACHMENT-I

VENDOR DOCUMENT REVIEW STATUS CODES FORMAT FOR STAMP AND STICKER

VENDOR DOCUMENT REVIEW STATUS

- A Document approved as submitted; proceed with fabrication/ construction.
- B Document approved subject to comments noted; proceed with fabrication/construction considering our comments.
- C Our comments are noted on this marked-up print.
- D Our comments are noted in the memo attached to the letter of transmittal No. APL/Proj..... dated.....
- E Correct original of this document to reflect our comments and resubmit for approval.
- F Correct original of this document to reflect our comments and resubmit for records.
- G Documents of this category are for information only and not for approval. Information furnished on the document is noted.
- H Document reviewed against our previous comments and other revisions highlighted and identified by the vendor.
- I Document returned without review.

Approval conveyed herein neither relieves Vendor/Contractor of his contractual obligations and his responsibilities for correctness of dimensions, materials of construction, weights, quantities, design details, assembly fits, system/performance requirements and conformity of supplies with Indian statutory Laws as may be applicable, nor does it limit the Purchaser's rights under the contract.

Reviewed by :

Date :

SITE GRADING WORK

ATTACHMENT-II

BANK GUARANTEE FOR SECURITY / PERFORMANCE GUARANTEE / DEFECT LIABILITY OF THE OBLIGATIONS OF VENDOR / CONTRACTOR

(On non-judicial stamp paper of appropriate value)

To,
ASSAM PETRO-CHEMICAL LTD.
Orion Place, G.S Road,
Bhangagarh, Guwahati 781005,
India

IN CONSIDERATION OF THE ASSAM PETRO-CHEMICAL LTD. a Company registered under the Companies Act 1956, having its registered office at Orion Place, G.S Road, Bhangagarh, Guwahati 781005, India (hereinafter called "the Corporation" which expression shall include its successors and assigns) having awarded to M/s _____ a partnership firm/sole proprietor business/a company registered under the

Companies Act, 1956 having its office at _____ (hereinafter referred to as "the Vendor" which expression shall wherever the subject or context so permits includes its successors and assigns) a supply contract in terms inter alia, of "the Corporation's" Order No. _____ dated _____ and the General purchase conditions of "the Corporation" and upon the condition of "Vendor's" furnishing security for the performance of "the Vendor's" obligations and/or discharge of "the Vendor's" liability under and/or in connection with the said supply contract upto a sum of Rs _____ (Rupees _____) amounting to 10% (ten percent) of the total order / contract value.

We, _____ (hereinafter called "the Bank" which expression shall include its successors and assigns) hereby jointly and severally undertake and guarantee to pay to "the Corporation" in rupees forthwith on demand in writing and without protest or demur of any and all moneys anywise payable by "the Vendor" to "the Corporation" under, in respect of or in connection with the said supply contract inclusive of all the Corporation's losses and damage and costs, (inclusive between attorney and client) charges, and expenses and other moneys anywise payable in respect of the above as specified in any notice of demand made by "the Corporation" to the Bank with reference to this Guarantee up to and aggregate limit of Rs _____ (Rupees

SITE GRADING WORK

_____) and "the Bank" hereby agrees with "the Corporation" that:

1. This Guarantee/Undertaking shall be a continuing Guarantee / Undertaking and shall remain valid and irrecoverable for all claims of "the Corporation" and liabilities of "the Vendor" arising upto and until midnight of _____

2. This Guarantee/Undertaking shall be in addition to any other guarantee or security whatsoever that "the Corporation" may now or any time anywise have in relation to "the Vendor's" obligation/liabilities under and/or connection with the said supply contract, and "the Corporation" shall have full authority to take recourse to or enforce this security in preference to the other security(ies) at its sole discretion and no failure on the part of "the Corporation" to enforcing or requiring enforcement to any other security shall have the effect of releasing "the Bank" from its full liability hereunder.

3. "The Corporation" shall be at liberty without reference to "the Bank" and without affecting the full liability of "the Bank" hereunder to take any other security in respect of "the Vendor's" obligation and/or liabilities under or in connection with the said supply contract and to vary the term vis-a-vis "the Vendor" of the said supply contract or to grant time and/or indulgence to "the Vendor" or to reduce or to increase or otherwise vary the prices of the total contract value or to release or to forebear from enforcement of all or any of the obligations of "the Vendor" under the said supply contract and/or the remedies of "the Corporation" under any other security(ies) now or hereafter held by "the Corporation" and no such dealing(s), variation(s) or other indulgence(s) or agreement(s) with "the Vendor" or release of forbearance whatsoever shall have the effect of releasing "the Bank" from its full liability to "the Corporation" hereunder or of prejudicing rights of "the Corporation" against "the Bank".

4. This Guarantee/Undertaking shall not be determined or affected by the liquidation or winding up, dissolution or change of constitution or insolvency of "the Vendor" but shall in all respects and for all purposes be binding and operative until payment of all moneys payable to "the Corporation" in terms hereof.

5. "The Bank" hereby waives all rights at any time inconsistent with the terms of this Guarantee/Undertaking and the obligations of "the Bank" in terms hereof shall not be anywise affected or suspended by reason of any dispute having been raised by "the Vendors" (whether or not pending before any arbitrator, officer, tribunal or court) or any denial of liability by "the Vendor" or any other order of communication whatsoever by "the Vendor" stopping or preventing or purporting to stop or prevent any payment by "the Bank" to "the Corporation" in terms hereof.

SITE GRADING WORK

6. The amount stated in any notice of demand addressed by "the Corporation" to "the Bank" as liable to be paid to "the Corporation" by "the Vendor" or as suffered or incurred by "the Corporation" on account of any losses or damages or costs, charges/and/or expenses shall be as between "the Bank" and "the Corporation" be conclusive of the amount so liable to be paid to "the Corporation" or suffered or incurred by "the Corporation", as the case may be, and payable by "the Bank" to "the Corporation", in terms hereof.

7. Notwithstanding anything contained herein above:

i) Our liability under this guarantee shall not exceed Rs.....

ii) This Bank Guarantee shall be valid up to and including; and

iii) We are liable to pay the guarantee amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or # *before the expiry of 30 days from the date of expiry of this guarantee.*

8. "The Bank" has power to issue this guarantee in favour of "the Corporation" in terms of the documents and/or the agreement/contract or MOU entered into between "the Vendor" and "the Bank" in this regard.

IN WITNESS Where of _____ Bank, has executed this document at _____ on _____.

_____ Bank

(by its constituted attorney)

(signature of a person authorized to sign on behalf of "the Bank")

SITE GRADING WORK

ATTACHMENT-III

PROFORMA FOR CONTRACT

(To be executed on non judicial stamp paper of appropriate value)

This CONTRACT NO _____ entered into this _____ day of

..... Month of Year between Assam Petro-chemicals Ltd, a company registered under companies Act,1956 have its registered office at Orion Place ,G.S. Road, Guwahati (herein referred to as owner/APL) which expression shall include _____ its successors and assignees) on the one part AND _____ M/S _____ hereinafter referred to as "CONTRACTOR" which expression shall include its successors and permitted assignees) on the other part.

WITNESSETH THAT

WHEREAS OWNER /APL desires to have works from the aforesaid CONTRACTOR on terms & conditions mentioned In this CONTRACT:

AND WHEREAS CONTRACTOR who has their own know how with resources for Performing such jobs has agreed to sign on works agreement and to render the services as per requirement of APL on Terms and conditions mentioned in this CONTRACT.

NOW Therefore Parties Agree That:

1) The following annexed hereto shall form an integral part of this CONTRACT:

- (i) Letter of Intent (LOI) No _____
- (ii) Terms & Conditions of CONTRACT STATED IN ITB
- (iii) Certificate by the Contractor as per sec. 297/299 of Companies Act. 1956.
- (iv) Price Schedule.
- (v) Time schedule of completion.
- (vi) Scope of work for CONTRACTOR as per CONTRACT.
- (vii) Curriculum vitae of key personnel.
- (viii) A copy of CONTRACT SECURITY DEPOSIT.

2) For the scope of WORK as mentioned in the CONTRACT, APL shall pay to

Assam Petro-chemicals Limited

Namrup. Assam

Enquiry Document No

APL/Proj/04/Site Grading/Tanker Parking/2016/407

SITE GRADING WORK

CONTRACTOR lump sum fee of Rs _____ (Rupees only).

3) For the purpose of this CONTRACT address of Parties will be as follows and all correspondence and notices in relation to present agreement sent to PARTIES at the addresses below shall be deemed to be sufficient for serving notices on the PARTIES. All Such notices as well as bills, reports, documents etc, shall be addressed to the PARTIES at such addresses.

To
Managing Director,
Assam Petro-chemicals Ltd.
Regd. Office, 4th Floor,
Orion Place,
Bhangagarh ,G.S. Road,
Guwahati-781005

Attention Shri

CONTRACTOR:

Attention Shri.....

In WITENESS whereof the PARTIES have executed this CONTRACT through their Representatives duly authorized in this behalf:

Signed for and on behalf of

Signed for and on behalf of

Assam Petrochemicals Ltd.

Contractor

SIGNATURE

SIGNATURE

NAME

NAME

DESIGNATION:

DESIGNATION:

PLACE:

PLACE:

DATE:

DATE:

WITNESS:

WITNESS:

1.

1.

SITE GRADING WORK

ATTACHMENT-IV

COMPLETION CERTIFICATE

(On Contractors Letterhead)

Date of Commencement of Work :
 Date of Completion of work as per agreement :
 Actual date of completion of work :
 Extension of time granted : Yes / No / Recommended
 If yes, the letter ref. No. : dtd.
 Value of Completed work : Rs.
 Date of Taking over of the completed work :

Certified that the above work has been completed in all respects as per drawings, specifications and directions of Engineer-in-Charge on and has been taken over from the contractor.

It is also certified that the contractor has cleared / cleaned the site (witnessed by the concerned Engineer from OWNER on dtd.As directed by Engineer-in-Charge.

Engineer-In-Charge: _____

Name: _____

Countersigned _____

Departmental Head _____

Name: _____

SITE GRADING WORK

ATTACHMENT-V

NO DEMAND CERTIFICATE

(On Contractors Letterhead)

1. NAME OF WORK : _____
2. NAME OF CONTRACTOR : _____
3. DATE OF AWARD : _____
4. TIME ALLOWED FOR COMPLETION : _____
5. SCHEDULE DATE OF COMPLETION AS PER AGREEMENT : _____
6. ACTUAL DATE OF COMPLETION : _____

CERTIFICATE THAT

1. The recoveries in respect of material issued to the contractor have been made from RA bills. Balance if any is to be recovered from final bill as per the statement enclosed.
2. Recovery on account of Water or Electricity are to be made by OWNER.
3. The contractor has made payment to the labour engaged by him and no complaint has since been received from any of the labour employed by the contractor in the performance of the above work. A certificate from sub-contractor to this effect is enclosed.
4. Work has been completed satisfactorily and is according to the specifications laid down in the contract.
5. None of the heavy equipment were given to the contractor on hire basis and nothing is recoverable on this account or recoveries in respect of hire charges of heavy equipment have been made from RA bill. Balance if any is to be recovered from Final bill as per statement enclosed.
6. Labour hutment has been/has not removed by the sub-contractor and ground rent is to be recovered as per statement enclosed.
7. The work has been completed within the schedule period.

OR

The completion of the work has been delayed by _____months/days and as such the recovery of liquidated damages to the extent of Rs. _____(Rupees _____) may be made .

Extension for _____months/days has been granted by the competent authority vide letter No. _____ dtd. _____.

SITE GRADING WORK

8. The requisite obligations as per contract have been fulfilled by the contractor.

ENGINEER-IN-CHARGE _____

RCM / CHIEF PROJECT MANAGER _____

ACCOUNTS _____

DATE _____

SITE GRADING WORK

ATTACHMENT-VI

NO DUE CERTIFICATE

(On Contractors Letterhead)

NAME OF CONTRACTOR: M/S _____

DESCRIPTION OF WORK: _____

WORK ORDER NO. & DATE: _____

ACTUAL DATE OF COMPLETION OF JOB: _____

We certify that we have fully paid and satisfied all claims for the work relating to labors, materials supplied equipment and any other entitlement whatever touching or affecting the contract. We undertake to indemnify and keep indemnified the owner from and against all claims, demands, debts, lines obligations and liabilities whatever arising there from or relating thereto.

SIGNATURE CONTRACTOR

NAME _____

ADDRESS: _____

DATE:

SITE GRADING WORK

ATTACHMENT-VII

SITE CLEARANCE CERTIFICATE

(On Contractors Letterhead)

NAME OF CLIENT :

NAME OF OWNER :

NAME OF CONTRACTOR :

P.O. NO. AND DATE :

NAME OF WORK :

COMPLETION TIME OF JOB

WE HERE BY CERTIFY THAT ALL YOUR MATERIAL, EQUIPMENTS, SITE OFFICE ETC. HAS BEEN REMOVED FROM THE _____ SITE. WE HAVE CLEARED THE SITE IN ALL RESPECT AND HANDED IT OVER TO OWNER.

SIGNATURE OF CONTRACTOR

NAME:

ADDRESS:

DATE:

SITE GRADING WORK

ATTACHMENT-VIII

LABOUR LIABILITY CERTIFICATE

(On Contractors Letterhead)

NAME OF CLIENT :

NAME OF OWNER :

NAME OF CONTRACTOR :

P.O. NO. AND DATE :

NAME OF WORK :

COMPLETION DATE OF JOB :

WE HERE BY CERTIFY THAT ALL OUR LIABILITIES TOWARDS OUR DEPLOYED LABOUR HAVE BEEN CLEARED BY US AND WE KEEP M/s ASSAM PETROCHEMICAL LTD. & OWNER _____ INDEMNIFIED AGAINST ABOVE LIABILITIES.

SIGNATURE OF CONTRACTOR

NAME:

ADDRESS:

DATE:

SITE GRADING WORK

**SECTION-D
EARTHWORK IN EXCAVATION AND BACK FILLING**

CONTENTS

1 SCOPE

2 APPLICABLE CODES

3 DRAWINGS

4 GENERAL

5 CLEARING

6 PRECIOUS OBJECTS, RELICS, OBJECTS OF ANTIQUITY, ETC.

7 CLASSIFICATION

8 EXCAVATION

9 STRIPPING LOOSE ROCK

10 FILL, BACK FILLING AND SITE GRADING

11 GENERAL SITE GRADING

12 FILL DENSITY

13 LEAD

14 MEASUREMENT AND PAYMENT

SITE GRADING WORK**1. SCOPE**

This specification covers the general requirements of earthwork in excavation in different materials, site grading, filling in areas as shown in drawing, filling back around foundations and in plinths, conveyance and disposal of surplus soils or stacking them properly as shown on the drawings and as directed by the Engineer and all operations covered within the intent and purpose of this specification.

2. APPLICABLE CODES

The following Indian Standard Codes, unless otherwise specified herein, shall be applicable. In all cases, the latest revision of the codes shall be referred to.

1. IS 783 - Code of practice for laying of concrete pipes.
2. IS 1200 - Method of measurement of building and civil engineering works.
 - Part 1 - Earthwork
 - Part 27- Earthwork done by mechanical appliances.
3. IS 3764 - Excavation work-code of safety.
4. IS 2720 - Methods of test for soils:
 - (Part 1) - Part 1 Preparation of dry soil samples for various tests.
 - (Part 2) - Part 2 Determination of water content.
 - (Part 4) - Part 4 Grain size analysis.
 - (Part 5) - Part 5 Determination of liquid and plastic limit.
 - (Part 7) - Part 7 Determination of water content-dry density relation using light compaction.
 - Part (9) - Part 9 Determination of dry density - moisture content relation by constant weight of soil method.
 - (Part 14) - Part 14 Determination of density index (relative density) of cohesion less soils.
 - (Part 28) - Part 28 Determination of dry density of soils in place, by the sand replacement method.
 - (Part 33) - Part 33 Determination of the density in place by the ring and water replacement method.
 - (Part 34) - Part 34 Determination of density of soil in place by rubber balloon method.
 - (Part 38) - Part 38 Compaction control tests (Hilf Method).

3. DRAWINGS

3.1. The Engineer will furnish drawings wherever, in his opinion, such drawings are required to show areas to be excavated/ filled grade level, sequence of priorities etc. The Contractor shall follow strictly such drawings.

SITE GRADING WORK

4. GENERAL

4.1. The Contractor shall furnish all tools, plants, instruments, qualified supervisory personnel, labour, materials any temporary works, consumables, any and everything necessary, whether or not such items are specifically stated herein for completion of the job in accordance with the specification requirements.

4.2. The Contractor shall carry out the survey of the site before excavation and set properly all lines and establish levels for various works such as earthwork in excavation for grading, basement, foundations, plinth filling, roads, drains, cable trenches, pipelines etc. Such survey shall be carried out by taking accurate cross sections of the area perpendicular to established reference/ grid lines at 8 m. intervals or nearer as determined by the Engineer based on ground profile. These shall be checked by the Engineer and thereafter properly recorded.

4.3. The excavation shall be done to correct lines and levels. This shall also include, where required, proper shoring to maintain excavations and also the furnishing, erecting and maintaining of substantial barricades around excavated areas and warning lamps at night for ensuring safety.

4.4. The rates quoted shall also include for dumping of excavated materials in regular heaps, bunds, riprap with regular slopes as directed by the Engineer, within the lead specified and leveling the same so as to provide natural drainage. Rock/ soil excavated shall be stacked properly as directed by the Engineer. As a rule, all softer material shall be laid along the centre of heaps, the harder and more weather resisting materials forming the casing on the sides and the top. Rock shall be stacked separately.

5. CLEARING

The area to be excavated filled shall be cleared of fences, trees, plants, logs, stumps, bush, vegetation, rubbish, slush, etc. and other objectionable matter. If any roots or stumps of trees are met during excavation, they shall also be removed. The material so removed shall be burnt or disposed off as directed by the Engineer. Where earth fill is intended, the area shall be stripped of all loose/ soft patches, top soil containing objectionable matter/ materials before fill commences.

6. PRECIOUS OBJECTS, RELICS, OBJECTS OF ANTIQUITY, ETC.

All gold, silver, oil, minerals, archaeological and other findings of importance, trees cut or other materials of any description and all precious stones, coins, treasures, relics, antiquities and other similar things which may be found in or upon the site shall be the property of the Owner and the Contractor shall duly preserve the same to the satisfaction of the Owner and from time to time deliver the same to such person or persons as the Owner may from time to time authorize or appoint to receive the same.

SITE GRADING WORK

7. CLASSIFICATION

7.1. All materials to be excavated shall be classified by the Engineer, into one of the following classes and shall be paid for at the rate tendered for that particular class of material. No distinction shall be made whether the material is dry, moist or wet. The decision of the Engineer regarding the classification of the material shall be final and binding on the Contractor and not be a subject matter of any appeal or arbitration.

7.2. Any earthwork will be classified under any of the following categories:

(a) **Ordinary and Hard Soils** These shall include all kinds of soils containing kankar, sand, silt, murrum and/or shingle, gravel, clay, loam, peat, ash, shale, etc., which can generally be excavated by spade, pick axes and shovel, and which is not classified under "Soft and Decomposed Rock" and "Hard Rock" defined below. This shall also include embedded rock boulders not longer than 1 metre in any one direction and not more than 200 mm in any one of the other two directions.

(b) **Soft and Decomposed Rock** This shall include rock, boulders, slag, chalk, slate, hard micascist, laterite and all other materials which in the opinion of Engineer is rock, but does not need blasting and could be removed with picks, hammer, crow bars, wedges, and pneumatic breaking equipment. The mere fact that the Contractor resorts to blasting for reasons of his own, shall not qualify for classification under 'Hard Rock'. This shall also include excavation in macadam and tarred roads and pavements. This shall also include rock boulders not longer than 1 metre in any direction and not more than 500 mm in any one of the other two directions. Masonry to be dismantled will also be measured under this item.

(c) **Hard Rock** This shall include all rock occurring in large continuous masses which cannot be removed except by blasting for loosening it. Harder varieties of rock with or without veins and secondary minerals which, in the opinion of the Engineer require blasting shall be considered as hard rock. Boulders of rock occurring in such sizes and not classified under (a) and (b) above shall also be classified as hard rock. Concrete work both reinforced and unreinforced to be dismantled will be measured under this item, unless a separate provision is made in the Schedule of Quantities.

8. EXCAVATION

8.1. All excavation work shall be carried out by mechanical equipment unless, in the opinion of the Engineer, the work involved and time schedule permit manual work.

8.2. Excavation for permanent work shall be taken out to such widths, lengths, depths and profiles as are shown on the drawings or such other lines and grades as may be

SITE GRADING WORK

specified by the Engineer. Rough excavation shall be carried out to a depth 150 mm above the final level. The balance shall be excavated with special care. Soft pockets shall be removed even below the final level and extra excavation filled up as directed by the Engineer. The final excavation if so instructed by the Engineer, should be carried out just prior to laying the mud-mat.

8.3. The Contractor may, for facility of work or similar other reasons excavate, and also backfill later, if so approved by the Engineer, at his own cost outside the lines shown on the drawings or directed by the Engineer. Should any excavation be taken below the specified elevations, the Contractor shall fill it up, with concrete of the same class as in the foundation resting thereon, up to the required elevation. No extra shall be claimed by the Contractor on this account.

8.4. All excavation shall be done to the minimum dimensions as required for safety and working facility. Prior approval of the Engineer shall be obtained by the Contractor in each individual case, for the method he proposes to adopt for the excavation, including dimensions, side slopes, dewatering, disposal, etc. This approval, however, shall not in any way relieve the Contractor of his responsibility for any consequent loss or damage. The excavation must be carried out in the most expeditious and efficient manner. Side slopes shall be as steep as will stand safely for the actual soil conditions encountered. Every precaution shall be taken to prevent slips. Should slips occur, the slipped material shall be removed and the slope dressed to a modified stable slope. Removal of the slipped earth will not be paid for if the slips are due to the negligence of the Contractor.

8.5. Excavation shall be carried out with such tools, tackles and equipment as described herein before. Blasting or other methods may be resorted to in the case of hard rock; however not without the specific permission of the Engineer.

8.6. The Engineer may also direct that in some extreme case, the rock may be excavated by heating and sudden quenching for splitting the rock. Fire-wood shall be used for burning and payment shall be made for such work as called for in the schedule of quantities.

9. STRIPPING LOOSE ROCK

9.1. All loose boulders, semi-detached rocks (along with earthy stuff which might move therewith) not directly in the excavation but so close to the area to be excavated as to be liable, in the opinion of the Engineer, to fall or otherwise endanger the workmen, equipment, or the work, etc., shall be stripped off and removed away from the area of the excavation. The method used shall be such as not to shatter or render unstable or unsafe the portion which was originally sound and safe.

9.2. Any material not requiring removal as contemplated in the work, but which, in the opinion of the Engineer, is likely to become loose or unstable later, shall also be promptly and satisfactorily removed as directed by the Engineer. The cost of such stripping will be paid for at the unit rates accepted for the class of materials in question.

SITE GRADING WORK**10. FILL, BACK FILLING AND SITE GRADING****10.1. General**

All fill material will be subject to the Engineer's approval. If any material is rejected by the Engineer, the Contractor shall remove the same forthwith from the site at no extra cost to the Owner. Surplus fill material shall be deposited/ disposed off as directed by the Engineer after the fill work is completed. No earth fill shall commence until surface water discharges and streams have been properly intercepted or otherwise dealt with as directed by the Engineer.

10.2. Material

To the extent available, selected surplus soils from excavated materials shall be used as backfill. Fill material shall be free from clods, salts, sulphates, organic or other foreign material. All clods of earth shall be broken or removed. Where excavated material is mostly rock, the boulders shall be broken into pieces not larger than 150 mm size, mixed with properly graded fine material consisting of murrum or earth to fill up the voids and the mixture used for filling.

10.3. If any selected fill material is required to be borrowed, the Contractor shall make arrangements for bringing such material from outside borrow pits. The material and source shall be subject to prior approval of the Engineer. The approved borrow pit area shall be cleared of all bushes, roots of trees, plants, rubbish etc. top soil containing salts/ sulphate and other foreign material shall be removed. The materials so removed shall be burnt or disposed off as directed by the Engineer. The Contractor shall make necessary access roads to borrow areas and maintain the same, if such access road does not exist, at his cost.

10.4. Filling in pits and trenches around foundations of structures, walls etc. As soon as the work in foundations has been accepted and measured, the spaces around the foundations, structures, pits, trenches etc. shall be cleared of all debris, and filled with earth in layers not exceeding 15 cm., each layer being watered, rammed and properly consolidated, before the succeeding one is laid. Each layer shall be consolidated to the satisfaction of the Engineer. Earth shall be rammed with approved mechanical compaction machines. Usually no manual compaction shall be allowed unless the Engineer is satisfied that in some cases manual compaction by tampers cannot be avoided. The final backfill surface shall be trimmed and leveled to proper profile as directed by the Engineer or indicated on the drawings.

10.5. Plinth filling

Plinth filling shall be carried out with approved material as described herein before in layers not exceeding 15 cm, watered and compacted with mechanical compaction machines. The Engineer may however permit manual compaction by hand tampers in case he is satisfied that mechanical compaction is not possible. When filling reaches the

SITE GRADING WORK

finished level, the surface shall be flooded with water, unless otherwise directed, for at least 24 hours allowed to dry and then the surface again compacted as specified above to avoid settlements at a later stage. The finished level of the filling shall be trimmed to the level/ slope specified. Where specified in the schedule of works, compaction of the plinth fill shall be carried out by means of 12 tonne rollers smooth wheeled, sheep-foot or wobbly wheeled rollers. In case of compaction of granular material such as sands and gravel, vibratory rollers shall be used. A smaller weight roller may be used only if permitted by the Engineer. As rolling proceeds water sprinkling shall be done to assist consolidation. Water shall not be sprinkled in case of sandy fill. The thickness of each unconsolidated fill layer can in this case be up to a maximum of 300 mm. The Engineer will determine the thickness of the layers in which fill has to be consolidated depending on the fill material and equipment used. Rolling shall commence from the outer edge and progress towards the centre and continue until compaction is to the satisfaction of the Engineer, but in no case less than 10 passes of the roller will be accepted for each layer. The compacted surface shall be properly shaped, trimmed and consolidated to an even and uniform gradient. All soft spots shall be excavated and filled and consolidated. At some locations/ areas it may not be possible to use rollers because of space restrictions etc. The Contractor shall then be permitted to use pneumatic tampers, rammers etc. and he shall ensure proper compaction

10.6. Sand filling in plinth and other places

At places backfilling shall be carried out with local sand if directed by the Engineer. The sand used shall be clean, medium grained and free from impurities. The filled-in-sand shall be kept flooded with water for 24 hours to ensure maximum consolidation. Any temporary work required to contain sand under flooded condition shall be to the Contractor's account. The surface of the consolidated sand shall be dressed to required level or slope. Construction of floors or other structures on sand fill shall not be started until the Engineer has inspected and approved the fill.

10.7. Filling in trenches

Filling in trenches for pipes and drains shall be commenced as soon as the joints of pipes and drains have been tested and passed. The backfilling material shall be properly consolidated by watering and ramming, taking due care that no damage is caused to the pipes. Where the trenches are excavated in soil, the filling from the bottom of the trench to the level of the centerline of the pipe shall be done by hand compaction with selected approved earth in layers not exceeding 8 cm; backfilling above the level of the centerline of the pipe shall be done with selected earth by hand compaction or other approved means in layers not exceeding 15 cm. In case of excavation of trenches in rock, the filling up to a level 30 cm. above the top of the pipe shall be done with fine materials, such as earth, murrum etc. The filling up of the level of the centerline of the pipe shall be done by hand compaction in layers not exceeding 8 cm Whereas the filling above the centerline of the pipe shall be done by hand compaction or approved means in layers not exceeding 15 cm The filling from a level 30 cm. above the top of the pipe to the top of the trench shall be done by hand or other approved mechanical methods with broken rock filling of size not exceeding 15 cm

SITE GRADING WORK

mixed with fine material as available to fill up the voids. Filling of the trenches shall be carried simultaneously on both sides of the pipe to avoid unequal pressure on the pipe.

11. GENERAL SITE GRADING

11.1. Site grading shall be carried out as indicated in the drawings and as directed by the Engineer. Excavation shall be carried out as specified in the specification. Filling and compaction shall be carried out as specified under Clause 10.0 and elsewhere unless otherwise indicated below.

11.2. If no compaction is called for, the fill may be deposited to the full height in one operation and leveled. If the fill has to be compacted, it shall be placed in layers not exceeding 225 mm and leveled uniformly and compacted as indicated in Clause 10.0 before the next layer is deposited.

11.3. To ensure that the fill has been compacted as specified, field and laboratory tests shall be carried out by the Contractor at his cost.

11.4. Field compaction test shall be carried out at different stages of filling and also after the fill to the entire height has been completed. This shall hold good for embankments as well.

11.5. The Contractor shall protect the earth fill from being washed away by rain damaged in any other way. Should any slip occur, the Contractor shall remove the affected material and make good the slip at his cost.

11.6. The fill shall be carried out to such dimensions and levels as indicated on the drawings after the stipulated compaction. The fill will be considered as incomplete if the desired compaction has not been obtained.

11.7. If specifically permitted by the Engineer, compaction can be obtained by allowing loaded trucks conveying fill or other material to ply over the fill area. Even if such a method is permitted, it will be for the Contractor to demonstrate that the desired/ specified compaction has been obtained. In order that the fill may be reasonably uniform throughout, the material should be dumped in place in approximately uniform layers. Traffic over the fill shall then be so routed to compact the area uniformly throughout.

11.8. If so specified, the rock as obtained from excavation may be used for filling and leveling to indicated grades without further breaking. In such an event, filling shall be done in layers not exceeding 50 cm approximately. After rock filling to the approximate level, indicated above has been carried out, the void in the rocks shall be filled with finer materials such as earth, broken stone, etc. and the area flooded so that the finer materials fill up the voids. Care shall be taken to ensure that the finer fill material does not get washed out. Over the layer so filled, a 100 mm thick mixed layer of broken material and earth shall be laid and consolidation carried out by a 12 tonne roller. No

SITE GRADING WORK

less than twelve passes of the roller shall be accepted before subsequent similar operations are taken up.

12. FILL DENSITY

12.1. The compaction, only where so called for, in the schedule of quantities/ items shall comply with the specified (Standard Proctor/ Modified Proctor) density at moisture content differing not more than 4 percent from the optimum moisture content. The Contractor shall demonstrate adequately at his cost, by field and laboratory tests that the specified density has been obtained.

13. LEAD

13.1. Lead for deposition/ disposal of excavated material, shall be as specified in the respective item of work. For the purpose of measurement of lead, the area to be excavated or filled or area on which excavated material is to be deposited/ disposed off shall be divided into suitable blocks and for each of the blocks, the distance between centre lines shall be taken as the lead which shall be measured by the shortest straight line route on the plan and not the actual route taken by the Contractor. No extra compensation is admissible on the grounds that the lead including that for borrowed material had to be transported over marshy or 'katcha' land/ route.

14. MEASUREMENT AND PAYMENT

14.1. All excavation shall be measured net. Dimensions for purpose of payment shall be reckoned on the horizontal area of the excavation at the base for foundations of the walls, columns, footings, tanks, rafts or other foundations/ structures to be built, multiplied by the mean depth from the surface of the ground in accordance with the drawings. Excavation in side slopes will not be paid for. The Contractor may make such allowance in his rates to provide for excavation in side slopes keeping in mind the nature of the soil and safety or excavation. Reasonable working space, beyond concrete dimensions and shuttering where considered necessary in the opinion of the Engineer will be allowed in excavation and considered for payment. However, if concreting is proposed against the excavated sides, no such over excavation will be permitted. In such cases over-excavation shall be made good by the Contractor with concrete of the same class as in the foundations at his cost.

14.2. Unless otherwise specified, the unit rates quoted for excavation in different types of material shall also account for a basic lead of 100 metres for disposal as specified or directed. Only leads beyond the basic lead of 100 metres will be considered as extra lead and paid for at the rates quoted in the schedules

14.3. Backfilling as per specification the sides of foundations of columns, footings, structures, walls, tanks, rafts, trenches etc. with excavated material will not be paid for separately. It shall be clearly understood that the rate quoted for excavation including backfilling shall include stacking of excavated material as directed, excavation/ packing of selected stacked material, conveying it to the place of final backfill, compaction etc. as specified. As a rule material to be backfilled shall be stacked temporarily within the

SITE GRADING WORK

basic lead of 100 metres unless otherwise directed by the Engineer. If the Engineer directs/ permits a lead of over 100 metres for such material, the conveyance of the material for the extra distance over the basic lead of 100 metres for backfilling will be paid for.

14.4. Payment for fill inside trenches, plinth or similar filling with selected excavated material will be made for only compaction as specified/ directed. Cost of all other operations shall be deemed to have been covered in the rate quoted for excavation. Payment for this work will be made based on measurement of plinth/ trench dimensions filled. The plinth ground levels shall be surveyed before hand for this purpose. If no compaction is specified/ desired such filling will not be separately paid for. In such a event the fill shall be leveled/ finished to the profile as directed at no extra cost.

14.5. Backfilling, plinth filling etc. with borrowed earth will be paid for at rates quoted. The quoted rate shall include all operations such as clearing, excavation, lead and transport, fill, compaction etc. as specified. Actual quantity of consolidated filling or actual quantity or excavation in the borrow pits (less such top soil which has been excavated and not used for filling) whichever is less shall be measured and paid for in cubic metres. The lead, lift etc. shall be as indicated in the schedule of quantities.

14.6. Actual quantity of consolidated sand filling shall be measured and paid in cubic metres.

SITE FILLING**1. SCOPE**

Apart from any other work/ purpose for which this specification may be made applicable by the Engineer, this shall generally govern work involving filling site/ plant over the entire area/ most of the area to raise the general grade level to the desired elevation. This work shall be carried out as per applicable clauses of specification "Earthwork in Grading, Excavation and Backfilling" particularly Clauses 10 and 11.

2. FILL MATERIAL**2.1. General**

All fill material whether such material is brought from outside borrow areas or from excavation from within the site, will be subject to the Engineer's approval. Notwithstanding any approval given to the fill material of borrow areas from which fill material is proposed to be brought, the Engineer/ Owner reserves the right to reject such material which in his opinion either does not meet the specification requirements or is unsuitable for the purpose for which it is intended.

2.2. Borrow Areas

It shall be Contractor's responsibility to locate suitable borrow areas for borrowing fill material. Such area will be inspected by the Engineer and approved before the Contractor makes arrangements to borrow the fill material. The top soil which may

SITE GRADING WORK

contain vegetation, rubbish, slush, etc. shall not be used. If demanded by the Engineer, the Contractor shall arrange to have trial pits of specified dimensions and numbers dug at locations specified, for the Engineer to examine the nature and type of material likely to be obtained from the borrow area.

2.3. Lead, Lift and Transportation

Unless separately provided for, all lead, lift and transportation required for bringing in the fill material from borrow areas or from excavation from within the site shall be included in the Contractor's quoted unit rates.

2.4. Quality

The borrowed soil shall be generally granular, and non-cohesive. It shall consist of sand, silty sand, murrum, ordinary soil, gravel and shingle. Dredged material shall also be free from sulphates, salts, organic, foreign and other harmful or objectionable materials. Any material rejected by the Engineer shall be removed from the site immediately.

3. ACCESS ROAD

Roads, whether of temporary or other nature, required to be constructed for access and for movement of men, materials, equipment, transport vehicles, vehicles carrying fill material etc. to or over borrow areas and/or to or over areas on which fill has to be deposited shall be constructed by the Contractor at his cost. Such costs shall be deemed to have been included in the unit rates quoted by the Contractor. Such access in roads shall be maintained in good condition during all seasons to ensure completion of work according to time schedule.

4. CLEARING

Site clearing before filling shall be carried out as specified in the specification "Earthwork in Grading, Excavation and Backfilling".

5. FILLING**5.1. Sand fill**

5.1.1. Sandy fill shall be deposited to bring the grade level to desired elevation after compaction of fill.

5.1.2. Sandy fill shall be compacted, where so specified, by 12 tonne vibratory rollers as indicated in Clause 5.2.3 below. The fill material shall be compacted to the specified density, where so specified.

5.1.3. If the density of fill or use of rollers for compaction is not specified, the Contractor shall ensure necessary compaction by the passage of trucks, carrying the fill material over the deposited fill in such a way that the entire fill area is covered. This will reasonably compact the sand fill and will be accepted by the Engineer. However, the Contractor shall ensure that every layer is thus compacted before the succeeding layers are deposited. Each layer shall not exceed 200 mm in thickness.

SITE GRADING WORK

5.1.4. Compaction of sandy fill by flooding the area shall be carried out where so specified. In this case, the Contractor should ensure that the fill material is not washed away. This work shall be carried out as directed by the Engineer.

5.2. Soil fill

5.2.1. Approved soil fill consisting of ordinary soil, murrum, soil containing gravel, shingle etc. shall be deposited in layers not exceeding 200 mm. The Contractor should ensure that all clods of earth are broken down to a size not larger than 100 mm.

5.2.2. Where density of fill or use of rollers is not specified the fill shall be carried out as specified in Clause 5.1.3 above.

5.2.3. Where the fill material has to be compacted by use of rollers procedure as specified in Clause 10.5.1 of specification "Earthwork in Grading, Excavation and Backfilling" shall be followed.

5.2.4. Where specified, the required density of fill shall be obtained by proper compaction.

6. MEASUREMENT

Measurement will be made on the basis of Clauses 14.5 and 14.6 of specification referred to in 1.0 above.

DEWATERING**1. SCOPE**

This specification covers the general requirements of dewatering excavations in general.

a. All excavations shall be kept free of water. Grading in the vicinity of excavation shall be properly closed to prevent surface water running into excavated areas. Contractor shall remove by pumping or other means approved by Engineer any water inclusive of rain water and subsoil water accumulated in excavation and keeps all excavations dewatered until the foundation work is completed and backfilled. Sumps made for dewatering must be kept clear of the excavations / trenches required for further work. Method of pumping shall be approved by Engineer; but in any case, the pumping arrangement shall be such that there shall be no movement of subsoil or blowing in due to differential head of water during pumping. Pumping arrangements shall be adequate to ensure no delays in construction.

b. When there is a continuous inflow of water and quantum of water to be handled is considered in the opinion of Engineer, as large, well point system - Single stage or multi stage, shall be adopted. Contractor shall submit to Engineer his scheme of well point system including the stages, the spacing, number and diameter of well points, headers

SITE GRADING WORK

etc., and the numbers, capacity and location of pumps of approvals. Unless separately provided for in the Schedule of prices, the cost of dewatering shall be included in the item rate for excavation.

2. MEASUREMENT

Unless separately provided for in the Schedule of quantities, dewatering is deemed to have been included in the unit rates quoted for excavation. If separately provided for, the unit of measurement shall be as indicated in the schedule of quantities.

SITE GRADING WORK

SECTION-E

GENERAL CONDITIONS OF CONTRACT

1.0 SCOPE OF CONTRACT

The specifications of the CONTRACT and the accompanying drawings are intended to describe and provide for a finished piece of work. These are intended to be complimentary and what is required by either shall be as if required by all. It is to be understood and agreed by the CONTRACTOR, that the work described shall be complete in every detail, even though every item necessarily involved is not particularly mentioned. The CONTRACTOR shall be required to provide all labour, materials and equipment necessary for the entire completion of the work described and shall not avail himself of any manifesting unintentional error, omission or inconsistency that may exist. The CONTRACTOR shall carry out and complete the work in every respect in accordance with the CONTRACT and in accordance with the directions and to the satisfaction of the PURCHASER/OWNER and the manufacturers' representatives, where their services have been provided by the PURCHASER

1.1 PURCHASER'S INSTRUCTIONS

The PURCHASER/OWNER may, in his absolute discretion, from time to time, issue further drawings and/or written instructions, details, directions and explanations, which are collectively referred to as 'PURCHASER's INSTRUCTIONS', in regard to:

1.1.1 Any additional drawings and explanations to exhibit or illustrate details.

1.1.2 The variation or modification of the design, quality or quantity of work or the additions or omission or substitution of any work. Any variation, modification of additions/omission of work has to be mutually agreed.

1.1.3 Any discrepancy in the drawings or between the schedule of quantities and/or specifications.

1.1.4 The removal from the site of any materials brought thereon by the CONTRACTOR and the substitution of any other materials thereof.

1.1.5 The removal and/or re-execution of any work executed by the CONTRACTOR, which in the opinion of the PURCHASER/OWNER is not in conformity with the specification.

1.1.6 The dismissal from the work of any persons employed thereupon with justifiable reasons.

1.1.7 The opening up for inspection of any work covered up.

SITE GRADING WORK

1.1.8 The amending and making good of any defects under paras 4.5.6 and 4.9 below.

1.2 COMPLIANCE WITH THE PURCHASER'S INSTRUCTIONS

1.2.1 The CONTRACTOR shall comply with and duly execute any work covered in such 'PURCHASER's INSTRUCTIONS' provided always that the verbal instructions, directions and explanations given to the CONTRACTOR or his foreman upon the work by the PURCHASER/OWNER shall, if involving a variation, be confirmed in writing by the PURCHASER/OWNER within seven days.

1.2.2 If compliance with the 'PURCHASER's INSTRUCTIONS' as aforesaid involves work and scope beyond that contemplated by the CONTRACT, unless the same were issued owing to some breach of the CONTRACT by the CONTRACTOR, the PURCHASER shall pay to the CONTRACTOR the price of the said work as an extra to be valued as hereinafter provided. The PURCHASER will also grant extension in delivery/completion period to the extent required by such compliance.

1.2.3 If the CONTRACTOR after receipt of written notice from the PURCHASER/CONSULTANT requiring compliance, with such further drawings and/or the 'PURCHASER's INSTRUCTIONS' fails to comply with the same within seven days, the PURCHASER may employ and pay other agencies to execute any such work whatsoever, as may be necessary to give effect thereto, and all costs incurred in connections therewith shall be recoverable from the CONTRACTOR by the PURCHASER on a certificate by the OWNER as a debt or may be deducted by the PURCHASER from any money that may become due to the CONTRACTOR. The CONTRACTOR, however, will not be held responsible for the quality or warranty of such work executed under the PURCHASER's agency.

2.0 RIGHTS OF PURCHASER/OWNER

2.1 RIGHT TO ILLUSTRATE AND EXPLAIN PLANS

2.1.1 The various parts of the CONTRACT are intended to be complementary to each other but should any discrepancy appear or any misunderstanding arise as to the import of anything contained therein, the explanation of the PURCHASER/OWNER shall be final and binding.

2.1.2 The correction of any errors or omissions of the drawings and specifications may be made by the PURCHASER/OWNER, when such correction is necessary to bring out clearly the intention which is indicated by a reasonable interpretation of the drawings and specifications as a whole.

2.1.3 When in the specifications or on the drawings which are a part of the CONTRACT or which may be furnished to the CONTRACTOR for directing the work, the terms and descriptions of various qualities of workmanship, material, structures, processes, plant

SITE GRADING WORK

or other features of the CONTRACT are described in general terms, the meaning or fulfillment of which must depend upon individual judgment, then in all such cases the question of fulfillment of such specifications or requirements shall be decided by the PURCHASER/OWNER and said material shall be furnished, said work shall be carried out and said structure, process, plant or feature shall be constructed, furnished or carried on in full and complete accordance with his interpretation of the same and to his full satisfaction and approval, provided such interpretation is not in direct conflict with the drawings and specifications and generally accepted good practice.

2.1.4 Details shown either on the drawings or in the specifications shall be done and furnished as if shown in both except where expressly excepted either on the drawings or in the specifications. Figured dimensions shall in all cases be taken in preference to scale measurements, and detailed drawings consistent with general drawings in preference to the general drawings of the same part of the work.

2.1.5 The PURCHASER/OWNER may, from time to time, prepare for his own use estimates of quantities or bills of materials required for the work. Copies of such estimates or bills of materials which may be given to the CONTRACTOR for his convenience, or any lists, weights or quantities of materials or structures which may appear on the drawings shall not be considered as finally correct, sufficiently complete, or accurately covering any portion or all of the work to be done under the CONTRACT. Such bills or estimates may be carefully assembled and prepared but their accuracy is not guaranteed. These may not be accurate as to any particular detail and are given as the best information available at the time of issue of the information. It is understood that any such lists or estimates are furnished to the CONTRACTOR for his convenience only and not as lists or estimates of work to be carried out and many necessary items of work might have been omitted.

2.1.6 Additional drawings and explanations to exhibit or illustrate details may be provided by the PURCHASER/OWNER whenever necessary and if so provided, and if consistent with the drawings and specifications, it shall be binding upon the CONTRACTOR to take cognizance of the same. The written decision of the PURCHASER/OWNER as to the true construction and meaning of the drawings and specification and of such additional drawings and explanations shall be binding upon the CONTRACTOR.

2.2 RIGHT TO DIRECT WORK

2.2.1 The PURCHASER/OWNER shall have the right to direct the manner in which all work under the CONTRACT shall be conducted, in so far as it may be necessary to secure the safe and proper progress and the specified quality of the work, and all work shall be carried out and all material shall be furnished to the satisfaction and approval of the PURCHASER/OWNER

SITE GRADING WORK

2.2.2 Whenever, in the opinion of the PURCHASER/OWNER, the CONTRACTOR has made marked departures from the schedule of completion laid down in the CONTRACT when untoward circumstances force a departure from the said schedule, the PURCHASER/OWNER, in order to assure the compliance with the schedule and the provisions of the CONTRACT, shall direct the order, pace and method of conducting the work, which shall be adhered to by the CONTRACTOR.

2.2.3 If, in the judgment of the PURCHASER/OWNER, it becomes necessary at any time to accelerate the overall plant erection work, the CONTRACTOR, when ordered and directed by the PURCHASER/OWNER, shall cease work at any particular point and transfer his men to such other point or points, and execute such portion of his work, as may be required, to enable others to hasten and properly engage and carry out their work, all as directed by the PURCHASER/OWNER. If such directions of the PURCHASER are likely to cause any disturbance and consequent delay in completion on the rest of the work, the CONTRACTOR will bring it to the notice of the PURCHASER/ OWNER promptly for consideration of suitable extension

2.2.4 Night work will be permitted only with prior approval of the PURCHASER/OWNER. The PURCHASER/OWNER may also direct the CONTRACTOR to operate extra shifts over and above normal day shift to ensure completion of the CONTRACT on schedule if in his opinion, such work is required.

2.3 RIGHT TO ORDER MODIFICATIONS OF METHODS AND EQUIPMENT If at any time the CONTRACTOR's methods, materials or equipment appear to the PURCHASER/OWNER to be unsafe, inefficient or inadequate for securing the safety of the workmen or the public, the quality of work or the rate of progress required, he may order the CONTRACTOR to ensure their safety and increase their efficiency and adequacy, and the CONTRACTOR shall promptly comply with such orders. If at any time the CONTRACTOR's working force and equipment are in the opinion of the PURCHASER/OWNER, inadequate for securing the necessary progress, as herein stipulated, the CONTRACTOR shall, if so directed, increase the working force and equipment to such an extent as to give reasonable assurance of compliance with the schedule of completion. The absence of such demands from the PURCHASER/OWNER shall not relieve the CONTRACTOR of his obligations to secure the quality, the safe conducting of the work and the rate of progress required under the CONTRACT. The CONTRACTOR alone shall be and remain liable and responsible for the safety, efficiency and adequacy of his methods, materials working force and equipment, irrespective of whether or not he makes any change as a result of any order or orders received from the PURCHASER/OWNER.

3.0 CHANGES IN THE WORK

3.1 If it becomes necessary or desirable to modify the CONTRACT and the specifications therein contained and the drawings, in a manner not materially affecting the substance thereof, or to make changes by altering, adding to or deducting from the work, or to add co-related work not now covered by the CONTRACT to the work to be

SITE GRADING WORK

done under the CONTRACT, the PURCHASER/OWNER may, without invalidating the CONTRACT, direct that changes shall be made accordingly. In cases where such changes increase the cost of the work and payment therefore, is not covered by the prices bid for the various items, the CONTRACTOR shall be reimbursed for such changes under a supplementary CONTRACT. In case such changes shall diminish the cost of the work proper, deduction towards such reduction in cost shall be made from the CONTRACT PRICE.

3.2 However, if any suggested changes would, in the opinion of the CONTRACTOR, prevent him from fulfilling any of his obligations or guarantees under the CONTRACT, he shall notify the PURCHASER/OWNER thereof in writing, and the PURCHASER/OWNER shall decide forthwith whether or not the same shall be carried out, and if the PURCHASER/OWNER confirms his instructions, the CONTRACTOR's obligations and guarantees shall be modified to such an extent as may be mutually agreed.

3.3 In any case in which the CONTRACTOR has received instructions from the PURCHASER/OWNER as to carrying out the changes which, either then or later will, in the opinion of the CONTRACTOR, involve a claim for additional payment for extra work or for extra materials the CONTRACTOR shall, as soon as reasonably possible after receipt of such instructions, advise the PURCHASER/OWNER to that effect. But the PURCHASER/ OWNER shall not be liable for payment of any charge in respect of any such changes, unless instructions for making the same shall have been given in writing by the PURCHASER/OWNER after receipt of such advice from the CONTRACTOR

3.4 The CONTRACTOR, when requested in writing by the PURCHASER/ OWNER, shall perform extra work and furnish extra material not covered by the specification but forming an inseparable part of the work contracted for and shall be paid extra for all such work at rates and terms mutually agreed upon.

3.5 Extra items, if any, shall be paid on the basis of mutual negotiation for which purpose, the CONTRACTOR will produce, if so desired by the PURCHASER/ OWNER, the evidence of extra cost incurred by him on materials and labour.

3.6 Except for minor modifications in the work not involving extra cost and not inconsistent with the purposes of the work, and except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order from the PURCHASER authorizing the extra work or change and no claim for any addition to the CONTRACT amount shall be valid unless so ordered. The written authorization for extra work shall be in the form of 'Modification Permit'. All such modifications shall be executed under the provisions and conditions of the original CONTRACT.

3.7 The value of any such additional work and rates of items not included in the Schedule of Quantities shall be settled by mutual negotiation.

SITE GRADING WORK

4.0 CONTRACTOR'S FUNCTIONS

4.1 GENERAL

4.1.1 The CONTRACTOR shall provide everything necessary for the proper execution of the works according to the intent and meaning of the drawings, schedule of quantities and Specification taken together whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred there from, and if the CONTRACTOR finds any discrepancy therein, he shall immediately and in writing refer the same to the PURCHASER/OWNER whose decision shall be final and binding.

4.1.2 The CONTRACTOR shall, as far as possible, use locally available resources namely material, equipment and apparatus, sub-contractors and workmen, as long as it will not result in additional expense or delay to the PURCHASER, and without affecting the quality of work.

4.1.3 It is not expected that the work under the CONTRACT will be sub-contracted. However, in case the CONTRACTOR desires to sub-contract a part of the work, in the interest of the project, he shall request in writing to the PURCHASER/ OWNER his approval for the same, giving full and complete details regarding the proposed sub-contractor, his experience and the terms of subcontract. Approval from the PURCHASER/OWNER for sub-contracting part of the work shall not relieve the CONTRACTOR from any of his obligations and responsibilities under the CONTRACT.

4.1.4 The CONTRACTOR shall proceed with the work to be performed under the CONTRACT and each part and detail thereof, in the best and most workmanlike manner by engaging qualified, careful and efficient workers, and do the several parts thereof at such time and in such order as the PURCHASER/ OWNER may direct, and finish such work in strict conformance with the plans, drawings and/or specifications, and any changes, modifications or amplifications thereof made by the PURCHASER/OWNER

4.1.5 If any work is done at a place other than the site of the works, the CONTRACTOR shall obtain the written permission of the PURCHASER/ OWNER for doing so.

4.2 UNLOADING, INSPECTION AND STORING

4.2.1 Unless excluded in Section C of the Enquiry Document, the CONTRACTOR shall promptly unload from the carriers all the materials/equipment covered under this CONTRACT. It is the CONTRACTOR's sole responsibility to keep in touch with the PURCHASER/OWNER and others to inform himself of the expected date and time of arrival of the carriers at site and ensure that his men and aids are available in time to

SITE GRADING WORK

unload the material/equipment and promptly release the carriers. Any demurrage charges incurred due to the delay in unloading the material/equipment and releasing the carriers shall be charged to the CONTRACTOR's account. The CONTRACTOR shall plan in advance his requirements of jacks, cranes, sleepers etc. required to unload the material/ equipment promptly and efficiently.

4.2.2 Unless excluded in Section C of the Enquiry Document, the CONTRACTOR shall safely transport the material/equipment to the storage area and store the same in a systematic manner with tags for easy identification and retrieval. The CONTRACTOR shall also maintain all required stores records and furnish all required reports.

4.2.3 All material and equipment received at site before the CONTRACTOR arrives at site shall be stored by the PURCHASER. These materials, if so specified in Section C of the Enquiry Document, shall be handed over to the CONTRACTOR and thereupon the CONTRACTOR shall inspect the same and furnish a receipt to the PURCHASER. The protection, safety and security of the materials so taken over by the CONTRACTOR shall thereafter be the responsibility of the CONTRACTOR until it is handed over to the PURCHASER after erection and/or commissioning. Any and all the material/equipment covered under the scope of this CONTRACT, received at site after the CONTRACTOR arrives at site, unless otherwise specified in the Section 'C' of the enquiry document, shall be unpacked inspected, checked against invoices by the CONTRACTOR. He shall furnish shortages and damages report to the PURCHASER/OWNER within a week of receipt of material and assist the PURCHASER in lodging claims with the insurance companies. In case the PURCHASER incurs a loss due to the delay in lodging insurance claims, which are attributable to the CONTRACTOR, all such losses shall be deducted from the CONTRACTOR's bills. The CONTRACTOR shall repack material/equipment as required and store the same in an orderly manner.

4.2.4 The CONTRACTOR shall also inform the PURCHASER in right time regarding the repairs and replacements required towards the items damaged/lost in order to enable the PURCHASER to arrange for repairs and replacements well in time and avoid delays due to non-availability of equipment and parts.

4.2.5 The CONTRACTOR shall arrange for periodic inspection of material and equipment in his custody until taken over by the PURCHASER and shall carry out all protective and preservative measures required thereupon.

4.2.6 The CONTRACTOR shall also keep a check on the deliveries of the material and equipment covered in his scope of erection and shall advise the PURCHASER well in advance regarding possible hold-ups in his work due to expected delays in delivery of equipment, to enable the PURCHASER to expedite the deliveries

4.3 SUPPLY OF TOOLS, TACKLES AND OTHER MATERIALS

4.3.1 For full completion of the work, the CONTRACTOR shall, at his own expense, furnish all necessary false work, erection tools, machine tools, power tools, tackles, hoists, cranes, derricks, cables, slings, skids, scaffolding, work benches, tools for

SITE GRADING WORK

rigging, cribbing and blocking, welding machine, preheating and stress relieving equipment, X-ray and all associated protective equipment, instruments, appliances, materials and supplies required for unloading, transporting, storing, erection, testing and commissioning that may be required to accomplish the work under the CONTRACT unless otherwise provided for. Adequacy of such tools will be subject to final determination of the PURCHASER/OWNER.

4.3.2 If Section C of the Enquiry Document so stipulates, the PURCHASER shall furnish to the CONTRACTOR, for use on the project, such equipment, tools and tackles that could be spared by him at the time of request for the same by the CONTRACTOR, at his standard rental charges. Such rental charges shall be deducted by the PURCHASER from the CONTRACTOR's progress payments when such payments are made.

4.3.3 The CONTRACTOR shall also furnish all necessary expendable devices like anchors, grinding and abrasive wheels, raw plugs, hacksaw blades, taps, dies, drills, reamers, chisels, files, carborundum stones, oil stones, wire brushes, necessary bamboo scaffolding, ladders, wooden planks, timbers, sleepers, and consumable material like oxygen, acetylene, argon, lubricating oils, greases, cleaning fluids, cylinder oil, graphite powder and flakes, fasteners, gaskets, temporary supports, stainless steel shims of various thickness as required, cotton waste, cheese cloth and all other miscellaneous supplies of every kind required for carrying out the work under the CONTRACT.

4.3.4 The CONTRACTOR shall provide all reasonable facilities including tools and personnel etc. and ensure co-ordination with the PURCHASER/OWNER and equipment supplier's erection supervisors to enable them to carry out all supervision, measurements, checks, etc. in a satisfactory manner.

4.3.5 The CONTRACTOR shall not dispose of, transport or withdraw any tools, tackles, equipment and material provided by him for the CONTRACT without taking prior written approval from the PURCHASER/OWNER, and the PURCHASER/OWNER at all times shall have right to refuse permission for disposal, transport or withdrawal of tools, tackles, equipment and material if in his opinion, the same will adversely affect the efficient and expeditious completion of the project.

4.4 SETTING OUT WORKS LINES AND GRADES

4.4.1 The CONTRACTOR shall set out the works and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions and alignment of all parts thereof. If at any time any error shall appear during the progress of any part of the work, the CONTRACTOR shall, at his own expense, rectify such error, if called upon to do so, to the satisfaction of the PURCHASER/OWNER and equipment suppliers' supervisors.

SITE GRADING WORK

4.4.2 Where the PURCHASER/OWNER has already established the base lines and bench marks adjacent to the various sections of work the same must be carefully preserved by the CONTRACTOR and in case of their unnecessary destruction by him or any of his employees, these will be re-established by the PURCHASER/OWNER at the CONTRACTOR's expenses.

4.4.3 The CONTRACTOR shall be responsible for the accuracy of all dimensions within the various sections of the work according to the figures of dimensions in the drawings.

4.4.4 Where required, the CONTRACTOR shall establish and maintain base lines and bench marks adjacent to the various sections of work.

4.4.5 The PURCHASER shall provide buildings, foundation and other civil works unless indicated otherwise in Section C of the Enquiry Document. The CONTRACTOR shall carry out all final adjustments of foundation levels, dressing of foundation surfaces, bedding and grouting of anchor bolts and bedplates etc. as may be required for seating of the equipment in proper position. The CONTRACTOR shall be responsible for obtaining correct reference lines for purposes of fixing the alignment of various equipment from master bench marks furnished by the PURCHASER. Any minor alteration required in rectifying the anchor bolt pockets, anchor bolts, etc. shall be carried out by the CONTRACTOR at no extra cost.

4.4.6 The CONTRACTOR shall supply, fix and maintain at his cost during the execution of any work, all the necessary centering, scaffolding, staging, planking, timbering, strutting, shoring, pumping, fencing, hoarding, guarding and lighting by night as well as by day, required not only for the proper execution and protection of the said work, but also for the protection of the pumping and the safety of any adjacent roads, streets, cellars, vaults, ovens, walls, houses, buildings and all other erections, matters or things. The CONTRACTOR shall take out and remove any or all such centering, scaffolding, staging, planking, timbering, strutting, shoring, etc. as occasion shall require or when ordered to do so and shall fully reinstate and make good all matters and things disturbed during execution of the work, to the satisfaction of the PURCHASER/OWNER. The CONTRACTOR shall be paid no additional amount for the above and for access roads to be made to reach the construction site.

4.5 ERECTION

4.5.1 The BIDDER shall include in his proposal a preliminary erection schedule. Upon award of the CONTRACT and before commencement of the work, the CONTRACTOR shall prepare a detailed and comprehensive erection schedule, for review and approval by the PURCHASER/OWNER and equipment supplier's erection supervisors. This approved erection schedule shall form the basis of all the erection works to be performed by the CONTRACTOR.

SITE GRADING WORK

4.5.2 The schedule shall show approximately the date on which each part or division of the work is expected to begin, based on his knowledge of the works of other contractors and the date when the work is scheduled to be finished. Upon the request of the PURCHASER/OWNER, the CONTRACTOR should be prepared to discuss his schedule in relation to the master schedule and shall coordinate his work with that of the other contractors as determined by the PURCHASER/OWNER.

4.5.3 The work so far as it is carried out on the PURCHASER's premises shall be carried out at such time as the PURCHASER may approve consistent with the construction schedule and so as not to interfere unnecessarily with the conduct of the PURCHASER's business and the PURCHASER will give the CONTRACTOR all reasonable facilities for carrying out the work.

4.5.4 The CONTRACTOR shall revise and update his erection schedule periodically (at least once every calendar month) to indicate actual progress of work, in relation to scheduled progress. The CONTRACTOR shall also submit monthly progress reports indicating progress of work giving scheduled and actual percentage completions, causes for delays, etc. as well as such other reasonable reports and photographs as the PURCHASER/OWNER may request from time to time.

4.5.5 Adherence to instructions of supervisory engineers of manufacturers, where provided by the PURCHASER, is compulsory. The CONTRACTOR shall work under the guidance of the manufacturer's supervisor to ensure that erection procedures adopted by the CONTRACTOR as well as completed erection of equipment is such as not to interfere with or prevent equipment from functioning as intended, as well as to the entire satisfaction of the manufacturer's supervisor and PURCHASER/OWNER. The CONTRACTOR shall also permit and provide all facilities for manufacturer's erection supervisors to carry out all checks that they may wish to, and approve any erection procedure and/or final setting and alignment of components, in order to satisfy themselves that erection has been carried out as intended by them. This shall, however, in no way relieve the CONTRACTOR of his responsibility for providing adequate and competent supervision and quality workmanship. In case of any dispute, the decision of the PURCHASER/OWNER and manufacturer's erection supervisor shall be final.

4.5.6 The CONTRACTOR shall haul materials and equipment furnished by the PURCHASER from the PURCHASER's storage or unloading areas or railway siding to the points where they are to be used in the construction work, install the materials and equipment in their final locations and classify and store all surplus and auxiliary parts in a systematic manner in his warehouse, where these can be readily identified and located when needed at a later date. A record of all readings taken during the alignment of the equipment shall be maintained by the CONTRACTOR. This shall be signed by the manufacturer's erection supervisor and/or the PURCHASER/OWNER as a token of their acceptance of the same. All such records shall be handed over to the PURCHASER on completion of job

SITE GRADING WORK

4.5.7 In the execution of the work no person other than the CONTRACTOR, or his duly appointed representatives, his sub-contractors and their workmen, shall be allowed to do work at the site, except by the special permission, in writing of the PURCHASER/OWNER or their representative, but access to the site at all times shall be accorded to the PURCHASER/OWNER and their representatives and other authorized officials and statutory public authorities. Nevertheless, the CONTRACTOR shall not object to the execution of the work by other contractors or tradesmen whose names shall have been previously communicated in writing to the CONTRACTOR by the PURCHASER/ OWNER and afford them every facility for the execution of their several functions simultaneously with his own.

4.5.8 The CONTRACTOR shall carry out the required 'minor modification work' at site as required to efficiently complete the work covered in the CONTRACT at no extra cost over his contracted sum. However, 'minor modifications' shall not involve more than 48 man-hours per item of such work. However, in case of 'major modifications' which are required to be done on the equipment, for no fault of the CONTRACTOR, he shall be compensated on the basis of man-day rates quoted in the price bids. It is the responsibility of the CONTRACTOR to get the prior approval for such 'major modification work' from the PURCHASER/ OWNER before such works are taken up. The CONTRACTOR shall also get the estimates and the actual time sheets certified by the PURCHASER/ OWNER and these certified time sheets will be the basis for processing his bills for the 'major modification work'.

4.5.9 If the work or any portion thereof is damaged in any way excepting by the acts of the PURCHASER/OWNER, or if defects not readily detected by prior inspection shall develop before the final completion and acceptance of the whole work, the CONTRACTOR shall forthwith make good, without compensation, such damage or defects in a manner satisfactory to the PURCHASER/OWNER. In no case shall defective or imperfect work be retained.

4.5.10 The CONTRACTOR at all times shall work in coordination with the PURCHASER/OWNER's engineering staff and offer them all reasonable facilities to become familiar with the erection, operation and maintenance of the Equipment.

4.5.11 In respect of observations of local rules, administrative orders, working hours and the like, the CONTRACTOR and his personnel shall co-operate with the PURCHASER/OWNER.

4.5.12 The PURCHASER reserves the right to perform or have performed in and about the works during the time when the CONTRACTOR is performing his work hereunder, such other work as the PURCHASER desires, and the CONTRACTOR shall make all reasonable effort to perform his work hereunder in such manner as will enable such other work to be performed without hindrance and shall make no claim for damage against the PURCHASER arising out of such other work or interference there from. The

SITE GRADING WORK

CONTRACTOR shall work in harmony with such other contractors regardless of race, religion, colour or national origin and any dispute between contractors shall be arbitrated by the PURCHASER/OWNER

4.5.13 If any part of the CONTRACTOR's work depends, for proper execution, upon the work of any other contractor, the CONTRACTOR shall inspect and promptly report in writing to the PURCHASER/OWNER any defect in such work of other contractors that render it unsuitable for proper execution of the work under the CONTRACT. His failure to so, inspect and report shall constitute an acceptance of the other contractor's work as fit and proper for the reception of his work, except as to defects which may develop in the work of other contractors after the proper execution of the work. To ensure proper execution of his subsequent work, the CONTRACTOR shall measure work already in place and shall at once report to the PURCHASER/OWNER any discrepancy between the executed work and the drawings.

4.5.14 In the event of the CONTRACTOR being prevented by causes not attributable to him from proceeding with erection or from completing erection before he withdraws from the site, he shall handover to the PURCHASER/OWNER for safe keeping during his absence such CONTRACT material that he is unable to erect, and the PURCHASER will furnish a receipt for material so handed over.

4.5.15 The CONTRACTOR shall not sell, assign, mortgage, hypothecate or remove equipment or materials which have been installed or which may be necessary for the completion of the CONTRACT without the written consent of the PURCHASER.

4.6 INSPECTION OF WORK

4.6.1 The PURCHASER/OWNER or any person appointed by them shall have access and right to inspect the work, or any part thereof, at all times and places during the progress of the work. The inspection and supervision is for the purpose of assuring the PURCHASER that the plans and specifications are being properly executed and while the PURCHASER/OWNER and their representatives will extend to the CONTRACTOR all desired assistance in interpreting the plans and specifications, such assistance shall not relieve the CONTRACTOR of any responsibility for the work. Any work which proves faulty shall be corrected by the CONTRACTOR without delay. The fact that the PURCHASER/OWNER or their representatives have not pointed out faulty work or work which is not in accordance with plans and specifications shall not relieve the CONTRACTOR from correcting such work as directed by the PURCHASER/OWNER without additional compensation

4.6.2 When finished work is taken down for the purpose of inspection, the CONTRACTOR shall stand the entire expense incident thereto in the event that said work is found to be defective. The PURCHASER shall pay the cost incident thereto in the event that the work inspected is found to be in accordance with the specification. In the latter case, the replacing of the covering or the making good of any of the parts

SITE GRADING WORK

removed shall be paid for by the PURCHASER at the contracted prices for the class of work done and the uncovering or taking out of materials or parts shall be paid for on the basis of actual direct cost of material, labour and incidental expense, plus reasonable rental prices for transportation of equipment, except that no percentage for the CONTRACTOR's fees shall be added to actual direct cost of material, labour and incidental expenses. However, no extension of time shall be given for completion of works on this account. If the CONTRACTOR fails to repair any defective work or replace any defective materials after reasonable notice, the PURCHASER/OWNER may cause such defective work to be repaired or defective material to be replaced and the expenses thereof shall be deducted from the amount to be paid to the CONTRACTOR.

4.6.3 The PURCHASER/OWNER, their representatives and the employees shall at all reasonable times have free access to the works and/or to the workshops, factories or other places where materials are being prepared or constructed for the CONTRACT and also to any place where the materials are lying or from where they are being obtained, the CONTRACTOR shall give every facility to the PURCHASER/OWNER and his representatives for inspection and examination and test of the materials and workmanship even to the extent of discontinuing portions of the work temporarily, or of uncovering or taking down portions of finished work.

4.7 PROTECTION TO PLANT

4.7.1 During construction of the project, the PURCHASER will continue to operate the existing plant and equipment in and around the vicinity of the project site. The CONTRACTOR shall protect all existing plant, structures, piping, conduits, equipment and facilities against damage during his operations.

4.7.2 The CONTRACTOR shall perform his work in a manner that in no way endangers the operation of the existing steam and electric and other plants of the PURCHASER which will have interconnections with the new plant in the construction of which the CONTRACTOR is engaged. In all cases where connections to existing plant and equipment occur, such connections shall be made only with specific and advance instructions and authorization from and issued by the PURCHASER/OWNER.

4.7.3 Except in case where the PURCHASER's express permission is applied for and received in writing, no use of the PURCHASER's plant facilities such as cranes, passenger elevator, toilets, showers or machine shop shall be made by the CONTRACTOR or his employees.

4.7.4 The PURCHASER shall not be responsible or held liable for any damage to person or property consequent upon the use, misuse or failure of any construction tools and equipment used by the CONTRACTOR or any of his subcontractors, even though such construction tools and equipment may be furnished, rented or loaned to the CONTRACTOR or any of his sub-contractors. The acceptance and/or use of any such construction tools and equipment by the CONTRACTOR or his sub-contractors shall be

SITE GRADING WORK

construed to mean that the CONTRACTOR accepts all responsibility for and agrees to indemnify and save harmless the PURCHASER from any and all claims for said damages resulting from said use, misuse or failure of such construction tools and equipment.

4.7.5 The CONTRACTOR and his SUB-CONTRACTORS shall be responsible during work for protection of the work, which has been completed by other contractors. Necessary care shall be taken to see that no damage to the same is caused by his own men during the course of execution of their work.

4.7.6 All other work completed or in progress as well as machinery and equipment that are liable to be damaged by the CONTRACTOR's work shall be protected by the CONTRACTOR and such protection shall remain and be maintained until its removal is directed by the PURCHASER/OWNER

4.7.7 The CONTRACTOR shall effectively protect all the works from action of weather and from damages or defacement and shall cover finished parts where required for their thorough protection. Face work shall be perfectly clean and free from defects.

4.7.8 The work shall be carried out onto completion without damage to any work and property adjacent to the area of his work; to whomsoever it may belong, without interference with the operation of their existing machines or equipment.

4.7.9 The CONTRACTOR shall provide the necessary temporary roadways, footways, guards as may be rendered necessary by reason of his work, for the protection and accommodation of foot passengers or other traffic of the PURCHASER or occupier of adjacent property and of public. The CONTRACTOR shall at all times provide sufficient temporary barriers, notice boards and lights to protect and warn the public and post necessary watchman to guard the site and equipment. The CONTRACTOR shall take all precautions necessary and shall be responsible for the safety of the work to be performed by him. The CONTRACTOR shall also observe and display 'Safety First' signs and shall have proper safety and fire protection equipment.

4.7.10 Adequate lighting at and near all the storage, handling, fabrication, preassembly and erection sites for properly carrying out the work and for safety and security shall be provided by the CONTRACTOR. The CONTRACTOR's work area would be adequately lighted during night time also. The CONTRACTOR should also engage adequate electricians/wireman, helpers etc. to carry out and maintain these lighting facilities. If the CONTRACTOR fails to provide all the above listed facilities, the PURCHASER may provide such facilities as he may deem necessary and charge the cost thereof to the CONTRACTOR. In any case, the CONTRACTOR shall be liable for all damages and consequences arising out of his neglect in this regard.

4.8 CLEAN UP OF WORK SITE

SITE GRADING WORK

4.8.1 All soil, filth or other matter of an offensive nature taken out of any trench, sewer, drain, cesspool or other place shall not be deposited on the surface, but shall at once be carted away by the CONTRACTOR, from the site of work for suitable and proper disposal.

4.8.2 The CONTRACTOR shall not store or place the equipment, materials or erection equipment on the drive ways and streets and shall take care that his work in no way restricts or impedes traffic or passage of men and material. During erection, the CONTRACTOR shall, without any additional payment, at all times keep the working and storage areas used by him free from accumulation of loose or combustible material, waste materials or rubbish, to avoid fire hazard and hindrance to other works of the PURCHASER. If the CONTRACTOR fails to comply with these requirements in spite of written instructions from the PURCHASER/OWNER, the PURCHASER will proceed to clear those areas and the expenses incurred by the PURCHASER in this regard shall be payable by the CONTRACTOR. Before completion of the work, the CONTRACTOR shall remove or dispose of in a satisfactory manner all scaffolding, temporary structures, waste and debris and leave the premises in a condition satisfactory to the PURCHASER/OWNER. Any packing materials received with the equipment shall remain the property of the PURCHASER and may be used by the CONTRACTOR for the performance of the work on payment of standard charges to the PURCHASER and with prior approval of the PURCHASER. At the completion of his work and before final payment, the CONTRACTOR shall remove from site all construction equipment temporary structures and debris and shall restore the site to a neat workmanlike condition, at his cost.

4.9 GUARANTEE

Twelve calendar months from the date of completion of the CONTRACT, unless otherwise agreed in writing by the PURCHASER/OWNER, will be deemed to be the 'Guarantee/Defects Liability Period'. The works shall not be considered as completed until the PURCHASER/OWNER has certified in writing that these have been virtually completed and the 'Guarantee/Defects Liability Period' shall commence from the date of such certificate. In case any defects in the work due to bad materials, and/or bad workmanship develop in the work before the expiry of the period, the CONTRACTOR, on notification by the PURCHASER, shall rectify or remedy the defects at his own cost and he shall make his own arrangements to provide materials, labour, equipment and any other appliances required in this regard. The retention amount will be returned to the CONTRACTOR only after the expiry of this 'Guarantee/Defects Liability Period'. In case even on due notification by the PURCHASER, the CONTRACTOR fails to rectify or remedy the defects, the PURCHASER shall have the right to get this done by the other agents and recover the cost incurred by deductions from the retention amount due to the CONTRACTOR, in case this cost is within the value of the retention amount, and if not, the CONTRACTOR shall be liable to pay to the PURCHASER the balance amount.

4.10 SECRECY

SITE GRADING WORK

The CONTRACTOR shall not disclose any information furnished by the PURCHASER/OWNER nor any drawings, reports and the information prepared by the CONTRACTOR for the project, without the prior written approval of the PURCHASER except in so far as disclosure is necessary for the performance of the CONTRACTOR's work and services under the CONTRACT.

5.0 CONTRACTOR'S PERSONNEL

5.1 The CONTRACTOR shall function as an erection organization and furnish adequate, courteous and competent labour (unskilled, semi-skilled and skilled), watchmen, supervisors and engineers of all classes for the duration of the work to maintain the rate of erection in accordance with the requirements of the schedule of completion, and shall begin the work included in the CONTRACT at such time as will ensure its completion as specified and shall complete the same, free of all liens and charges, at or before the time specified for completion. The CONTRACTOR shall make available qualified engineers for placing the equipment in operation and carrying out the necessary tests and trials. Conducts required of the CONTRACTOR's men are specified in following paras.

5.2 It is important that the CONTRACTOR shall employ men known to be reliable and competent for the work in general and it shall be a requirement of the CONTRACT that men used on special works shall be competent, well trained and trusted employees

5.3 The CONTRACTOR shall furnish details of the qualifications and experience of his senior supervisors and engineers assigned to the work, including their experience in supervising erection and commissioning of plant and equipment of comparable capacity.

5.4 The CONTRACTOR shall be personally present or employ at least one competent representative, whose name shall have previously been communicated in writing to the PURCHASER/OWNER, to superintend the erection of the equipment and carrying out of the work under the CONTRACT. This representative shall have full technical capability and administrative and financial powers to expeditiously and efficiently execute the work under the CONTRACT. The CONTRACTOR or his representative, or if more than one be employed, one of the representatives shall be present at the site at all times the work is in progress, and any written orders or instructions which the PURCHASER/OWNER may give to the said representative of the CONTRACTOR, shall be deemed to have been given to the CONTRACTOR. He shall maintain an office on or adjacent to the site of the work, and shall at all times keep in the said office a complete set of the specifications and drawings. The PURCHASER/OWNER shall normally communicate directly with the said representative at site. In the event that the CONTRACTOR is a Company or a Corporation or a Partnership, then, this paragraph shall be interpreted to mean the attention of an Officer of the Company or Corporation or member of the Partnership.

SITE GRADING WORK

5.5 The CONTRACTOR's representative at the site shall be posted and be available at site within a reasonable time after the PURCHASER/ OWNER shall inform the CONTRACTOR in writing to that effect. The service of the CONTRACTOR's representatives shall be made available during the progress of the work for such periods during the working days as the PURCHASER/OWNER may require.

5.6 When the CONTRACTOR or his representative is not present on any part of the work where it may be desired to give directions in the event of emergencies, orders may be given by the PURCHASER/OWNER and shall be received and obeyed by the supervisors or foremen who may have charge of the particular part of the work in reference to which orders are given. If requested to do so, the PURCHASER/OWNER shall confirm such orders in writing. Any such instructions, directions or notices given by the PURCHASER/OWNER shall be held to have been given to the CONTRACTOR.

5.7 The CONTRACTOR's employees shall be provided with identification badges showing employee's pay roll number, the CONTRACTOR's name and project identification. All employees will be required to wear these badges during the time they are at project site, where these would be plainly visible to the PURCHASER's watchmen and security staff. All workers, watchmen, supervisors, engineers and other staff at work site shall be provided with safety helmets by the CONTRACTOR and these shall be worn by them all the time they are at work site. Employees failing to do so shall, upon request of the PURCHASER/OWNER, be summarily discharged. No employees of the CONTRACTOR shall be permitted to enter areas of construction operation unauthorisedly.

5.8 The CONTRACTOR shall furnish the PURCHASER/OWNER a fortnightly labour force report showing by classifications the number of employees engaged in the work. The CONTRACTOR's employment records shall include any reasonable information as may be required by the PURCHASER/ OWNER.

5.9 The CONTRACTOR shall ensure that he pays his men regularly their wages, overtime and other compensations. The CONTRACTOR shall also furnish the PURCHASER at fortnightly intervals a certificate that he has paid all the dues to his workmen. In case such payment is not made regularly by the CONTRACTOR, the PURCHASER will be in his right to make such payments and deduct the same from the CONTRACTOR's progress payments.

5.10 None of the CONTRACTOR's superintendents, supervisors, engineers or labour may be withdrawn from the work without due notice being given to the PURCHASER/OWNER. Further no such withdrawal shall be made if, in the opinion of the PURCHASER/OWNER, it will jeopardize the required pace of progress and/or the successful completion of the work.

5.11 The PURCHASER/OWNER shall be at liberty to object to any representative or person or skilled, semiskilled or unskilled worker employed by the CONTRACTOR in

SITE GRADING WORK

the execution, or otherwise, of the work, who shall misconduct himself, or be incompetent, or negligent or unsuitable and the CONTRACTOR shall remove the person so objected to, upon receipt of notice in writing from the PURCHASER/OWNER requiring him to do so and shall provide in his place a competent representative at his own expense within reasonable time. Such persons who had been removed from the site at the request of the PURCHASER/OWNER shall not be again employed or allowed on the works without the permission of the PURCHASER/ OWNER.

5.12 In connection with the performance of work under the CONTRACT, the CONTRACTOR shall agree not to discriminate because of race, religion, colour or national origin. It is also expected that the CONTRACTOR in his selection of personnel will give due regard to their ability to co-operate with the PURCHASER's/OWNER's and the equipment supplier's erection supervisors. Suggestions and recommendations made by the PURCHASER's/ OWNER's and the equipment supplier's erection supervisors relating to the work and co-ordination thereof are to be carefully and courteously considered.

6.0 SITE FACILITIES**6.1 OFFICES, TOOL ROOM AND STORES ETC.**

The PURCHASER agrees to provide at the site, free of cost, space for office and space for locked room for proper storage of instruments and precision tools. However, the office, the room for storing instruments and precision tools etc. and other constructions such as "dog house", portable tool room adjacent to place of installation, welding sheds, fabrication sheds, labour rest rooms, canteen, lavatory facilities, etc. shall be installed by the CONTRACTOR at his own cost, on the PURCHASER's property, only at locations designated and only if approved by the PURCHASER. The above temporary sheds shall not be used to house any labour or Supervisory force of the CONTRACTOR.

6.2 WAREHOUSES

Any storage space, covered and/or semi-covered, available at site for storing equipment and materials to be installed under this CONTRACT, shall be indicated in the specific requirements of the erection specification. Additional covered warehouses required for storing equipment and material shall have to be built by the CONTRACTOR at his own expense, at location designed and approved by the PURCHASER.

6.3 LODGING AND OTHER FACILITIES FOR LABOUR

Temporary lodging facilities including all sanitary, electric power, water and ventilation requirements for all skilled and unskilled labour, technicians, foremen, watchman, peons, electrical staff, etc. shall be the responsibility of the CONTRACTOR. A separate space outside the works area may also be provided by the PURCHASER, if so stipulated in Section C of the Enquiry Document, for building temporary structures to accommodate the CONTRACTOR's labour. The temporary structures to accommodate the CONTRACTOR's labour shall be put up by the CONTRACTOR at his cost but with

SITE GRADING WORK

prior approval from the PURCHASER/OWNER. Within two weeks of completion of the CONTRACT, the CONTRACTOR shall remove all such temporary structures and hand over to the PURCHASER the space made available to the CONTRACTOR in a clean, leveled and tidy condition. The PURCHASER may provide a few unfurnished quarters for the CONTRACTOR's engineers and

other administrative executives, at the PURCHASER's standard rents. However, such accommodation will be limited and the CONTRACTOR's requirements beyond availability shall have to be met by the CONTRACTOR, at his own expense in a temporary manner after obtaining specific approval from the PURCHASER. The PURCHASER's built accommodation, if any, available on rental charges are indicated in the Specific Requirements of the Technical Specification.

6.4 CONSTRUCTION ELECTRIC POWER, AIR AND WATER

Electric power, air and water will be available for use by the CONTRACTOR free of cost or at charges as given in the specific requirements of the erection specification. These supplies will be made, where available, at one central point in the site convenient to the PURCHASER and all piping for air and service water to work area, office, warehouse, store room, canteen, labour rest room, welding and fabrication sheds, etc. and lodging area for labour shall be furnished, installed and maintained by the CONTRACTOR at his own expense. He shall also furnish, install and maintain at his cost the power lines, junction boxes and any other electrical receptacles, apparatus or equipment from the central point to his work area including office, warehouse, store room, canteen, labour rest room, welding and fabrication shed, etc. and lodging area for labour. The PURCHASER's built accommodation, if any, to be rented to the CONTRACTOR shall have electric power and drinking water supply unless otherwise specified.

6.5 The PURCHASER will not charge the CONTRACTOR for his unrented ground. The PURCHASER shall, on no account, be responsible for the expenses incurred by the CONTRACTOR for hired ground or water obtained from elsewhere.

7.0 TIME AND ORDER OF COMPLETION AND LIQUIDATED DAMAGES

7.1 The CONTRACTOR shall be allowed admittance to the site on the 'Date of Commencement' and he shall thereupon and forthwith begin the works and shall regularly proceed with and complete the same on or before the 'Date of Completion'.

7.2 The CONTRACTOR agrees that the work shall be commenced and carried on at such points, and in the order of precedence and at such times and seasons as may be directed by the PURCHASER/OWNER in accordance with the schedule for the completion of work as outlined in the CONTRACT. The CONTRACTOR declares that he has familiarized himself with the site and rights-of-way, with all the local conditions, and with all the circumstances which may or are likely to affect the performance and completion of the work, and that he has allowed for such conditions in the preparation of this schedule. The progress of work shall be checked at regular monthly intervals and

SITE GRADING WORK

the percentage progress achieved shall be commensurate with the time elapsed after the award of contract.

7.3 However, it is not incumbent upon the PURCHASER/OWNER to notify the CONTRACTOR when to begin, neither to cease or resume work, nor to give early notice of the rejection neither of faulty work, nor in any way to superintend so as to relieve the CONTRACTOR of responsibility or of any consequence of neglect or carelessness by him or his subordinates.

7.4 No necessity for an extension of time is anticipated, but if untoward or extraordinary circumstances should arise beyond the control of the CONTRACTOR, which, in the opinion of the PURCHASER/OWNER should entitle the CONTRACTOR to a reasonable extension of time, such extension may be granted but shall not operate to relieve the CONTRACTOR of any of his obligations

7.5 The CONTRACTOR shall promptly notify the PURCHASER/OWNER any event or conditions which might delay the completion of erection work in accordance with the approved schedule and the steps being taken to remedy such situation.

7.6 If the CONTRACTOR is delayed at any time in the commencement or during the progress of the work by any act, delay or neglect of the PURCHASER/ OWNER or his employees, or by any other contractor utilized by the PURCHASER/OWNER or by changes ordered in the work by the PURCHASER/OWNER, or by Force Majeure, the time of completion shall be extended by a reasonable period as may be mutually agreed, upon application from the CONTRACTOR at the time of such special circumstances occurring and not towards the end of the CONTRACT period.

7.7 Force Majeure is herein defined as (1) any cause which is beyond the control of the CONTRACTOR or the PURCHASER, as the case may be (2) natural phenomenon including but not limited to weather conditions, floods, drought, earthquakes and epidemics (3) acts of any Governmental authority, domestic or foreign, including but not limited to war, declared or undeclared, priorities, quarantine, embargoes, licensing control or production or distribution restrictions; (4) accidents and disruptions including but not limited to fires explosions, breakdowns of essential machinery or equipment and power shortages; (5) transportation delay due to force majeure or accidents; (6) strikes, slowdown, lockouts and sabotage; (7) riots and civil commotions; (8) failure or delay in the CONTRACTOR's source of supply due to force majeure causes enumerated at 1 to 7.

7.8 The PURCHASER/OWNER shall have the right to require the discontinuance of the work, in whole or in part, for such time as may be necessary, should the condition of the weather or flood or other contingencies make it desirable to do so, in order that the works shall be well and properly executed. Extension of time shall be granted to the CONTRACTOR for discontinuance of work so required, and the CONTRACTOR shall not claim for compensation or damage in relation thereto.

SITE GRADING WORK

7.9 The time stipulated in the CONTRACT for the execution and completion of the works shall be deemed to be the essence of the Contract. In the event the CONTRACTOR fails to execute, complete and deliver the works within the time specified in the CONTRACT, then the CONTRACTOR shall pay to the PURCHASER as and by way of liquidated damages one (1) percent of the total value of the CONTRACT for each week's delay after expiry of a period of 14 days' grace beyond the date of completion specified in the CONTRACT. However, such payments shall not exceed 10% of the total value of the CONTRACT. The PURCHASER may, without prejudice to any method of recovery, deduct the amount for such damages from any amount due or which may become due to the CONTRACTOR. In the event of extension of time being granted by the PURCHASER/OWNER in writing, for completion of the work, stated in paras 7.4, 7.6, 7.7 and 7.9, this penalty clause will be applicable after the expiry of such extension period.

7.10 DELAY AND EXTENSION OF TIME

If in the opinion of the PURCHASER/OWNER, the work be delayed (a) by force majeure or (b) by reason of proceedings taken or threatened by or disputes with adjoining or neighboring owners or public authorities or (c) by the works or delays of other Constructors or Tradesman engaged by the PURCHASER or (d) by reason of 'PURCHASER's INSTRUCTIONS' as per para 1.1 or (e) in consequence of the CONTRACTOR not having received in due time necessary instructions from the PURCHASER/OWNER for which he shall have specifically applied in writing, or (f) by reason of nonpayment of running bills within a reasonable period after issue of the certificate by the PURCHASER/OWNER, the PURCHASER/OWNER shall make a fair and reasonable extension of time for completion of the CONTRACT works. In case of strike or lockout the CONTRACTOR shall, as soon as possible, give written notice thereof to the PURCHASER/OWNER, but the CONTRACTOR shall nevertheless constantly use his endeavours to prevent delay and shall do all that may reasonably be required to the satisfaction of the PURCHASER/OWNER to proceed with the work.

8.0 CONTRACT PRICE

8.1 CONTRACT price shall include all traveling expenses to and from the site, allowances, living expenses, wages, salaries, overtime, benefits and all compensations for the skilled and unskilled workmen, supervisors, engineers, clerical staff, watch and ward staff and storekeepers etc., insurance carried by the CONTRACTOR for his workers, workmen's compensation, third party liability and any other insurance required by the specification, cost of all licences and permits, cost of procurement, loading, transport and unloading of all the material, tools and tackles, instruments and construction aids to and from the site, cost of providing office, tool room, quarters, canteen, workshops and all facilities at site as may be required, cost of supply of all material required under the CONTRACT, performance of all services as required under the CONTRACT and satisfactorily executing the complete work under the CONTRACT. If any fees are to be paid to the statutory authorities for testing, inspection or calibration,

SITE GRADING WORK

these shall be paid by the CONTRACTOR and included in his cost. The CONTRACT price shall be firm. If any price escalations are to be applied, they should be clearly indicated as required in the Schedule of Prices.

8.2 The BIDDER shall inspect, examine and obtain all information and satisfy himself regarding all matters and things such as nature and character of work, site conditions and other relevant matters such as right of way, surface water conditions to be encountered, the character of equipment and facilities needed for the prosecution of the work, the availability, location and suitability of all construction materials, the quantities of various sections of the work, and the local conditions, relating to the execution and maintenance of the works to be carried out under the CONTRACT or any hindrance to or interference with construction and maintenance of the works from any cause whatsoever including any other operation of works, which may or shall be carried out on or adjacent to the site of these works, under the CONTRACT and shall make allowance for all such contingencies in the CONTRACT price and shall not raise any claims or objections against the PURCHASER in any of such matters as mentioned above, except when they pertain to sub-surface conditions. The acceptance of the order or execution of the CONTRACT shall be construed as evidence that such an examination was made and later claims for labour, equipment or materials required for difficulties encountered shall not be allowed.

8.3 SCHEDULE OF QUANTITIES

The quantities of the various kinds of work to be carried out and materials to be furnished under the CONTRACT which have been estimated and set forth in the proposal or the Agreement or the lists of CONTRACT PRICES, are the best available, but may not be accurate in any or all particulars and are only for the purpose of comparing, on a uniform basis, the bids offered for the work under the CONTRACT. The BIDDER agrees that neither the PURCHASER nor the OWNER nor any of the employees or agents thereof shall be held responsible if any of the estimated quantities should be found to be not even approximately correct in the construction of the work and that he shall not, at any time, dispute or complain of such statement nor assert that there was any misunderstanding in regard to the character, sizes and type of work to be done or the kind or amount of the materials to be furnished. Further, the CONTRACTOR shall make no claim for anticipated profits, for loss of profit or for damages because no work is ordered under certain items or because of a difference between the quantities of the various kinds of work to be done or materials actually delivered and the estimated quantities set forth by the PURCHASER/OWNER. This is applicable only in case of unit rate CONTRACTS.

8.3.1 The CONTRACT may be lump sum or unit rate CONTRACT as specified in Section C of the Enquiry Document.

(a) In the case of lump-sum CONTRACTS, all efforts have been made to indicate the actual quantum of work in the CONTRACT specification. The BIDDER shall quote a

SITE GRADING WORK

lump-sum price on this basis. He shall also indicate unit rates which will be used in the case of variations in the scope of services specified.

(b) In case of unit rate contracts, if a bill of material is furnished in the enquiry document, the BIDDER shall quote unit rates which will hold good for +20% variation from quantities specified. The BIDDER shall also indicate factors for adjustment of unit rates for variations beyond these limits.

(c) If any other mode of price adjustment is specified in Section C of the Enquiry Document for variations in quantum of work, the same shall apply.

8.3.2 Any work shown on the equipment supplier's drawings and not particularly described in the CONTRACT and its associated specifications, or specified and not shown on the drawings, shall be included by the BIDDER in his bid, and the omission from both the drawings and specifications of any detail of work necessary and obviously intended, shall not relieve the CONTRACTOR from performing such work.

9.0 INDEMNITY INSURANCE AND DEPOSIT

9.1 The CONTRACTOR shall be solely responsible for all injury to persons, animals or things and for all damage to property to whomsoever it may belong which may arise from operations or neglect of his or of any sub-contractor or any of his sub-contractor's employees, whether such injury or damage arises from carelessness, accident or any other cause whatsoever in any way connected with the carrying out of the CONTRACT. This para shall be held to include, inter alia, any damage to building whether immediately adjacent to or otherwise and any damage to roads, footpaths, monuments or ways as well as all damage caused to the buildings or the works forming the subject of the CONTRACT. The CONTRACTOR shall promptly report in writing to the PURCHASER/OWNER all cases of accidents and damages however caused and wherever occurring in execution of the CONTRACT, and shall make adequate arrangements to render all possible aids to the victims of all such accidents and damages.

9.2 The CONTRACTOR shall indemnify the PURCHASER in respect of all actions, suits, claims and demands brought or made against the PURCHASER by the workmen of the CONTRACTOR or any other person or persons whomsoever in connection with the works or in respect of any matter or thing done or omitted to be done by the CONTRACTOR in the execution of or in connection with the works notwithstanding that all reasonable and proper precautions may have been taken by the CONTRACTOR and against any loss or damage to the PURCHASER/OWNER in consequence of any action or suit being brought against the PURCHASER/OWNER for anything done or committed to be done in connection with the execution of the work. The indemnity given by the CONTRACTOR as aforesaid shall extend to making good all claims and demands arising out of losses/damages to property of every description and kind, the

SITE GRADING WORK

infringement of any legal right as well as injury or accident to any person resulting in death or otherwise.

9.3 In the event of non-compliance of the provisions of para 9.2 by the CONTRACTOR, the PURCHASER shall have full power and right at his discretion to defend or compromise any suit or pay claim or demand brought or made against him as aforesaid whether pending or threatened, as he may consider necessary or desirable and shall be entitled to recover from the CONTRACTOR all sums of money including the amount of damages and compensation and all legal costs, charges and expenses in connection with any compromise or award which shall not be called into question by the CONTRACTOR and shall be final and binding upon him.

9.4 The CONTRACTOR shall reinstate all damages of every sort mentioned in this para so as to deliver the whole of the CONTRACT works completed and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of third parties.

9.5 The CONTRACTOR shall at his own expense arrange to effect and maintain until the completion of the CONTRACT Insurance Policies, with an insurance company approved by the PURCHASER, against all risks in respect of which the CONTRACTOR is required under this para to indemnify the PURCHASER. In particular, the CONTRACTOR shall effect and maintain an insurance policy of at least Rs. 3 lakhs for one person and Rs. 5 lakhs per accident for injury or death and at least Rs. 5 lakhs per accident for third party property damage, to indemnify the PURCHASER against all third party accident/damage claims which may arise in respect of the work or in consequence thereof. The CONTRACTOR shall also maintain an insurance policy against all claims which may be made upon the PURCHASER whether under the Workmen's Compensation Act or any other statute in force during the currency of the CONTRACT or at common law in respect of any employee of the CONTRACTOR or any sub-contractor. All such insurance policies shall be in the joint names of the PURCHASER and the CONTRACTOR and shall be deposited with the PURCHASER. The CONTRACTOR shall be responsible for anything which may be excluded from the insurance policies referred to above and also for all other damage to any property or persons out of and incidental to the negligence or defective carrying out of the CONTRACT.

9.6 The CONTRACTOR shall ensure compliance with all statutes, laws, rules and regulations of the Central or State Government or any other authority such as the Workmen's Compensation act 1923, Payment of Wages Act, Minimum Wages Act 1948, Employees State Insurance Act, Employees Provident Fund Act, etc. and any and all statutory modifications thereof in connection with employees engaged by him or his sub-contractors in the work.

9.7 The CONTRACTOR shall conform to the provisions of Indian Boiler Regulations, Indian Factory Rules, Indian Electricity Act and any other acts of legislature relating to

SITE GRADING WORK

the work and to the regulations and bye-laws of any authority and of any water, lighting and other companies and/or Authorities with whose systems the Plant/Structure is proposed to be connected and shall before making any variations from the drawings or specifications that may be necessitated by so conforming, give to the PURCHASER/OWNER written notice, specifying the variations proposed to be made and the reason for making it and apply for instructions thereon.

9.8 The CONTRACTOR shall arrange to give all notices required by the said Acts, Regulations or Bye-laws to be given to any Authority or to any Public officer and pay all fees that may be properly chargeable in respect of the works and lodge the receipts with the PURCHASER/OWNER. Obtaining all permits and licences required thereupon is the responsibility of the CONTRACTOR

9.9 FIRE INSURANCE

Unless instructed otherwise by the PURCHASER/OWNER, the CONTRACTOR shall, on signing the CONTRACT, insure the works and keep them insured until the completion of the CONTRACT against loss or damage by fire, with a Company to be approved by the PURCHASER/OWNER, in the joint names of the PURCHASER and the CONTRACTOR for such amount and for any further sum, if called upon to do so by the PURCHASER/ OWNER, the premium of such further sum being allowed to the CONTRACTOR as an authorized extra. Such policy shall cover the property of the PURCHASER only and shall not cover any property of the CONTRACTOR or any sub-contractor, or his employees. The CONTRACTOR shall deposit the policy and receipts for the premium with the PURCHASER/OWNER within twenty-one days from the date of signing the CONTRACT unless instructed otherwise by the PURCHASER/OWNER. In default of the CONTRACTOR insuring as provided above, the PURCHASER on his behalf may so insure and may deduct the premiums paid from any moneys due, or which may become due to the CONTRACTOR. The CONTRACTOR shall, as soon as the claim under the policy is settled, or the work reinstated by the Insurance Office should they elect to do so, proceed with all due diligence with the completion of the works in the same manner as though the fire had not occurred and in all respects under the same conditions of CONTRACT. The CONTRACTOR in case of re-building or re-installment after fire shall be entitled to such extension of time for completion as the PURCHASER/OWNER may deem fit.

9.10 PATENT INDEMNIFICATION

9.10.1 The CONTRACTOR shall indemnify and keep indemnified the PURCHASER, his successors or assignees for and against any and all claims, suits, damages, losses, actions, demands, costs charges, royalties and expenses arising from or for infringement, real or claimed, of patent-rights, copyrights or other protected rights, if any designs, plans, device, machine, diagrams, drawings or any material supplied by the CONTRACTOR or any of the construction methods or processes followed by the CONTRACTOR for the construction of the constructed portion of the project, or for the operation of the constructed portion of the project, are found to have infringed any such rights.

SITE GRADING WORK

9.10.2 In the event of any claim being made or action being brought against the PURCHASER in respect of any of the matters referred to in para 9.10.1 above, the CONTRACTOR shall promptly be notified and he shall, at his own expenses, conduct all negotiations for the settlement of the same and any litigation that may arise there from. 9.10.3 In the event any designs, drawings, plans or diagrams or any of the construction methods or processes furnished/ followed by the CONTRACTOR for the construction of the portion of project or for the operation of the project, constitute infringement of patent or any of the protected rights and use thereof is restrained, the CONTRACTOR shall procure for the PURCHASER, at no cost to the latter, the right to continue using the same or to the extent it is possible, replace the same with non-infringing work approved by the PURCHASER or modify them so that become non-infringing, but such modifications shall otherwise be to the entire satisfaction of the PURCHASER. The provisions of this paragraph shall survive the completion, expiration or termination of the CONTRACT.

9.11 COMPREHENSIVE TRANSPORT AND ERECTION-CUM-COMMISSIONING INSURANCE

The PURCHASER may cover the Plant and Equipment covered under the CONTRACT under a comprehensive transport and erection-cum commissioning insurance. The CONTRACTOR shall inspect all the material received at site and furnish a loss/damage report to the PURCHASER within a week of receipt of material at site, and provide all required assistance to the PURCHASER in lodging insurance claims thereupon. In case of loss to the PURCHASER due to delays in submitting the loss/ damages report by the CONTRACTOR, the PURCHASER will be within his right to deduct such losses from the CONTRACTOR's progressive payments. The CONTRACTOR shall also submit to the PURCHASER/OWNER his estimate for carrying out repairs on such damaged equipment and when approved by the PURCHASER/ OWNER, the CONTRACTOR shall execute the work. The approved estimate for the work will be the basis for payments to the CONTRACTOR for the repair works. However, the CONTRACTOR shall furnish details of man hours worked and consumables used in such a job to justify his estimate. In the event that comprehensive insurance cover is not arranged by the PURCHASER, the CONTRACTOR shall arrange for comprehensive transport, erection-cum-commissioning insurance.

9.12 SECURITY DEPOSIT

The successful BIDDER shall furnish, within 15 days from date of issue of the letter of intent, security deposit equal to 21/2% of the total accepted tender value for proper fulfillment of the CONTRACT. This security deposit shall be returned to the CONTRACTOR on the virtual completion of the CONTRACT. In case of default or failure to execute the CONTRACT in conformity with the stipulations of this specification, the deposit shall be forfeited to the PURCHASER.

10.0 TERMS OF PAYMENT

10.1 Unless specified otherwise in Section C of the Enquiry Document or elsewhere in the bid document, the terms of payment shall be as below:

SITE GRADING WORK

(a) 10% (Ten percent) of CONTRACT PRICE as advance along with order against bank guarantee.

(b) 80% (Eighty percent) of CONTRACT PRICE as monthly progress payment against certified bills.

(c) 10% (Ten percent) of CONTRACT PRICE as retention money within a month of completion of 'Guarantee/Defects Liability Period' or within a month after completion of commissioning of the complete plant against a bank guarantee for the 'Guarantee/Defects Liability'. The mode of arriving at the monthly progress payments payable to the CONTRACTOR is indicated in para 11.0 below.

11.0 MEASUREMENT OF WORK AND PROGRESS PAYMENTS

11.1 The PURCHASER/OWNER may, from time to time, intimate the CONTRACTOR that he requires the works to be measured and the CONTRACTOR shall attend or send a qualified agent to assist the PURCHASER/OWNER or his representative in taking such measurements and calculations and to furnish all particulars as may be required by him.

11.2 Where the erection of equipment, vessels and structural steel are involved, the basis of such measurements and progress evaluation shall be weights specified in the shipping documents or invoices or drawings as decided by the PURCHASER/OWNER.

11.3 Should the CONTRACTOR not attend or neglect or omit to send such agents, the measurement taken by the PURCHASER/OWNER or approved by him shall be taken to be the correct measurements of the work.

11.4 The CONTRACTOR or his agent may, at the time of measurement, take such notes of measurements as he may require.

11.5 When measurements are affected by conditions already established, the CONTRACTOR shall take field measurements notwithstanding scale or dimensions shown on the drawings.

11.6 The measurements so taken and certified correct by the PURCHASER/ OWNER shall be the basis for the progress payment to the CONTRACTOR. Where the break-up of the CONTRACT PRICE on unit basis is difficult to arrive at, the PURCHASER/OWNER and the CONTRACTOR shall work out at the commencement of the CONTRACT, the weightages or the cost break-ups to arrive at a mutually agreeable basis for computation of the progress estimates.

SITE GRADING WORK

11.7 To the value so arrived at on the basis of the CONTRACTOR's monthly progress evaluated, shall be added the amounts earned by the CONTRACTOR under supplemental contracts and orders if any, till date of the progress estimate. From the total thus computed, all previous payments plus any amounts due to the PURCHASER in accordance with the terms of this CONTRACT shall be deducted. The remainder shall be paid by the PURCHASER to the CONTRACTOR under Interim Certificates from OWNER.

11.8 In case work is nearly suspended, or in case only unimportant progress is being made, or in case it is apparent that the CONTRACTOR is about to forfeit his CONTRACT or that the money yet due to him shall not complete the CONTRACT, the PURCHASER may at his discretion withhold any payment which may be due to the CONTRACTOR

11.9 The bank guarantee provided by the CONTRACTOR as security against 10% advance paid to him shall be returned to the CONTRACTOR on issue of a final completion certificates to the CONTRACTOR. The bank guarantee furnished against the advance shall be current and valid, and revalidated for the residual unadjusted value till the PURCHASER issues a final completion certificate for the CONTRACTOR's scope of work.

11.10 The CONTRACTOR shall not demand nor be entitled to receive payment for the work or portion thereof, except in the manner set forth in the CONTRACT and only after the PURCHASER/OWNER has given a certificate for such payment.

11.11 FINAL PAYMENT

11.11.1 Whenever, in the opinion of the PURCHASER/OWNER, the work covered by the CONTRACT has been completed, he shall prepare a final abstract showing the total amount of work carried out by the CONTRACTOR and its value under and according to the terms of the CONTRACT. From the total value thus arrived at shall be deducted all previous payments and all deductions made in accordance with the provisions of the CONTRACT. The remainder shall be paid by the PURCHASER to the CONTRACTOR within three months after the date at the PURCHASER/OWNER's final certificates.

11.11.2 Payment of the retention amount shall be due after the Defects Liability Period of 12 calendar months, as per conditions stipulated in para 4.9 above.

11.11.3 The CONTRACTOR shall not be entitled to the said retention amount, until he shall deliver to the PURCHASER a complete release of all liens arising out of the CONTRACT or receipts in full in lieu thereof, and in either case an affidavit that so far as he has knowledge or information, the release and receipts include all the labour, materials, licences and other commitments for which a lien could be filed. If any lien remains unsatisfied after all payments are made to the CONTRACTOR, he shall refund

SITE GRADING WORK

to the PURCHASER all moneys that the latter may be compelled to pay in discharging such a lien, including all costs and the attorney's fees so incurred.

11.12 WITHHOLDING PAYMENT

11.12.1 The PURCHASER may withhold part or whole of any payment for erection claimed by the CONTRACTOR, which in opinion of the PURCHASER, is necessary to protect himself from loss on account of

(a) Defective work not remedied or guarantees not met

(b) Claims filed against the CONTRACTOR

(c) Failure by the CONTRACTOR to make due payment for materials supplied or labour employed by him

(d) Damage to other contractors', the PURCHASER's or others' property

(e) Failure to meet the mutually agreed schedules

11.12.2 When the grounds for withholding payments are removed, payments of the amount due to the CONTRACTOR shall be made by the PURCHASER without delay.

12.0 SUSPENSION

If the CONTRACTOR, except on account of any legal restraint upon the PURCHASER preventing the continuance of the work or in case of a certified bill for interim payment not paid within the period mutually agreed, shall suspend the work or in the opinion of the PURCHASER/OWNER shall neglect or fail to proceed with due diligence and expedition in the performance of his part of the CONTRACT or if he shall more than once, make default in respect of para 7.4 above or shall contravene the provisions of the CONTRACT, the PURCHASER/OWNER shall have the power to give notice in writing to the CONTRACTOR requiring that he should proceed with the work with due diligence and reasonable dispatch and in conformity with the provisions of the CONTRACT and to the entire satisfaction of the PURCHASER/OWNER and such notice shall purport to be a notice under this para. After such notice shall be given, the CONTRACTOR shall not be at liberty to remove from the site of the works or from any ground continue thereto any plant or materials belonging to him which shall have been placed thereon for the purposes of the work and the PURCHASER shall have a lien upon all such plant and materials to subsist from the date of such notice being given until the notice shall have been complied with. If the CONTRACTOR shall fail to proceed with the works as therein prescribed within 7 days after such notice has been given, the PURCHASER may proceed as provided in para 13.0 below.

13.0 TERMINATION OF CONTRACT BY OWNER

SITE GRADING WORK

13.1 If the CONTRACTOR (being an individual or a firm) commits any 'Act of Insolvency', or shall be adjudged an Insolvent, or shall make an assignment or composition for the greater part in number of amount of his creditors, or shall enter into a Deed of Assignment with his creditors, or being an Incorporated Company shall have an order made against him or pass an effective Resolution for winding up either compulsorily or subject to the supervision of the Court or voluntarily, or if the Official Assignee of the CONTRACTOR shall repudiate the CONTRACT, or if the Official Assignee or the Liquidator in any such winding up shall be unable, within seven days after notice to him requiring him to do so, to show, to the reasonable satisfaction of the PURCHASER/OWNER, that he is able to carry out and fulfil the CONTRACT and if required by the PURCHASER/OWNER to give security thereof or if the CONTRACTOR (whether an Individual, Firm or Incorporated Company) shall suffer execution to be issued, or if the CONTRACTOR shall suffer any payment under the CONTRACT to be attached to by or on behalf of any of creditors of the CONTRACTOR or if the CONTRACTOR shall assign or sublet the CONTRACT without obtaining the consent in writing of the PURCHASER/OWNER, or if the CONTRACTOR shall charge or encumber this CONTRACT for any payments due or which may become due to the CONTRACTOR there under, or if OWNER shall certify in writing to the PURCHASER that in his opinion the ONTRACTOR.

13.1.1 Has abandoned the CONTRACT, OR

13.1.2 Has failed to commence the work, or has, without any lawful excuse under these conditions, suspended the progress of the works for seven days after receiving from the OWNER's written notice to proceed, OR

13.1.3 Has failed to remove materials from the site or to pull down and replace works within seven days after receiving from the PURCHASER/OWNER written notice that the said materials or work were condemned and rejected by the OWNER under these conditions, OR

13.1.4 Has neglected or failed persistently to observe and perform all or any of the acts, matters or things by the CONTRACT to be observed and performed by the CONTRACTOR for seven days after written notice shall have been given to the CONTRACTOR requiring the CONTRACTOR to observe or perform the same,

OR

13.1.5 Has, to detriment of good workmanship or in defiance of the PURCHASER/OWNER's instructions to the contrary, sub-contracted part of the CONTRACT, then and in any of the said causes, the PURCHASER may, notwithstanding any previous waiver, after giving seven days notice in writing to the CONTRACTOR, determine the CONTRACT, and have the rest of the work completed by employing other agencies at the cost of the CONTRACTOR, without affecting the mutual obligations created prior to such termination in regard to the work already carried

SITE GRADING WORK

out. The PURCHASER will hold in his custody all plant, tools, tackles etc. belonging to the CONTRACTOR till the claim of the PURCHASER for compensation due from the CONTRACTOR is fully settled. After completion of the work, the PURCHASER/OWNER shall ascertain and certify in writing under his hand what, if anything, shall be due or payable to or by the CONTRACTOR, after considering the value of the work completed and materials supplied by the CONTRACTOR before termination of the CONTRACT, which may have remained unpaid, and the expenses of direct loss which the PURCHASER may have incurred or suffered in getting the work completed by other agencies. The amount so certified shall be paid by the PURCHASER to the CONTRACTOR or by the CONTRACTOR to the PURCHASER as the case may be. The certificate of the OWNER in that regard shall be final and conclusive.

13.1.6 After the above payments are made, the PURCHASER/OWNER shall give a notice in writing to the CONTRACTOR to remove his materials and plant and should the CONTRACTOR fail to do so within a period of 14 days after receipt of such notice, the PURCHASER shall dispose them of by suitable means and shall pass on the CONTRACTOR the amounts realized after deducting expenses incurred in such disposal. The PURCHASER shall not accept any responsibility for any loss, damage or deterioration of the materials of the CONTRACTOR during their custody by the PURCHASER.

14.0 RESOLUTION OF DISPUTES AND ARBITRATION

14.1 In the event of any dispute or difference at any time arising between the parties relating to the WORK ORDER/CONTRACT, meaning or effect of any para or any content of the rights and liabilities of the parties or other matters specified therein or with reference to anything arising out of or incidental to the WORK ORDER/CONTRACT or otherwise in relation to the terms, whether during the continuance of the WORK ORDER/CONTRACT or thereafter, such disputes or differences shall be endeavored to be solved by mutual negotiations.

14.2 If however such negotiations are in fructuous, the disputes shall be resolved by arbitration of two Arbitrators, one to be appointed by each party to the dispute and to a third Arbitrator to be appointed by the two Arbitrators in writing before taking upon themselves the burden of arbitration. Such a reference shall be deemed to be a submission to arbitration under The Indian Arbitration and Conciliation Act, 1996 and any modification or re-enactment thereof, and the award made in pursuance thereof shall be binding on the parties. The venue of arbitration shall be mutually agreed.

14.3 Any reference to arbitration shall not relieve either party from the due performance of its obligations under the WORK ORDER/CONTRACT. However, if the nature of disputed matter under arbitration so necessitates, either party may suspend further performance till the arbitration award is available. The period of non-performance under these circumstances shall be added to the contracted period of completion, without payment of compensation for such delay.

SITE GRADING WORK

15.0 ETHICAL CONCERNS

The CONTRACTOR may raise Ethical Concerns, if any, with regard to OWNER's personnel, with the senior management of the OWNER.

SAFETY CONDITIONS FOR UNDERTAKING SITE WORK

1.0 SCOPE

This document gives broad guidelines to be followed by the CONTRACTOR for ensuring safe working conditions in and around the site.

2.0 SAFETY ORGANISATION

2.1 Each CONTRACTOR at site shall organize a Safety Group headed by a Safety Officer who shall be responsible for providing, supervising and monitoring safe working conditions at all times for their workers. The Safety Officer shall be experienced in maintaining safe conditions for workers at site and shall be responsible for and shall have authority to enforce safe conditions for the workers.

2.2 The CONTRACTOR shall have a declared Safety Policy and shall get the same approved by the PURCHASER/OWNER. The approved Safety Policy shall be displayed prominently in the CONTRACTOR's site office.

2.3 The CONTRACTOR shall take active interest and participate in the development and operation of safety programs at site. His responsibility does not cease with establishment of Safety Group and approval of its various activities. He shall demonstrate his involvement by regular participation in safety meetings, review of safety records and taking corrective action where required, introduction of safety promoting bulletins, posters, suggestions and awards and by setting example by strictly observing safety rules.

2.4 The CONTRACTOR shall remove all waste material and debris from and around the work area and properly clean up the area at the end of each day before leaving the work site.

2.5 The CONTRACTOR shall take all necessary precautions not only for safe working of his own workmen but also deploy all precautions to ensure safety of structures, equipment and workmen of other agencies in and around his work site.

2.6 The CONTRACTOR shall ensure that his workmen do not trespass into prohibited areas.

2.7 The PURCHASER/OWNER shall have the right to inspect at any time, all items of machinery or equipment brought to site by the CONTRACTOR, his agents or workmen and to prohibit the use on the site of any item, which in the opinion of the PURCHASER

SITE GRADING WORK

/ OWNER is or may be detrimental to the safety of the site. The exercise of such right or the omission to exercise it in any particular case shall not absolve the CONTRACTOR or his agents or workmen of their responsibility of adhering to the safe working practices.

2.8 The CONTRACTOR shall execute the work in a manner causing the least possible interference with the business of the PURCHASER/OWNER, or with the work of any other CONTRACTOR who may be engaged on the premises and shall at all times co-operate with the other CONTRACTORS working at site.

2.9 The CONTRACTOR shall obtain work permit from the PURCHASER/ OWNER before starting any work at site. The work permits are issued to prevent the CONTRACTOR from working in unauthorized areas and shall be valid for specific area for a stipulated period

2.10 The CONTRACTOR shall ensure at all times that his workers do not lie down or sleep under or around any machine, equipment, vessel or vehicle in his work area.

2.11 RESPONSIBILITIES OF THE CONTRACTOR'S SAFETY OFFICER

2.11.1 He is responsible and accountable for:

(a) Preventing injury to personnel, damage to plant and equipment and fires.

(b) Instituting ways to improve existing work methods from safety point of view.

(c) Legal and contractual requirements affecting safety, health, and welfare of his workmen

(d) Provision and use of protective clothing and equipment and use of firefighting equipment

(e) Suitability of new and hired equipment from a safety viewpoint

(f) Identifying potential hazards.

(g) Changes in safety requirements and fire precautions

(h) Carrying out site surveys to see that only safe work methods are in operation, health and safety requirements are being observed and welfare and first aid facilities are adequate and properly maintained.

(i) Determining the cause of an accident or dangerous occurrence and recommend means of preventing recurrence.

SITE GRADING WORK

(j) Supervising the recording and analysis of information on injuries, damage and production loss. Assess accident trends and review overall safety performance.

(k) Assisting with training of employees at all levels. Organizing periodic demonstration of practicing safe working conditions by experienced safety instructors.

(l) Taking part in discussions on injury, damage and loss control.

(m) Keeping up-to-date with recommended codes of practice and safety literature. Circulating information applicable to each level of employees.

(n) Fostering within the company an understanding that injury prevention and damage control are an integral part of business and operational efficiency.

(o) Attending job progress meetings where safety is an item on the agenda. Report on job safety performance.

2.11.2 The Safety Officer shall inspect and ensure the following:

(a) All electrical equipment are securely earthed.

(b) Standard access platforms and ladders are provided for inspection, operation and maintenance of equipment.

(c) The equipment are periodically inspected for their condition, maintained properly and operated by trained personnel at design speeds and loads.

3.0 WORKING AT HEIGHTS

For carrying out work at heights exceeding 2 meters or near openings in floors and roofs etc. precautions as given in following paras shall be taken.

3.1 Adequate safety precautions like use of safety belts, crawling-ladders, safety nets etc. shall be taken. The workers shall wear safety belts with hook properly fastened.

3.2 All workmen engaged on work at heights shall be experienced in such work.

3.3 Written permission of the PURCHASER/OWNER shall be obtained before undertaking work on roofs.

3.4 Wherever possible, steel staging or platform shall be erected.

3.5 Staging with toe guards shall be provided with simple safety rails or ropes at waist height throughout its length on all open sides.

SITE GRADING WORK

3.6 Staging supports shall be All Purpose Scaffolding (APS) steel tubes scaffolding, safety secured and supported on firm level footings or slung from overhead beams. The supports shall be situated at maximum distance of 2.5 metres apart and the staging shall be secured to each support.

3.7 Wherever it is not possible to put up staging and/or use of safety belts and safety nets, steel sheets shall be slung beneath the place of work for safety.

3.8 When working over open process vessels or tanks, safety belts and safety nets shall always be used whether or not staging and scaffolding is provided.

3.9 Safe access to all points of works shall be provided in the form of suitable ladders and stairways etc.

3.10 Area around the work place shall be barricaded suitably or fenced off to avoid injuries to personnel passing by. Suitable warning boards and signs shall be put up.

4.0 EXCAVATION

In the event of an excavation or removing a manhole cover, the CONTRACTOR shall ensure that any opening, sump or pit caused is securely fenced and covered as required by the Factory Act before leaving the workplace for the day. Suitable warning boards and signs shall be put up near such opening while work is in progress to warn persons passing by.

5.0 LIFTING GEAR

5.1 The CONTRACTOR shall submit a valid Test Certificate to the PURCHASER/OWNER, from approved certifying authorities for all of his lifting gear and hoists, slings, chains, wire ropes, hooks, chain-pulley blocks, winches, hoists and cranes etc. before commencing work.

5.2 These certificates shall be available at site in the CONTRACTOR's office for inspection as and when required

6.0 PRESSURE AND LEAK TESTING

6.1 Pressure and leak testing of equipment shall be carried out hydraulically. However, in special cases where pneumatic testing is specified, written approval shall be obtained from the PURCHASER/OWNER before starting work. Under no circumstance gases other than nitrogen, carbon dioxide, air or steam shall be used for testing.

6.2 In case nitrogen or carbon dioxide is used for testing, the equipment shall be adequately ventilated and gas tested to ensure oxygen content of 21% before permitting a worker to enter the equipment.

7.0 WORK INSIDE AN EQUIPMENT OR DRAINAGE SYSTEM

SITE GRADING WORK

7.1 All equipment and associated piping shall be isolated, completely drained, purged and well ventilated before entry of a worker. The atmosphere inside the vessel or equipment shall be tested to ensure absence of toxic and flammable gases.

7.2 Toxic and flammable liquids and gases in the equipment shall be safely disposed off as per the instructions of the PURCHASER/OWNER.

7.3 Workers carrying out drainage, purging and testing operations shall wear gas masks and other protective gear appropriate to the material being handled.

7.4 While a worker has entered equipment or a drainage system, another worker shall be present outside at all times to assist the worker inside in the event of an emergency.

8.0 ELECTRICAL

8.1 Portable power tools rated for above 50 V supply and hand lamps rated for above 24 V supply shall not be used at site.

8.2 An armoured cable with a 3 pin Reyrolle type plug, properly earthed shall be provided between the CONTRACTOR's DG set and step down transformer.

8.3 All power supply and distribution boards shall have canopy for protection and all the distribution boards shall be earthed securely.

8.4 All supply points shall have proper plug and socket.

8.5 The CONTRACTOR shall check tightness of connection of cable terminations and joints before starting the work.

9.0 WELDING

9.1 Only qualified welders shall be employed at the work site. The CONTRACTOR shall organize the qualifying test at site for his welders and the PURCHASER/ OWNER shall approve the welders. All welders shall have to undergo qualifying test and only on passing the test, they shall be allowed to work at site.

9.2 For all welding work at site, generator sets shall be used instead of AC transformer sets. AC transformer sets are banned for welding jobs inside vessels (both open and closed top type).

9.3 The CONTRACTOR shall get his welding sets certified by the PURCHASER/ OWNER before starting work. These certificates shall have to be renewed every two months. A copy of the certificates shall be displayed on respective welding sets.

SITE GRADING WORK

9.4 Only cables in good condition and insulated holders shall be used. The length of supply cable to welding site shall not exceed 8 metres and the welding set body shall be properly earthed.

9.5 A charged fire extinguisher of CO₂ type shall be carried with each welding set. The CONTRACTOR shall keep Halon or equivalent type fire extinguishers near hot jobs like cutting oil lines.

9.6 The welder shall not use a building structure, pipeline or railway track etc. as a return path of the current. Adequately rated circuit breaker shall be provided in the power circuit for human protection on all power supply points.

10.0 HOT WORK

10.1 Before starting any hot work like gas cutting, welding and grinding etc., the CONTRACTOR shall obtain hot work permit from the PURCHASER/ OWNER. The permit shall be renewed on day-to-day basis.

10.2 The CONTRACTOR shall ensure purging of piping and equipment to make it totally safe before carrying out any hot work

10.3 Smoking is strictly prohibited in work areas except at designated locations. Smoking areas shall be identified with sign board at strategic locations showing:

'SMOKING IS PERMITTED IN THIS LOCATION ONLY'

10.4 At permitted locations, cigarette ash or butts shall be disposed off only in ash trays provided.

10.5 No combustible material shall be stored on or near any source of heat like hot pipes, welding or gas. Before leaving the place of work or the CONTRACTOR's sheds, the CONTRACTOR's workmen shall ensure that no material or item that could start a fire is left at site. Special attention shall be paid to collection and disposal of oil soaked cotton waste or rags. On no account are these to be dropped into corners, pushed below equipment or left hanging on pipes.

10.6 Gas cylinders shall be used in a safe manner. These shall not be dropped from heights or dragged on the floor. Trolley with rubber rimmed wheels shall be used for transporting gas cylinders within the site. Acetylene cylinders shall be kept in upright position. Oxygen cylinders shall not be kept near inflammable materials like oil etc.

10.7 Tarpaulins shall not be used in the vicinity of welding and gas cutting jobs.

SITE GRADING WORK

10.8 The CONTRACTOR's supervisor of the rank of a foreman or equivalent shall examine the arrangements made for hot work before commencement of work and shall satisfy himself that all reasonable safety precautions have been taken.

10.9 The CONTRACTOR shall return the hot work permit after completion of welding work.

11.0 PERSONAL PROTECTIVE EQUIPMENT

11.1 Workmen shall wear protective clothing, head, leg and eye protection safety equipment at all times as per the job requirements. These are to be supplied and provided by the CONTRACTOR.

11.2 Adequate number of IS approved safety helmets shall be available at site.

11.3 Welders shall wear good quality insulated welding gloves, goggles, face shield, shoes and overalls while at work.

12.0 ACCIDENTS

In case of injury or serious illness of a worker, the PURCHASER/ OWNER shall be notified immediately. All accidents shall be recorded by filling in the 'Accident Report' form, which shall be kept in easy accessible location in the site office of the CONTRACTOR. Any 'Near Miss' incident shall also be reported by the CONTRACTOR and recorded.

13.0 INSURANCE

All the CONTRACTOR's workmen shall be covered under the Employees State Insurance Scheme, Janata Policy or any other scheme which may be specified by the Statutory Authorities from time to time.

14.0 REVIEW MEETING

The PURCHASER/OWNER shall conduct fortnightly Safety Review Meeting to review the safety conditions practiced at work areas by the CONTRACTOR.

15.0 WORK AFTER NORMAL WORKING HOURS

15.1 Extra care shall be taken for jobs to be carried out after normal working hours with due revalidated work permit and supervised by the CONTRACTOR's site-in-charge. The site-in-charge shall make available his residential address and telephone number to the PURCHASER/OWNER so that he can be contacted in case of an emergency.

15.2 Proper lighting shall be ensured at the workplace for any work carried out after the normal working hours.

SITE GRADING WORK

16.0 CONVEYANCE FOR EMERGENCY

The CONTRACTOR shall ensure that conveyance and person with driving license is available at site at all times of work execution so that in case of an accident, the victim can be rushed to nearest medical centre.

17.0 SAFETY PRACTICES

17.1 Avoid working under un-insulated live conductors or working on freshly painted steel, which is still wet.

17.2 Stairs and railing shall be in place as long as necessary. Ladders shall be periodically checked for any defects. Ladders shall be securely fastened to prevent movement while in use.

17.3 The CONTRACTOR shall advise his workmen to take the following precautions while using ladders:

(a) While ascending or descending, face the ladder. Use both hands for holding.

(b) Do not climb higher than the third rung from top on straight or extension-ladders and second rung from top on set ladders.

(c) Step-ladders shall be fully open before use.

(d) Sliding down a ladder shall be prohibited.

(e) Make shift ladders such as clear fastened across a single rail and short ladders spliced together shall never be used.

(f) Ladders shall be kept free from dirt and grease.

(g) Defective ladders shall be removed from use.

(h) Ladders shall not be left un-attended unless these are securely anchored at top and bottom.

(i) While using ladders, shoes shall not be greasy, muddy or otherwise slippery.

(j) Ladder shall not be used during severe windy conditions.

17.4 Lumber shall be piled out of the work area. Nails shall be removed or bent while handling lumber to avoid injury to workmen.

17.5 While tearing down plaster or brickwork, dust shall be controlled with water.

SITE GRADING WORK

17.6 Walls shall not be subjected to lateral pressure or impact from materials stored or falling materials.

17.7 The safety valves for boilers shall be set by trained personnel and shall be sealed or padlocked at safe working pressure. Only authorized person shall change the setting of safety valves. The safety valve relieving pressures shall be checked as recommended by the manufacturer and applicable codes.

17.8 Blow down valves shall be operated strictly as per instructions. If blow cock is not marked with an arrow to show open and close position, the same shall be marked at site.

17.9 Safety slogans and safety instructions shall be prominently displayed in English, Hindi and local language at strategic locations.

18.0 EMERGENCY PROCEDURES

18.1 The CONTRACTOR shall familiarize himself with the emergency procedures, which apply to plants and areas in which his men are working.

18.2 First Aid Box shall be kept in the CONTRACTOR's site office. The CONTRACTOR's site-in-charge and his key supervisors shall be trained in administering first aid, preliminary treatment for electrical shocks, fall from height and burns etc.

18.3 When an emergency condition exists or on hearing the 'Stop Work Alarm' every supervisor shall ensure:

(a) All work is stopped at once.

(b) All equipment is shutdown.

(c) All men are evacuated to a pre-determined assembly point.

(d) A roll call is taken and every man is accounted for.

(e) No one shall be permitted to return to work until notification has been received from a responsible authorized agency that it is safe to do so.

19.0 RESPONSIBILITY OF THE CONTRACTOR'S SITE INCHARGE

His primary responsibility is safety of personnel and equipment. He shall:

SITE GRADING WORK

19.1 Understand the company's policy on maintaining safe working environment and appreciate the responsibility allocated to each grade of supervision

19.2 Know the safety requirements and relevant Government Regulations, and ensure their implementation.

19.3 Ensure that sound, safe working methods and reasonable welfare facilities are provided for workers.

19.4 Determine at the planning stage the following:

(a) The most appropriate order and method of working

(b) Allocation of responsibilities to supervisors

(c) Storage areas and access etc.

(d) Hazards which may arise from overhead or underground services

(e) Facilities for welfare, first aid and sanitation

(f) Work permit procedures and requirements

(g) Basic fire precautions

(h) Provide written instructions to establish work methods, to explain the sequence of operations, to outline potential hazards at each stage and to indicate precautions to be adopted.

SITE GRADING WORK**CONTRACTOR'S HEALTH AND SAFETY PROGRAMME****1.0 SAFETY ORGANISATION****1.1 HEALTH AND SAFETY POLICY**

The CONTRACTOR's organization shall have a written HEALTH AND SAFETY POLICY (POLICY) issued by the Chief Executive of the organization, appropriate to the scale and nature of the risks involved in the CONTRACT works. A copy of the POLICY shall be made available to the PURCHASER at the time of the award of the CONTRACT in evidence of the CONTRACTOR's commitment to management of employee's health and safety and compliance to statutory and regulatory requirements. The POLICY along with its component operation procedures shall be evidenced as working document publicized among the CONTRACTOR's and his SUB-CONTRACTORS' employees through appropriate language/s. All the CONTRACTOR's employees shall be familiar with the POLICY and their role and obligations in its implementation. The POLICY shall meet the relevant statutory and regulatory requirements and the requirements of the PURCHASER/OWNER. The POLICY shall periodically be reviewed for updating with respect to new and emerging legal and other requirements.

1.2 SAFETY REPRESENTATIVE

1.2.1 The CONTRACTOR shall appoint a Safety Representative (SR) meeting statutory competence requirements, with a minimum experience of five years of safety management in comparable contracts, approved by the PURCHASER on the basis of his qualification and experience. The SR shall give his whole time to the superintendence of the 'Health and Safety Programme' of the CONTRACTOR

1.2.2 The CONTRACTOR shall also nominate in writing competent Safety Appointees (SAs) from various disciplines to assist the SR in implementation of health and safety measures in their routine contract works. The SR shall have sufficient authority to direct the CONTRACTOR's or his SUB-CONTRACTOR's personnel to meet health and safety requirements and to stop performance of work until such requirements are met.

1.3 EMPLOYEE CONSULTATIONS, SAFETY COMMITTEE AND COMMUNICATION

1.3.1 The CONTRACTOR shall ensure full involvement of all his employees recognizing their right to consultation on health and safety matters. The safety appointees of the various areas, in conjunction with the SR shall be responsible for ensuring employees' involvement through routine safety inspections, hazard and risk assessment in new and changed works and their control. The CONTRACTOR shall maintain appropriate operating procedures to guide these

SITE GRADING WORK

requirements.

1.3.2 The CONTRACTOR shall also appoint a Safety Committee (SC) comprising of the SAs from the various areas under the chairmanship of the SR. The committee shall meet at periodic intervals to discuss the status and adequacy of the safety management, and any safety concerns of the employees. The

committee shall also formulate and validate the safety procedures incorporating controls to prevent or mitigate hazards and risks before submission for approval by the PURCHASER/OWNER. The minutes of the SC meeting shall be submitted to the PURCHASER/OWNER. The SR shall maintain the records of the meetings.

1.3.3 The CONTRACTOR shall communicate to the employees regularly on job hazards applicable to their tasks in hand. The SAs or any of the SR's nominees shall hold 'Toolbox Talks' for this purpose on a routine basis before undertaking any safety critical and/or non-routine activities. Weekly meetings of the CONTRACTOR and his SUB-CONTRACTORS attended by the SR and the SAs shall include safety as a key item in the agenda to discuss hazards and risk assessments, job safety analysis and control procedures and to review accidents and incidents (Near-miss) for remedial measures to prevent such occurrence. The minutes of the meeting shall be submitted to the PURCHASER/OWNER. The SR shall maintain the records.

1.4 CONTRACTOR'S SAFETY REPORTS

1.4.1 The CONTRACTOR shall submit a monthly written report to the PURCHASER/OWNER, which shall be due on the fifth workday of every month. The health and safety of all full time, part-time, permanent, temporary, contract employees and any outsourced employee undertaking any part of the CONTRACT works shall be included in the safety report. The report shall include the total number of working hours for the month, the number of recordable accidents and the number of lost-time accidents. A cumulative trend plot of the monthly severity and frequency rate of the reportable accidents shall be included in the monthly safety report and calculated as:

LOST MANDAYS DUE TO LOSS-TIME INJURIES x 1,000,000
MANHOURS WORKED

FREQUENCY =NUMBER OF LOST TIME INJURY x 1,000,000
MANHOURS WORKED

1.4.2 The CONTRACTOR shall arrange to display the safety statistics and the cumulative plot of severity and frequency of accidents mentioned above painted on a board prominently displayed, as a means of encouragement and assurance to all interested parties and for publicizing the safety achievements.

1.5 CONTRACTOR'S ACCIDENT/INCIDENT REPORTS

SITE GRADING WORK

1.5.1 'Accident' for the purpose of this para is defined as 'Undesired Event Giving Rise to Death, Ill-health, Injury, Damage or other Loss' and 'Incident' is defined as 'Event that gave rise to an Accident or had the Potential to lead to an Accident'. An accident where no ill health, injury, damage or other loss occurs is also referred to as 'Near-Miss'. Incident includes Near-Miss. The

CONTRACTOR shall report orally, to the PURCHASER/OWNER regardless of their extent, duration and severity, immediately on occurrence of all accidents resulting in:

- (a) Personal injury
- (b) Property damage
- (c) Fires
- (d) Spills
- (e) Near-Misses

1.5.2 The CONTRACTOR shall submit the accident and incident report in writing to the PURCHASER/OWNER within 24 hours of its happening in the form as prescribed by the governing statute or in the absence of which, in the form prescribed by the PURCHASER/OWNER. The CONTRACTOR shall detail in the 'Accident/Incident Report', the particulars of the dangerous occurrence leading to the accident, lost time of absence due to accident, root cause analysis and the corrective and preventive actions to prevent such recurrence. In addition, the CONTRACTOR shall include his estimate of the impact of accident on project schedule. Incidents shall also be reported in the same manner identifying root cause/s to eliminate such potential occurrence or risks.

1.6 FIRST-AID PERSONNEL AND FACILITIES

1.6.1 The CONTRACTOR shall make available first-aiders, first-aid boxes and or first aid stations as per statutory requirements. The persons holding current certificates of competency of recognized institutions in prescribed numbers as per any governing statute and in the absence of such regulatory requirement a minimum of two first-aiders for each area of work for every hundred workmen. First-aiders' names shall be prominently displayed.

1.6.2 The first-aid boxes shall display contents of medical and medicinal articles with quantity maintained, which shall be in accordance with governing statute. Nominated first-aiders shall replenish stock promptly.

1.6.3 The first-aid refresher training shall be provided at least once in a year and all employees shall be encouraged to undergo first-aid training. A record shall be kept of all first aid treatments with particulars of treatment and personnel providing the treatment.

SITE GRADING WORK**1.7 OCCUPATIONAL HEALTH CENTRE**

1.7.1 Where required by the CONTRACT, the CONTRACTOR shall establish and maintain an Occupational Health Centre where hazardous Processes are involved such as roof work, steel work, working above or below water, demolition and confined space. Where the PURCHASER maintains the Occupational Health Centre facilitating the CONTRACTOR, such a facility shall meet the requirements laid by the governing statute and this shall be stated in the CONTRACT. Where the CONTRACTOR out-sources such facility, it shall meet the statutory requirements and shall be approved by the PURCHASER/OWNER and the statutory body.

1.7.2 The Occupational Health Centre shall be served by a full time medical officer holding a medical degree in allopathic medicine with a minimum of five years experience in Occupational Health/Medicine. A nurse, one dresser/compounder and one sweeper-cum-ward boy who will all be available during entire construction operation during the day shall assist the medical officer. One additional Medical Officer shall be posted for every additional thousand Construction workmen along with the team of nurse, compounder and ward boy

1.7.3 The Occupational Health Centre shall be capable of undertaking emergency care services or emergency treatment facilities which shall include emergency life saving aids and appliances to handle head and spinal injuries, severe fractures, snake bites, burns of all nature, electric shocks, cases of asphyxiation and such other severe injuries as could be reasonably anticipated at the facilities and shall meet provisions of any governing statute.

1.8 AMBULANCE ROOM AND AMBULANCE VANS

The PURCHASER shall arrange for an ambulance room and an ambulance van directly or outsource the facilities meeting the governing statutory needs for prompt transportation of serious cases accident and or sickness to the hospital. Such facilities shall be maintained in good repair and equipped with facilities such as dry powder type extinguishers, flashlights, portable oxygen unit, self-contained breathing apparatus etc. as prescribed by the governing statute.

1.9 INDUCTION AND JOB-SAFETY TRAINING

1.9.1 The CONTRACTOR shall maintain a procedure for identification of the training needs and training his employees to create a health and safety conscious workforce that will comply with the law and safety requirements of the Organization. He shall also maintain a procedure for safety induction and initial training as well as follow-up training on the job safety for new entrants. All employees shall receive effective training and periodic refresher training on the operation control procedures specific to their tasks designed to control the job-safety risks. A booklet of such operation control procedures and safety rules with need based pictorial illustrations shall be made available to all employees who are to learn and be familiar with such procedures. All training shall be

SITE GRADING WORK

monitored for effectiveness as per established procedures. The CONTRACTOR shall maintain records of all training.

1.9.2 The SR and the SAs shall conduct regular fortnightly or weekly mock-safety drills for different imaginary accident scenarios, in premeditated work areas to provide on-job training such as:

(a) Use of safety appliances such as water monitors, hydrants, hydrant pumps, fire-hoses, extinguishers, breathing apparatus and safety harness for working at height,

(b) Response to health and safety emergencies,

(c) fighting fires using various equipment and

(d) First-aid

1.9.3 Participants shall receive training during mock-drills through role-play of their normal expected tasks during emergencies and fire fighting. The degree of demonstrated ability in the chosen tasks during such safety drills shall be recorded as participants' competence level for planning his further training. The experience gained in mock drills shall be used to update of operational control procedures and the training needs. The roster of participants and contents for routine mock-drills shall be appropriately planned to cover all employees in the training at least once in four months.

1.9.4 The SR and the SAs shall be trained on a standardized comprehensive advanced training programme covering safety management, legal aspects, techniques of hazard identification and risk assessment and specific job-safety in various disciplines such as Civil, Electrical, instrumentation and Mechanical plant and equipment of the CONTRACTOR. The training records shall be maintained subject to audit by the PURCHASER/OWNER. Training effectiveness shall be assessed and recorded and used as input for further training plans of the employee.

1.10 HEALTH AND SAFETY PROMOTION

Safety posters, banners and slogans displayed for safety promotion shall be rotated at frequent intervals. The CONTRACTOR is encouraged to have safety promotion as an item in the SC agenda. The CONTRACTOR is encouraged to include safety promotion programmes such as: safety bulletins, magazines, competitions in slogan and poetry writing on safety, screening of safety films, celebration of national safety and environmental day, safety suggestion schemes and safety library etc.

1.11 PURCHASE AND PROCUREMENT CONTROL

1.11.1 The CONTRACTOR shall maintain a procedure for control of his purchases to ensure that all safety requirements are appropriately vetted by the safety personnel during all stages of procurement including planning of specifications, inspection for

SITE GRADING WORK

acceptance and commissioning in order that threats to safety are not overlooked and appropriate attention is paid to the training of personnel in the operation of the CONTRACTOR's new or changed machinery and their operation control procedures, to prevent/control risks.

1.11.2 The CONTRACTOR shall exercise due diligence in appointing his SUBCONTRACTORS

and outsourcing contract services, that no new health and safety threats are created. The CONTRACTOR shall ensure personnel of SUBCONTRACTORS and outsourced contract services are competent in health and safety management to meet the POLICY requirements. They shall be made aware of the safety rules, emergency procedures and any information that will have a bearing on the safety, health and related contractual obligations

1.12 HAZARD IDENTIFICATION AND RISK ASSESSMENT

1.12.1 The CONTRACTOR shall ensure that his key personnel and safety personnel are trained to be competent in hazard identification, risk assessment and risk control processes. The CONTRACTOR shall on a routine basis identify, evaluate and control all health and safety risks especially in the hazardous work activities and also to validate the previous risk assessments. Elements such as hazard identification, evaluation of risks with existing control measures in place and estimate of tolerability of the residual risks shall be an ongoing process. Any additional/New control measures shall be designed based on this process on need basis.

1.12.2 The CONTRACTOR shall maintain a Hazard Identification, Risk Analysis and Risk Control Manual (HIRARC) pertaining to all his activities duly updated as detailed above. The HIRARC manual shall be made available to the PURCHASER/OWNER during regular inspections and audits

1.13 WORK PERMITS

1.13.1 The CONTRACTOR shall maintain a work permit procedure to limit the hazardous processes and high risks tasks to authorized personnel, who shall be informed of the job safety analysis and the job specific safety precautions, on issue of a work-permit. The work permit issued under the procedure shall be valid for a specified period and shall be issued only after all safety precautions are fulfilled and duly verified by the SR or the SA or specialist who is authorized for safety certification as a prerequisite for issue of a work permit. The work permit shall be appropriate for the purpose for which it is issued. Various work permits are:

(a) Safety Work Permit (SWP)

SWP is mandatory for working at heights, on fragile roofs such as asbestos or such roofing Works, steel erection, work over water, a live substation or switch-yard even if

SITE GRADING WORK

section of work is not electrically charged, demolition, blasting and such potentially hazardous CONTRACT works in the opinion of the PURCHASER/OWNER.

(b) Hot Work Permit (HWP)

HWP shall be used where hot working, like electric or gas welding, gas cutting, or burning or any other operation involving heating, open flames or electric arcs, grinding and electrical works etc. are potentially dangerous in areas such as inflammable materials storage, plant and pipe lines handling inflammable and or explosive materials either presently or in the past, or where new works are undertaken adjoining such works which in the opinion of the PURCHASER/OWNER are potential risks. A HWP shall be deemed mandatory in all such potentially dangerous areas. The CONTRACTOR shall get areas such as welding shops or maintenance areas approved by the PURCHASER/OWNER for 'Permit-Free' operation.

(c) Confined Space Entry Permit (CSP)

CSP is issued for entering and carrying out tasks in confined space. Confined space for the purpose of this para is defined as an enclosed or partially enclosed space which is not intended or designed primarily as a work place and

(i) is at atmospheric pressure during occupancy

(ii) has restricted entry and exit

(iii) has potentially harmful level of toxic or inflammable contaminant or unsafe level of oxygen

(iv) is of a nature that could contribute to overwhelming a person by an unsafe atmosphere

(v) has a potential that safety on entry could be affected by unsafe conditions stated above by accident or due to human errors

Confined spaces shall include but not limited to storage tanks, process vessels, bins, boilers, ventilation or exhaust ducts, sewers, underground utility vaults, tunnels, pipelines and open top spaces more than 4 feet in depth such as pits, tubs, vaults and vessels

(d) Electrical Safety permits/Lock-out and Tag out (ESP/LOTO) The CONTRACTOR shall institute an electrical safety permit system to ensure safe electrical isolation. Safety permits shall not be issued until safe release tag is placed on the equipment isolated on all isolating points. The safety permit shall be returned on satisfactory completion of the job by the executing agencies duly signing off indicating that all shorts and grounds and men and materials are removed from the job and that the job safe for energizing. This is a prerequisite to energize the isolated equipment. The safety tags

SITE GRADING WORK

shall be collected in the order first the isolated equipment and lastly the tag on the main control of the equipment The tags and permit system shall be auditable

1.14 JOB SAFETY INSPECTION

1.14.1 The CONTRACTOR shall maintain a procedure for Safety Inspection at routine intervals to provide assurance that the instituted safety procedures are in place to prevent deviations from established standards that could lead to a safety hazard and consequential risk. The CONTRACTOR shall establish appropriate standardized checklists for systematic job safety verification to ensure

(a) set standards are followed without deviation

(b) employees are competent to perform as per prescribed operation control procedures,

(c) monitoring of safety of the various work areas/tasks and

(d) adequacy of existing operation control procedures and practices to mitigate and eliminate risks

1.14.2 Should the existing operation control procedures prove inadequate and the residual risks are higher than tolerable levels, the SR shall initiate hazard and risk assessment and analysis and consultations with the SC to deploy appropriate remedial measures and improved operation control procedures. Periodic inspection reports and proposed remedial measures shall be submitted to the PURCHASER/OWNER. Records of changes change processes; consultations with the SC and revision of operational controls shall all constitute objective evidence of the existence of established procedures.

1.15 SAFETY AUDITS

1.15.1 The CONTRACTOR shall undertake periodic safety audits to confirm through investigative methods the effectiveness of the measures set out in the POLICY. In order to be effective such safety audit shall be comprehensively covering all aspects detailed in this specification to ensure effective loss-control/accident prevention programme. Safety audits shall take into account the safety inspection records, remedial measures and effectiveness of the safety programme. Effectiveness of safety programme shall be based on the CONTRACTOR's effective hazard identification and risk assessment processes for design of operation control procedures and on the safety statistics. Audit reports and preventive actions and safety improvement programmes shall be submitted to the PURCHASER/OWNER.

SITE GRADING WORK

1.15.2 The PURCHASER/OWNER shall retain their right to audit the CONTRACTOR's Safety Management System either directly by their employees or his nominated representatives for its effectiveness.

2.0 EQUIPMENT, SUBSATANCES AND PERSONAL SAFEGUARDING**2.1 MECHANICAL SAFETY**

2.1.1 The CONTRACTOR shall ensure that all his equipment and machinery are safe to use while in motion or working. Operators shall have received training or instruction on operation of the machinery and the regulatory requirements. The CONTRACTOR shall have adequate procedure to ensure the stability and securing of his working machinery during operation. He shall restrict repair and maintenance of the machinery to trained personnel and maintain records of repairs and maintenance. The equipment shall have appropriately designed means of isolating from sources of energy and shall have emergency stop control, which is easily accessible. All controls shall be clearly and uniformly marked. All operation controls, interlocks, sensing devices and guards on tools and equipment shall be functional and their status shall be regularly checked and recorded. The CONTRACTOR shall provide evidence of compliance to these requirements in any contractual write-ups submitted to the PURCHASER/ OWNER for approval in respect of critical construction/contract works.

2.1.2 The CONTRACTOR shall provide only good quality hand tools and ensure control of condition, storage, routine inspection and use of such hand-tools. Unsafe tools such as with cracked or broken handles, mushroomed chisels and punches, worn screwdrivers, hardened hammerheads; power tools with unsafe resistance to earth or without safety guards shall be prohibited.

2.1.3 All safety ladders, scaffolding and such access equipment shall meet requirements of IS 3696 and IS 4014 and such standards as the PURCHASER/OWNER may stipulate. The safety work permits shall be issued only after ensuring that all safety requirements of access equipment are complied with. Access equipment shall be inspected on a routine basis to prevent injuries caused by falls.

2.1.4 The CONTRACTOR shall ensure safety of all those concerned with lifting and those who may be affected by material hoisting, lifting and handling using various mechanical aids. All lifting equipment such as cranes, hoists, lifting shackles, hooks chains and links shall be designed as per appropriate International codes of construction. Operators shall have been trained in operation and maintenance of such equipment besides training on standard hand signals to be employed during the hoisting and lifting operations. Safe Working Loads (SWL) shall be marked on equipment prominently. SWL shall be evidenced to have been established by test procedures in accordance with acceptable codes of practices.

SITE GRADING WORK

2.1.5 Riding on construction equipment, forklifts and cranes shall be prohibited unless such vehicles are provided with passenger seats.

2.1.6 Pressurized gas and air systems shall be maintained safe in good working order and shall meet the requirements of the Factories Act 1948, The Static and Mobile Pressure Vessels Rules 1984 and the Gas Cylinder Rules 1934 as applicable. The safety relief valves, safety appurtenances and isolation systems shall be compliant with safety code of practices. Any statutory register of pressure vessel records and the code of practices shall be subject to periodic auditing by the PURCHASER/OWNER.

2.1.7 The areas of highly dangerous activities like hoisting, lifting and rock blasting, and radiation, shall be appropriately barricaded to protect personnel and machinery and guided by work permit discipline. Emergency plans shall cater to emergencies arising out of such activities.

2.1.8 Signs, barricades, barrier tapes and warning or entry restriction devices or accessories shall be provided to minimize work related risks of accidents and injuries. Signage shall meet all regulatory requirements such as under The Building and other construction workers Act 1996, Factory Act 1948, Manufacture, Storage, Import of Hazardous Chemicals Rules under Environmental Protection Act 1986, Indian Explosives Act 1984 and Gas Cylinder Rules 1981 and Indian Electricity Act 1910 and Rules thereof and any other safety requirements of the PURCHASER/OWNER.

2.2 ELECTRICAL SAFETY

2.2.1 The CONTRACTOR shall provide only such equipment for work that is electrically safe to work. The CONTRACTOR shall have a procedure to identify and record all his electrical equipment in a register, with provisions to record his periodic inspections of such equipment. Inspection shall cover cables, extension leads, all electrical equipment drawing power from socket outlet. He shall identify and maintain in good working order all electrical installations such as distribution panels and major switchgear ensuring safe accessibility. A clear area shall be maintained around panels and switchgears. The installed equipment shall be periodically inspected by qualified personnel to ensure their continued safe operating condition. Inspection shall include earth polarity checks, continuity checks and earth resistance checks. The CONTRACTOR shall ensure use of flameproof and explosion proof switchgears and lighting fittings where required as per governing codes.

2.2.2 Approved earth leakage relays or alternative safety devices to relevant IS and International codes shall be used on all portable electrical hand tools. Where possible low-voltage electric power supply shall be used for hand tools, earth leakage units shall protect electrical installations in workshops, kitchens, cafeterias, first-aid rooms, laboratories and offices. Record of regular checks shall be maintained. The CONTRACTOR shall comply with 'Code of Practice for Earthing' as per IS 3043.

SITE GRADING WORK

2.2.3 Safety rubber matting of appropriate voltage rating conforming to IS 5424 entitled 'Rubber Mats for Electrical Purposes' shall be provided in front of all switchgears and power distribution panels for the safety of personnel operating such equipment.

2.2.4 The CONTRACTOR shall arrange displaying signage under Indian Electricity Act 1910, such as:

(a) Danger notices as per IS 2551 in conspicuous places on all low, medium and High voltages as per Rule 35,

(b) Instruction of restoration of persons suffering from electric shock in English and local languages as per Rule 44 in switchgear rooms, substations and places where electricity is used and

(c) Notice prohibiting unauthorized entry in areas where electrical apparatus are used.

2.2.5 All power cables providing construction power to various construction machinery and the connectors shall be in safe and sound condition. Cables shall be routed through cable trays supported on appropriately designed structures, duly clamped, secured and identified. Road crossing cables shall be laid in conduits buried at least 600 mm below the surface to prevent damage due to vehicular traffic. All cables shall be off the floor to avoid damage or tripping hazard. Cables shall be terminated at the switchgear and sockets in a workman like manner to prevent loose contacts and flashover. Only safety receptacles shall be used for providing power connection to hand-tools. All switches and distribution boards shall be clearly marked. All electrical distribution and panel wiring diagrams shall be available with the electrical maintenance personnel. The CONTRACTOR shall maintain a safe electrical isolation/lockout procedure.

2.2.6 The CONTRACTOR shall ensure lighting circuits are not used for hand-tools. No electrical equipment shall be overloaded. Tools and test equipment used on electrical systems shall be insulated.

2.3 SUBSTANCES ABUSE PROGRAMME

The CONTRACTOR is encouraged to have a 'Substance Abuse Programme', and pre-employment drug testing. Drinking during working hours shall be strictly prohibited. The CONTRACTOR shall promote through poster and other publicity, awareness on abuse of substances such as alcohol and such depressant drugs that slows the activity of brain and spinal cord on abusive usage endangering the safety and health of users and others affected by their work.

2.4 HAZARDOUS SUBSTANCES CONTROL

SITE GRADING WORK

2.4.1 The CONTRACTOR shall prevent all injuries, illnesses and damage to property or the environment caused by any article or substance, which proves to be hazardous. The code of practices of construction and operation and maintenance and control procedures shall meet required statutory and regulatory requirements. Personnel shall be trained on use, handling, storage, disposal and emergency spillage procedures

2.4.2 The CONTRACTOR shall detail and deploy operational controls to reduce hazardous wastes and their disposal as required by the statute 'Hazardous Waste (Management and handling) Rules 2000'. Oil wastes, used oils, soil and cotton soaked in oil consequent to handling operations, grease and many class of paints and asbestos sheets and gaskets are typical hazardous wastes.

2.4.3 The CONTRACTOR shall identify, contain and control all sources of radiation. Appropriate regulatory approvals shall be obtained before commencement of work involving radiation sources. Radiation protection advisors suitably qualified and experienced shall be appointed whose names shall be submitted to PURCHASER/OWNER. Dosimetry and surveillance of personnel engaged in such work shall be maintained in accordance with regulatory requirements.

3.0 PERSONAL SAFEGUARDING

3.1 PERSONAL PROTECTION EQUIPMENT (PPE)-GENERAL The CONTRACTOR shall provide his employees required PPE meeting the requirements of the stated IS specifications and guidelines or equivalent International Standards as may be prescribed by the PURCHASER/ OWNER from time to time. The CONTRACTOR shall have instituted good working procedures and practices in providing PPE, maintenance, issue and training on their use. All PPE shall be periodically checked to ensure worn, damaged equipment are replaced expeditiously.

3.1.1 Control Issue, Use and Maintenance of the PPE. Employees shall be responsible for the PPE issued to them. The CONTRACTOR shall meet requirements of IS 8519 entitled 'Guide for Selection of Industrial Safety Equipment for Body Protection' or any equivalent international specification that the PURCHASER/OWNER may prescribe.

3.1.2 Head Protection:

The CONTRACTOR shall comply with requirements of IS 2925. Hard hats shall be used and worn where a hazard of falling or flying objects exist. Hard hats intended for use by visitors shall have replaceable paper lining.

3.1.3 Eye and Face Protection

Eye protection shall be worn during all operations by operators and people in the vicinity, where there is a danger of flying particles of metal such as generated during use of hand tools such as chisels, grinding, welding and cutting lathe work on brass and cast iron acid and alkali splash, high pressure jet cleaning or insulation removal from heights using high pressure jets. The CONTRACTOR shall meet the requirements of IS

SITE GRADING WORK

8520 entitled 'Guide for Selection of Industrial Safety Equipment for Eye, Face and Ear Protection'.

3.1.4 Footwear

Safety shoes, boots and gumboots fitted with steel toe-caps of approved quality conforming to prescribed Indian or international standards. Wearing of unsafe safety shoes such as jogging shoes, tennis shoes, slippers and sandal etc. are prohibited. The CONTRACTOR shall meet the requirements of IS 10667 entitled 'Guide for Selection of Industrial Safety Equipment for Protection of Foot and Leg'.

3.1.5 Protective Clothing

The CONTRACTOR shall prevent hazards of loose clothes worn by workmen getting caught in moving machine parts. Loose and thin garments such as dhoti and pyjamas are prohibited. While the CONTRACTOR shall ensure that all workmen wear long sleeved shirts, jackets or the like with the sleeves rolled down and secured at the cuff, long pants/ trousers extending up to the top of the safety shoes so as to prevent injuries caused by contact with heat, cold abrasive and sharp surfaces shall be strictly enforced. Such protective clothing shall be mandatory in hazardous areas especially during start-up operations involving hot, inflammable, and other chemical hazards, furnaces and Boilers and such fired equipment and asphaltting plants. Personnel exposed to acids and alkalis hot fluids and steam during such operations shall be provided with appropriate heat or corrosion resistant clothing. The CONTRACTOR shall meet the requirements of IS 8990 entitled 'Maintenance and Care of Industrial Safety Clothing'.

3.1.6 Hand Protection

The CONTRACTOR shall provide appropriate hand gloves as per IS 8807 entitled 'Guide for Selection of Industrial Safety Equipment for Protection of Arms and Hands' to prevent injuries to hands during work. The CONTRACTOR shall maintain appropriate inventory of gloves for different applications like acid and alkali handling, general-purpose work gloves and asbestos or heat resistant hand gloves etc.

3.1.7 Safety Harness or Fall Arrest

The CONTRACTOR shall provide safety harness or means of restraint such as safety belts, harness and lifelines etc. to workmen engaged to work in heights such as open-sided floors, open-sided scaffoldings, floor and roof openings, overhead construction works of various nature etc. where there is a falling hazard of two metres or above. Storage, issue, wearing and maintenance of safety harness shall be under strict supervision and records shall be maintained. All fall arrests shall consist of full-body harnesses, lanyards with shock absorbers, lifelines, rope grabs and associated hardware. Two alternate lanyards shall be used to facilitate tying off at a new location before disconnecting from the previous location. Practices for safety harnesses and fall

SITE GRADING WORK

arrests shall conform to IS 4912, IS 11972 and IS 8519 or equivalent international codes.

3.1.8 Falling Object Protection

Where work is in progress in elevated areas, barricades, barrier tapes, signs and such entry restriction devices shall be used to keep area below clear of personnel to prevent injury due to falling objects. If work is required in the area below elevated work area, it shall be scheduled at a time different from elevated works. The workmen below shall be protected from falling objects by the debris net or a catch platform with an adequate toe board to prevent material from falling off. Use of safety net for elevated works shall be considered in the work permits where appropriate. Where a lift is made above a working area, the area below the path of the lift shall be cleared of personnel during the lift and barricaded and guarded to prevent entry of persons generally in conformity with IS 4912, IS 11972 and IS 13416 for protective barriers in and around building and preventive measures against safety hazards in work places and safety requirements for floor and, wall opening, railings and toe-boards.

3.1.9 Respiratory Equipment

The CONTRACTOR shall maintain where appropriate, procedures for training and use of Self-Contained Breathing Apparatus (SCBA). The SCBA shall be provided together with lifelines and rescue teams to safeguard personnel working in areas where gases such as carbon monoxide, methane chlorine and such life endangering atmospheres are present. The CONTRACTOR shall meet requirements of IS 9623 for 'Selection, Use and Maintenance of Respiratory Protective Devices'. The CONTRACTOR shall have trained adequate number of personnel including the identified fire fighting teams, hose teams and SAs in the use of the SCBA. The CONTRACTOR shall use the periodic safety drills to demonstrate, train and establish competence of personnel in the use of SCBA.

3.1.10 Hearing Conservation

The CONTRACTOR shall ensure reasonable precautions are taken to avoid injury to the hearing of the employees. All noise levels shall be controlled within 85 dBA. The CONTRACTOR shall identify noise areas where noise levels exceed prescribed safe level for arranging for appropriate engineering revision. Where this is not feasible, appropriate earmuffs or protectors shall be provided to workmen ensuring these are worn by those exposed to noise levels beyond safe levels. Periodic hearing acuity tests shall be conducted on such persons exposed to high noise levels to ensure that they do not suffer any hearing impairment as per requirements of IS 8520.

3.2 MANUAL HANDLING AND ERGONOMICS

3.2.1 The CONTRACTOR shall have procedures to identify risks involved in manual handling operation and tasks. The CONTRACTOR shall ensure appropriate training to

SITE GRADING WORK

prevent any possible injury. Full use of mechanical aids shall be made to avoid risks arising out of such manual handling. Employees shall be adequately trained on such manual tasks and related safety precautions to reduce the risk of injury to personnel engaged in such work.

3.2.2 The CONTRACTOR shall undertake ergonomic study of manual operations to prevent musculoskeletal injury during manual handling, besides visual fatigue and mental stress giving considerations to matters such as seating lighting and ventilation etc.

4.0 FIRE PROTECTION AND PREVENTION**4.1 GENERAL REQUIREMENTS**

4.1.1 Where the PURCHASER maintains the fire protection equipment, the CONTRACTOR shall comply with the PURCHASER's fire regulations, warning signals and procedures. The CONTRACTOR shall arrange to train his personnel meeting the prescribed qualifying competence needs, in requisite numbers in the operation of such fire protection equipment and systems.

4.1.2 Risk assessments shall be carried out to identify potentially vulnerable areas to provide sufficient quantities of correct type of extinguishers and ancillary equipment to deal with various types of fire hazards.

4.1.3 Where required under the CONTRACT the CONTRACTOR shall provide appropriate type of extinguishers close to areas of fire hazard but not too close they are cut off from use during a fire. Water based extinguishers shall not be positioned close to or used on electrical equipment.

4.1.4 Extinguishers shall be marked/labelled and recorded with location particulars in a register. These shall be inspected at monthly intervals to ensure they are in operable sound condition. There shall be a systematic plan for servicing, repairing and recharging fire extinguishers and for recording such dates on the register and equipment.

4.1.5 The location of firefighting equipment shall quickly and easily be identifiable especially in emergencies in a conspicuous manner painted as high as possible to identify the location of the extinguisher to prevent it from being obscured by machinery and goods stacked in front and to return the equipment to its location after emergency use in other locations. In order to ensure this, 'Keep Clear' area shall be demarcated and maintained. Location plans of extinguishers and firefighting equipment shall be prominently displayed when desired by the PURCHASER/OWNER.

4.1.6 SR and SAs shall be trained on fire fighting techniques who shall co-ordinate and control fire protection and prevention programmes.

SITE GRADING WORK

4.1.7 Where required under the CONTRACT, the CONTRACTOR shall maintain alarm systems powered by mains and by battery for back-up. Where required under the CONTRACT, emergency lighting shall be provided to aid evacuation in poor lighting conditions following the alarm. The alarm system shall be made known to all employees. When the PURCHASER extends these facilities for use by the CONTRACTOR, he shall provide appropriate training to his personnel in the use of such emergency facilities and duties

4.1.8 A clear written procedure for action in the event of fire should be produced. Fire teams and hose teams shall be identified and their responsibilities during emergencies shall be detailed in writing. Personnel shall be trained on their fire duties and use of fire-fighting equipment. Regular drills shall be conducted to test procedures and to validate them. Fire instructions and emergency procedures shall be displayed throughout the premises. Emergency response procedures are detailed under para 5.0 below.

4.1.9 A means of escape shall be provided in all work areas and storages and maintained and kept free from obstruction. All exits shall be clearly marked and kept unlocked whilst the premises are in use. Escape routes shall be protected from fire.

4.1.10 When a hot work permit is issued, the CONTRACTOR shall ensure

(a) Identification of combustibles such as paper, cardboard and wood and moving away from area where hot work is undertaken using open flame or electric arc.

(b) Determination that flammable vapours and liquids are not present

(c) Protection of floor and wall openings to keep out sparks

(d) Determination that sprinkler and hydrant and other installed fire systems are functional

(e) Establishing a fire-watch with fully loaded extinguishers or charged water-hoses throughout the operation and 30 minutes after completion of operation

(f) Adequate ventilation for welders, by means of natural air movement local exhaust ventilators or air-line respirators as required

(g) Workmen performing the task are adequately briefed on job safety analysis, hazards and risks and the safeguards against risks.

4.2 SECURITY

4.2.1 Where required under the contract, security personnel shall do all that is reasonably practicable to ensure the safety of employees and property of the company in the face of accidents by fighting fires and containing losses due to pilferage, theft,

SITE GRADING WORK

vandalism and industrial espionage both by employees and external elements. Security personnel shall be appropriately competent and receive adequate safety training. Security personnel shall routinely report on a standardized basis on aspects such as violation of fire-protection rules, use of alcohol and narcotic drugs, condition of security fencing, floodlighting and storages etc.

4.2.2 Where the project is located where a number of other companies are in operation, the CONTRACTOR shall plan for mutual assistance programmes in cases of emergencies, as are practiced in the area in conjunction with the PURCHASER.

4.2.3 Where common boundaries exist between companies, the CONTRACTOR in conjunction with the PURCHASER shall co-ordinate security control over factors common: such as floodlights, fencing, pipelines containing gas, fuel and electricity

4.2.4 Security personnel shall be represented in the SC through the SA nominated from the area.

5.0 EMERGENCY PLANNING (EP)/EMERGENCY RESPONSE (ER)

5.1 The CONTRACTOR shall plan to deal with emergencies. An EP/ER specific to the job site shall be written and communicated to all employees. The EP/ER shall identify for the potential for and responses to incidents and emergency situations and for preventing and mitigating the likely illness and injury that may be associated with them.

5.2 The CONTRACTOR shall review his emergency preparedness and response plans and procedures in particular after occurrence of incidents or emergency operations

5.3 The CONTRACTOR shall designate his emergency team with their duties during emergencies defined, including those of the hose teams, medical personnel, first-aiders and security. The CONTRACTOR shall maintain a procedure as to how his emergency organization shall liaise with the PURCHASER's representatives in the EP/ER.

5.4 The CONTRACTOR shall also periodically test such emergency procedures by conducting mock-drills and use the experience for updating the EP/ER and for training the employees on the perceived competence needs.

5.5 The EP/ER of the CONTRACTOR shall be under the control of the SR who shall be able to co-ordinating with the PURCHASER/OWNER for liaising with government agencies, neighbouring industries and community

5.6 The EP/ER shall be designed to allow people to work under disaster conditions when normal services such as telephone water, light power, transport and sanitation are not available and first aid and fire fighting facilities are not able to cope with sudden demand on services.

SITE GRADING WORK

5.7 The telephone numbers of ambulance, police, managers and the PURCHASER's key executives shall be prominently displayed in the identified Emergency Response Centre.

6.0 PREMISES AND HOUSE-KEEPING**6.1 ORDERLY WORK-PLACE**

The CONTRACTOR shall maintain a well-managed safe working place in sound clean condition. The CONTRACTOR shall ensure that there is a place for everything and everything in its place so that optimum use is made of valuable floor space with commensurate cleanliness and reduced handling time. He shall ensure that his entire infrastructure including temporary and semi-temporary buildings are kept clean and good repair.

6.2 GOOD LIGHTING-NATURAL AND ARTIFICIAL

The CONTRACTOR shall provide lighting natural or artificial to enable work Processes are carried out safely. Artificial lighting shall be adequate especially in the nights and emergencies. The lumen levels shall meet the statutory requirements.

6.3 VENTILATION-NATURAL AND ARTIFICIAL

The CONTRACTOR shall ensure that workplaces are ventilated with at least prescribed amount of clean or cleaned fresh air of a suitable temperature, especially where toxic or irritating substances are present such as welding, vehicle exhaust fumes, irritating dusts, organic solvents or any other inimical atmosphere creating health hazards or safety.

6.4 WELFARE AND HYGIENE FACILITIES

The CONTRACTOR shall provide welfare facilities to ensure a high standard of cleanliness for all activities and rest. The CONTRACTOR shall provide facilities for his employees such as ablutions, toilets change rooms, kitchens and cafeterias adequate and in a clean and hygienic state.

6.5 POLLUTION TO GROUND, AIR AND WATER

The CONTRACTOR shall strive to exceed established minimum performance norms in waste and pollution control. All drains shall be identified as clean water and foul water to aid non-armful disposal.

6.6 TRAFFIC ROUTES AND AISLES

The CONTRACTOR shall arrange to separate pedestrian and vehicular including material handling equipment traffic wherever possible and maintain the routes clear of obstruction. To ensure safety of users clear painted demarcation is encouraged as a discipline to be enforced.

SITE GRADING WORK**6.7 STACKING AND STORAGE PRACTICE**

6.7.1 The CONTRACTOR shall ensure stacked material is bonded on a stable and level footing capable of carrying the mass of the stack. Adequate clearances shall be provided between the sides of the stack and top to facilitate unimpeded access to service equipment like overhead wiring, cranes, forklifts and firefighting equipment, and hoses. Circular items shall be sufficiently choked with wedges not with odd bits of materials. Free-standing stacks of gunny bags and sacks such as cement bags shall be stacked to prescribed safe-stack heights with layers formed for stable bonding, preventing slippage causing accidents. Stacking against walls shall not be permissible.

6.7.2 The CONTRACTOR shall maintain the premises and surrounding areas in clean and clear manner with safe access and egress. There shall be sufficient and adequate storage racks, shelving, bins and pallets and material handling equipment to stack his construction materials such as pipes structural and construction enabling materials. Unwanted materials shall be promptly moved away for efficient material movement.

6.8 STORAGE OF HAZARDOUS MATERIALS

6.8.1 Hazardous materials shall be stored on solid bases. Solid bases shall include compacted earth, pallets, concrete or asphalt platforms or paving. Hazardous materials shall be stored, stacked and secured to prevent toppling, spillage or other unintended dislodgement. Aisles and clearances shall be as detailed under 6.6 above. Hazardous materials shall be stacked in such a manner that an observer standing in the aisle can read their labels and legend.

6.8.2 Each hazardous material contained shall be identified by a legible or legend as per governing statute, code or regulation. The label shall identify the item, quantity and appropriate warnings.

6.8.3 Hazardous materials which if brought in contact with each other could react or pose equal or greater hazard than either material stored alone shall be stored at a distance not lesser than twenty feet apart.

6.8.4 Warnings shall be posted and maintained in a legible condition at all access points clearly defining the specific hazardous nature of the stored materials such as 'Corrosive', 'Flammable', 'Explosive', 'Oxidizing', 'Compressed Gas' or other hazardous nature.

6.8.5 Where hazardous materials are unloaded in the CONTRACTOR's storage maintained at site in a semi-permanent installation, such installations shall be approved by relevant statutory bodies. Copies of licences for storage shall be lodged with the PURCHASER. The containers and storage shall display quantities stored with name of

SITE GRADING WORK

the hazardous material and the UN hazard classification label in prescribed colour code prominently painted in a conspicuous manner

6.8.6 The CONTRACTOR shall inspect the hazardous storages and installations on a daily basis and shall undertake any requisite preventive action necessary to avoid safety risks

6.9 STORAGE OF FLAMMABLE AND EXPLOSIVE MATERIALS

6.9.1 The CONTRACTOR shall secure flammable and or explosive materials against accidental ignition.

6.9.2 Storage facilities for flammable liquids such as petrol, diesel kerosene and lubricants as well as the quantities stored shall meet the legal and statutory requirements. These shall be stored in approved fire-resistant rooms with a sump of sufficient volume to contain any spillage.

6.9.3 The electrical fittings to be flame -proof and on a strict maintenance schedule. Containers shall be appropriately bonded in receptacles into which low flash point fuel is decanted.

6.10 COMPRESSED GAS CYLINDERS

Compressed gas cylinders shall be stored and secured in the upright position at safe distances from shielded from welding and cutting operations. Compressed gas cylinders in storage shall be shut off and torches, hose and manifolds removed and capped. Cylinders shall be periodically checked for leakages. Storage shall meet requirements of Gas Cylinder Rules 1981. Compressed gas storages shall be provided with safety relief valves, Safety valves and rupture disc to protect them overpressures. Appropriately designed to ensure their continued availability in the face of process changes

6.11 SCRAP AND REFUSE BINS-REMOVAL SYSTEM

The CONTRACTOR shall ensure that he has sufficient waste bins that are identified for different wastes and maintained in clearly demarcated areas. Wastes with oily or other ignitable materials such as oily cotton wastes and hand gloves shall be stored separately with covers to prevent fires and shall be made of metal. Different wastes shall be segregated and stored separately and disposed off. These shall be emptied at routine intervals to prevent that they do not overflow with wastes.

**SITE GRADING WORK
CHECKING CALIBRATION OF THEODOLITE**

Project:		System:	
Client / Job No.:		Building / Str.:	
Contractor:		Ref. Documents:	1)
Description:			2)

Instruments: a) Make:

b) Model No.:

c) Serial No.:

Temperature:

Date of Checking:

For Horizontal Angle:

Instrument Position No.	Face Left		Face Right		Remark
	Angle A Vernier-I	Angle A Vernier-I	Angle A Vernier-I	Angle A Vernier-I	
1					
2					
3					
4					
5					
6					

For Vertical Angle:

Instrument Position No.	Face Left		Face Right		Remark
	Angle A Vernier-I	Angle A Vernier-I	Angle A Vernier-I	Angle A Vernier-I	
1					
2					
3					
4					
5					
6					

Note: 1. Angle measured by Face Left & Face Right with both Vernier shall be same.
2. Difference/s in angle measurement signifies Instrument Error and appropriate corrective action shall be taken by the Contractor to eliminate the error.

	Contractor	APL	Remarks (If any)
Name			
Designation			
Signature & Date			

**SITE GRADING WORK
SURVEY CHECK AT START OF CONSTRUCTION**

Project:		System:			
Client / Job No.:		Building / Str.:			
Contractor:		Ref. Documents:	1)		
Description:			2)		
1.0 SURVEY CHECK (At Start of Construction)					
1.1 VERIFY					
<input type="checkbox"/> Accuracy of reference points					
<input type="checkbox"/> Existing Bench Marks					
<input type="checkbox"/> Co-ordinates on Existing Grid					
<input type="checkbox"/> New Plant Location					
<input type="checkbox"/> New Plant Location					
<input type="checkbox"/> Calibration of Instruments					
1.2 INSTALL					
<input type="checkbox"/> New Grid Pillars for Use by all Survey Teams					
<input type="checkbox"/> Mark Co-ordinates, Elevation of Pillars on Drawing/s					
<input type="checkbox"/> Protection of Grid Pillars / Benchmarks (Old/New)					
1.3 EXISTING UNDERGROUND / OBSTACLES					
<input type="checkbox"/> Verify & Mark Location of Existing Interferences					
-sewer					
-Cable					
-Piping					
-Piles					
-Foundations					
-Others (tree.....)					
<input type="checkbox"/> Indicate on drawing/sketches (attached)					
2.0 Condition of 'As built' Drawings (Where applicable)					
<input type="checkbox"/> Are as built drawings in accordance with actual situation?					

	Contractor	APL	Remarks (If any)
Name			
Designation			
Signature & Date			

SITE GRADING WORK

MOISTURE/ DENSITY RELATION & STANDARD/ MODIFIED PROCTOR TEST OF SOIL

Project:		System:	
Client / Job No.:		Building / Str.:	
Contractor:		Ref. Documents:	1)
Description:			2)

Material : _____ Location: _____ Depth : _____ Source : _____

No. of Layers 3 / 5 No. of Blows 25 / 55 Wt..of Rammer 2.6 Kg /4.9 Kg Ht. of Drop 310 /450 mm

Note : 1) 55 blows of 4.9 kg hammer are for soil containing material up to 37.5 mm size.

2) 25 blows of 2.6 kg hammer are for material up to 19 mm size.

Trial No.	1	2	3	4	5
a) Wt of Soil + Mould (g)					
b) Wt. of Mould (g)					
c) Wt. of Soil (a - b) (g)					
d) Volume of Mould (cm ³)					
e) Bulk Density (c / d) (g/cm ³)					
Container No.					
f) Wet Soil + Con. (g)					
g) Dry Soil + Con. (g)					
h) Wt. of Water (f - g) (g)					
i) Wt. of Con. (g)					
j) Wt. of Dry Soil (g- i) (g)					
k) Moisture Content (h x 100) / j (%)					
l) Dry Density e 1+ k/100 (g/cm ³)					

Refer IS : 2720 – Part VII & 8. Minimum 5 determinations required.

Result : Modified / Standard Proctor Density = g / cm³ (corresponding to OMC)

Optimum Moisture Content (from Graph) =

	Contractor	APL	Remarks (if any)
Name			
Designation			
Signature & Date			

**SITE GRADING WORK
DETERMINATION OF DRY DENSITY OF SOIL BY CORE CUTTER METHOD**

Project:		System:	
Client / Job No.:		Building / Str.:	
Contractor:		Ref. Documents:	1)
Description:			2)

Sample / Source : Volume of core cutter (Vc) : cm³

Location : Proctor Density : gm / cm³

Tested by : Optimum Moisture Content : %

Sr. No	Determination No	1	2	3	4	5	6
	Chainage / Location						
	Wt. of core + wet soil = Ws						
	Wt. of core cutter = Wc						
	Wt. of wet soil = Ws – Wc						
	Bulk (Wet) Density $Wd = \frac{Ws - Wc}{Vc}$						
	Wt. of container + wet soil = W2.						
	Wt. of Container = W1						
	Wt. of Container + dry soil= W3						
	Wt. of water						
	Moisture Content= $W\% = \frac{W2 - W3}{W3 - W1} * 100$						
	Dry Density = $\frac{Wd}{(1+W/100)}$ gm / cm ³ .						
	Average Dry Density of Soil.						

Notes : 1) Refer IS : 2720 – Part 29.

2) Three determinations constitute one test

Remarks :

	Contractor	APL	Remarks (if any)
Name			
Designation			
Signature & Date			

SITE GRADING WORK

DETERMINATION OF DRY DENSITY OF SOIL BY SAND REPLACEMENT METHOD

Project:		System:	
Client / Job No.:		Building / Str.:	
Contractor:		Ref. Documents:	1)
Description:			2)

Sand Calibration :

1. Weight of sand in cone – $W_2 = \text{gms}$
2. Volume of the calibrating container – $V = \text{cm}^3$
3. Weight of sand + cylinder before pouring – $W_1 = \text{gms}$
4. Weight of sand + cylinder after pouring – $W_3 = \text{gms}$
5. Weight of sand to fill calibrating container $W_a = W_1 - W_3 = \text{gms}$
6. Bulk Density of Sand $Y_s = W_a / V = \text{gm/cm}^3$

Sr. No.	Determination No.	1	2	3	4	5	6
1	Chainage / Location						
2	Wt. of wet soil from hole = W_w Gms.						
3	Wt. of Sand + Cylinder before pouring = W_1 gms.						
4	Wt. of sand + cylinder after pouring = W_4 gms.						
5	Wt. of sand in hole = $W_b = (W_1 - W_4)$ gms.						
6	Bulk Density of Soil $Y_b = W_w \times Y_s$ gm / cm^3						
7	Wt. of container = W_c gms.						
8	Wt. of container + wet soil = W_s gms.						
9	Wt. of container + dry soil = W						
10	Wt. of oven dry soil = $W_d = W - W_c$ gms.						
11	Moisture content % = $w = ((W_s - W_c) - W_d * 100) / W_d$						
12	Dry Density $Y_d = \frac{Y_b}{1 + w/100}$ gm/cm ³						
13	Average Dry Density of Soil						

Notes : 1) Refer IS : 2720 – Part 28.

2) Three determinations constitute one test.

Remarks : _____

	Contractor	APL	Remarks (if any)
Name			
Designation			
Signature & Date			

**SITE GRADING WORK
CLEARANCE CARD FOR MURRUM FILLING**

Project:		System:	
Client / Job No.:		Building / Str.:	
Contractor:		Ref. Documents:	1)
Description:			2)

1) Source of Murrum :

2) Embankment No. :

3) Location of filling : X from _____ to _____

Y from _____ to _____

4) Layer No. / RL :

5) Cross – section of previous layer checked : OK / Not OK.

6) Density of previous layer conformed to the specified limits : Yes / No.

(Test Report No. _____).

7) Observations (if any) :

8) Clearance for laying Murrum layer : Yes / No.

	Contractor	APL	Remarks (if any)
Name			
Designation			
Signature & Date			

SITE GRADING WORK**SECTION-F****DETAILED SITE PROGRESS REPORT**

SL. No.	Area	Activity	Unit	Quantity	Progress for the month		Cum progress till date	Target for the next month	Constraint s if any	Reason for delay/Remarks
					Scheduled	Achieved				

SITE GRADING WORK**SCHEDULE OF DEVIATIONS FROM TECHNICAL SPECIFICATIONS**

The BIDDER shall indicate below all deviations from the Technical Specifications.

Sl. No	SECTION	SPECIFICATION NO	PARA NO.	DEVIATION

The BIDDER hereby certifies that the above mentioned are the only deviations from the PURCHASER's/OWNER's Technical Specifications for this Enquiry Document. The BIDDER further confirms that in the event any other data and information presented in the BIDDER's proposal and accompanying documents including drawings and catalogues etc. are at variance with the specific requirements laid out in the PURCHASER's/OWNER's Technical Specifications, the latter shall govern and shall be binding on the BIDDER without any price implication.

COMPANY SEAL

Signature

Name

Designation

Company

Date

SITE GRADING WORK**SCHEDULE OF DEVIATIONS FROM GENERAL CONDITIONS**

The BIDDER shall indicate below all deviations from the General Conditions.

Sl. No	SECTION	SPECIFICATION NO	PARA NO.	DEVIATION

The BIDDER hereby certifies that the above mentioned are the only deviations from the PURCHASER's/OWNER's General Conditions for this Enquiry Document. The BIDDER further confirms that in the event any other data and information presented in the BIDDER's proposal and accompanying documents including drawings and catalogues etc. are at variance with the specific requirements laid out in the PURCHASER's/OWNER's General Conditions, the latter shall govern and shall be binding on the BIDDER without any price implication.

COMPANY SEAL

Signature

Name

Designation

Company

Date

SITE GRADING WORK**SCHEDULE OF EQUIPMENT AND MACHINERY**

The BIDDER shall indicate below the equipment and erection machinery he has in his possession and proposes to bring to the site, in case the work is awarded to him.

SI. No	TYPE AND DESCRIPTION OF THE EQUIPMENT AND ERECTION MACHINERY	NUMBER IN POSSESSION	NUMBER PROPOSED TO BRING TO THE SITE

The BIDDER hereby confirms that the quantity and type of equipment and erection machinery he will employ for the site work will not be less than those listed above. The BIDDER also agrees to bring more equipment and erection machinery, if so warranted, in the opinion of the PURCHASER/ OWNER to meet the construction norms and construction schedule.

COMPANY SEAL

Signature

Name

Designation

Company

Date

SITE GRADING WORK**SCHEDULE OF RATES FOR LABOUR**

The BIDDER shall indicate below the all-inclusive prices of labour assumed for the purpose of this CONTRACT.

SI. No	SUPPLY OF LABOUR	NORMAL TIME RATE FOR 8 HRS Rs. PER DAY	OVER TIME RATE Rs. PER HOUR
1	Unskilled Labour - Male		
2	Unskilled Labour - Female		
3	Skilled Labour - Male		
4	Mason		
5	Carpenter		
6	Painter		
7	Fitter - Reinforcement		
8	Fitter - Structural steel		
9	Welder		
10	Rigger		
11	Welders with Welding Equipment		
12	Gas Cutter with all Equipment		
13			
14			
15			
16			

The PURCHASER shall have the right to ask the CONTRACTOR to supply labour for any work at the rates quoted above.

COMPANY SEAL

Signature

Name

Designation

Company

Date

SITE GRADING WORK

SCHEDULE OF BIDDER'S EXPERIENCE

The BIDDER shall indicate below a list of similar jobs executed by him, to whom a reference may be made by the PURCHASER.

Sl. no	NAME, ADDRESS TEL. NO. FAX NO. E-MAIL ID OF CLIENT AND PROJECT NAME	PURCHASER ORDER/ CONTRACT NO. DATE	BRIEF DETAILS OF EQUIPMENT SYSTEM SUPPLIED	SCOPE OF SERVICES (SEE LEGEND)	CONTRACT PRICE IN Rs.	SCHEDULED DATE OF COMPLETION	ACTUAL DATE OF COMPLETION	REASON FOR DELAY IN COMPLETION, IF APPLICABLE	REMARKS

LEGEND: E - ERECTION, S - SUPPLY, SUP - SUPERVISION OF ERECTION, TC - TESTING AND COMMISSIONING

COMPANY SEAL

Signature

Name

Designation

Company

Date

SITE GRADING WORK

SCHEDULE OF PRE-FILLED AGREED TERMS AND CONDITONS

Bidder Name: M/s.

ENQUIRY No- **APL/Proj04/Site Grading/Tank farm/Methanol/2015/405**

Bidder's Offer Ref. No. :

Tel No. _____ Fax no _____

Email:

Contact Person: _____ Mobile No.

1. Duly signed & stamped copies of this "PATC", with all the clauses duly confirmed/ precisely replied to by the Contractor, shall be enclosed with each and every set of Contractor's un-priced quotation.

2. All the commercial terms and conditions shall be indicated by Contractor in this format only and nowhere else in his quotation. However, in case the space for Contractor's reply is not sufficient against a particular question, the Contractor shall furnish same by way of separate annexure attached to this "PATC", indicating cross-reference of respective clauses.

3. Failure on the part of Contractor in not returning this duly filled-up "PATC" with all the sets of un-priced quotation and/or submitting incomplete replies may lead to rejection of Contractor's quotation".

SL. No	Description of the Terms & conditions		Contractor's offer
1	Contract Terms	Contract shall be awarded to sole bidder on Overall Lowest basis for entire scope of ENQUIRY	<i>Confirmed</i>
2	Security Deposit	Contractor shall submit Security deposit of amount and duration as per SCC / GCC	<i>Confirmed</i>
3	Liquidated Damages	Liquidated Damages shall be applicable as per SCC / GCC. Please confirm your acceptance.	<i>Confirmed</i>
4		NOTE: <ul style="list-style-type: none"> • In case of Rate Contracts, the Liquidated damages, accepted above, will be levied on the total value of our respective indents. • In case any deviation is taken by you, from our standard LD Clause, while evaluating your offer, your offer will be loaded to the extent of your non-acceptance to our LD Clause. 	
5	Composite VAT	Please specify whether Composite VAT is Nil or is included in your quoted rate or is Extra.	

Bidder Name, Sign & Company Seal:

SITE GRADING WORK

SCHEDULE OF PRE-FILLED AGREED TERMS AND CONDITONS

SL.No	Description of the Terms & conditions	Contractor's offer		
6	Composite VAT In case Composite VAT is extra, please specify the rate, in terms of percentage of Basic Price. • This will be loaded while evaluating your offer.	_____ %		
7	CENVAT Benefit on Composite VAT that CLIENT can avail			
8	In case of Composite VAT applicable, please indicate your TIN No.			
9	NOTE: In case of Composite VAT, please note the following point: (1) In case you have a valid TIN Number, OWNER can claim Input tax credit and your offer will be evaluated by off-setting the Input tax credit. (2) In case you do not have a valid TIN number, your offer will be evaluated without off-setting the Input tax credit.			
10	Composite Service Tax Please specify whether Composite Service Tax is Nil or is included in your quoted rate or is Extra	(Nil)	(Included)	(Extra)
11	In case Composite Service Tax is extra, please specify the rate, in terms of percentage of Basic Price. This will be loaded while evaluating your offer.			
12	Rebate Benefit on Composite Service Tax that CLIENT can avail			
13	In case of composite Service Tax applicable Indicate Service Tax Registration No.			
14	Variation in Composite VAT/ Composite Service Tax/ other taxes & duties Only statutory variations, if any, in the present rate of Composite VAT/ Composite Service Tax, up to the contractual delivery period shall be to Owner's account subject to documentary evidence to be furnished by the bidder. Confirm compliance.			
15	Any variation in Composite VAT/ Composite Service Tax at the time of work execution for any reasons, other than statutory, including variations due to turnover, shall be borne by bidder. Confirm compliance.			

Bidder Name, Sign & Company Seal:

SITE GRADING WORK

SCHEDULE OF PRE-FILLED AGREED TERMS AND CONDCTIONS

SL. No	Description of the Terms & conditions		Contractor's offer
16		Works will be eligible for CENVAT Credit and Bidder shall furnish all documents as required to avail the same. Confirm compliance.	<i>Confirmed</i>
17		If Composite VAT/ Composite Service Tax indicated by bidder as nil [or] not applicable at present due to any reason, the same shall be borne by Supplier if it becomes applicable later on. Confirm compliance.	<i>Confirmed</i>
18		Any new or additional taxes/ duties and any increase in the existing taxes/duties imposed after contractual delivery period shall be to BIDDER'S account whereas any corresponding decrease shall be passed on to the Owner. Confirm Compliance	<i>Confirmed</i>
19	Payment Terms	As per SCC / GCC (whichever applicable). Confirm compliance.	<i>Confirmed</i>
20		In case of any deviations, from our standard payment terms (such as Documents through bank, by Demand Draft, etc), all bank charges will be to your account. Please confirm your acceptance	<i>Confirmed</i>
21		In case of delayed delivery, invoices shall be submitted after deducting price reduction towards delayed delivery as mentioned in SCC / GCC. Confirm Compliance.	<i>Confirmed</i>
22	Completion Period	Please confirm completion period as per Section A – Scope of Enquiry Document	<i>Confirmed</i>
23		NOTE: (1) The completion period will be reckoned from the date of our LOI / Purchase Order / date of Contract as mentioned in Section A / C (2) In case of Rate Contracts, the delivery period will be reckoned from the date of our each Indent.	
24	Guarantee	Shall be as per SCC / GCC. Please confirm your acceptance	<i>Confirmed</i>
25	Validity of your offer	Please confirm that your offer is valid, for acceptance, for a period as mentioned in ITB.	<i>Confirmed</i>

Bidder Name, Sign & Company Seal:

**SITE GRADING WORK
SCHEDULE OF PRE-FILLED AGREED TERMS AND CONDCTIONS**

SL. No	Description of the Terms & conditions		Contractor's offer
26		<ul style="list-style-type: none"> In case the validity of your offer is shorter, your offer is liable for rejection. 	<i>Confirmed</i>
27	Firmness of prices	Quoted prices shall remain firm and fixed till complete execution of the order. Confirm Compliance.	<i>Confirmed</i>
28	Arbitration Clause	Please confirm your acceptance to our Arbitration Clause as per SCC / GCC.	<i>Confirmed</i>
29	Termination Clause	Please confirm your acceptance to our Cancellation clause as per SCC / GCC.	<i>Confirmed</i>
30	NSIC Unit	Please confirm your registration with NSIC, for any / all items of this Price Enquiry.	<i>Confirmed</i>
31		In case you are registered with NSIC, please confirm that you have not succeeded in securing orders for the same item, in competition (i.e. without price preference) with the large scale units, during the preceding 12 months.	<i>Confirmed</i>
32		<ul style="list-style-type: none"> If registered, please enclose a copy of the valid NSIC registration certificate, applicable for the items offered by you. Price preference shall be considered for units registered with NSIC, as per the prevailing government guidelines, rules & regulations, as applicable. 	
33	PBG	Please confirm that PBG will be submitted by you as per SCC / GCC in OWNER's prescribed format.	<i>Confirmed</i>
34	Inspection	Shall be as per SCC / GCC	<i>Confirmed</i>
35	Acceptance to Other Terms and Conditions	Acceptance to General Conditions of Contract (GCC). Confirm Compliance.	<i>Confirmed</i>
36		Acceptance to Special Conditions of Contract (SCC). Confirm Compliance.	<i>Confirmed</i>
37		Confirm acceptance to Technical Specifications / Notes, etc., as per ENQUIRY without any deviation.	<i>Confirmed</i>

Bidder Name, Sign & Company Seal:

SITE GRADING WORK

SCHEDULE OF PRE-FILLED AGREED TERMS AND CONDCTIONS

SL. No	Description of the Terms & conditions		Contractor's offer
38		Deviation if any to ENQUIRY terms and conditions shall be brought out strictly as per Doc. No. APL.M4-991 & APL.M4-992 of Enquiry document.	<i>Confirmed</i>
39		If any discrepancies noted between the BIDDERS's own quoted Price Schedule and the ENQUIRY Attachment Sheets / Schedule of Price then, the contents of ENQUIRY Attachment Sheets / Schedule of Price shall only prevail for all contractual purposes. Confirm compliance.	<i>Confirmed</i>
40		Whether any of the Directors of BIDDER is a relative of any Director of Owner or the BIDDER is a firm in which any Director of Owner or his relative is a Partner or the BIDDER is a private company in which any director of Owner is a member or Director.	<i>Confirmed</i>
41		Please confirm you have not been banned or delisted by any Government or Quasi Government agencies or PSUs or other private firms. If you have been banned, then this fact must be clearly stated. This does not necessarily because for disqualification. However if this declaration is not furnished the bid shall be rejected as non-responsive.	<i>Confirmed</i>
42		Deviations to Terms & Conditions shall lead to loading of prices as per special conditions of contract (SCC) / ITB or rejection of offer. Please confirm.	<i>Confirmed</i>
43		Any claim arising out of order shall be sent to Owner within 3 months from the date of last dispatch. In case the claim is received after 3 months, the same shall not be entertained by Owner. Confirm Compliance.	<i>Confirmed</i>
44		Terms and conditions, if any, appearing in quotation, shall not be applicable in the event of order. In case of contradiction between the confirmations given herein and terms & conditions mentioned elsewhere in the offer, the confirmation given herein shall prevail. Confirm compliance.	<i>Confirmed</i>

SITE GRADING WORK

Bidder Name, Sign & Company Seal:

SCHEDULE OF PRE-FILLED AGREED TERMS AND CONDITONS

SL. No	Description of the Terms & conditions		Contractor's offer
45	<p>Contractor to quote as per the requirements and terms and conditions of the ENQUIRY Document including all the enclosures and not to stipulate deviations/ exceptions. Once quoted, the Contractor shall not make any subsequent price changes, whether resulting or arising out of any technical/ commercial clarifications and details sought on any deviations, exceptions or stipulations mentioned in the Contractor offer unless any amendment to ENQUIRY Document is issued by OWNER. Similarly, no revision in quoted price shall be allowed should the deviations stipulated by Contractor are not accepted by OWNER and are required to be withdrawn by Contractor in favour of meeting the requirements and complying to the terms and conditions of the ENQUIRY Document. Any unsolicited proposed price change by the Contractor is likely to render the Contractor offer liable for rejection. Confirm compliance.</p>		<i>Confirmed</i>

Bidder Name, Sign & Company Seal:

Assam Petro-chemicals Limited

Namrup. Assam

Enquiry Document No

APL/Proj/04/Site Grading/Tanker Parking/2016/407

SITE GRADING WORK

Ref: APL/Proj/Civil/04/2015/631

Dated:

NOTICE INVITING TENDER

Assam Petro-Chemicals Ltd, Namrup, a Govt. of Assam Undertaking invites item rate tender under two bid system from reputed contractor for the following works:

Sl. No.	NIT No.	Name of Work	Estimated cost (Rs.)	Earnest Money (Rs.)
1.	APL/Proj/04/Site Grading/Tanker Parking /2015/407	Site grading work at a part of integrated project site, Assam Petro-Chemicals Ltd., Namrup	Rs.34,48,163.00	70,000.00

Any Extension or change will appear in APL Web site.

Sd/- MANAGING DIRECTOR

SITE GRADING WORK
DETAILS OF PRESENT COMMITMENTS OF SIMILAR NATURE

Sr. No.	Name and Address of Client	Type of work	Value of Contract	Date of Commencement of work	Schedule Completion	% Completion	Expected date of completion

SEAL OF TENDERER

SIGNATURE OF TENDERER

Note: 1. Append separate sheet, if necessary.

2. Enclose self attested documentary Proof i.e. copy of LOI /WO in support of the above.

SITE GRADING WORK

DETAILS OF PAST PERFORMANCE (Mention works of similar nature only)

Sr. No.	Name and Address of Client	Type of work	Value of Contract	Date of Commencement of work	Completion		Remarks
					Contractual	Actual	

SEAL OF TENDERER

SIGNATURE OF TENDERER

Note: 1. Append separate sheet, if necessary.

2. Enclose self attested documentary Proof i.e. copy of LOI/WO & Completion Certificate in support of the above.