

URANIUM CORPORATION OF INDIA LIMITED
(CIN : U 12000 JH 1967 GOI 000806)
JADUGUDA
DIST : EAST SINGH BHUM
JHARKHAND-832102

PHONE : (0657) 2730122, 2730222, 2730353

FAX : (0657) 2730322

TENDER DOCUMENT

FOR

**LAYING HORIZONTAL FILTER AND COVERING
WITH 1 MTR. ROCK FILL MATERIAL FOR 4TH
STAGE TAILINGS DAM AT JADUGUDA. (EAST SIDE).**

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FOR

**LAYING HORIZONTAL FILTER AND COVERING WITH
1 MTR. ROCK FILL MATERIAL FOR 4TH STAGE
TAILINGS DAM AT JADUGUDA. (EAST SIDE).**

To be submitted on 16/10/2014 up to 03.00 P.M.

**Tenders shall be opened in presence of tenderers who may present at 03.30
P.M. on 16/10/2014 in the office of D.G.M.(Per)-IRs.**

Issued to :-----

(Name of Contractor / Tenderer)

Signature of Officer issuing the Tender document :.....

Designation :.....

Date :

URANIUM CORPORATION OF INDIA LIMITED
JADUGUDA

TENDER DOCUMENT

FOR

**LAYING HORIZONTAL FILTER AND COVERING WITH
1 MTR. ROCK FILL MATERIAL FOR 4TH STAGE
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INDEX

<u>SECTION</u>	<u>DESCRIPTION</u>
<u>Part - I</u>	
I	NOTICE INVITING TENDER
II	GENERAL INFORMATION & SCOPE OF WORK
III	CONDITIONS OF TENDERING
IV	FORMS
V	GENERAL CONDITIONS
VI	SPECIAL CONDITIONS
VII	TECHNICAL SPECIFICATION
VIII	SCHEDULE OF ITEMS
IX	DRAWINGS
<u>Part - II</u>	
I	SCHEDULE OF ITEMS WITH DULY FILLED IN QUANTITIES, RATE, AMOUNT AND TOTAL VALUE OF THE WORK.

URANIUM CORPORATION OF INDIA LIMITED
JADUGUDA

PART – I
(TECHNICAL AND COMMERCIAL PART)

OF

NIT NO : 12/JAD/Civil (Mill) Dated : 10/09/2014

TENDER DOCUMENT

FOR

**LAYING HORIZONTAL FILTER AND COVERING WITH
1 MTR. ROCK FILL MATERIAL FOR 4TH STAGE
TAILINGS DAM AT JADUGUDA. (EAST SIDE).**

Submitted at 03.00 P.M. on **16/10/2014** (Dated).

Tender shall be opened in presence of Tenderers who may present at
03.30 P.M. on **16/10/2014** in the office of D.G.M. (Per) IRs.

SECTION --- 1

NOTICE INVITING TENDER

Refno.UCIL/Civ-409/750/2014

Date : 10/09/2014

NIT No : 12/JAD/Civil (Mill)

Sealed item rate open tenders in two parts (Part – I Techno-commercial Part & Part-II Price Part) are invited (Schedule of Quantities in Triplicate in a separate sealed envelope) from experienced , reliable , resourceful and reputed contractors for the following work :-

NAME OF WORK	LAYING HORIZONTAL FILTER AND COVERING WITH 1 MTR. ROCK FILL MATERIAL FOR 4 TH STAGE TAILINGS DAM AT JADUGUDA. (EAST SIDE).
ESTIMATED COST	Rs. 6, 88,78,375.00
PERIOD OF COMPLETION	12 Months
COST OF TENDER DOCUMENT	Rs. 10,000.00
EARNEST MONEY DEPOSIT	Rs. 688764.00
DATE OF DOWNLOADING OF TENDER DOCUMENT FROM	15-09-2014
LAST DATE FOR SUBMISSION OF TENDER (TECH + PRICE PART)	16/10/2014 Upto 3.00 PM
DATE OF OPENING OF TENDER (TECH PART)	16/10/2014 at 3.30 PM
<i>If the office of UCIL, Jaduguda happens to be closed on the last date and time mentioned for any of the above events, the said event will take place on the next working day at the same time and venue.</i>	

- i) The Tenderer's average annual turnover during last 03 years , ending 31st March of the previous financial year i.e. 31-03-2014 should be at least 207 Lakhs.
- ii) Experience of having successfully completed work of drainage filter comprising of sand and gravel / stone chips with minimum Quantity of 05,000 M³ each
- iii) The party should have completed similar type of works in last 07 years. Only the following Tailings dam , Ash dam , Water Retaining dam.
- The parties not satisfying the above mentioned qualification criteria/failing to submit relevant documents as per above will be summarily rejected.

Tenderers should enclose relevant document (copy of work order with details Schedule of Quantity , completion certificate etc) in support of their credential to justify their qualification as mentioned above in the technical part of the offer.

Detail qualification criteria is available in tender document. Full details , specifications , terms and conditions of work shall be available in the Tender Document for above N.I.T. which can be downloaded from our web site from 15/09/2014 onwards. The downloaded tender document shall be accepted along with cost of tender document in the form of demand draft drawn on SBI Jaduguda in favour of Uranium Corporation of India Limited. Fax or e-mail tender will not be entertained. Tenders received without E.M.D. , cost of tender document , service tax code no. , and P.F. registration no. will be summarily rejected.

Sealed Tenders will be received in tender box kept at the office of D.G.M. (Pers) IRs. , Jaduguda on or before 16/10/2014 up to 3.00 P.M. and will be opened on stipulated date and time at Jaduguda by Chairman & Managing Director or his representative(s) in presence of tenderers who may like to be present. The successful tenderes shall have to comply with provision of Contract Labour (Regulation & Abolition) act 1970 and rule appended there under if applicable to him.

The Corporation reserves the right to accept or reject or cancel any or all Tender(s) either in full or part thereof or to split up if necessary without assigning any reasons whatsoever. NIT is also displayed in web site of the Corporation www.ucil.gov.in.

For Chairman & Managing Director
URANIUM CORPORATION OF INDIA LIMITED

DISTRIBUTION (Notice Boards):-

Mines Office : TMD / NWP / JAD / Bhatin / Bagjata / MLD / BND - Estate Officer : TMD/NWP/JAD

Site Officer (Mill) : TMD / JAD Civil Office : TMD / NWP / JAD – Mill

Old Adm Building - JAD Time Office : TMD / NWP / JAD

Copy to :

- 1 DGM (A/cs) HOD , Jadugoda |
2. DGM (Pers) IRs :- For information and pl. depute your representative during tender opening.
3. A.A.O. (Central Pers) JAD. |

URANIUM CORPORATION OF INDIA LIMITED
(A GOVERNMENT OF INDIA ENTERPRISE)
P.O. JADUGUDA MINES, DIST: EAST SINGHBHUM,
JHARKHAND --- 832 102

DETAIL OF NOTICE INVITING TENDER

1. Sealed item rate Tenders are invited on behalf of the Chairman and Managing Director, Uranium Corporation of India Limited, Jaduguda Mines for **“LAYING HORIZONTAL FILTER AND COVERING WITH 1 MTR. ROCK FILL MATERIAL FOR 4TH STAGE TAILINGS DAM AT JADUGUDA. (EAST SIDE)”**.
2. The tender shall be in prescribed form and it shall be valid for a minimum period of six months from the date of opening of tender. Should the tenderer modify or withdraw his tender within the said period of six months from the date of opening of the tender, earnest money deposited by the tenderer shall be forfeited.
3. Normally Contractors whose names are borne on the approved list of contractors of CPWD/PWD/MES or local reputed/experienced contractors will be permitted to tender. Not more than one tender shall be submitted by a contractor or by a firm of contractors.
4. No two or more concerns in which an individual as a proprietor and /or a partner shall tender for the execution of the same works, if they do so, all such tenders shall be liable to be rejected.
5. Chairman and Managing Director shall be the Accepting Officer hereinafter referred to as such for the purpose of this contract.
6. NA.
7. Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks contingencies and other circumstances which may influence or effect their tender. A tenderer shall be deemed to have full knowledge of the site, whether he inspects it or not and so no extra charges consequent on any misunderstanding or otherwise shall be allowed.
8. Submission of a tender by a tenderer implies that he has read this notice and other contract documents and has made himself aware of the scope and specifications of the work to be done and of considerations and rates at which stores, tools and plant, etc. will be issued to him by the Corporation and local conditions and other factors bearing on the execution of the works.

9. A tenderer should quote in figures as well as in words rate(s) tendered. The amount for each item should be worked out and the requisite totals given. Special care shall be taken to write rates in figures as well as words and the amounts in figures only in such a way that interpolation is not possible. The total amount shall be written both in figures and in words. In case of words 'PAISE' after the decimal figures, e. g; Rs. 2.15p and in case of words, the words 'RUPEES' should precede and the words 'PAISE' should be written at the end. Unless their rate is in whole rupees and followed by the word "ONLY" it should invariably be up to two place of decimal. The rate mentioned in words shall be considered as final in case of any dispute/ambiguity.
10. All rate shall be quoted on the tender form.
11. In the case of item rate tender, only rates quoted shall be considered. And tender containing percentage below/above the rates quoted is liable to be rejected.
12. The tender for the works shall not be witnessed by a Contractor or contractors who himself/themselves has/have tendered or who may and has/have tendered for the same works. Failure to observe this condition shall render the tender of contractor tendering as well of those witnessing the tender liable to rejection.
13. The tender shall be accompanied by the Earnest Money in any shape as mentioned under relevant clause. Tender received without Earnest Money , Cost of tender document, Service code no , Pan no , & PF no. will be summarily rejected.
14. On acceptance of tender, earnest money will be treated as part of the security deposit. Failure of the successful tenderer to carry out the tendered work shall entail forfeiture of the earnest money and security deposit entirely.
15. The Uranium Corporation of India Limited Jaduguda Mines is connected by both rail and road links and is situated on the Calcutta-Mumbai line of S.E. Rly. at a distance of 232 Kms. from Calcutta and 20 Km from Tatanagar. The name of the Rly. Station is Rakhamines. Jaduguda is at a distance of about 30 Kms. from Tatanagar by road on Tata-Mosaboni road. The main plant is located at about 3 Kms. from the Rakha mines railway station.
16. Uranium Corporation of India Limited, Jaduguda Mines will return the earnest money without any interest, to unsuccessful tenderer on production by the tenderer a certificate of D.G.M (Civil) TMD / Chief Supdt.(Mill) JAD/Chief Supdt. (Civil) Mill JAD.
17. A tenderer shall submit the tender which satisfied each and every conditions laid down in this notice, failing which the tender will be liable to be rejected.
18. The Corporation reserves to themselves the right of accepting the whole or any part of the tender and tenderer shall be bound to perform the same at his quoted rates.
19. Rates quoted by the tenderer should be inclusive of all the taxes, duties and royalty but exclusive of service tax. Service Tax liability will be 50 : 50 of both service provider and service receiver. 6.18 % of 40 % of total contract value shall be borne by UCIL. Balance 6.18 % of 40 % of total contract value will be deposited by contractor to the concerned authority the same shall be reimbursed by UCIL on production of documentary evidence.

20. Contractor will have to follow :- The successful tenderers shall have to comply with provision of contract labour (Regulation & Abolition) Act, 1970, EPF and MP Act, 1952 and Rules framed thereunder, if applicable to him/them.
21. This notice of tender shall form part of the tender document.
22. The down loaded tender document shall be accepted along with cost of tender document in the form of demand draft drawn on SBI Jaduguda in favour of Uranium Corporation of India Limited . Fax or e-mail tender will not be entertained.
23. Tender documents consisting of drawing, specification, schedule of quantities of the various classes of work to be done, the condition of contract and other documents will be available in our web site and it could be down loaded from date and time as mentioned in our NIT.
24. Tender shall be received by D.G.M. (Pers.) IRs. up to 03.00 PM. on **16/10/2014** upto 3.00 PM and shall be opened at 03.30 P.M. on the same day in the presence of tenderers who may be present.
25. The Corporation does not bind themselves to accept the lowest tender or to give any reasons for their decision.
26. Tenderers should submit their price bid (Part-II) in triplicate and techno- commercial part (Part-I) duly signed by the Contractor, failing which the tender will be liable to be rejected.
27. **No escalation whatsoever will be paid or entertained.**
28. The Corporation reserves the right to accept or reject or cancel any or all tender(s) either in full or part thereof or to split up if necessary without assigning any reason whatsoever.
29. The tenderer should mention their price/item rates in figures as well as in words. In case of any dispute ambiguity, the price/rate mentioned in words shall be considered as final.
30. **Award of work is subject to Government approval and all clearances.**
31. The intending tender shall have to produce documentary evidence to prove their past experience, capabilities, proven track record and financial resources to do such type of work. Audited Balance Sheet and \profit and \loss Account are sufficient for proof of financial resources.

For and on behalf of
Chairman & Managing Director
Uranium Corporation of India Limited

Signature

Designation

Date

SECTION –II

GENERAL INFORMATION

&

SCOPE OF WORK

GENERAL INFORMATION: JADUGUDA

- | | | | |
|-----|------------------|---|--|
| 1. | Project | : | As per NIT. |
| 2. | Executing Agency | : | Uranium Corporation of India Ltd.
(A Govt. of India Enterprise)
P.O. Jaduguda Mines,
Dist: East Singhbhum,
Jharkhand- 832 102. |
| 3. | Project Site | : | Jaduguda (Tailings Dam) |
| 4. | Site | : | Jaduguda |
| 4.1 | Location | : | Latitude – 22 ⁰ 4' N
Longitude- 86 ⁰ 16' E |

4.2 Rail and Road Connection:

The Jaduguda Mill and Mines of Uranium Corporation of India Limited is about 30 Kms. from Tatanagar by road on Tata-Mosaboni Road. The nearest Railway Station is Rakha Mines , 228 Kms. from Howrah on the South Eastern Railway(Howrah-Nagpur-Mumbai line) and is 8 Kms. from the plant site. The Corporation is maintaining a beautiful residential colony for the Officers and staff having all the amenities like Shopping complex, Bank, Post Office, School, Hospital and Guest House.

4.3 General Topography:

The Site is located at the foot of a hill which forms its southern boundary. The area is sloping towards north the average gradient being about 1-2%. There are also some undulations in the area. The grade level of the area is about 108 and 109 M above M.S.L.

4.4 Climatic Conditions:

- | | | | |
|-------|---|---|-------------------------|
| i) | Peak ambient temperature | : | 47 ⁰ C |
| ii) | Lowest ambient temperature | : | 4 ⁰ C |
| iii) | Average daily max. temperature in the hottest month
May and June | : | 40 ⁰ C |
| iv) | Average daily min. temperature in the coldest month
December and January | : | 11 ⁰ C |
| v) | Annual Average rainfall | : | 1400 mm |
| vi) | Highest annual Rainfall | : | 1860 mm |
| vii) | Heaviest rainfall in 24 hours | : | 214 mm |
| viii) | Max. relative humidity | : | 100% |
| ix) | Prevalent direction of wind from | : | WEST |
| 4.5 | Seismic condition | : | Zone II as per IS: 1893 |
| 4.6 | Maximum highest flood level | : | 120 M above MSL |

SCOPE OF WORK

The scope of work includes the following works :-

- (a) Before laying of horizontal filter , whole area of horizontal land which will come under construction of dam at toe of the dam is to be stripped minimum 300 mm depth.
- (b) To be levelled and compacted the horizontal land.
- (c) Sand layer of specified thickness is to be laid down over the area of horizontal land and watering on it for compaction.
- (d) Graded crushed stone layer is to be laid down over the sand and properly compacted it by roller.
- (e) Excavation for key trench in all types of soils / rocks is to be carried out.
- (f) Layer of impervious material is to be filled up in designated zone and compacting to specified density at optimum moisture content.
- (g) 150 mm thick rip-rap pitching with stone rock is to be carried out.
- (h) To laying rockfill material of approved quality and grading in designated zone of the dam and compacting to specified density.

The scope of work also include the following for which no extra payment will be made. Therefore , contractor may consider this while quoting their rate of other items as mentioned under bill of quantities for various items of work

- 1). Cutting of grasses in the working area and disposal with in 2.00 K.M.
- 2). Submit ground-level before start the work (Note :- Incase contractor does not submit level , before start of the work , UCIL Engineer Representative shall take and record the level which has to be accepted by the contractor and no further claim shall be entertained in this regard.
- 3). **COMPACTION** : Base and all fillings material must be compacted properly.
- 4). All temporary work for execution of the work like temporary road for transport of material and construction of godown no separate payment will be paid for this work.
- 5). Any equipment , material or services which are not mentioned in the tender document but required for completion of the work in safe and efficient manner shall be deemed to be included.
- 6). The owner reserves the right to add similar work or delete any work from those listed above.

Note :- Contractors are advised to see the area get acquainted with the actual features of the land where work is to be executed and get other related information before quoting their rates for carrying out the work successfully.

SECTION – III

CONDITION OF TENDERING

CONDITIONS OF TENDERING

1.0 PREPARATION OF TENDERS

1.1 TENDERS TO STUDY

- 1.1.1 Before submission of the tender the Tenderers are advised to make themselves fully conversant with the conditions of tendering, General Conditions, Special conditions, Site conditions, specifications, schedules, Drawings and all other relevant information so that no ambiguity may arise in these respects subsequent to the submission of the tender.
- 1.1.2 It shall be the responsibility of the tenderer to request for any missing document. In absence of any such request the Tenderer will be deemed to have received and read all documents.
- 1.1.3 The tenderer shall submit his tender strictly in accordance with the tender specified and terms and conditions laid down in the tender document.

Should there be any discrepancy, in or any doubt, or obscurity to the meaning of any of the clauses of the tender document, or as to any thing to be done or not to be done by the accepted tenderer or as to these instructions observed by the intending tenderer or as to these instructions observed by the intending tenderer, the tenderer must set forth in writing such discrepancy doubt or obscurity, and submit the same in duplicate to the Purchaser (Attn: The Officer of the Purchaser issuing the NIT) with copies in duplicate to the D.G.M. (Civil)TMD / Chief Supdt.(Mill)/ Chief Supdt.(Civil) Mill, Uranium Corporation of India Limited, Jaduguda, so as to reach him as soon as possible, but not later than the date fixed in NIT for such purpose and if no such date is fixed in the NIT, five days before the date fixed for receipt of the tenders. The elucidation given by the Purchaser shall be final and binding on the Tenderers.

- 1.1.4 By submitting a tender for the work, tenderer will be deemed to have satisfied himself by actual inspection of the site and locality of the work, if so required and that the rates quoted by him in the tender will be adequate to complete the work in all respects according to the specifications and other conditions and that he has taken into account all conditions and difficulties that may be encountered during its progress whether or not expressly provided in the tender document but necessary for the completion and maintenance of this work to the entire satisfaction of the Engineer.
- 1.1.5 The tender shall be neatly arranged, plain and intelligible with numbered pages. They should not contain any terms and conditions, which are not applicable to the tender.
- 1.1.6 Insertions, postscripts, additions and alternation shall not be recognized unless confirmed by the tenderer's signature.
- 1.1.7 The tenders shall contain firm prices for the work till completion of the work in all respect. No escalation whatsoever will be paid or entertained.

1.1.8 **Tenders** (Technical as well as Price part) shall be submitted in a manner asked for.

1.2 **Language**

English shall be the ruling language. All tenders, drawings, technical data document and/or correspondences shall be in English.

1.3 **Canvassing prohibited**

Canvassing in any form is strictly prohibited and any tenderer found to have resorted to canvassing shall be liable to have his tender rejected summarily.

1.4 **MISINFORMATION**

If the tenderer deliberately gives wrong information in his tender to create circumstances for the acceptance of his tender, the purchaser reserve the right to reject such tender.

1.5 **DOCUMENTS NOT TRANSFERABLE**

Tender documents are not transferable.

1.6 **NOT MORE THAN ONE TENDER**

Not more than one tender for a work shall be submitted by one contractor or one firm of contractors.

1.7 **TENDER DOCUMENT PROPERTY OF THE PURCHASER**

Tender documents in which tender is submitted by a tenderer shall become the property of the purchaser and the purchaser shall have no obligation to return the same to the tenderer.

1.8 **Tenderer to bear expenses**

The purchaser shall not be liable for any expenses whatsoever incurred by the Tenderer in the preparation of the tender whether his tender is accepted or not even if the purchaser calls for complete withdrawal of invitation of tender.

2.0 **SUBMISSION OF TENDER**

2.1 Tenders to be in two parts.

2.1.1 Unless otherwise instructed to the contrary all tenders shall be submitted in two parts i.e; (I) Part-I: Technical and Part-II: Price Tenders are to be submitted in double covers. The outer cover should contain the three envelopes, each sealed and marked with NIT No. closing date and name of the work tendered for. One envelope should contain Technical proposal (Part-I of the tender) and the second envelope should contain Price proposal (Part-II of the tender) and the third

separate envelope should contain the documents/proof of submission of the earnest money, cost of tender document and all the three envelope should be enclosed in the outer cover, which should be also superscribed with NIT no. date of opening and name of the work quoted for. First of all only Technical part of the offer will be opened and then Price part of only those tenderers who quality technically will be opened at latter date.

2.1.2 LIST OF DOCUMENTS TO BE SUBMITTED IN PART-I

- (a) Tenderer's covering letter.
- (b) Document showing deposit of earnest money, as asked for, in the NIT and cost of tender document in a separate sealed cover and inserting photo/Carbon copy in each copy of the technical bid.
- (c) Filled in proposal exhibit sheets. In case of Price tabulation only confirmation is to be given against each item as regards filling of prices. But the rates of items of work and amount of all the items to be mentioned only in the part-II(Price proposal of the work).
- (d) Signed NIT tender document in the first copy of the tender as per clause 2.2.
- (e) List of jobs executed during last 07 (Seven) years with following informations :-
 - (i) Name of purchaser/employer and name of work.
 - (ii) Scheduled completion time with name and nature of jobs with awarded value.
 - (iii) Actual completion time of the work.
 - (iv) Reasons for delay in completion of the job if any.
 - (v) List of jobs, presently in hand as well as under execution alongwith above information.
- (f) List of construction equipment/Tech. Staff/Manufacturing/Testing facilities available for this contract along with their present conditions/locations.
- (g) Drawing list.
- (h) Other document as may be required to be submitted along with the tender in accordance with Technical specifications, Special conditions and General conditions of NIT Tender Document.
- (i) Financial status, Balance sheet, Profit and Loss Account for last three years.
- (j) Schedule of quantities mentioning description, quantities and units of item without mention of any rate or amount on the same.

2.1.3 LIST OF DOCUMENTS TO BE SUBMITTED IN PART-II (PRICE BID)

- a) Tenderer's covering letter.
- b) Filled in proposal sheets (mentioned under price proposal in NIT tender document) which included the list of items of work quantities of each items, rate quoted and amount computed for all items and total value of work.
- c) Any other documents as deemed necessary.

2.2 NIT TENDER DOCUMENT TO BE SIGNED AND RETURNED

- a) All tender papers, which comprise the following, shall be signed and returned with the first copy of tender under Part-I.
 - ___ Notice Inviting Tender.
 - ___ General Information.
 - ___ Condition of Tendering

- ___ Forms
- ___ General conditions of Contract
- ___ Special conditions of Contract
- ___ Technical Specification
- ___ Proposal Exhibit Sheets

___ **Drawings and documents enclosed with the specifications.**

All pages of tender papers, drawings and documents shall be initialled at the lower right hand corner with ink only and signed by the tenderer or any person holding power of attorney authorising him to sign on behalf of tenderer.

- (b) Filled in proposal Exhibit Sheets.
- (c) Full statement regarding the status and past experience of the tenderer.
- (d) List of construction equipment/manufacturing/Tech. Staff/Testing facilities available for this contract along with their present conditions/locations.
- (e) Document showing Earnest Money Deposit.
- (f) Tenderer's covering letter.
- (g) Other documents as may be required to be submitted alongwith the tender in accordance with Technical Specification, Special conditions of Contract and General Conditions of contract. When the work is awarded and the letter of acceptance issued, these documents shall become an integral part of the Contract. The tenderer shall submit in separate volumes one additional copy of the following documents duly signed by the tenderer without which the tender is liable to rejection.
 - i) Filled in Proposal Exhibit Sheets.
 - ii) Full statement regarding the status and past experience of the tenderer.
 - iii) List of construction equipment/Tech. Staff/Manufacturing/Testing facilities available for this contract along with their present conditions/locations.
 - iv) Documents showing earnest money deposit.
 - v) Tenderer's covering letter.
 - vi) Confirmation that signed tender papers have been enclosed in original copy of tender.

2.3 NUMBER OF COPIES OF TENDER: The tender document may be submitted only one copy with its relevant papers.

2.4 ALL PAGES TO BE SIGNED

All pages of the tenderer's offer drawings and other accompanying documents shall be initialed at the lower right hand corner with ink only and signed where required by the tenderer or any person holding power of attorney authorising him to sign on behalf of tenderer before submission of the tender. All signature shall be dated.

2.5 AUTHORISATION

In the event of the tender being submitted by a firm, it must be signed by each partner thereof, and in the event of the absence of any partner, it shall be signed on his behalf by a person holding a power of attorney authorising him to do so, certified copy of which shall be enclosed. Tender submitted on behalf of complete registered under the Indian Companies Act, for the time being force, shall be signed by persons duly authorised to submit the tender on behalf of the company and shall be accompanied by certified copies of the resolution, extracts of articles of association, special or general power of attorney and other information to show clearly the title authority and designation of persons signing the tender on behalf of the company.

2.6 DELIVERY OF TENDER

- 2.6.1 The completed tender with all accompaiments shall be submitted.
- 2.6.2 Part-I: Technical shall be enclosed in a sealed envelope which shall be superscribed the tender notice number, name of work for which tender is submitted, name of tenderer and date of opening as advertised/notified along with the inscription Part-I : Technical.
- 2.6.3 All the three copies of Part-II : Price, shall be enclosed in a separate securely sealed envelope which shall be similarly superscribed but shall have the inscription Part-II: Price.
- 2.6.4 The above two envelopes shall be enclosed in a Third sealed envelope similarly superscribed and so delivered to the Purchaser's office inviting tender unless otherwise instructed to the contrary to reach him on or before the date and hour fixed for receiving the tender.
- 2.6.5 If forwarded by post, the sealed envelope containing the tender as per clause 2.6.4 above must be enclosed in another envelope properly addressed.
- 2.6.6 Personal delivery is recommended. Tenderers forwarding tender by post shall do so at their own risks and tenders received after due date and hour shall not be entertained.

3.0 VALIDITY OF TENDER

The tender submitted shall be deemed to constitute an agreement between the tenderer and the purchaser whereby such tender shall remain open for acceptance by the Purchaser for a period of six months from the date the tenders are opened. During which period the tenderer shall not withdraw his offer or amend, impair or derogate therefrom. If the tender submitted does not contain all the relevant information or needs clarification on the information furnished and the tenderer is requested to supplement the information or submit clarification, the aforesaid validity period of six months shall be deemed to commence from the date of receipt of the information and clarification called for. Every tenderer is therefore requested to furnish all the relevant information to make the tender complete so as to avoid undue delay in finalization of offers.

Every tenderer shall be deemed to have agreed as aforesaid in consideration of the tender being considered by the purchaser in terms here of, provided the same has been duly

submitted and found to be in order. If the tenderer be notified in writing at the address given in the tender within the said period of six months that has been accepted, he shall be bound by the terms of agreement constituted by his tender and such acceptance thereof by the purchaser until a written contract has been executed in place of such agreement.

The tenderer whose tender has been accepted and so notified shall become the “**Successful Tenderer**”.

4.00.0 EARNEST MONEY

4.01.0 Earnest Money as per Notice Inviting Tender shall be deposited unless otherwise instructed to the contrary in any of the following ways and must accompany the tender document without which the tender will not be considered at all.

(k) In properly executed Bank Drafts drawn in favour of Uranium Corporation of India Limited payable at Jaduguda/Jamshedpur.

(ii) In properly executed Bank Guarantee from a reputed schedule commercial bank in the approved form as enclosed herewith, the Bank Guarantee shall remain valid for six (6) months from the date of opening of Tender with a claim period of three (3) months. In case signing of Contract agreement is delayed beyond the said six (6) months, the validity of this Bank Guarantee shall have to be extended suitably to cover a period of one (1) month after submission of Security Deposit / performance bond.

No cash or cheque in any form will be accepted as earnest money. No interest will be paid on any earnest money or any other guarantee.

4.02.0 In case, the Successful Tenderer fails for any reason to execute such contract agreement and to furnish Security Deposit / performance bond within the time required in the Contract Document, the earnest money shall be retained by the owner as liquidated damage.

The earnest money of unsuccessful Tenderers will be returned within thirty (30) calendar days after execution of the Contract agreement with successful Tenderer.

4 (a) SECURITY DEPOSIT

The total amount of security deposit including the amount of earnest money will be 10% of the awarded value of work. Fifty percent of this amount shall have to be deposited as initial security deposit at the time of execution of the agreement. Balance fifty percent shall be recovered @ 10% from the R.A. Bills till the full amount of security deposit is retained.

Acceptable Mode of payment of Initial Security Deposit :-

- i) For deposit upto Rs. 5000/- : Cash /Demand draft payable at SBI Jaduguda
- ii) For deposit beyond 5000/- and upto Rs. 1.00 Lakhs : Deposit at Call / Terms deposit / fixed deposite etc. of any nationalised Bank duly pledged in favour of UCIL.

For deposit beyond Rs. 1,00,000/- in : In properly executed Bank Guarantee
case of deposit. issued by any National Bank in the approved form as enclosed
herewith.

5.00.1 AWARD OF CONTRACT

The acceptance of a tender and award of contract to one or more than one Tenderer, if considered necessary, rests with the Purchaser. Purchaser has the right to re group the packages under the Tender. It shall not be obligatory on the part of the Purchaser to accept the lowest tender. The Purchaser would be at liberty to accept any tender, lowest or otherwise, in whole or in part and to reject any or all the tenders received, without assigning any reason, and no explanation and compensation can be demanded of him by any Tenderer in respect thereto.

6.00.0 PURCHASER'S EQUIPMENT

Not Applicable.

7.00.0 FOREIGN EXCHANGE

Not Applicable.

8.00.0 TIME OF COMPLETION

Time of completion for the complete package work shall be as mentioned in the NIT. However, the Tenderer shall indicate the earliest possible time for completion of the works. The time shall be reckoned 15 days from date of issue of work order / L.O.I. or handing over the site whichever is later. The work shall be considered finished only if the Engineer-in-charge has issued a certificate to that effect.

9.00.0 OPENING OF TENDERS

Tenders will be opened at the place notified on the scheduled date and time in presence of Tenderer's authorised representatives who are present. Not more than two (2) representatives of each Tenderer shall be permitted to attend the opening of the tenders.

10.0.0 DRAWINGS

Each Tenderer shall forward in connection with his Tender, Drawings (a complete set with each copy of the Tender), if so stated in technical specifications, and the Drawings shall be duly marked so as to connect them with the Tender to the satisfaction of the Purchaser and shall be deposited by the Tenderer with his Tender. All drawings forwarded as part of the Tender whether so required by any reference in the specifications or not shall remain the property of the Purchaser.

11.0.0 SECRECY

The Tenderer (whether his Tender is accepted or not) shall treat the details of the Tender Specifications and other documents attached thereto, as private and confidential. The Tenderer shall take necessary steps to ensure that all persons employed in any work in connection with his tender have noticed that the Indian Official Secret Act 1923 (XIX of 1923) and Indian Atomic Energy Act 1962 (XXXIII of 1962) amended thereafter applied to them and shall continue so to apply even after award of the Contract (Whether his Tender is accepted or not).

12.0.0 The tenderer shall furnish the evidence which satisfies each and every conditions laid down in the notice, failing which the tender will be liable to be rejected.

13.0.0 General information and guidance for contractor

The information given below is only for the Tenderers general guidance and shall not relieve him of the responsibility for fully detailed first hand site investigations of his own before tendering :

13.01.0 Rates: The tenderers are required to quote the rates against all items of the schedule of quantities in words and figures clearly in triplicate (2nd & 3rd copies shall necessary be photo/carbon copy of the original) failure in this respect is liable to tender incomplete.

13.02.0 The tenderer shall submit along with the tender a list of construction equipment and machinery in their possession and which they shall bring at site for these construction work.

13.03.0 If any clarifications regarding specifications, conditions of contract. Or schedule of quantities is required, the same can be obtained by the Tenderer from chief supdt. (Civil) Mill the Uranium Corporation of India Limited , Jaduguda.

13.04.0 If after the tender has been accepted, the tenderer fails to pay the Security Deposit aftet written notice to him of such acceptance, the sum deposited by him as Earnest Money may be forfeited. The tenderer shall not be allowed to increase/withdraw his tender within six moths (the validity period of the offer) from the date of opening of the tender and if he does so the Earnest Money deposit may be forfeited.

13.04.1 The officer inviting tenders shall have the right to reject all or any of the tenders. And will not be bound to accept the lowest.

13.05.0 Each of tender document is required to be signed by the person or persons submitting the tender in his/their hand writing in token of his/their having acquainted himself/themselves

with the General conditions of Contract, General specification. Special conditions etc. as laid down. Any tender with any of the documents not so signed will be liable to rejection.

13.06.0 The tender form must be filled in English and all entries must be made by hand written in ink. All the rate must be filled both in words and figures. If any of the document is missing or unsigned the tender will be considered invalid. All erasure and alternations made while filling the tender must be attested by dated initials of the tenderer. Over writing of figure is not permitted to comply with any of these conditions will render the tender invalid. No advice of any change in rate or conditions after the opening of tender will be entertained.

13.07.0 Tenderer are advised to quote their rate as per NIT Condition only , otherwise tender will be liable to be rejected.

14.0 The tenderer should mention their price/items rates in figures as well as in words. In case of any dispute/ambiguity, the price/rate mentioned in words shall be considered as final. Tender shall be submitted schedule of items(s) in triplicate duly signed and stamped as each page.

15.0 In case of joint venture all participating companies (not more than two partners / participants) should submit all credentials of each participants separately. If Joint Venture company already exists and previously worked jointly should submit their credential along with complete details of Memorandum of Association and / or Article of Association etc.

Turnover and single job value for qualification of join venture i.e, combined details of both the partners/ participating farms should not be less than 120% of financial qualification as mentioned in item 1 & 2 above. Whereas for minor partner / participating farm of joint venture should individually fulfill at least 40% of qualification (financial) as mentioned in items 1 & 2 above.

Rates quoted by the tenderer should be inclusive of all the taxes, duties and royalty but exclusive of service tax. Service Tax liability will be 50 : 50 of both service provider and service receiver.

PRE - QUALIFICATION CRITERIA

Technical evaluation will be done based on the documents submitted by the tenderer. No correspondence shall be made after opening of technical bid regarding any missing document. Hence, tenderers are requested to submit all the relevant documents along with their tender.

- i) The Tenderer's average annual turnover during last 03 years , ending 31st March of the previous financial year i.e. 31-03-2014 should be at least 207 Lakhs.**
- ii) Experience of having successfully completed work of drainage filter comprising of sand and gravel / stone chips with minimum Quantity of 05,000 M³ each.**
- iii) The party should have completed similar type of works in last 07 years. Only the following Tailings dam , Ash dam , Water Retaining dam.**

The parties not satisfying the above mentioned qualification criteria/failing to submit relevant documents as per above will be summarily rejected.

Tenderers should submit relevant document (copy of work order with details Schedule of Quantity , completion certificate etc) in support of their credential to justify their qualification as mentioned above in the technical part of the offer.

DETAILS OF CREDENTIALS/INFORMATION SHEET ABOUT THE TENDERER/CONTRACTOR

(To be filled-in by the tenderer/contractor)

1. Name of the Firm/Company of the Tenderer :
2. Name & address of the Chief Executive/ Chairman and Managing Director of the Firm with Telephone no. . : -----

3. Registered Office and address of the firm With Telephone and Fax no. : -----

4. Address for Correspondence/all communications with the firm : -----

5. Name, designation, address of the person authorised to deal with this tender/work : -----

6. Nature of the registration of the firm : Limited Co./Private Ltd./Partnership Co./Proprietor shipfirm
7. Registration No. with date and Registering Authority : -----

8.

<u>Name of Directors/Partners</u>	<u>Occupation</u>	<u>Address</u>

9. Address of the office/work site of the tenderer, nearest to the place of the work being tendered : -----

10. Particulars about the professional persons employed by the firm :

Name of the professional persons & Address	Qualification	Experience in no. of years	Nature of experience	Date of joining

11. Details of the work experience of the firm :

Name & Address of the client	Name of the work & Contract No.	Value	Completion time	
			Scheduled	Actual

12. Financial Particulars:

- (a) Authorised capital :
- (b) Paid up capital :
- (h) Working capital-limit in cash/credit for, bill Purchase/discount-forms etc. from the bank : Branch : -----
Value of Rs.....

(d) Loans and Advance taken :

(e) Loan and advances outstanding :

(f) Value of work/turn over done during preceding three years:

Financial year	Value of work	Income Tax deposited

(g) Audited balance sheet and profit and loss
Account for the last 3 years :

13. Furnish copy of Income Tax Return for the
last three years :

14. Income Tax/PAN/GIR No. :

15. Service Tax, Sales Tax, Central Sales Tax
Regd. No. :

16. Excise Duty Regd. No. :

17. Contract Labour Regulation & Abolition
Act, Regd. No. :

18. Any other relevant Regn. No. if any :

19. Details of ownership of various construction
equipments furnished as enclosed :

Name and signature of Authorised Representative of Tenderer/Contractor.

LIST OF SIMILAR JOBS ONLY EXECUTED DURIGN LAST 7 YEARS (STARTING FROM MOST RECENT JOB)

Year	Name of work	Name & Address of client with contact phone no.	Contract value	Completion period	Date of commencement	Date of completion	Reasons for delay, if any	Completion cost including all materials	Completion certificate enclosed (Yes/No)	Dispute, if any (Yes/No)
2013										
2012										
2011										
2010										
2009										
2008										
2007										
2006										

Note: Extra sheets can be enclosed, if the above space is not sufficient

Sign Of Tenderer

ANNEXURE - III

LIST OF OTHER CIVIL CONSTRUCTION JOBS (LIKE THOSE INDICATED IN ANNEXURE-II) EXECUTED DURING LAST 7 YEARS STARTING FROM MOST RECENT JOB).

Year	Name of work	Name & Address of client	Contract value	Completion period	Date of commencement	Date of completion	Reasons for delay, if any	Completion cost including all materials	Completion certificate enclosed (Yes/No)	Dispute, if any (Yes/No)
2013										
2012										
2011										
2010										
2009										
2008										
2007										
2006										

Note: Extra sheets can be enclosed, if the above space is not sufficient

Signature of Tenderer

LIST OF EQUIPMENT/MACHINERY OWNED BY THE TENDERER

Sl. No.	Name of equipment/Machinery	Year of Manufacture	Quantity	Capacity of equipment	Supporting document enclosed (Yes/No)
1.					
2.					
3.					
4.					
5.					
6.					
7.					

SECTION – IV

FORMS

I N D E X

1.00.00 DECLARATION FORM

2.00.0 CONTRACT AGREEMENT

3.00.0 BANK GUARANTEE FOR PERFORMANCE BOND

DECLARATION FORMS

To

Tender Notice No.

Date:

Name of work :

Dear Sir,

I/We, the undersigned, having examined the Tender documents as above hereby submit this tender amounting to the sum as per the enclosed filled in price proposal in Part-2 and should the same be accepted, hereby undertake to execute the complete works as set forth in the scope of work, Technical specification and Tender drawings in accordance with the conditions of tendering, special conditions of contract, General conditions of contract or in default thereof to forfeit and pay to Uranium Corporation of India Limited, the sum of money mentioned in the relevant portion of tender document.

I/We, agree to abide by this Tender for the period of six (6) months from the date fixed for opening of the same and in default agree that the amount of Earnest Money deposited along with this tender may be forfeited.

I/We, undertake to complete the whole works covered under this tender within a period of from the date of letter of acceptance.

The Earnest Money for a value of Rs..... as required in Notice Inviting Tenders in the form of is being enclosed duly endorsed in favour of Uranium Corporation of India Limited.

If this tender is accepted, I/We shall deposit the sum to constitute the security deposit required by the relevant terms of contract.

We also undertake, as required, to enter into a contract with Uranium Corporation of India Limited, by executing an Agreement in the prescribed contract Agreement Form enclosed alongwith this tender document and till such time the agreement be not executed, we shall be bound by the terms and conditions of the tender document and subsequent letter, minutes of discussions and letter of acceptance.

Signature of Tenderer
Name
Address

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

Witness
Name

Address

CONTRACT AGREEMENT FORM

ARTICLES OF AGREEMENT made and entered into this.....
..... at Jaduguda, Jharkhand between URANIUM CORPORATION OF INDIA LIMITED (A Government of India Enterprise) having its Registered Office at Jaduguda Mines, Dist: Singhbhum, Jharkhand – 832 102. (hereinafter referred to as the Corporation) which expression shall unless repugnant to the context include its successors and/or assigns of one part and Messers
..... having their registered office at(hereinafter referred to as Contractor), which expression shall unless repugnant to the context include its successors and/or assigns of the other part.

WHEREAS the Corporation desired to entrust this particular type of work upon an experienced bonafied, reliable and resourceful agency and so invited tenders from pre qualified bidders for the Design, fabrication, supply, installation, testing and commissioning of
.....
.....
..... UCIL package No. JME..... as laid down in Annexure A hereinafter.

AND WHEREAS in pursuance of such invitation for Tender, the Contractor submitted a tender and also the subsequent clarifications, modifications, correspondence, minutes of meetings jointly signed by both the parties as laid down in Annexure”A” hereinafter.

AND WHEREAS after consideration of all above documents, the Corporation accepted the total offer alongwith all clarifications, modifications, correspondences and minutes of meetings for the supply, installation, testing and commissioning of all equipment will all accessories complete in all respect as submitted by the Contractor.

AND issued a letter of Intent No..... dated
the contractor fully accepted the same vide..... dated And as listed in Annexure-D.

WHEREAS one of the conditions embodied in the Tender submitted by the Contractor and accepted by the Corporation was that the Contractor upon acceptance of his offer shall enter into an Agreement with the Corporation and furnish (i) Security Deposit, in the form of a Bank Guarantee for Rs..... according to the format acceptable to the Corporation and duly endorsed in favour of the Corporation for the due observance, fulfillment and performance by the Contractor of the terms, conditions and convents as the part of the Contract, (ii) Detailed PERT/CPM charts for all activities even individually till final completion of works under this Agreement.

AND WHEREAS the Corporation has called upon the Contractor to execute the presents.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expression shall have the same meanings as are respectively assigned to them in the General conditions and special conditions of Contract hereinafter referred to.
2. The Corporation's letter of Intent No..... dated..... and the Contractor's full acceptance of the same vide Dated along with the following documents shall be deemed to form and be read and constructed as part of this Agreement, as though fully written out and set forth herein.
 - (a) ANNEXURE – A : The Tender document for Construction of 3rd stage tailing dam at Jaduguda work as specified in Tender Specification N.I.T No. UCIL/Civ-.....dated.....
 - (b) ANNEXURE – B : Bank Guarantee for performance and Bank Guarantee for advance payment.
 - (c) ANNEXURE – C : Detailed PERT/CPM chart for all individual activities till completion.
 - (d) ANNEXURE – D : Various correspondences and Minutes of Meeting to be read with Annexures as listed in the Enclosure-1 to this agreement.

In the event of discrepancy or ambiguity between this Agreement and any of the documents described above, this Agreement shall govern. In the event of discrepancy or ambiguity between or caused by the provisions in the documents (A) to (D/E) inclusive, the priority of these documents shall be settled in accordance with the order (D/E) to (A) i.e, the document executed on a later date prevailing over the document executed earlier.

3. Time is the essence of contract. The Contractor hereby covenants with the Corporation to construct, complete and maintain the works under the above Letters of Intent in conformity in all respects with the provisions of this one Agreement and as specified in the above documents (a) to (d) inclusive.
4. The price payable by the Corporation to the Contractor for the execution of the Contract mentioned herein above shall be Rs.....) and the Corporation hereby covenants to pay to the Contractor in consideration of the supply, Installation, Testing and Commissioning of all equipment and accessories complete as per the letter of Intent mentioned herein above a total contract price of Rs..... at the time and in the manner, prescribed by this Agreement and set forth in the above documents (A) to (D) inclusive.
1. All notices called for by the terms of the Agreement shall be effective only at the time of receipt thereof and only when received by the parties to whom they are addressed at the following addresses:-

- (a) URANIUM CORPORATION OF INDIA LIMITED
(A GOVERNMENT OF INDIA ENTERPRISE)
P.O. JADUGUDA MINES
DIST: SINGHBHUM,
JHARKHAND – 832 102.
2. The Corporation and the Contractor agree that this Agreement including annexed documents (A) to (D/E) inclusive expresses all of the Agreement and covenants of the parties, and that it integrates, combines and supersedes all prior and contemporaneous negotiations, and Agreements whether written or oral and that no modification or alternation of this Agreement shall be valid or binding on either party, unless expressed in writing and executed with the same formality as this Agreement except as may otherwise be specifically provided in this Agreement.
 3. Both parties shall make best endeavor to emendably amend themselves and dispute that may arise on any matter arising out of or in connection with this Agreement. In the unlikely case that the parties are not able to come to a mutual settlement, either of them shall seek arbitration. Then it is expressly agreed between the parties that any such dispute or difference arising out of or in connection with the contract shall be governed by the relevant clause of the Agreement. All disputes, arising out of or if any way connected with this Agreement shall be deemed to have arisen at Jaduguda and only competent court at Jamshedpur (Jharkhand) shall have jurisdiction to determine the case.
 4. All disputes arising out of or in any way connected with this Agreement shall be deemed to have arisen in Jaduguda and only in competent courts in the district of Singhbhum (East) shall have exclusive jurisdiction to determine the case.
 5. This Contract Agreement is made in all good faith and executed in two identical counterparts, one for the Corporation and the other for the Contractor.

IN WITNESS WHEREOF, the Corporation and the Contractor have executed this Contract Agreement the day and year first above written.

In the presence of :

SIGNED & DELIVERED for and on
On behalf of URANIUM CORPORATION OF INDIA LTD.

SIGNED & DELIVERED BY THE Contractor

BANK GUARANTEE FOR THE PERFORMANCE BOND

Name of the Bank : -----
Address of the Bank : -----
Guarantee No. & Dare: -----
Date of Expiry : -----
Claim Period : -----
Limit of Liability : -----

WHEREAS URANIUM CORPORATION OF INDIA LIMITED (herein after referred to as the CORPORATION) having its registered office at P.O. Jaduguda Mines & Dist: Singhbhum (East), Jharkhand – 832 102 which expression shall, unless repugnant o the Context, includes its legal representatives successors and assigns, have entered into an agreement) herein after referred to as the Agreement) with _____/(herein after referred to as the CONTRACTOR) having its registered office at _____ which expression shall, unless repugnant to the Context, include its legal representatives, Successors or assigns, for _____ Package work

_____ Letter of Intent No. _____
_____ dated _____ described in the Agreement based on the Terms and the Conditions contained in the Agreement and whereas by the said Agreement Corporation has agreed to pay the Contractor for the services to be rendered by the Contractor in terms of the said Agreement.

AND WHEREAS, in accordance with the terms of the Agreement, the CONTRACTOR has to furnish Performance Bond in the form of a Bank Guarantee (BG) from a reputed Schedule Commercial Bank for Rs..... (Rupees
..... Only) being 10% of the total contract value for due performance, fulfillment and observance of the terms and conditions of the Agreement and further covenanted with CORPORATION to make good any deficiencies so as to fulfill in all respects the purposes of which the Agreement is entered into and in accordance with their operating and other conditions specified and to meet all the requirements specified in regard there to in the Agreement for the period/periods stipulated in the Agreement.

Now, by this Guarantee, we the CONTRACTOR (as principal) and the _____

(Name of the Bank) (Name of the Branch with Address)
having its head office at _____
(Address of the Head office of Bank)

(herein after called the SURETY) are held and firmly bound up to the CORPORATION in the sum of Rs.....(Rupees only) for the payment of which the CONTRACTOR and the surety bound themselves, their successors, Legal representatives and assigns jointly and severally by this presents. This Guarantee will be in full force irrespective of any change in the constitution of the CONTRACTOR and/or the SURETY or death or insolvency of the SURETY. Now the conditions of this guarantee is such that if the CONTRACTOR (as principal) shall duly, faithfully and punctually perform and observe all the terms, provisions, conditions and stipulations of the Agreement including covenants, concerning guarantee stipulated therein on the part of the CONTRACTOR (as Principal) to be performed and observed according to the true purpose, intent and meaning thereof or if on default of the CONTRACTOR the SURETY shall satisfy and discharge the damages sustained by the CORPORATION hereby up to the amount of this guarantee herein, then the obligation herein shall be null and void, but otherwise shall be in full force and effect for a period up to and including _____ from the date of issue of this guarantee, But no alteration in the (Expiry date of the BG)

terms of the said agreement made between the CORPORATION and the CONTRACTOR or to the extent or the nature of the materials supplied and/or services rendered, completed and maintained there under and no allowance of time by the CONTRACTOR or the CORPORATION under the Agreement nor any forbearance in respect of any matter or the thing concerning the said agreement on the part of the CORPORATION shall in any way release the SURETY from any liability under the guarantee herein.

We do hereby indemnify the CORPORATION and undertake to pay the amount due and payable under this guarantee without any demur, merely on demand within 48 hours from the CORPORATION stating that the amount claimed is due by way of loss or damage caused to or suffered by the CORPORATION by reason of any breach by the said agreement or by reason of the said CONTRACTOR (as principal) failure to comply with any of the conditions with regard to the Agreement set out in this Guarantee. Any such demand made on us by the CORPORATION shall be final and binding and be conclusive as regards the amount due and payable by us under this Guarantee.

However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____ (Rupees _____) only.

We further covenant that the Guarantee herein contained shall remain in full force and effect and that it shall continue to be enforceable till all the dues of the CORPORATION under or by virtue of the said Agreement have been fully paid and he CORPORATION'S claim satisfied or discharged or till the CORPORATION certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said CONTRACTOR (as Principal) and discharges the Guarantee.

We, the SURETY further covenant with the CORPORATION that the CORPORATION shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement from time to time, to postpone for any time or from time to time, any of the power exercisable by the

CORPORATION AGAINST the said CONTRACTOR (as Principal) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variations, or extension being granted to the said CONTRACTOR or any forbearance, act of omission on the part of the CORPORATION, or any indulgence by the CORPORATION to the said CONTRACTOR (as Principal) or by any such matter or thing whatsoever, which under the law relating to sureties would but for this provision, have effect of so relieving.

THIS guarantee herein contained is not revocable by the notice during its currency and will remain in full force until all the undertaking covenants, terms and conditions of the Agreement are performed and fulfilled or until it is discharged by notice in writing by the CORPORATION.

This guarantee will remain in force up to and including _____

(Date of expiry of Bank Guarantee)

and will stand automatically cancelled on the expiry of the said period unless extended by mutual agreement. Unless a demand or claim to enforce the claim under this guarantee is made writing against the surety within _____ months (_____ months) from the date of the expiry of this guarantee i.e, on or before _____ all the rights of the CORPORATION hereunder against the surety shall be forfeited and we shall be relieved and discharged from all the liabilities hereunder.

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

Notwithstanding any thing contained herein before our liability under the present Guarantee is restricted to Rs..... (Rupees only) and shall remain in force for a period up to _____.

(Date of expiry of BG)

Unless a suit or action is instituted to enforce the claim under the Guarantee within _____ months (_____ months) from the said date all your rights under the guarantee shall be forfeited and we shall be relieved and discharge from all liabilities thereunder.

For the purpose of enforcing the legal rights/remedies under this guarantee we agree that the Court of Law at Ghatsila, Jharkhand State, shall have exclusive jurisdiction.

Witnesses:

Surety

1. Name & Address

For and on behalf of

(Name of the Bank)

Signature

(Signature and P.A. No. of Branch Manager)

2. Name & Address ----- Signature

SECTION – V

GENERAL CONDITIONS

GENERAL CONDITIONS OF CONTRACT

INTERPRETATION AND DEFINITIONS

Singular and Plural

1. Where the context so requires, words importing the singular only also include the plural and vice-versa.

HEADINGS AND MARGINAL NOTES TO CONDITIONS

- 1.1 Headings and marginal notes to these General conditions shall not be deemed to form part thereof or be taken into consideration in the interpretation or be taken into consideration in the interpretation or construction thereof or of the contract.

DEFINITIONS

- a) 'Corporation' shall mean Uranium Corporation of India Limited having its registered office at Jaduguda Mines, Post office and Town Jaduguda Mines- 832 102, in the state of Jharkhand and includes a duly authorised representative of the corporation or any other person empowered in this behalf by the Corporation to discharge all or any of its functions.
- b) The 'Accepting Authority' shall mean the authority mentioned in the schedule-'F'.
- c) The contract shall mean the notice inviting the tender and acceptance thereof and the formal agreement, if any, executed between the Corporation and the contractor together with the documents referred to therein including these condition with appendices and any special conditions, including subsequent amendments thereof, the specifications, Designs, Drawings, Schedule of Quantities with rates and amounts and schedule of rates. All these documents taken together shall be deemed to form one contract and shall be complementary to one another.
- d) The 'Contractor' shall mean the individual or firm or company whether incorporated or not, undertaking the works and shall include legal representatives of such individual or persons composing such firm or company as the case may be and permitted assigns of such individual or firm or company.
- e) The 'Contract sum' shall mean:
 - 1) in the case of lump sum contracts the sum for which the tender is accepted.
 - 2) in the case of percentage rate contracts the estimated value of the works as mentioned in the tender adjusted by the contractor's percentage.
 - 3) in the case of item rate contracts the cost of the works arrived at after multiplying of the quantities shown in schedule of quantities by the item rates quoted by the tenderer or as finally accepted for the various items.
- f) A 'Day' shall mean a day of 24 hours from midnight to midnight irrespective of the number of hours worked in that day.
- g) 'Engineer-in-charge' shall mean the Engineering Officer appointed by the undertaking or his duly authorised representative who shall direct, supervise and shall be incharge of the works for purpose of this contract.
- h) 'Consulting Engineer or consultant' shall mean as authorised representative of WAPCOS (Water & Power Consultancy Services 'India' Limited) which has been appointed as consulting firm by the Corporation.
- i) 'Market Rate' shall be the rate as decided by the Engineer-in-charge on the basis of the cost of materials and labour at the site where the work is to be executed, plus the percentage mentioned in schedule to cover all over- heads and profit.

- (j) Schedules(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the tender papers issued by the corporation or the standard schedule or rates prescribed by the Corporation and the amendments there to issued from time to time.
- k). The 'Site' shall mean the lands and or other places on under in or through which the work is to be executed under the contract including any other lands or places which may be notified/indicated by the Corporation or used for the purposes of the Contract.
- l). Temporary works' shall mean all temporary works of every kind required in or about the execution, completion and maintenance of the works.
- m). Urgent works' shall mean any urgent measures which in the opinion of the Engineer-in-charge, become necessary during the progress of the works to obviate any risk of accident or failure.
- n). A 'Week' shall mean seven days without regard to the number of hours worked any day in that week.
- o). The 'Works' shall mean the works to be executed in accordance with the contract or part(s) thereof as the case may be and shall include all extra or additional, altered or substituted works or temporary and urgent works as required for performance of the contract.

2.0 **CONTRACT DOCUMENTS**

The contractor shall be handed over one set of contract document after signing the contract agreement with UCIL. He will have to make more copies of the same and he will be required to submit minimum three(3) copies of the document and one original to UCIL. He shall keep one copy of the documents at the site in good order and the same shall at all reasonable times be available for inspection and use by the Engineer-in-charge, his representative or by other inspecting officer.

- 1.0 None of these documents shall be used by the contractor for any purpose other than that of this contract.
- 1.1 The contractor shall take necessary steps to ensure that all persons employed on any work in connection with contract are aware that the Indian Official Secret Act 1925 (XIX of 1923) applied to them and shall continue so to apply even after the execution of such works under the contract.

3.0 **WORKS TO BE CARRIED OUT**

3.1 The contractor acknowledges that this bid contained all of the information required, in the invitation to Bid, specifically the contractor's lump sum price or his firm unit price for the work to be performed. The contractor agrees that prices as awarded include any and all cost components including profits, overhead charges and other costs, including but not limited to labour, materials, tools, equipment, insurance, transportation facilities and plant not specified to be furnished by the Corporation or others. The descriptions given in the schedule of quantities shall, unless otherwise stated, be held to include waste on materials, carriage and cartage, carrying in return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion as aforesaid in accordance with good practice and recognised principles, in a work like manner, to the full satisfaction of the Engineer-in-charge.

4.0 INSPECTION OF SITE

4.1 The Contractor shall inspect and examine the site and its surroundings and shall satisfy himself before submitting his tender as to the nature and location of the work, the general and local conditions, particularly those bearing upon transportation, disposal, handling and storage of materials, quantities and nature of work and availability of materials, equipment, labour, water and electric power, roads and uncertainties of whether or other physical conditions on the project, the sub-soil conditions, the character of equipment, plant and facilities needed. The contractor must also acquaint himself with all necessary information as to risks, contingencies and other circumstances which may influence or affect his tender. No extra charges consequent on any misunderstanding or otherwise shall be allowed.

5.0 SUFFICIENCY OF TENDER

5.1 Description of item in the schedule of quantities is brief and therefore shall be read in conjunction with the relevant drawings and specifications and the contractor's rate shall be deemed to be for such complete work unless otherwise specified by the contractor while tendering. No claim whatsoever shall be entertained by the Corporation on account of insufficiency of any rate as quoted in the schedule of quantities and rates. The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of the tender for the works and of the rates and prices quoted by him in the schedule of quantities, which shall, cover all his obligations under the contract including programme of work in accordance with general/special conditions of the contract, and all matters and things necessary for the proper engineer, co-ordination, procurement, construction/erection completion, maintenance of the works, and shall also cover the cost of necessary protection, against all risks accidents compensation for injury to life and damage to property if any caused by the contractors operations connected, with the work, including labour, materials and equipment to ensure safety and protection against all risks, accidents, compensation for injury to life and damage to property. The rates shall be firm and shall not be subject to change due to variations during the entire period of execution of the work in cost of materials, labour conditions or any other conditions whatsoever. The rates quoted by the tenderer shall be inclusive of all taxes, duties and other statutory levies. No extra charges whatsoever consequent on any misinterpretation or otherwise shall be allowed.

6.0 DISCREPANCIES AND ADJUSTMENT OF ERRORS

- 6.1 The several documents forming the contract are to be taken as complementary to and shall be read in conjunction with each other and mutually explanatory of one another. In case of any conflict of meaning between the special conditions of contract and the general conditions of contract, the provisions of special conditions of contract shall over ride the corresponding provisions of general and supplementary conditions of contract. Similarly where the description of any item of work in the tender schedule differs from the specifications or drawings, the description given in the bill of quantities read with preamble shall have over riding effect.
- 6.2 If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the document.
- 6.3 Any error in description, quantity or rate in schedule of quantities or any omission there from shall not vitiate the contract or release the contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contract.
- 6.4 If any discrepancy between the rates given by the contractor in words and figures or in the amount worked out by him in the schedule of quantities and general summary is found, the same shall be adjusted in accordance with the following rules :-
- a) In the event of a discrepancy between words and figures quoted by a tenderer, the description in words shall prevail.

- b) In the event of an error occurring in the amount column of schedule of quantities as a result of wrong extension of the unit rate and quantity, the unit rate shall be regarded as firm and the amount shall be amended on the basis of the rate.
- c) All errors in totaling in the amount column and carrying forwarded totals shall be corrected.
- d) The totals of various sections of schedule of quantities amended shall carried over to the general summary and the rendered sum amend accordingly. The tendered sum so altered shall, for the purpose of the tender, be substituted for sum originally tendered and considered for acceptance instead of the original sum quoted by the tenderer. Any rounding off of totals in various sections of schedule of quantities or in general summary by the tenderer, shall be ignored.

6. **SECURITY DEPOSIT:** The total Amount of security including the amount of Earnest money will be 10 % of awarded value of work. Contractor shall have to deposit required amount with our Account department towards the initial security deposit (including earnest money) @ 05 % of the ordered value. In addition to the above , further amount to extent of 5 % of the cost of the work will be deducted from running accounts bill @ 10% of the gross value of the R.A. bill till the full amount of security deposit is recovered by corporation.

Refund the Security Deposit:- One half of the security deposit refundable to the contractor worked out on the basis of the value of work completed shall be refunded to the contractor on the Engineer-in-charge certifying in writing that the work has been completed.

On expiry of the Defects Liability period or on payment of amount of the final bill. Security deposit may be payable in accordance whichever is latter, the Engineer-in-charge shall on demand from the contractor refund to him the remaining portion of the security deposit provided the Engineer-in-charge is satisfied that there is no demand outstanding against the contractor.

8. Deviation/Variation Extent & Pricing.

The Engineer-in-charge shall have power (1) to make alteration in, omissions from additions to, or substitutions for, the original specification, drawings, designs and instructions that may

appear to him to be necessary or necessary or advisable during the progress of the work and (2) to omit a part of the works in case of non-availability of a portion of the works in case of non-availability of a portion of the site or for any other reasons, and the Contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer-in-charge and such alterations, omissions, additions or substitution shall form part of the Contract as if originally provided there in and any altered, additional or substituted provided there in and any altered, additional or substituted work which the Contractor may be directed to do in manner above specified as part of the works, shall be carried out by the Contractor on the same conditions in all respects including price on which agreed to do the main work except as here-in-after provided. No work which radically changes the original nature of the contract shall be ordered by the Engineer-in-charge as a deviation and in the event of any deviation being ordered which in the opinion of the Contractor changes the original nature of the contract, he shall nevertheless carry it out the disagreement as to the nature of the work and rate to be paid there for shall be resolved in accordance with condition 52.

- 8.1 The time for completion of the works shall, in the event of any deviations resulting in additional cost over the Contract sum being ordered, be extended as follows if requested by the Contractor.
- (a) in the proportion which the additional cost of the altered additional or substituted work, bears to the original contract sum plus.
 - (b) 25% of the time calculated in (a) above or such further additional time as may considered reasonable by the Engineer-in-charge.
- 8.2 Rates for such additional altered or substituted work shall be determined by the Engineer-in-charge as follows:-
- (a) If the rate for additional, altered or substituted items of work in specified in the schedule of quantities, the contractor shall carry out the additional, altered or substituted item at the same rate. In the case of composite tenders where two or more schedules of quantities may form part of the contract, the applicable rate shall be taken from the schedule of quantities of that particular part in which the deviation is involved, failing that at the lowest applicable rate for same item of work in the other schedule of quantities.
 - (b) If the rate for any altered, additional or substituted item of work is not specified in the schedule of quantities, the rate for that item shall be derived from the rate for nearest similar item specified therein. In case of composite tender where two or more schedule of quantities form part of the contract, the rate shall be derived from the nearest similar item in the Bills of quantities of the part of works in which the deviation is involved failing that from the lowest of the nearest similar item in other schedule of quantities.
 - (c) If the rate for any additional, altered or substituted item of work cannot be determined in the manner specified in sub-paras (a) and (b) above then such item of work shall be carried out at the rate entered in the C.P.W.D. schedule of rates current the plus/minus the percentage by which the tendered amount of the work actually awarded is higher or lower than the estimated amount of the works actually awarded.
(Applicable to Measurement Contracts based on item rates or lump sum contract based on Bills of quantities or percentage rate contract).
 - (d) If the rate for any altered, additional or substituted item of work cannot be determined in the manner, Specified in sub para (a) to (c) above, the contractor shall within 14 days of the date of receipt of the order to carry out the said work, inform the Engineer-in-charge of the rate which he proposed to claim for such item of work, supported by analysis of the rate claimed, and the Engineer-in-charge shall, within three months thereafter, after giving due

consideration to the rate claimed by the Contractor determined the rate on the basis of market rate (s). In the event of the contractor failing to inform the Engineer-in-charge within the stipulated period of time, the rate which he proposes to claim the rate for such item shall be determined by the Engineer-in-charge on the basis of market rate (s). For this purpose the purchase voucher etc. shall be produced by the contractor to the Engineer-in-charge.

9. SUSPENSION OF WORKS

9.1 The contractor shall on receipt of the order in writing from the Engineer-in-charge suspend the progress of the works or any part thereof for such time and in such manner as the Engineer-in-charge may consider necessary for any of the following reasons :-

- (a) On account of any default on part of the contractor.
- (b) for proper execution of the works or part there of for reasons other than the default of the contractor or
- (c) for safety of the works or part there of.

10. TIME AND EXTENSION FOR DELAY

10.1 It is understood and agreed by the Contractor and Corporation that the time is essence of agreement and accordingly the contractor shall do and perform his obligations in such a manner as not to hinder delay or impair timely completion of the work awarded to him.

10.2 If the contractor commits default in commencing the execution of the work as aforesaid, Corporation shall without prejudice to any other right or remedy, be at liberty to forfeit the Earnest Money/Security Deposit absolutely.

10.3 Construction schedule in the form of a PERT CHART/CPM Network or other suitable representation for the programme of work, shall be prepared by the contractor in consultation with the Engineer-in-charge, soon after the contract is concluded. The Chart shall indicate, the different components, items of work and time required for completion of each component item, indicating various activities, so as to complete the work in all respects within the stipulated period, as indicated in the tender documents.
To ensure good progress during the execution of the work, the contractor in all cases in which the time allowed for any work exceeds one month(save for special jobs), shall achieve completion of 1/8th of the whole of the work before 1/4th of the time. 3/8th of the work before one half of the time and 3/4th of the work before 3/4th of the time, has elapsed.

10.4 The contractor shall also furnish his approach to work, indicating briefly his method of working, his plans in tackling the construction programme, vis-à-vis, the capacity of equipments he proposes to deploy on various components of work etc. The contractor shall obtain approval of the Engineer-in-charge to the aforesaid. They shall mutually decide upon any updating/crashing required and maintain jointly recorded documents in connection with all such activities. In case of any disagreements, the decision of the Engineer-in-charge shall be final and binding on the contractor.
The Contractor shall submit a weekly / fortnightly schedule of work, identifying each item of work for acceptance by the Engineer-in-charge.

Hire charges for the equipment provided by the Corporation shall be calculated in accordance with the Logbook.

11. MATERIALS

The contractor shall at his own expense, provide all materials required for the works.

- 11.2 All materials to be provided by the contractor shall be in conformity with technical specifications and relevant Indian Standard Codes. All the contractor's materials shall be inspected and passed by the Engineer-in-charge, before their use in the works. Corporation's official concerned with the contract shall be entitled at any time to inspect and examine any materials to be used in or on the works, either on the site or at factory or workshop or other place(s) where such materials are assembled fabricated manufactured or any place(s) where these are laying or from where these shall be obtained and the contractor shall give such facilities as may be required for such inspection and examination. The contractor shall, if required by the Engineer-in-charge furnish proof, about the suitability of materials.
- 11.3 The contractor shall at his own expense supply to the Engineer-in-charge samples of materials proposed to be used in the works. The Engineer-in-charge shall, within seven days of supply of samples or within such further period as he may require, intimate to the contractor in writing, whether samples are approved by him or not. If samples are not approved, the contractor shall forthwith arrange to supply to the Engineer-in-charge for his approval fresh samples conforming to the specifications laid down in the contract.
- 11.4 All rejected materials shall be removed from the site, immediately by the contractor at his own cost. In case of default on the part of the contractor in removing rejected materials the Engineer-in-charge shall have full powers to procure other proper materials to be substituted for rejected materials and in the event of the contractor refusing to comply, he may cause the same to be supplied by other means. All costs which may attend upon such removal and/or substitution shall be borne by the contractor.
- 11.5 The contractor shall indemnify the corporation servant or employee of the corporation against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties or other charges which may be payable in respect of any articles or materials or part thereof included in the contract. In the event of any claim being made or action being made or action brought against the corporation in respect of any such matters as aforesaid, the contractor shall immediately be notified there of.
- Provided that such indemnify shall not apply when such infringement has taken place in complying with the specific directions/issued by the corporation but the contractor shall pay any royalties or other charges payable in respect of any such use, the amount so being reimbursed to the Contractor only if the use was the result of any drawing and/or specification issued after submission of the tender.
- 11.6 All charges on account of octroi, terminal or sales tax and other duties on materials obtained for the works from any source (excluding materials supplied by the Corporation) shall be borne by the Contractor.
- 11.7 The Engineer-in-charge shall be entitled to have tests carried out for any materials supplied by the Contractor other than those for which satisfactory proof has already been furnished, at the cost of the Contractor and the Contractor shall provide at his own expense all facilities which the Engineer-in-charge may require for the purpose.

12. **GENERAL**

- 12.1 Materials required for the works, whether brought by the Contractor or supplied by the Corporation, shall be stored by the Contractor only at places approved by the Engineer-in-charge. Storage and safe custody of materials should be the responsibility of the Contractor.
- 12.2 Corporation's official concerned with the Contract shall be entitled at any time to inspect and examine any materials to be used in or on the works, either on the Site or at factory or workshop or other place (s) where such materials are assembled, fabricated manufactured or any place (s) where they are lying or from which they are being obtained and the Contractor shall give facilities as may be required for such inspection and examination.

13. **LABOUR LAWS**

- 13.1 The contractor shall employ both skilled and un-skilled labour in sufficient numbers to maintain the required rate of progress and quality to ensure workmanship of the degree specified in the contract agreement and to the satisfaction of the Engineer-in-charge.
- 13.2 The contractor shall furnish to the Engineer-in-charge at the intervals mentioned in schedule-F a distribution return of the number and description by trades of the labour employed on the works. The contractor shall also submit to the Engineer-in-charge on 4th and 19th of every month, a true statement showing (i) the accident that occurred during the said fortnight, the circumstances under which these occurred and the extent of damages and injury caused by them, (ii) the number of female workers who have been allowed maternity benefit as provided in the Maternity Benefit Act – 1961 or Rules made there under and the amount paid to them. The contractor shall not employ children below the age stipulated by law.
- 13.3 The contractor shall pay to the labour wages not less than fair wages as defined in the contract labour (Regulation and Abolition) Act, 1970 and Rules made there under.
- 13.4 The contractor shall in respect of labour employed by him comply with or cause to be complied with the contract labour (Regulation and Abolition) Act, 1970 and Rules made there under in regard to all matters provided therein.
- 13.5 The contractor shall comply with the provisions of the payment of wages Act, 1936, Minimum Wages Act, 1948, Employers Liability Act, 1938, Workmen's Compensation Act, 1948 or any modifications thereof or any other law relating thereto and rules made there under from time to time.
- 13.6 The contractor shall be liable to pay his contribution and the employee's contribution to the employees state insurance scheme in respect of all labour employed by him for the execution of the contract, in accordance with the provision of the Employees State Insurance Act, 1948 as amended from time to time and as applicable in this case. In case the contractor fails to submit full details of his account of labour employed and the contribution payable, the Engineer-in-charge shall recover from the running bills of contractor and amount of contribution as assessed by him. The amount to recover shall be adjusted against the actual contribution payable under Employees State Insurance Scheme.

13.7 The Engineer-in-charge shall on a report having been made by an inspecting staff defined under the contract Labour (Regulation Act, 1970 and Rules made there under, have the power to deduct the moneys due to contractor may sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the conditions of the contract for the benefit of workers, non-payment of wages or of deductions made from their wages which are not justified by the terms of the contract or non-observance of the said Act.

13.8 The contractor shall indemnify the Corporation against any payment to be made under and for observance of the Contract Labour (Regulation and Abolition) Act, 1970 and Rules made there under without Prejudice to his right to claim indemnity from his sub-contractors.

14. **MODEL RULES FOR LABOUR WELFARE**

14.1.1 The contractor shall at his own expense comply with or cause to be complied with model rules for labour welfare as provided under the rules framed by the appropriate government from time to time for the protection of health and for making sanitary arrangements for workers employed directly or indirectly on the works. In case the contractor fails to make arrangements as aforesaid the Engineer-in-charge shall be entitled to do so and recover the cost thereof from the contractor.

14.1.2 Failure to comply with model rules for labour welfare, Safety code or the provisions relating to report on accidents and to grant maternity benefits to female workers shall made the contractor liable to pay to the corporation as liquidated damages an amount not exceeding Rs. 50/- for each default or materially incorrect statement. The decision of the Engineer-in-charge in such matters based on reports from the inspecting officers, shall be final and binding and deductions for recovery of such liquidated damages may be made from any amount payable to the contractor.

14.1.3 The Contractor shall not be permitted to enter on (other than for inspection purpose) or take possession of the site until instructed to do so by the Engineer-in-charge in writing. The portion of the site to be occupied by the Contractor shall be indicated by the Engineer-in-charge at site and the contractor shall on no account be allowed to extent him operations beyond these areas.

In respect of any land allotted to the Contractor for purpose of or in connection with the contract, the Contractor shall be a license subject to the following and such other terms and condition as may be imposed by the licensor:-

- (i) that he shall pay a nominal license fee of Rs.1 per year or part of a year for use and occupation, in respect of each and every separate area of land allotted to him.
- (ii) that such use or occupation shall not confer any right of tenancy of the land to the contractor.
- (iii) that the contractor shall be liable to vacate the land on demand by the Engineer-in-charge.
- (iv) that the contractor shall have no right to any construction over this land without the written permission of the Engineer-in-charge. In case he is allowed to construct any structure he shall have to demolish and clear the same before handing over the completed work unless agreed to the contractory.

14.9 The Contractor shall provide, if necessary of if required on the site, all temporary access there to and shall alter, adapt and maintain the same as required from time to time and shall take up and clear them away as and when no longer required and as when ordered by the Engineer-in-charge and make good all damage done to the site.

SETTING OUT THE WORKS

The Engineer-in-charge shall supply dimensioned drawings, levels and other information necessary to enable the contractor to set out the work. The Contractor shall provide all labour and setting out apparatus required and set out the works and be responsible for the accuracy of the same. He shall amend at his own cost and to the satisfaction of the Engineer-in-charge any error found at any stage which may arise through inaccurate setting out unless such error is based on incorrect data furnished in writing by the Engineer-in-charge, in which case the cost of rectification shall be borne by the Corporation. The Contractor shall protect and preserve all bench marks used in setting out the works, till end of the Defects Liability period unless the Engineer-in-charge directs their earlier removal.

SIDE DRAINAGE

15. All water which may accumulate on the site during the progress of the works or in trenches and excavations, shall be removed from the site to the satisfaction of the Engineer-in-charge and at the contractors expense.
16. The Contractor shall not at any time do, cause or permit any nuisance on the site or do anything which shall cause unnecessary disturbance or inconvenience to owners, tenants or occupiers of other properties near the site and to the public generally.

MATERIALS OBTAINED FROM EXCAVATION

Materials of any kind obtained from excavation on the site shall remain the property of the Corporation and shall be disposed of as the Engineer-in-charge may direct.

TREASURE TROVE, FOSSILS ETC.

All fossils, coins, articles of value or antiquity and structures and other remains or things of geological or archaeological interest discovered on the site shall be the absolute property of the Corporation and the contractor shall take reasonable precautions to prevent his workmen or any other person from removing or damaging any such article or thing and shall immediately upon discovery thereof and before removal acquaint the Engineer-in-charge and obtain his directions as to the disposal of the same at the expense of the Corporation.

PROTECTION OF TREES

Tree designated by the Engineer-in-charge shall be protected from damage during the course of the works and earth level within 1 metre of each such tree shall not be changed. Where necessary, such trees shall be protected by providing temporary fencing.

WATCHING AND LIGHTING

- 20.(a) The contractor shall provide and maintain at his own expense all lights, guards, fencing and watching when and where necessary or required by the Engineer-in-charge for the protection of the works or for the safety and convenience of these employees on the works or the public.

CONTRACTOR'S SUPERVISION – SITE TECHNICAL STAFF

15. The contractor shall engage and keep at site, qualified technical staff/engineer with necessary supporting supervisory staff of sufficient experience of all types of works covered by this contract and they should have all necessary authority to receive materials from the corporation. Issue valid receipt for the same, engage labour etc, and proceed with the work as required for speedy execution of the work.

INSPECTION AND APPROVAL

17. All works embracing more than one process shall be subject to examination and approval at each stage thereof and the contractor shall give due notice to the Engineer-in-charge or his authorized representative when each stage is ready. In default of such notice, the Engineer-in-charge shall be entitled to appraise the quality and extend thereof.
18. No work shall be covered up or put out of view without the approval of the Engineer-in-charge or his authorized representative and the Contractor shall afford full opportunity for examination and measurement of any item of work which is about to be covered up or put out of view and to examine foundations before permanent item(s) of work is placed thereon. The contractor shall give the notice to the Engineer-in-charge or his authorized representative whenever any such item of work of foundation is ready for examination and the Engineer-in-charge or his representative shall without unreasonable delay, attend to the purpose of examining and measurement such work. In the event of the failure of the contractor, such work shall be uncovered at the contractor's expense for examination by the Engineer-in-charge.
19. Corporation Officers concerned with the contract shall have powers at any time to inspect and examine any part of the works and the Contractor shall give such facilities as may be required for such inspection and examination.

DUTIES AND POWERS OF ENGINEER-IN-CHARGE REPRESENTATIVE

20. The duties of the Representative of the Engineer-in-charge , are to watch and supervise the works and to test and examine any materials to be used or workmanship employed in connection with the works. He shall have no authority to order any work involving any extra payment by the Corporation nor to make any variation in the works.
21. The Engineer-in-charge may from time to time in writing delegates to his representative any of the powers and authorities vested in the Engineer-in-charge and shall furnish to the Contractor a copy of all such written delegation of powers and authorities. Any written instruction or written approval given by the representative of the Engineer-in-charge to the contractor within the terms of such delegation shall there upon confirm, reverse or vary such decision.

REMOVAL OF WORKMEN

22. The Contractor shall employ in and about the execution of the works only such persons as are skilled and experienced in their several trades and Engineer-in-charge shall be at liberty to object to and require the Contractor to remove from the works any person employed by the Contractor in or about the execution of the works who in the opinion of the Engineer-in-charge misconduct himself or incompetent or negligent in the proper performance of his duties and such person shall not be again employed upon the works without permission of the Engineer-in-charge.

UNCOVERING AND MAKING GOOD

23. The Contractor shall uncover any part of the works and/or make opening in or through the same as the Engineer-in-charge may time to time direct for his verification and shall reinstate and make good such part to the satisfaction of the Engineer-in-charge. If any such part has been covered up or put out of view after being approved by the Engineer-in-charge and subsequently found on uncovering to be executed in accordance with the contract, the expenses of uncovering and/or making openings or through reinstating and making good, the same shall be borne by the Corporation. In any other case all such expenses shall be borne by the Contractor.

WORKING DURING NIGHT OR ON SUNDAYS AND HOLIDAYS

24. Subject to any provisions to the contrary contained in the contract, none of the permanent works shall be carried out during night or on Sundays or on unauthorised holidays without the permission in writing of the Engineer-in-charge except when the work is unavoidable or absolutely necessary for the safety of life, property or works in which case the contractor shall immediately advice the Engineer-in-charge accordingly.

COMPLETION CERTIFICATE

25. As soon as the work is completed, the Contractor shall give notice of such completion to the Engineer-in-charge and within ten days of receipt of such notice the Engineer-in-charge shall inspect the work and shall furnish the contractor with a certificate of the work and shall furnish the contractor with a certificate of completion indicating (a) the date of completion (b) defects to be rectified by the Contractor (c) (and/or) item for which payment shall be made at reduced rates. When separate periods of completion have been specified for items or groups of items, the Engineer-in-charge shall issue separate completion certificate for such items or groups of items. No certificate of completion shall be issued, nor shall the work be considered to be completed till the contractor shall have removed from the premises on which the work has been executed all scaffolding, sheds and surplus materials, except such as are required for rectification of defects, rubbish and all huts and sanitary arrangements required for his workmen on the site in connection with the execution of the work, as shall have been erected by the contractor workmen and cleaned all dirt from all parts of building (s) in, upon or about which the work has been executed or of which the work has been executed or of which he may have had possession for the purpose of the execution there of and cleaned floors, gutters and drains eased doors and sashes, oiled locks and fastenings labeled keys clearly and handed them over to the Engineer-in-charge or his representative and made the whole premises fit for immediate occupation or use to the satisfaction of the Engineer-in-charge. If the contractor shall fail to comply with any of the requirements of this conditions as aforesaid, on or before the date of completion of the works, the Engineer-in-charge may at the expense of the contractor fulfil such requirements and dispose of the scaffoldings, surplus materials, and rubbish etc. as he thinks fit and the contractor shall have no claim in respect of any such scaffolding surplus materials except for any sum actually realised by the sale there of less the cost of fulfilling the requirements and any other amount that may be due from the contractor. If the expense of fulfilling such requirements is more than the amount realised on such disposal as aforesaid, the contractor shall forthwith on demand pay such excess.

26. If at any time before completion of the entire work, items or groups of items for which separate periods of completion have been specified, have been completed, the Engineer-in-charge with the consent of the contractor takes possession of any part or parts of the same (any such part) then notwithstanding anything expressed or implied elsewhere in this contract :
- (a) Within ten days of the date of completion of such items or groups of items or of possession of the relevant part of Engineer-in-charge shall issue completion certificate for the relevant part as in condition 30 above provided the contractor fulfils his obligation under that condition for the relevant part.
 - (b) The defects liability period in respect of such items and the relevant part shall be deemed to have commenced from the certified date of completion of such items or the relevant part as the case may be.
 - (c) The Contractor may reduce the value insured to extent of full value of the completed items or relevant part as estimated by the Engineer-in-charge for this purpose. This estimate shall be applicable for this purpose only and for no other.
 - (d) For the purposes of ascertaining compensation for delay in completion of the work relevant part will be deemed to form a separate item or group, with date of completion as given in the contract or as extended under the relevant condition and actual date of completion as certified by the Engineer-in-charge under this condition.

COMPENSATION FOR DELAY/L.D. CLAUSE

27. If the contractor fails to maintain the required progress in items of the condition of this contract or to complete the work and clear the site on or before the contract or extended date/period of completion, he shall, without prejudice to any other right or remedy of the corporation on account of such breach, pay as agreed compensation amount calculated as stipulated below or such smaller amount as the contract value of the work for every week that the progress remains below that specified or that the work remains incomplete.

This will also apply to items or group of items for which separate period of completion has been specified. For this purpose the terms "Contract Value" shall be the value at contract rates of the work as ordered.

- (a) Completion period (as originally stipulated) not exceeding 6 months - @ 1% per week maximum up to 10 percent.
 - (b) Completion period (as originally stipulated) exceeding 6 months and not exceeding 2 years - @ ½ % per week maximum up to 7 ½ %.
 - (c) Completion period (as originally stipulated) exceeding 2 years - @ ¼ % per week maximum up to 5 percent.
28. The amount of compensation may be adjusted or set off against any sum payable to the contractor under this or any other contract with the Corporation.

DEFECTS & LIABILITY PERIOD :

29. The contractor shall be responsible to make good and remedy at his own expense within such period as may be stipulated by the Engineer-in-charge any defect which may develop or may be noticed before the expiry of the period mentioned in schedule-F hereto from the certified date of completion and intimation of which has been sent to the contractor within seven days of the expiry of the said period by a letter sent by hand delivery or by registered post.

- a. From commencement to completion of the works, the contractor shall take full responsibility for the care here of and for taking precautions to prevent loss or damage and to minimise loss or damage to the greatest extent possible and shall be liable for any damage or loss that may happen to the works or any part thereof and to all Government T&P from any cause whatsoever (save and except the Accepted Risks) and shall at his own cost repair and make good the same.
- b. Provided always that the Contractor shall not be entitled to payment unless the contractor shall insure the work (from commencement to completion), the Corporations 'T&P hired by the contractor and all materials at site, to their full value (as to Corporations T&P according to the value indicated in schedule-C), against the risks of loss or damage from whatever cause arising other than the excepted risks. The said insurance shall be in the joint names of the corporation and the contractor. The contractor shall deposit with the Engineer-in-charge the said policy or policies. All money payable by the insurers under such policy or policies shall be recovered by the Corporation and shall be paid to the Contractor shall in instalments by the Engineer-in-charge for the purpose of re-building or replacement or repair of the works and/or goods destroyed or damaged as the case may be.
- c. If the Contractor has a blanket insurance policy for all his works and the policy covers all the items to be insured under this condition, the said policy shall be assigned by the contract in favour of the Corporation, provided however if any amount is payable under the policy by the insurer in respect of works other than the work under this contract the same may be recovered by the contractor directly from the insurers.
- d. Where the Corporation building or a part thereof is rented by the contract he shall insure the entire building if the building or any part thereof is used by him for the purpose of storing or using materials of combustible nature, as to which the decision of the Engineer-in-charge shall be final and binding.
- e. The Contractor shall indemnify and keep indemnified the Corporation against all losses and claims for injuries or damage to any person or any property whatsoever which may arise out of or in consequence of the construction and maintenance of works and against all claims, damage, proceedings, damage, cost, charges and expenses whatsoever in respect of or in relation thereto; provided always that nothing herein constrained shall be deemed to render the contractor liable for or in respect of or to indemnify the Corporation against any compensation or damages caused by the Expected risks.
- f. The Contractor shall at all times indemnify the Corporation against all claims, damages or compensation under the provisions of Payment of Wages Act, 1936, Minimum wages Act; 1948, Employees Liability Act, 1938, the Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947 and the Maternity Benefit Act, 1961 or any modifications thereof or any other law relating thereto and rules made thereunder from time to time or as consequence of any accident or injury to any workman or other persons in or about the works, whether the employment of the contractor or not (save and except where such accident or servants) and against all costs, charges and expenses of any suit, action or proceedings arising out of such accident or injury against all sum or gums which may with the consent of the contractor be paid to compromise or compound any such claim. Without limiting his obligations and liabilities as above provided, the contractor shall insure against all claims, damages or compensation payable under the Workmen's compensation Act, 1923 or any modification thereof or any other law relating thereto.

- g. The aforesaid insurance policy/policies shall provide that they shall not be cancelled till the Engineer-in-charge has agreed to their cancellation.
- h. The contractor shall prove to the Engineer-in-charge from time to time that he has taken out all the insurance policies referred to above and has paid the necessary premiums for keeping the policies alive till expiry of the Defects Liability period.
- i. The contractor shall ensure that similar insurance policies taken out by his sub-contractors (if any) and shall be responsible for any claims or losses to the Corporation resulting from their failure to obtain adequate insurance protection in connection thereof. The Contractor shall produce or cause to be produced by his sub-contractor (if any) as the case may be, the relevant policy or policies and premium receipts as and when required by the Engineer-in-charge.
- j. If the contractor and/or his sub-contractor (if any) shall fail to effect and keep in force the insurance referred to above or any other insurance which he/they may be required to effect under the terms of the contract, they and in any such case the Corporation may, without being bound, effect and keep in force any such insurance and pay such premium or premium as may be necessary for that purpose and from time to time deduct the amount so paid by the Corporation from any moneys due or which may become due to the Contractor or recover the same as debt due from the contractor.

FACILITIES TO OTHER CONTRACTORS

29. The Contractor shall, in accordance with requirements of the Engineer-in-charge, afford all reasonable facilities to other contractors engaged contemporaneously on separate contracts in connection with the works and for departmental labour and labour of any other properly authorised authority or statutory body which may be employed at the site on execution of any work not included in the contract or of any contract which the Corporation may enter into in connection with or ancillary to the works.

NOTICE TO LOCAL BODIES

- 30 The Contractor shall comply with and give all notices required under any governmental authority, instrument, rule or order made under any Act of Parliament, State Law or any regulation or Bye-laws of any local authority relating to the works. He shall before making any variation from the contract drawings necessitated by such compliance give to the Engineer-in-charge a written notice giving reasons for the proposed variation and obtain the Engineer-in-charges instructions thereon.
- 30.1 The Contractor shall pay and indemnify the Corporation against any liability in respect of any fees or charges payable under any Act Parliament, State Laws or any Government instrument, rule or order and any regulations or by-laws of any local authority in respect of the works.

SUB-CONTRACTS:

31. The contract shall not sublet any portion of the contract without the prior written approval of the accepting Authority.

INSTRUCTION AND NOTICES:

32. Subject as otherwise provided in this contract, all notices to be given on behalf of the Corporation and all other actions to be taken on its behalf may be given or taken by the Engineer-in-charge or any Officer for the time being entrusted with the functions, duties and powers of the Engineer-in-charge.
 - 32.1 All instructions, notices and communications etc. under the contract shall be given in writing and if sent by registered post to the last known place of abode or business of the contractor shall be deemed to have been served on the date when in the ordinary course of post these would have been delivered to him.
 - 32.2 The contractor or his agent shall be in attendance at the site/sites during all working hours and shall superintend the execution of the works with such additional assistance in each trade as the Engineer-in-charge may consider necessary orders given to the contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.
 - 32.3 The Engineer-in-charge shall communicate or confirm his instructions to the contractor in respect of the execution of the work in a 'Works site order book' maintained in the office of the Engineer-in-charge and the contractor or his authorised representative shall confirm receipt of such instructions by signing the relevant entries in this book. If required by the contractor, he shall be furnished a certified true copy of such instruction (s).

Foreclosures of contract in full or in part :

33. If at any time after acceptance of the tender the Corporation shall decide to abandon or reduce the scope of the works for any reason whatsoever and hence not require the whole or any part of the works to be carried out, the Engineer-in-charge shall give notice in writing to that effect to the contractor and the contractor shall have no claim to any payment of compensation or otherwise whatsoever on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works.
 - 33.1 The Contractor shall be paid at contract rates full amount for works executed at site and in addition a reasonable amount as certified by the Engineer-in-charge for the items hereunder mentioned which could not be utilised on the work to the full extent because of the foreclosure:
 - (a) Any expenditure incurred on preliminary site work eg. Temporary access road, temporary labour huts, staff quarters and site office storage accommodation and water storage tanks.
 - (b) The Corporation shall have the option to take over contractor's material or any part thereof either brought to site or of which the contractor is legally bound to accept delivery from the suppliers (for incorporation in or incidental to the work), provided however, the Corporation shall be bound to take over the materials or such portions thereof and the contractor does not desire to retain. For materials taken over or to be taken over by the Corporation, cost of such materials shall, however, take into account purchase price, cost of transportation and deterioration or damage which may have been caused to materials whilst in the custody of the contractor.

- (ii) For contractors materials not retained by the corporation, reasonable cost of transporting such materials from site to contractors permanent stores or to his other works, whichever is less. If materials are not transported to either of the said places, no cost of transportation shall be payable.
- (c) If any materials supplied by the Corporation are rendered surplus, the same except normal wastage shall be returned by the contractor to the Corporation at rates not exceeding these at which these were originally issued less allowance for any deterioration or damage which may have been caused whilst the materials were in the custody of the contractor. In addition, cost of transporting such materials from site to the corporation stores, if so required by the Corporation.
- (d) Reasonable compensation for transfer of T&P from site to contractors permanent stores or to his other works whichever is less. If T&P are not transported to either of the said places, no cost of transportation shall be payable. The Contractor shall if required by the Engineer-in-charge, furnish to him books of account, wage books, time sheets and other relevant documents as may be necessary to enable him to certify the reasonable amount payable under this condition.

TERMINATION OF CONTRACT FOR DEATH

34. If the Contractor is an individual or a proprietary concern and the individual or the proprietor dies and if the contractor is a partnership concern and one of the partners dies than unless the accepting Authority is satisfied that the legal representatives of the individual contractor or of the proprietor of the proprietary concern and in the case of partnership, the surviving partners, are capable of carrying out and completing the contract, the Accepting authority shall be entitled to cancel the contract as to its incompleting part without the Corporation being in any way liable to payment of any compensation to the estate of the deceased contractor and/or to the surviving partners of the contractors firm on account of the cancellation of the contract. In the event of such cancellation the corporation shall not hold the estate of the deceased contractor and/or the surviving partners of the contractor's firm liable in damages for not completing the contract.

CANCELLATION OF CONTRACT IN FULL OR IN PART

35. If the Contractor:
- (a) At any time makes default in proceeding with the works with due diligence and continued to do so after a notice in writing of 7 days from the Engineer-in-charge or
 - (b) Commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it with 7 days after a notice in writing is given to him in that behalf by the Engineer-in-charge.
 - (c) Fails to complete the works or items of work with individual dates of completion, and does not complete them within the period specified in a notice given in writing in that behalf by the Engineer-in-charge.
 - (d) Shall offer or give or agree to give to any person in Corporation's service or to any other person on this behalf any gift or consideration of any kinds as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract for the Corporation or
 - (e) Shall enter into a contract with the Corporation in connection with which commission has been paid or agreed to be paid by him or to his knowledge unless the particulars of any such commission and the terms of payment there of have previously been disclosed in writing to the Accepting/Engineer-in-charge, or
 - (f) Shall obtain a contract with the Corporation as a result offering tendering or by other non-bonafide methods of competitive tendering , or

- (g) Being an individual, or if a firm any partner there of shall at any time be adjudged insolvent or have a receivers order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed executed by him for benefit of his creditor shall be given to contractor for the value of the work executed by him up to the time of cancellation the value of contractor's materials taken over and incorporated in the work, and use of tackle and machinery belonging the contractor ; or
- (h) Being a Corporation, shall pass a resolution or the court shall take an order for the liquidation of its affairs, or a receiver or manager on behalf of the debenture holders shall be appointed or a circumstance shall arise which entitle the court or debenture holders to appoint a receiver or manager; or
- (i) Shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days; or
- (j) Assigns, transfers, sublets (engagement of labour on a piece work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or attempts to assign, transfer or sublet the entire works or any portion there of without the prior written approval of the Accepting Authority;

The Accepting Authority may, without prejudice to any other right to remedy which shall have accrued or shall accrue there after to the Corporation by written notice cancel the contract as a whole or only such items of work in default from the contract.

36.1 The Accepting Authority shall on such cancellation have powers to:-

- (a) take possession of the site and any materials, constructional plant, implements, stores, etc., there on, and/or
- (b) Carry out the incomplete work by any means at the risk and cost of the contractor.

36.2 On cancellation of the contract in full or in part, the Engineer-in-charge shall determine what amount, if any, is recoverable from the contractor for completion of the works or part of the works or in case the works or part of the works is not to be completed, the loss or damage suffered by the Corporation. In determining the amount, credit shall be given to the contractor for the value of the work executed by him up to the time of cancellation, the value of contractors materials taken over and incorporated in the work and use of tackles and machinery belonging to the contractor.

36.3 Any excess expenditure incurred or to be incurred by the Corporation in completing the works or part of the works or the excess loss or damages suffered or may be suffered by the Corporation as aforesaid after allowing such credit shall be recovered from any money due to the contractor on any account, and if such money are not sufficient the contractor shall be called upon in writing to pay the same within 30 days.

36.4 If the contractor shall fail to pay the required sum within the aforesaid period of 30 days, the Engineer-in-charge shall have the right to sell any or all of the contractors unused materials, constructional plant, Implements, temporary buildings, etc. and apply the proceeds of sale thereof towards the satisfaction of any sums due from the contractor under the contract and if thereafter there be any balance outstanding from the contractor, it shall be recovered in accordance with the provisions of the contract.

36.5 Any sums in excess of the amounts due to the Corporation and unsold materials, constructional plant, etc. shall be returned to the contractor, provided always that if cost or anticipated cost of completion by the Corporation of the works is less than the amount which the Contractor would have been paid had he completed the works or part of the works, such benefit shall not accrue to the contractor.

LIABILITY FOR DAMAGE, DEFECTS OR IMPERFECTIONS AND RECTIFICATION THEREOF

- 37 If the Contractor or his workman or employees shall injure or destroy and part of the building in which they may be working or any building, road, fence etc. continuous to the promises on which the work or any part of it is being executed or if any damage shall happen to the work while in progress the contractor shall upon receipt of a notice in writing in that behalf make the same good at his own expense. If it shall appear to the Engineer-in-charge or his representative at any time during construction or re-construction or his prior to the expiration of the Defects Liability period, that any work has been executed with unsound, imperfect or unskillful workmanship or that any materials are of a quality inferior to that contracted for; or otherwise not in accordance with the contract, or that any defect, shrinkage or other fault have appeared in the work arising out of defective or improper materials or workmanship, the contractor shall upon receipt of a notice in writing in that behalf from the Engineer-in-charge, forthwith rectify or remove and re-execute the work and/or remove and replace with other the materials or articles complained of, as the case may be, by other means at the risk and expense of the Contractor.
- 37.1 In case of repairs and maintenance works, splashes and dropping from white washing, painting etc. shall be removed and surfaces, cleaned simultaneously with completion of these items of work in individual rooms, quarters or promises etc. where the work is done, without waiting for completion of all other items or work in the contract. In case the contractor fails to comply with the requirements of this condition, the Engineer-in-charge shall have the right to get the work done by other means at the cost of the contractor. Before taking such action however, the Engineer-in-charge shall give three days notice in writing to the contractor.

URGENT WORKS

- 38 If any urgent work (in respect whereof the decision of the Engineer-in-charge shall be final and binding) becomes necessary and the contractor unable or unwilling at once to carry it out as he may consider necessary. If the urgent work be such as the contractor is liable under the contract to carry out at his expense, all expenses incurred on it by the Corporation shall be recoverable from the contractor and be adjusted or set off against any sum payable to him.

CHANGE IN CONSTITUTION

- 39 Where the Contractor is a partnership firm, prior approval in writing of the Accepting Authority shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or a Hindi Undivided family business concern such approval as aforesaid shall like wise be obtained before the contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the work hereby undertaken by the contractor. If prior approval as aforesaid is not obtained the contract shall be deemed to have been assigned in contravention of condition 41 (j) hereof and the same action may be taken and the same consequences shall ensure as provided for in the said condition-41.

TRAINING OF APPRENTICES

- 40 The Contractor shall during the currency of the contract when called upon by the Engineer-in-charge engage and also ensure engagement by sub-contractor and other employed by the contractor in connection with the works, such number of apprentices in the categories mentioned in the Scheduled-F and for such periods as may be required by the Engineer-in-charge. The Contractor shall train them as required under the Apprentices Act, 1961 and shall be responsible for all obligations of the employer under the Act including the liability to make payment to Apprentices as required under the Act.

VALUATION AND PAYMENT

RECORDS AND MEASUREMENT

- 41 The Engineer-in-charge shall except as otherwise stated ascertain and determine the value of the works done in accordance with the measurement recorded and the contracted rates for each such items of work.
- 41.1 All items having a financial value shall be entered in measurement book, level book etc. prescribed by the Corporation so that a complete record is obtained of all work performed under the contract.
- 41.2 Measurement shall be taken jointly by the Engineer-in-charge or his authorised representative and by the Contractor or his authorised representative.
- 41.3 Before taking measurements of any work, the Engineer-in-charge or the persons deputed by him or the purpose shall give a reasonable notice to the contractor. If the contractor fails to attend or send an authorised representative for measurement after such a notice or fail to countersign or to record the objection within a week from the date of measurement, then in any such event measurements taken by the Engineer-in-charge or by person deputed by him shall be taken to be correct measurements of the work.
- 41.4 The Contractor shall, without extra charge, provide assistance with every appliance, labour and other things necessary for measurement.
- 41.5 Measurements shall be signed and dated by both parties each day on the site on completion of measurement. If the contractor objects to any of the measurement recorded on behalf of the Corporation, a note to that effect shall be made in the measurement book against the item objected to and such note shall be signed and dated by both parties engaged in taking the measurement.
- 41.6 Where mode of measurement is not otherwise specified, the measurement shall be taken at site as per the latest I.S. code of practice at the time of tendering.

METHODS OF MEASUREMENT

- 42 Except where any general or detailed description of the work in quantities expressly shows to the contrary, Schedule of quantities shall be deemed to have been prepared and measurement shall be taken in accordance with the procedure set forth in the schedule of rates/specification notwithstanding any provision in the relevant standard method of measurement or any general or local custom. In the case of items which are not covered by the Schedule of rates/specification, measurement shall be taken in accordance with the relevant standard method of measurement issued by the Indian Standard Institution.

PAYMENT ON ACCOUNT

- 43 Interim bills shall be submitted by the contractor at intervals mentioned in schedule-F on or before the date fixed by the Engineer-in-charge for the work executed. The Engineer-in-charge shall then arrange to have the bills verified by taking or causing to be taking, where necessary, the requisite measurements of the work.

- 43.1 Payment on account for amount admissible shall be made on certifying the sum by the Engineer-in-charge to which the contractor is considered entitled by way of interim payment for all work executed, after deducting there from the accounts already paid, the security deposit and such other amounts as may be deductible or recoverable in terms of the contract.
- 43.2 Any interim certificate given relating to work done or materials supplied may be modified or corrected by any subsequent interim certificate or by the final certificate. No certificate of the Engineer-in-charge supporting an interim payment shall itself be conclusive evidence that any work or materials to which it relates is/or accordance with the contract.
- 43.3 Pending consideration of extension of date of completion interim payments shall continue to be made as herein provided.

TIME LIMIT FOR PAYMENT OF FINAL BILL

- 44 The final bill shall be submitted by the contractor within three months of physical completion of the works. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payment of these items of the bill in respect of which there is no dispute and of items in dispute, for quantities and at rates as approved by Engineer-in-charge, shall be made within the period specified hereunder, the period being reckoned from the date of receipt of the bill by the Engineer-in-charge.
- (i) Contract amount not exceeding Rs. 5.0 lakhs: four months
- (ii) Contract amount exceeding Rs. 5.0 lakhs: six months
- 45 After payment of the amount of the final bill payable as aforesaid has been made, the Contractor may, if he so desires reconsider his position in respect of the disputed portion of the final bill and if he fails to do so within 90 days his disputed claim shall be dealt with as provided in the contract provided however no reimbursement or refund shall be made if the increase/decrease is not more than + 10% of the said price, and if so the reimbursement or refund shall be made only on the excess over + 10% provided that any increase will not be payable if such increase has become operative after the Contract or extended date of completion of the works or items of work in question.

OVER PAYMENTS AND UNDER PAYMENTS

- 46 Whenever any claim for the payment of a sum of money to the Corporation arises out of or under this contract against the contractor the same may be deducted by the Corporation from any sum then due or, which at any time thereafter may become due to the Contractor under this contract and failing that under any other contract with the Corporation (which may be available with the Corporation) or from his security deposit; or he shall pay the claim on demand.
- 46.1 The Corporation reserves the right to carry out post payment audit and technical examination of the final bill including all supporting vouchers, abstracts, etc. The Corporation further reserve the right to enforce recovery of any over payment when detected, notwithstanding the fact that amount of the final bill may be included by one of the parties as an item of dispute before an arbitrator appointed under condition 52 of this contract and notwithstanding the fact than the amount of the final bill figures the arbitration award.
- 46.2 If as a result of such audit and technical examination any over payment discovered in respect of any work done by the contractor or alleged to have been done by him under the contract, it shall be recovered by the Corporation from the Contractor by any or all of the methods prescribed above or if any underpayment is discovered, the amount shall be duly paid the contractor by the Corporation.

- 46.3 Provided that the aforesaid right of the Corporation to adjust over-payment against amounts due to the contractor under any other contract with the Corporation shall not extend beyond the period of two years from the date of payment of the final bill or in case the final bill is a minus bill, from the date the amount payable by the contractor under the minus final bill is communicated to the Contractor.
- 46.4 Any amount due to the contractor under this contract for under payment may be adjusted against any amount then due or which may at any time thereafter become due before payment is made to the contractor, from him to the Corporation on any other contract or account whatsoever.

ARBITRATION AND LAW

ARBITRATION :-

47. Except where otherwise provided for in Contract all questions and dispute relating to the meaning of the specifications, designs, drawings and instructions herein before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works, or the execution or failure to execute the same whether arising during the progress of the work or after the completion or thereof shall be referred to the sole arbitrations or otherwise concerning the works, or the execution or failure to execute the same whether arising during the progress of the work or after the completion or abandonment thereof shall be referred to the sole arbitration of the Chairman and Managing Director of Uranium Corporation of India Limited, Jaduguda and if the Chairman and Managing Director is unable or unwilling to act to the sole arbitration, of some other person appointed by the Chairman and Managing Director, willing to act as such arbitrator. There will be no objection if the arbitrator so appointed is an employee of Uranium Corporation of India Limited, Jaduguda and that he had to deal with the matters to which the contract related and that in the course of his duties as such he had expressed views on all or any of the matters in dispute or difference. The arbitrator to whom the matter is originally referred being transferred or vacating his office or being unable to act for any reason, such Chairman and Managing Director as aforesaid at the time of transfer vacation of office of inability to act, shall appoint another person to act as arbitrator in accordance with the terms of the contract such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor. It is also a term of this contract that no person other than a person appointed by such Chairman and Managing Director, as aforesaid should act as arbitrator and if for any reason, that is not possible, the matter is not to be referred to arbitration at all. In all cases where the amount of the claim in dispute is Rs. 50,000.00 (Rupees Fifty thousand only) and above, the arbitrator shall give reasons for the award.

Subject as aforesaid the provisions of the Arbitration Act, 1940 or any statutory modification or re-enactment thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceeding under this clause. It is a term of the contract that the party involving arbitration under this clause together with the amount or amounts claimed in respect of each such dispute.

The arbitrator's may from time to time with consent of the parties enlarge the time, for making and publishing the award.

The work under the contract shall, if reasonably possible, continue during the arbitration proceedings and no payment due or payable to the contractor shall be with held on account of such proceedings.

The contractor shall be deemed to have entered on the reference on the date he issues notice to both the parties fixing the date of the first hearing.

The Arbitrator, shall give a separate award in respect of each dispute or difference referred to him.

The venue of arbitrator shall be such place as may be fixed by the arbitrator, in his sole discretion.

The award of the arbitrator shall be final, conclusive and binding all parties of this contract.

LAWS GOVERNING THE CONTRACT

48. This contract shall be governed by the Indian Laws for the time being in force and it shall be deemed to have been executed at Jaduguda, District Singhbhum (East), Jharkhand within the ordinary civil jurisdiction of the Competent Courts in the District, Singhbhum.

SECTION – VI

SPECIAL CONDITIONS OF CONTRACT

SECTION – VI

SPECIAL CONDITIONS

- 1.0 This section lays down the special conditions of contract forming a part of the contract agreement and shall be read in conjunction with the general conditions of contract.
- 2.0 Intent of specification as specified under INTENT OF SPECIFICATION shall be deemed to be a part of this special conditions of contract.
- 3.0 The technical specification and standards of various works shall be specified in tender specification.
- 4.0 The work and services to be covered under this specification and the conditions therein are detailed in the following sections of the specification and these sections along with enclosed drawings and documents form a part of this tender specification.

Section I	:	Notice Inviting Tender
Section II	:	General Information
Section III	:	Conditions of Tendering
Section IV	:	Forms
Section V	:	General Conditions
Section VI	:	Special Conditions
Section VII	:	Technical Specification
Section VII A	:	Schedule of items
Section VIII	:	Drawings and documents enclosed with the specification.

- 5.0 Ground area (without any finish) shall be given for construction of temporary storage/shed. The contractor shall demolish all such temporary structures constructed by him for erection and clean the site, unless, otherwise instructed by the purchaser.
- 6.0 On arrival of material at site, the contractor shall open the packing, cases, inspect the materials, repair and replacement of materials damaged or lost in transit or at site should be done promptly by him at no extra cost to the purchaser.
- 7.0 The contractor shall arrange for all machinery, tools and tackles etc. as required for handling at site, erection of structures under this contract. No equipment will be available for hire from the purchaser other than specified.
- 8.0 No compensation shall be paid to the contractor for temporary idling of their workers, officers and equipments etc. for hocking/matching up of the works, awarded for the existing works extension which may arise due to non-availability of site, facilities etc. However, best effort shall be put up by the purchaser, without disrupting production of the operating plant, to extend all help and facilities at site to the contractor for carrying out their works satisfactory without any loss of time and man-hour etc.

9.0 PROGRESS REPORTS AND SCHEDULES

The contractor shall submit to the purchaser, by the 3rd of every month 3(three) copies of a report in an approved proforma showing the progress made in construction, procurement activities of the works during the previous months. The report also indicate any delay with respect to the approved programme and corrective measures proposed by the contractor.

- 10.0 The contractor shall arrange for all approach facilities at his own cost as may be required during construction period.

11. **COMPLETION TIME**
The total time period for computing the entire job covered under this NIT specification is given /mentioned In the NIT which will be reckoned 15 days from date of Work Order / L.O.I. or handing over the site Whichever is later.
12. **MEDICAL CARE**
The contractor shall be fully responsible for any first aid and emergency medical treatment to his employees at site. Necessary arrangements for this purpose shall be made by the contractor at site. In serious cases, Medical facilities of UCIL may be available to the contractor on chargeable basis.
13. **DELAY IN COMPLETION**
If the contractor fails to complete the works within the time frame of completion the purchaser shall be entitled to impose liquidated damage a sum at ½ % of contract sum for each complete week between the time for completion and actual date of completion, maximum upto 7.5 % of the contract value in accordance to clause of the general conditions of Contract (G.C.C)
14. **Schedule of work**
The successful contractor will have to submit a programme of work in the form of Bar Chart and PERT Chart showing the tentative progress of work of design, fabrication, delivery, installation, commissioning, etc. within a reasonable time after receipt of LOI but before signing of the contract agreement, to the purchaser for his approval. The programme to be made in such a manner that it will cause minimum shut down to the operating plant. The programme to be made to complete the system within the stipulated time period. The submission to and approved by the purchaser of such programme shall not relieve the contractor of any of his duties or responsibilities, under the contract.
15. **Time Bar on payment**
Payment shall be released within 45 days after checking and entries made on measurement book and certification of the progress bill (R/A Bill) done by Engineer-in-charge. No claim whatsoever shall be entertained for late payment beyond 45(forty five) days for reasons attributable to the contractor.
16. **Contractor to follow security rules enforced by the owner**
The contractor shall strictly abide by the prevailing security rules and regulations and also to be enforced by the owner from time to time. Entry to the works premises of the owner is strictly restricted and only bonafide pass/permission holders are allowed.
17. **Price Escalation**
No Escalation on any account would be payable under this contract.
- 18.0 **MATERIALS TO BE SUPPLIED BY THE PARTY.**
All materials including Cement and steel required for the execution of the job will have to be arranged by the contractor at their own cost from the approved manufacturers only.

No cement & steel will be supplied by the company/purchaser. The contractor will have to be consumed the cement & steel quantity as per theoretical consumption based on CPWD norms.

Contractor will have to produce manufacturer's test certificate to the owner/purchaser for each lot of cement and steel brought at site for use.

The quality of the cement will be further checked by the purchaser before use and contractor will be allowed to use only when found suitable if require by the purchaser the sample of cement and steel will be checked through out side agency approved by the purchaser for which all expenses will be borne by the contractor.

APPROVED MANUFACTURER LIST : Cement will be Portland blast furnace slag cement with slag content more than 50% of the following manufacturers.

CEMENT :- I) ACC II) LAFARGE
STEEL :- I) SAIL II) TISCON

The contractor shall have to provide suitable store buildings for proper storage of cement & steel.

ALLOWABLE WASTAGE FOR :- CEMENT \pm 03 % AND STEEL \pm 05%

- i) The contractor shall have to provide suitable store building for proper storage of cement.
- j) The contractor shall submit reconciliation statement of steel/cement purchased by him from the once in every months.

19. Site office and stores

The contractor shall build at his own cost a suitable site office and necessary stores on the portion of the land allotted to him in an approved manner. The contractor shall maintain and keep his office and stores in good condition through out the execution of the works.

20. PAYMENT ON ACCOUNT:-

- (a) Interim bills shall be submitted by the contractor at intervals mentioned in schedule-F on or before the date fixed by the Engineer-in-charge for the work executed. The Engineer-in-charge shall then arrange to have the bills verified by taking or causing to be taking, where necessary, the requisite measurements of the work.
- (b) Payment on account for amount admissible shall be made on certifying the sum by the Engineer-in-charge to which the contractor is considered entitled by way of interim payment for all work executed, after deducting there from the accounts already paid, the security deposit and such other amounts as may be deductible or recoverable in terms of the contract.
- (c) Any interim certificate given relating to work done or materials supplied may be modified or corrected by any subsequent interim certificate or by the final certificate. No certificate of the Engineer-in-charge supporting an interim payment shall itself be conclusive evidence that any work or materials to which it related is complete in all respects.
- (d) The final bill shall be submitted by the contractor within three months of physical completion of the works. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payment of these items of the bill for quantities and at rates as approved by Engineer-in-charge, shall be made within the period specified hereunder, the period being reckoned from the date of receipt of the bill by the Engineer-in-charge.

- (i) Contract amount not exceeding Rs. 5.0 lakhs: four months
 - (ii) Contract amount exceeding Rs. 5.0 lakhs: six months
- (e) Final bill will not be entertained unless the same is accompanied by an affidavit in Form no. 'M' with particulars in form No. 'N' as per Rules-40 (10) of Bihar Mineral Concessional Rules-1972. Transport Challan in Form No.F in original will also be enclosed along with Final bill or paper pertaining to royalty clearance from the concerned department is submitted by the contractor.

21. CONTRACTOR TO ASSIST IN MEASUREMENT

The engineer shall except as otherwise stated, ascertain and determine by measurement the value of work done in accordance with the contract. The contractor shall when he requires any part or parts of the works to be measured, give notice to the engineer or the engineer's representative in making such measurement and shall furnish all particulars required by either of them. Should be contractor not attend or neglect or omit to send such agent then the measurement made by the engineer or approved by him shall be taken to be the correct measurement of the works.

Except where any general or detailed description off the work in the schedule of items expressly shows to the contrary, all measurements be made according to the procedure set forth by the engineer.

22. GUARANTEE

- (i) Guarantee, whenever required by the contract, shall be furnished by the contractor to the owner on forms approved by the Engineer and shall be signed by both the contractor and the sub-contractor when the sub-contractor's work is involved.
- (ii) the contract assumes a proper degree of skill on the part of the contractor and all his workmen employed. The contractor shall consult with the engineer whenever in his judgement a variation in the work of construction in the quality of materials specified would be beneficial or necessary to fulfill the guarantees called for in the contract. Such variations shall be carried out by the contractor only when authorized by the Engineer in writing. The request for such changes shall be made before the contract agreement is executed otherwise guarantees will be understood to hold good for work as specified in the contract and any variation necessary to fulfill such guarantees shall be carried out by the contractor at his own cost.

23. CONTRACTOR'S SITE ESTABLISHMENT

Site office and stores

The contractor shall build at his own cost a suitable site office and necessary stores on the portion of the land allotted to him in an approved manner. The contractor shall maintain and keep his office and stores in good condition through out the execution of the works.

DRAWINGS

(a) Tender drawings

The drawings enclosed with this tender document give some idea of the job. These are preliminary drawings for tender purpose only and are by no means the final drawings or show the full range of work under the scope.

(b) Contractor to examine

The contractor shall examine carefully all the drawings furnished to him and shall call the attention of the engineer to any discrepancy in the drawings. They are also expected to visit the site at their own cost to examine and assess the quantum and nature of work, covered under this NIT, before submission of offer. Any discrepancies in the quotation, or revision of rates thereon will not be entertained.

(C) Drawings to be made available at site

One copy of the required drawings shall be kept by the contractor at site and shall be made available for inspection and use by the engineer and by the any other person authorised by the engineer in writing.

25.0 CONTRACTOR TO ASSIST IN MEASUREMENT

The engineer shall except as otherwise stated, ascertain and determine by measurement the value of work done in accordance with the contract. The contractor shall when he requires any part or parts of the works to be measured, give notice to the engineer or the engineer's representative in making such measurement and shall furnish all particulars required by either of them. Should be contractor not attend or neglect or omit to send such agent then the measurement made by the engineer or approved by him shall be taken to be the correct measurement of the works.

Except where any general or detailed description off the work in the schedule of items expressly shows to the contrary, all measurements be made according to the procedure set forth by the engineer.

26.0 VARIATION AND SCHEDULE OF QUANTITIES

The quantities set out in the schedule of items are the estimated quantities of the permanent works only. The actual design and quantities may vary from those indicated in the tender documents due to the actual condition of the site or due to other reasons. The contractor shall carry out all the work upto a total variation of $\pm 15\%$ on the contract price. All tendered rate shall remain firm within this limit. Any individual item may vary to any extent and be excluded altogether and extra items may be included rates

for extra items not covered in CPWD, DSR-2007 shall be based on market price of material and labour with 15% extra to cover overhead and profits.

27.0 **Water**

- (a) **Water will be provided at a single point near work sit free of cost , but subject to availability otherwise contractor will have to arrange himself at their own cost for that no payment will be reimbursed by UCIL.**
- (b) **Contractor has to arrange/make their own arrangement from above point of water.**
- (c) **Electricity can be provided at one point near work site free of cost. Extension if required till have to be arranged by the contractor , but subject to availability otherwise contractor will have to arrange himself at their own cost for that no payment will be reimbursed by UCIL.**

28. **Foreclosure of contract**

- 28.1 If at any time after acceptance of the tender the corporation decides to abandon or reduce the scope of the works for any reason whatsoever and hence not required the whole or any part of the works to be carried out, the Engineer-in-charge shall give notice in writing to that effect to the contractor and the contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequent of the foreclosure of the whole or part of the works.
- 28.2 That contractor shall be paid at contract rates full amount for works executed at site and, in addition, a reasonable amount as certified by the Engineer-in-charge for the items hereunder mentioned which could not be utilised on the work to the full extent because of the foreclosure:
- a) Any expenditure incurred on preliminary site work e.g; temporary access roads, temporary labour huts, staff quarters, and site office storage accommodation and water storage tanks.
 - b) The corporation shall have the option to take over contractor's material or any part thereof either brought to the site or of which the contractor is legally bound to accept delivery from suppliers (for incorporation in or incidental to the work), provided, however, the Corporation shall be bound to take over the materials or such portions thereof which the contractor does not desire to retain. For materials taken over or to be taken over by the Corporation, cost of such materials shall, be worked out taking into account purchase price, cost of transportation and deterioration or damage which may have been caused to materials while in the custody of the contractor.
 - (c) For contractors materials not taken over by the corporation, reasonable cost of transporting such materials from site to contractors permanent stores or to his other works, whichever is less. If materials are not transported to either of the said places, no cost of transportation shall be payable.
 - (d) If any materials supplied by the Corporation are rendered surplus, the same except normal wastage shall be returned by the contractor to the Corporation at rates not exceeding those at which these were originally issued less allowance for any deterioration or damage which may have been caused whilst the materials were in the custody of the contractor. In addition, cost of transporting such materials from site to the Corporation Stores, shall be paid to the contractor if so required by the corporation.

- e) Reasonable compensation for transport of T&P from site to contractor's permanent stores or to his other works, whichever is less. If T&P are not transported to either of the said places, no cost of transportation shall be payable.
- 28.3 The contractor shall if required by the Engineer-in-charge furnish to him books of account, wage books, time sheets and other relevant documents as may be necessary to enable him to certify the reasonable amount payable under this condition.

ROYALTY

Contractor will have to pay royalty charges to the concerned department towards the use of minor minerals such as sand, gravel, stone chips, stone boulder , rock , bricks and morum etc , for the quantity consumed in the work.

Final bill will be paid only after submission of royalty clearance certificate by the contract from District Mining Officer , JSR.

SECTION -- VII

TECHNICAL SPECIFICATION

TECHNICAL SPECIFICATION FOR

LAYING OF HORIZONTAL FILTER AND COVERING WITH 1 MTR. ROCK FILL MATERIAL FOR RAISING OF 4TH STAGE TAILINGS DAM (PHASE – II OF 1ST STAGE TAILINGS DAM) AT JADUGUDA. (EAST SIDE).

1. SPECIFICATION / I.S.I. STANDARDS TO BE FOLLOWED

The text includes reference to I.S. Standards and codes where necessary. These specifications shall be followed in letter and spirit. Changes if any shall be made at the level of the Engineer-in-charge.

2. TENDER DRAWINGS

The drawings for tender purposes enclosed with this specification are listed under contents. The tender drawings indicate the tentative section of the dam.

The construction shall be done as per construction drawings to be issued by the Engineer-in-charge.

BENCH MARKS

This section covers requirements for fixing bench marks/reference line and taking cross sections etc. The provisions of this section will also apply to works covered under part-B of these specification.

General

Before starting any work, the contractor shall erect a permanent benchmark, reference line and check profiles at convenient locations approved by the Engineer-in-charge. The bench mark shall be 20 cm x 20 cm x 60 cm with 40 cm embedded underground and 20 cm above the ground. The top surface of the benchmark shall be horizontal and plain. The words “B.M.” with RL shall be conspicuously carved and painted on the benchmark. The reference line shall comprise of the base line properly dagbelled on the ground with a number of masonry pillars suitably spaced. The check profiles shall be located at such places as to ensure execution of all slopes, steps and elevations, to the profile or profiles indicated in the approved drawings or as directed by the Engineer-in-charge. In case of spread out works, several bench marks reference lines and check profiles as may be necessary shall be constructed by the contractor as directed by the Engineer-in-charge.

Payments

All materials and labour for setting out works including construction of bench marks, reference lines, check profiles and surveys as may be required at the various stages of the construction work, shall be supplied or made available by the contractor at the contractor's cost.

Cross Sections

Immediately prior to the beginning of the work, cross sections of the existing ground level at every 15 mtr. interval, normal to the axis of the dam shall be taken over the base and seating of the dam for sufficient distance outside the limits. Levels on these cross sections will be taken at 5 m intervals.

These cross sections shall be taken and plotted in ink and shall be binding on the parties after they are signed, both by the contractor and the Engineer-in-charge. These cross sections shall form the basis of all future measurements and payments on the area.

1.4 Payments:

No payment shall be made to the contractor for this item. The rate for individual item of work under the contract shall include the cost of setting out works and all other items as indicated above.

2.00 PREPARATION OF WORK AREAS

2.1 Clearing work areas

Clearing and grubbing operations shall be performed in excavation embankment areas, borrow areas including a 3 m wide strip measured beyond and continuous to the limit lines of the areas. These sites shall be cleared of all trees, stumps, bushes, roots rubbish and other objectionable materials. Such materials from clearing operations shall be burnt, removed from the site of work or otherwise disposed off as approved.

No trees shall be cut from outside the area designated unless instructed in writing by the Engineer-in-charge and all trees designated outside the areas actually occupied by the dam shall be protected carefully from any damage.

2.1.1 Payments

No separate payment will be made for this and the same will be included in the corresponding item of works in schedule of rates quantities and bids.

2.2 Care and Diversion

In case care and diversion works are considered necessary, the contractor shall construct and maintain such temporary works to make the work areas clear of water. The contractor shall pump out all water from the work area and shall keep the foundations free from water while excavating and preparing the foundation etc. The contractor shall not be entitled for any claim or additional compensation or payment for damage due to water leaking through, under or around temporary bunds.

2.2.1 Payments

No separate payment shall be made for construction of temporary bunds and dewatering and the same shall be included in the corresponding items of work in schedule or rates and quantities and bids.

3.0 STRIPPING

3.1 EMBANKMENT

The entire area of embankment including a 3 m wide strip beyond and continuous with the areas of embankment proper, as shown in the drawings shall be stripped to a sufficient depth, as directed, to remove all unsuitable materials. In no case, stripping depth shall be less than 30 cm / 60 cm or as per direction of Engg-in-charge. The unsuitable materials shall include all debris, top soil, vegetable material including roots, loose rock, mounds of earth and boulders, organic silt, swamp materials and other perishable or objectionable construction or that might interfere with the proper bonding of the embankment with the foundation, or the proper compaction of the materials in the embankment, or that may be otherwise objectionable. The stripping shall be kept in advance of other items of works to ensure that no undesirable material will get mixed with approved embankment material and to enable proper inspection and measurement. Materials from stripping operation shall be dumped in soil disposal areas as shown on the drawings or as directed by Engineer-in-charge.

3.2 MEASUREMENTS AND PAYMENTS

- (a) Immediately prior to the beginning of the work, after the jungle clearance has been done, accurate cross sections of the existing ground levels at every 15 m interval or closer where necessary and normal to the axis of the dam shall be taken over the area to be excavated and for sufficient distance outside the limits of excavation. Levels on these cross sections will be taken at 5 meters. Final sections along the same lines after the benching or stripping is completed shall be taken. Volume shall then be computed for materials excavated and recorded.
- (b) The payment for the work shall be based on measurement for the actual work recorded in cubic meter units. It shall include all items lime excavation, dressing of the benches and foundations, re-handling and removal of material from the sites including all leads and lifts etc. as described in the schedule of quantities and bids.

4.0 KEY TRENCH

4.1 Excavation of key trench under Dam Embankment

The key trench as shown in the drawings shall be excavated in the foundation to the established lines and grades. The alignment and cross sections shown in the drawings will be subject to such changes as may be found necessary by conditions exposed by the excavations. Accurate trimming of the slopes of the excavation will not be required, but excavation shall conform as closely as practicable to the established lines and grades.

4.2 Material excavated from the key trench

The material from excavation of key trench shall be used in the random zone of the embankment either immediately or after stock piling as convenient. Before placing this material in the embankment, the foundation for the embankment shall be cleared, stripped and prepared as specified and adequate arrangement made for watering and rolling the layers of earth fill in the embankment. This material shall be subject to the same degree of embankment control as for the material obtained from the borrow pits for random zone. Excavated materials which are unsuitable for use shall be disposed off as directed by the Engineer-in-charge.

4.3 Back filling of key trench

Key trench shall be back filled with impervious material of the same specifications and in the same manner as for the impervious zone of the embankment of the dam. The finest and most clayey material shall be placed in the key trench.

4.4 Measurements and Payments

- (a) For this purpose, grid levels at the ground at 5 m or closer intervals will be taken after stripping and before commencement of the key trench excavation and after the final excavation of the key trench. Payments will be based on the contents of the key trench, finally approved on excavated sections.

For wet excavation and dewatering, no separate payment will be made and the same will be included in the respective items in the schedule of quantities and rates. Similarly, rate will include all leads and lifts of disposal and shoring wherever necessary.

- (b) Payments for the back filling of the key trench shall be made in the same way, as for the impervious zone of the embankment of the dam.
Payment shall be made as per actual measurement of work done at unit rate of one cum and shall include all items of work including excavation of earth and its transportation, breaking clods, picking of roots, levelling and laying, compaction by mechanical means, watering etc. including all leads and lifts.

No extra payment for dewatering shall be made, and same will be included in the respective items of schedule of quantities and rates.

5.0 BORROW AREAS

GENERAL

1. The limits of borrow areas to be used in the various zone of embankment shall be flagged in the field and material from each borrow area shall be placed only in the zones for which it has been specified.

2. Borrow pit for contractor arranged material shall not be opened at adjacent downstream village of the 3rd stage tailings pond, 2nd stage tailings pond and 1st stage tailings pond within a distance of 2.00 KM from downstream toes of the all three tailings ponds. In case it is proposed to provide a lining for the reservoir, no borrow pits shall be opened up in the reservoir. Borrow pits shall be operated so as not to impair the usefulness or mar the appearance of any part of the work or any other property. The surface of wasted material shall be left in a reasonably smooth and even condition. Borrow areas outside the reservoir area shall be finished as directed by the Engineer-in-charge to prevent conditions favourable for breeding of mosquitoes.

3. Preparation of borrow area

All areas required for borrowing earth for embankment shall be cleared of all trees and stumps, roots, bushes, rubbish and other objectionable material. Particular care shall be taken to exclude all organic matter from the material to be placed in the dam embankment. The cleared areas shall be maintained free of vegetable growth during the progress of the work. Clearing and grubbing shall be carried out in accordance with the provision of clause 2.1.

4. Stripping of borrow areas

Borrow areas shall be stripped of top soil, sand and any other matter which is unsuitable for the purpose for which the borrow area is to be excavated. In quarry areas such stripping shall include the removal of all overburden and loose, soft and disintegrated rock materials from stripping shall be disposed off as directed.

5. Moisture conditioning

Moisture conditioning will be required in borrow areas for impervious zones. Where the natural moisture content of the soils for the impervious zone is less than the specified moisture content, moisture conditioning of the soil shall be resorted to by borrow pit irrigation. In flat areas with very tight soils requiring long periods of irrigation, this shall be carried out by ponding water on the surface by constructing low dykes. In large sloping borrow areas where a comparatively shallow depth is to be excavated, pressure sprinkler system could be used. When borrow pit irrigation is not completely adequate, supplemental water shall be loaded into carriers. Only very minor additions shall be made on the placement site.

Where the natural moisture content is on the higher side, it shall be reduced by ripping or ploughing and aerating the soil or by good surface drainage depending on the moisture content.

6. EXCAVATION

The depth of cut in all borrow areas will be designated by the Engineer-in-charge, and the cuts shall be made to such designated depths only. Shallow cuts will be permitted in the borrow areas, if unstratified material with uniform moisture contents is encountered.

Each designated borrow area shall be fully exploited before switching over to the next designated borrow pit. Haphazard exploitation of borrow area shall not be permitted. The type of equipment used and the operations in the excavation of materials in borrow areas shall be such as will produce the maximum quantities of uniformly blended materials fulfilling the requirement for each zone.

7. HAULAGE

The design, provision and operation of all facilities and equipment necessary for transporting of fill materials from borrow pits, excavations and stock piles to the final point of placement within the dam embankment shall be such that fill materials when placed in the embankment completely fulfill the requirements of those materials and do not produce unacceptable segregation's, wetting, drying or other undesirable effects in the fill materials.

8. STOCK PILING

Stock piling shall be done at approved locations only. Before any area is used for stock piling, it shall be cleared and stripped of all vegetation and top soil as necessary to prepare the stock pile area.

Stock piling of fill materials by end dumping the material down a stopping face/chute shall not be permitted, if segregation of the material takes place. Any material, particularly the materials for impervious zone, when stock piled, shall be protected from being rendered less suitable for placement in the fill due to weathering effects viz. Drying or over watering, due to rain etc.

9. PAYMENTS

No payments will be made for any of the above works as these will be covered in the over all rate of "earth work in filling" in the dam embankment. Further, the tenderer shall acquaint himself with the borrow areas, leads, haul roads etc. before tendering. All haul roads from borrow areas to work sites shall be at the cost of the tenderer.

10. SEALING CRACKS

Deep pot holes or pockets shall be filled with hand compacted soil or concrete. If the rock surface in the bottom and sides of pot holes is cracked, the crack should be sealed with cement grout. If the rock surface contains a great number of closely spaced pot holes, the entire rock surface shall be grunted to prevent.

Foundation rock which is fairly impervious but with a very jagged surface shall be treated by laying core material at a moisture content above OMC, in thin layers and compacting with mechanical tempers to ensure that all irregular depressions in the rock surface area filled with soil to create a complete bond. Any open cracks in jagged rock surface shall be sealed with cement grout by suitable means. Fault zones or larger cracks shall be dug out to a depth equivalent to twice the width or as determined by the Engineer-in-charge and back filled with concrete.

11. FILL MATERIALS

The materials for the respective zones of the embankment shall be obtained from borrow areas designated by the filed laboratory, which will also specify the depth of cut in the borrow area, for obtaining the material of desired gradation. In general, all materials from a particular borrow area shall be a mixture of materials obtained for the full depth of cut. Where, in a borrow area, the substratum occurs in well defined layers differing considerably in mechanical analysis so that mixture is not suitable for any particular zone, the materials shall be excavated layer wise by scrappers or other suitable means and the materials placed in the zone for which it satisfies the requirement.

12.0 IMPERVIOUS FILL MATERIALS

The materials for zone- I shall be impervious materials from selected borrow areas and shall not have particles of maximum size exceeding 100 mm. It shall not contain less than 10% material finer than 0.002 mm. It shall have a permeability value of less than 10^{-5} cm/sec.

13.0 RANDOM MATERIALS

Random materials for part requirement can be obtained from the foothills of stage-I reservoir and from the colony areas as directed by the Engineer-in-charge.

For balance requirement, the tenderer is required to arrange by them the suitable borrow areas. The quality of the material should be such that it should fulfill the requirement of "Technical specification" as laid down in the technical specification.

The materials shall be a mixture of materials obtained for full depth of cut. Rocks or boulder having maximum size exceeding 100 mm shall not be permitted. Endeavor shall be to avoid segregation of materials, and obtain a uniform mix.

ROCK FILL MATERIAL

Rock fill materials for the designated zone of the dam shall comprise of well graded rock. The material shall consist of hard durable rock fragment of approved quality . The rock fragment shall be free from cracks, seams, shale parting, conglomerate bonds and other defects, that would tend the increase unduly their susceptibility to deterioration by water and weathering action. The shape of the individual rock fragment shall be angular. The rock fill material shall be angular. The rock fill material shall satisfy the following requirements.

- (i) Fine smaller than 02 mm shall not exceed 10% and fines shall be cohesionless. (D mini – 02 mm).
- (ii) Maximum size of stones shall not exceed 600mm. (D max. – 600 mm). All the size of the material in between maximum and minimum must be uniformly graded.
- (iii) Co-efficient of uniformity shall be equal to or greater than 15.
- (iv) The material shall have permeability of more than 10^{-2} cms / Sec.

14.0 FILTER MATERIALS :- Filter material should be sufficient fine and well graded so that the voids of the filter are small enough to prevent base material particle from penetrating and clogging the filter.

Filter materials conforming to the specified gradation requirements may be available from excavated rock materials blended with natural or crushed sand so as to produce non-plastic free draining and well graded materials. Material may have to be screened and washed to produce filter material of required grading. The gradation of the filter layers shall be chosen so as to meet the following criteria with respect to the gradation of the adjacent layers:-

- (a) $\frac{D_{15} \text{ of the filter}}{D_{15} \text{ of the base}} > 5$
- (b) $\frac{D_{15} \text{ of the filter}}{D_{85} \text{ of the base materials}} < 5$
- © $D_{15} F / D_{85} B < 5$ piping retension criterion
- (d) $4 < D_{15} F / D_{15} B < 40$ Permeability criterion
- (e) $D_{50} / D_{50} B < 25$ Parallel gradation criterion

Where, D_{15} and D_{85} are the sizes at which 15% and 85% by weight of total soil particles are finer respectively. Filler layer shall not contain more than 5% material finer than 0.074 mm and the fines shall be cohesion. In addition, maximum particle size of well graded crushed stone shall not exceed 70 mm and less than 0.6 mm, uniformly graded coarse sand is to be used of which max. size of material in between the maximum and minimum must be uniformly graded.

The grain size curve of the filter shall be roughly parallel to that of the base material. However, these limits will be rechecked and established by the field laboratory on the basis of mechanical analysis of adjacent materials.

15.0 **Fill placement**

15.1 **General**

The suitability of procedure for the operations of placing fill materials, shall be determined by the Engineer-in-charge.

Except as otherwise specified, the fill materials shall be placed in the dry season. The distribution and gradation of the materials through out the earth fill shall be as shown on the drawings or as directed. The fill shall be free from lenses, pockets, streaks or layers of materials differing substantially in texture or gradation from the surrounding materials. The combined excavation and placing operations shall be such that the materials when compacted in the earth fill will be blended sufficiently to produce the best practicable degree of compaction and stability. Successive loads of materials shall be dumped on the earth fill in a direction parallel the axis of the dam, and in a manner to produce the best practicable distribution of the material. The various zones shall be clearly delineated on the embankment and the materials from the borrow areas placed accordingly. Initial stages of dam construction shall serve the purpose accordingly. Initial stages of dam construction shall serve the purpose of “Embankment Tests section”. The embankment test section shall be used to establish.

- (i) Layer thickness of fill materials.
- (ii) Optimum practicable moisture content.
- (iii) Number of passes of sheep foot roller/vibratory roller for effective compaction.

15.2 **Compaction**

Compaction of each layer of fill after proper conditioning as enumerated below, shall proceed in a systematic, orderly and continuous manner so as to ensure that each portion of layer receives the specified compaction. Guide lines for general compaction procedures and details about compaction equipment are placed at Appendix-A.

15.3 **Testing of Impervious, Random & Stone / Boulders Materials for Filling**

Suitable borrow areas for above material shall have to be arranged by the contractor. Suitability of the above materials will be decided best on the results obtained from the any suitable test laboratories approved by the UCIL. All the charges for collecting samples and laboratory testing and submission of results etc. will be borne by the contractor.

In case of random and impervious, minimum two samples from one location from different depths will have to be tested. From one borrow area minimum two location will be selected for testing of the samples and minimum two such borrow areas having sufficient quantity of above material should be identified and get tested.

Above materials shall be excavated, quarried, transported, placed and spread on the dam in such a manner that excessive segregation is avoided. Particular care shall be taken to ensure that materials are not so placed, as will be conducive to the formation of intermittent layer. No stones, pebbles or rock fragments having maximum dimensions of more than 100 mm shall be placed in this zone. Such stones and cobbles shall be removed either at the borrow pit or after being transported to the embankment but before the materials in the earth fill are rolled and compacted. The materials shall be placed in the earth fill in continuous horizontal layers not more than 150 mm in thickness after being rolled as herein specified. During construction, a small transverse slope from center towards edges should be given to avoid pools of water forming due to rains. If in the opinion of the Engineer-in-charge.

The surface of prepared foundation or the rolled surface of any layer of earth fill is too dry or smooth to bond properly with the layer of materials to be placed thereon, it shall be moistened or worked with narrow, scarifier, or other suitable equipment, in an approved manner to a sufficient depth to provide a satisfactory bonding surface, before the succeeding layer of earth fill is placed. If the rolled surface of any layer is found to be too wet for proper compaction of the layer of earth fill material placed thereon, it shall be raked up and allowed to dry, or be worked with narrow, scarifier or any other suitable equipment to reduce the moisture content to the required extent, and then it shall be compacted before the next succeeding layer of earth fill material is placed. When compacting the soil against the steep rock abutment, the construction surface of embankment shall be sloped away from the rock for a distance of about 3 m at an inclination of 6:1 or steeper. If the foundation surface is too irregular to allow the use of large roller directly against the rock out crop, the fowler shall be used to compact the soil as close to the out crop as possible and the portion of the embankment directly against the rock shall be compacted with the pneumatic hand tampers in thin layers. The moisture content of the earth fill placed against the rock or the structure shall be 2% above the optimum, to allow it to be compacted into all irregularities of the rock. In placing the earth fill on rock foundation, the foundation shall first be prepared. Care shall be taken in placing the first layer of the fill, so that no damage is caused by the hauling machinery, sheep foot rollers shall not be employed for compacting, till the thickness of the layers compacted by other means is greater by 30 cm, than the depth of the foot of the roller drum. The soil for the first layer shall be at moisture content of 2% above OMC, to enable satisfactory bonding of the fill with the rock surface. Stones and cobbles shall be used in the riprap or rock toe of the dam embankment, if suitable or wasted as directed.

15.4 Moisture control

The water content of the earth fill material prior to and during compaction shall be distributed uniformly through out each layer of materials and it shall be between -1% to +1% of the optimum moisture content. As far as practicable the material shall be brought to the proper moisture content, in the borrow area, before excavation. If additional moisture is required it shall be added by sprinkling water, before rolling of the layer. If moisture is greater than required, the material shall be spread and allowed to dry before starting rolling. Moisture control shall be strictly adhered to. The moisture content shall be relatively uniform throughout the layers of material. If necessary, ploughing, disking, narrowing or blending with other material may have to be resorted to obtain uniform moisture distribution. If the moisture content is more than or less than the range of optimum practicable moisture content, or if it is not uniformly distributed through out the layer, rolling and adding of further layer shall be stopped. Further work shall be started again only when the Engineer-in-charge satisfied.

16.0 ROLLING

When each layer of material has been conditioned so as to have the proper moisture content uniformly distributed through out the material, it shall be compacted by passing the tamping roller. Five to six passes of 10-Ton roller are considered sufficient.

However, the exact number of passes shall be stipulated by the field laboratory on the basis of compaction tests conducted on embankment test section. The layers shall be compacted in strips overlapping by not less than 0.6 m. The rollers or loaded vehicles shall travel in a direction parallel to the axis of the dam. Turn shall be made carefully to ensure uniform compaction. Rollers shall always be pulled. Density attained shall be at least 98% of the maximum dry density (Standard Proctor) obtained in the laboratory for the type of material used.

17.0 TAMPING

In locations where compaction of the earth fill by means of roller is impracticable or undesirable, the earth fill shall be specially compacted, as specified herein at the following locations:-

- (i) Portions of the earth fill in dam embankment adjacent to foundations designated on the drawings as specially compacted earth fill.
- (ii) Earth fill in dam embankment adjacent to steep abutments.
- (iii) Earth fill at locations specially designated such as back fills in trenches for laying the out let pipes from decantation wells.

Earth fill shall be spread in layers of not more than 10 cms. In thickness when loose and shall be moistened to have the required moisture content as specified. When each layer of material has been conditioned to have the required moisture content, it shall be compacted to the specified density by special rollers, mechanical tampers or by other approved methods, and all equipment and methods used, shall be subject to approval based on evidence of actual performance and field compaction test. The moisture control, and compaction shall be equivalent to that obtained in the earth fill actually placed in the dam embankment in accordance with the specifications. Work of compaction, specified above, will be carried out by the contractor and no payment will be made separately for this purpose as the rates quoted are inclusive of this activity.

18. DRESSING SLOPES

The outer slopes of the embankment shall be neatly dressed to lines and grades as placement of fill progresses. Compaction shall extend over the full width of the embankment and material in earth slopes shall be compacted as for the rest of structure. To ensure proper compaction on the edge, the cross section of the filling, during construction shall be kept suitably wider (45 cm) and the cross section dressed to the designed requirement after compaction for which no extra payment will be made and the cost of the same shall be induced by the contractor in the per cubic meter rate of completed item of earth work as in para under "Measurement and payments". All humps and hollows varying more than 150 mm from the neat lines of the embankment shall be regarded. Material used to fill depression shall be thoroughly compacted and bonded to the original surface. Slopes shall be maintained until final completion and acceptance. Any material that is lost by rains, weathering or other cause shall be replaced by the contractor at his cost.

19. Measurement and payments of Earth fill random

- (a) The work shall be measured on the basis of the cross-section. Initial cross-sections for this will be the ones taken after stripping and in accordance with para "Measurements and Payments". The cross-sections will be taken at an interval of 15 m or at closer distances as found necessary or as determined by the Engineer-in-charge.

The gross quantity of materials will be based on these cross-sections which will also indicate the separate zones of impervious, filter, rock-fill and rip-rap etc. for facility of arriving at the correct quantity of these materials which went into the construction of embankment. The lines demarcating the zones on the cross-sections shall conform to respective typical sections, except where departures from these are specially permitted by the Engineer-in-charge. Running measurements for any subsequent bill will be the overall sectional measurements minus the sectional running measurements up to the previous running bill.

- (b) Final measurements will be recorded on cross sectional basis. Foundation plan with relevant cross sections of the dam showing dimensions and levels shall be prepared and get signed by the contractor in token of the acceptance before commencement of stripping and again after completion of stripping of dam neat. The final measurements will be based on the accepted foundation plan and relevant cross section and completed section of the dam at the time of taking final cross-sections. The quantities arrived at, shall be paid at full tendered rate minus the running payments.
- (c) Cross section referred to in the above sub-para will be taken after the top most earth layer is duly compacted at optimum moisture content in accordance with relevant paras of the specifications. Materials placed in excess of the lines and grades shown on the relevant drawings and over and above the stipulations in relevant para will be ignored and not paid for. Similarly, while making running payment, suitable deduction will also be made for loose undressed, uncompacted materials on the slopes.
- (d) To achieve proper compaction into the edges of the designed section, the section is required to be widened as stipulated in para "Dressing Slopes". After compaction, it will be dressed by trimming the slopes to proper sections so that the surface on the slopes is also as firm and compact as the top of the embankment. Necessary extra quantities required to be handed for this purpose shall not be paid for extra and area to be included in the rate of earth work for the embankment.
- (e) Apart from the items described in the schedule of quantities, rate payable for this item will also cover construction, maintenance and removal of all additional haul roads and ramps, dumping and compaction and removal of all roots, vegetation, and unsuitable and objectionable materials either at the borrow area or at the embankment, unless there is any thing specified to the contrary.

The rate for earth work on dam (impervious material) shall include laying of layers in uniform thickness, control, compaction to required densities and dressing including all leads and lifts.

Payment of final bill shall be made at full tendered rates on the quantities worked out as above.

20 FILTER

20.1 Base filter Blankets

Where indicated in the drawings, filter blankets shall be laid on the base, under the downstream portion of the earth embankment, and other locations. The number of layers in filter blanket and thickness of each layer shall be as specified in the drawings. Filter shall be placed and tamped in such a manner, that mixing of filter with foundation or back fill materials will not occur. The filter material shall comprise of clean, sound and well-graded sand and crushed/broken aggregates. The material shall be free from debris, brush wood, vegetable matter, decomposed rock and other deleterious matter. The gradation of each filter layer shall meet the requirements as specified in para "Filter Materials".

The material brought by the contractor to the site shall be subjected to the tests in the laboratory at the project site with reference to grading and the filter criteria specified as in the enclosed sheet. All materials not conforming to the requirements so determined shall be rejected.

20.2 PLACING

The foundation shall be cleared, stripped and prepared as specified in preceding relevant paras before laying the base filter.

The filter material shall be placed and spread with crawler type tractor to approximately horizontal layers of thickness not more than 1000 mm and 750 mm for vertical layers after compaction. The Engineer-in-charge may direct the filter materials, shall be placed in the dam embankment locations other than the filter zones where defects occur below the general level of the foundation, etc. Extreme care should be taken during placing materials for this zone, to obtain fill, free from lenses, pockets, layers and streaks of segregated materials. If on completion of each layer of the filter, the surface of the layer is such that in the opinion of the Engineer-in-charge, it will obstruct free drainage of water through the zone, the surface of the layer shall be ripped, sluiced or otherwise prepared as directed by the Engineer-in-charge.

Blending of fine and coarse filters on the dam embankment, in order to produce the required grading other than the blending required to correct segregation, as a result of placing or spreading, will not be permitted. If during or after placement, any material in the filter zone has become contaminated by any objectionable material from the passage of construction machinery or by any other means, the contaminated filter shall be entirely removed and rectification as necessary be carried out under the directions of the Engineer-in-charge.

Each layer of material in the filter zones shall be watered and compacted to a maximum relative density of 70% by means of crawler type tractor, vibratory rollers, or similar approved equipment.

After completion of the filter blanket, the random / rock / impervious (as per direction of Engg-in-charge) fill material shall be placed in 600 mm each layer by layer after compaction.

21. CHIMNEY DRAIN

Chimney filter of the dimensions, specified in drawings shall be constructed on the downstream face of random/impervious zone. Material used shall be clean, sound and durable and shall be free from silt, roots, brush wood, vegetable matter or other deleterious matter. The gradation of filter materials shall meet the requirements as specified in para “ Filter Materials”. The material shall be laid in 750 mm layers and extreme care shall be taken during placing materials to obtain a zone, free from lenses, pockets, layers or streaks of segregated material. Overlapping of fill materials placed in the adjoining zones shall not be permitted to an extent such that the horizontal thickness of chimney drain is reduced below that shown off the drawings. Local reduction in horizontal width of this zone, to the extent of 100 mm shall be permitted, provided that the average thickness remains undiminished. Each filter layer shall be watered and then compacted to obtain a maximum relative density of 70%. At the abutment contact, filter materials shall be compacted by special compactors in a manner best suited to the job, in order to achieve the prescribed density.

22. PAYMENTS

- (i) For base filter, the work shall be measured on the basis of the cross-sections as indicated for impervious materials in para “Measurements & Payments of Earth Fill Random”.
- (ii) For chimney drain, the measurement shall be taken by measuring independently the surface area of slope and multiplying the same by thickness of respective layers of filters at its tendered rates as stipulated in the schedule of quantities and rates.

The rate shall include cost of shuttering required for chimney drain. The rates shall be inclusive of all leads and lifts of materials, watering and compaction of the filter materials and no separate payment will be made to the contractor on these counts. Materials placed in excess of the lines and grades shown on the relevant drawings, will be ignored and not paid for.

23. RANDOM MATERIAL

Random materials shall be excavated from the designated borrow area. Height of faces and location of benches shall be suitably chosen. One or more horizontal beams shall be formed at regular intervals so that the site shall be left in tidy and safe condition. Such equipment and procedures shall be used in the excavation of materials as well produce maximum quantities of uniformly blended materials without segregation. The material shall be transported, place and spread in the designated zone of the dam in such a manner, as to obtain uniform conditions as far as practicable. Particular care shall be taken to ensure that the materials so placed shall not be conducive to formation of intermittent layers/lenses of segregated materials.

24.0 Compaction

The materials shall be placed in continuous horizontal layers of 600 mm in thickness, when loose. Each layer shall be evenly spread to a level surface with minimum voids and compacted by about four passes of 10 Ton vibratory Roller in a direction parallel to the axis of the dam and one pass in a direction perpendicular to the axis, the acceptable minimum density shall be 2 Tons per cu m. Before the random material is end dumped, it shall be wetted by jetting the loaded trucks. The quantity of water used shall be around 15% of volume of materials.

If one completion of each layer, the surface of the layer is such that it will not be possible to obtain satisfactory bond with the succeeding layer, the surface shall be ripped, raked or otherwise prepared to provide a satisfactory surface.

26.0 Royalty

The contractor will have to pay royalty charges to the concerned department towards the use of minor minerals such as Sand, gravel, stone, stone chips, bricks and moorum etc. for the quantity consumed in the work. However, if royalty is payable on waste rock, random and impervious materials, the same will be borne by UCIL.

Contractors are required to keep the above in mind while quoting their rates.

27.0 Inspection and quality control

27.1 GENERAL

Control Tests will be carried out to determine whether the embankment fill as placed by the methods specified satisfies the requirements of the specifications. For this purpose the following tests shall be carried out on the materials from the different zones of the embankment.

After performing test at site and if found satisfactory, then only next layer of the material will be allowed.

27.2 IMPERVIOUS MATERIALS

Control Tests

Frequency

Field Density

One test for every 1,000 cu.m. placed or for each layer placed, frequency should be increased in (I) areas where degree of compaction is doubtful, (ii) in areas where embankment placing operations are concentrated.

RECORD TESTS

Standard Laboratory(Govt.test laboratories or any educational institutional test laorastories.),

Compaction, One test for full quantity

Mechanical analysis and Specific Gravity.

Permeability Tests

One test for every 20,000 cu.m.

27.3 FILTERS

Control tests

Mechanical Analysis

One test per layer placed, average one test for every 100 cu.m.

Relative Density

One test for every 5 m placed. Average one test for every 1000 cu.m.

Record Tests

Mechanical analysis relative Density specific gravity, Permeability.

One set of tests for every 10000 cu.m. placed.

27.4 RANDOM ZONE

Control Tests

Density

One test for every 5000 cu.m. placed.

Record Tests

Mechanical Analysis, Density

One test for every 20000 cu.m. placed.

28.0 Protection, Maintenance and Clean up

(a) General

The dam embankment shall, during the progress of work, be maintained in a satisfactory manner until final completion. Any material that is lost by weathering or other causes shall be suitably and properly replaced.

(b) Protection of Fill

During and/or after placement of materials in the different zones of the embankment, the materials shall be protected against contamination by clay, topsoil, other objectionable material from the passage of construction machinery, or by any other means.

Extreme care shall be taken at all times to preserve the homogeneity and permeability of the filter zones. The primer consideration in this regard shall be to prevent entry of fine materials placed in the adjacent zone and soil fractions eroded from the surfaces of the abutments by water draining towards the fill. Proper arrangement shall be made for effective system of drainage of the fill as well as abutments.

(c) Clean up

During placement of fill in the dam embankment the surfaces and slopes of the dam embankment fills shall at all times be kept free of waste materials. On completion of the work, all constructional plant, surplus material, waste materials and rubbish shall be removed from within the limits of dam embankment and the entries area shall be left in a neat, clean and presentable condition.

Borrow area for the impervious material suitable for use for construction work will have to be arranged by the contractor and all the cost incidental to this will be borne by the contractor. The soil sample from the borrow area will required to be tested for its suitability to be used in construction work by an agency approved by UCIL and the necessary cost towards this shall be borne by the contractor.

COMPACTION EQUIPMENT

General

Specification/details of compaction equipment given herein are intended to serve as a guideline. Use of improved type of equipment and mode of compaction are acceptable as long as the end results are achieved. Infact, the use of improved compaction equipment shall be encouraged as may be most suited to the prevailing site conditions and programme of construction.

Tractors for pulling compaction equipment shall have sufficient power for the most adverse conditions to be encountered during compaction of the fill and when the compaction equipment is ballasted to the maximum weight specified for compaction of the fill.

When rollers are operated in a multiple arrangement behind a single tractor, each of the rollers shall be similar and similarly ballasted as, approved by the Engineer.

Compaction equipment shall be maintained in good condition at all times to ensure that the amount of compaction obtained is the maximum for the equipment.

Sheep Foot Roller

Sheep foot rollers and vibratory rollers of the specifications given below are recommended for compaction of different zones of dam section as suited to respective materials. Double drum sheep foot rollers shall be used for compaction. Each drum of roller shall have an outside diameter not less than 142.25 cms and length not less than 122 cms (48 inches). The space between two adjacent drums when on level surface shall not be less than 30 cms (12 inches) and not more than 33 cms 115 inches.

The total number of foot per drum shall be 88. At least one tamping foot shall be provided for 967 cm² (150 sq. inches) of the drum surface area. The length of each tamping foot from the outside surface of the drum shall be maintained at not less than 18 cms. (7 inches). The cross sectional area/bearing surface area of each tamping foot shall not be less than 25.80 sq. cms (4 sq. inches) not more than 64.5 sq. cm (10 sq. inches) at a plane normal to the axis of shank 15 cm (6") from surface. The weight of the roller when fully loaded shall not be less than 7100 kg (15500 lbs) and the ground pressure when fully loaded shall not be less than 40 kg/cm².

The rollers shall be pulled at a speed of not more than 4 kms per hour. During operation of rolling the spaces between the tamping foot shall be kept clear of materials sticking to the drum which could impair the effectiveness of the tamping rollers.

Vibratory Rollers

Vibratory rollers shall be of the vibratory, single smooth steel drum type and shall be equipped with a suitable cleaning device to prevent the accumulation of material on the drum during rolling. Each roller shall have a total static weight of not less than 9070 kgs. The drum shall be not less than 152.4 cms (60 inches) in diameter and 198 cms (78 inches) in width. The vibration frequency of the roller during operation shall be between 1100 and 1500 vibrations per minute. The centrifugal force developed by the roller at 1250 vibrations per minute shall be not less than 17,240 kgs. The power of the engine driving the vibrator shall be sufficient to maintain the specified frequency and centrifugal force under the most adverse conditions which may be encountered during compaction of the fill. The speed during rolling shall not exceed 4 km/hour.

Special Compactors

In locations where compaction of the earth fill by means of sheep foot roller/vibratory roller is impracticable or undesirable, the earth fill shall be compacted with special compactors.

Special compactors could be loaded dump trucks, hand guided heavy duty mechanical tampers, hand guided vibratory rollers and such other compaction equipment as may be approved by the Engineer. Special compactors shall be capable of producing, with a reasonable number of coverage, the specified densities in the fill material on which they are used.

Compaction by special compactors where required shall be carried out during day light.

SPECIFICATION FOR STONE MASONRY

1.1 General

Stones shall consist of most durable rock type, of approved quality, selected for the purpose. The quality of individual stones shall be dense, sound and resistant to abrasion and shall be free from cracks seams, shale partings, conglomerate bands and other defects. Stones shall be free from any harmful impurities and the SO₃ content shall not exceed 1%. The crushing strength of stones for masonry shall not be less than 200 kg/cm².

The stones shall be so cut and plain chiseled as to obtain proper wedging action and that quantity of mortar required for masonry work is minimum. Stones having a weight of 40 kg or more per piece shall constitute 70% of total volume of masonry work. No stone less than 5 kg weight shall be used.

1.2 WORKMAN SHIP

Masonry shall be done in horizontal layers providing proper bonding. All stones shall be cleaned of dirt, dust and all weathered and loose portions and moistened before use. Provision of reinforcement at the vulnerable points in the masonry to prevent shrinkage cracks may be necessary if so required by the Engineer-in-charge. For curing the mortar, the masonry shall be kept watered for a minimum period of 14 days

continuously. Newly erected masonry shall be protected from inclement weather to prevent mortar from being washed out of joints by rain.

Stone masonry shall be constructed with cement mortar as specified in the schedule of quantities. The voids in between the stone should be filled up with cement mortar.

1.3 Payment

Payment shall be made on the basis of unit rates quoted in the schedule of quantities and bids. The rates shall be for the complete finished work including materials of approved quality with all leads and lifts, cleaning of stones, moistening, scaffolding and supports and curing etc.

1.4 Spillway :

General

Spillway has to be provided at right and left abutment of dam as shown in drawing. The spillway will be excavated to required section and grade. The alignment and cross sections shown in the drawing will be subject to such changes maybe found as necessary by condition exposed by excavation. Accurate trimming of the slope of the excavation will not be required but excavation shall confirm as closely as practicable to the established line and slopes.

S A F E T Y R U L E S

SAFETY OF CONTRACTORS EMPLOYEE

1. The Contractor shall at all times, take all reasonable precaution for the safety of employees, including those of sub-contractors in the performance of his contract and shall comply with all applicable provisions of both Central as well as the State Safety Laws. In addition to the Safety provision already included in the tender, the contracting officer shall include the safety requirements recommended by the Health Physics Unit, Jaduguda for a specified contract.
In the event that the contractor fails to comply with these provisions, the contracting officer may, without prejudice to any other legal or contractual rights, issue an order stopping all or any part of the work, thereafter a start order for resumption of work may be issued at the discretion of the contracting officer. The contractor shall make no reason of or in connection with such stoppage.
2. Contractors shall have a full time Safety Officer/Engineer when the contractor employees 500 or more persons or when engaged in specially hazardous work. In the case of contractors employing fewer than 500 persons his safety representative shall be an employee in a high supervisory capacity and his safety duties may be in addition to other technical administrative duties.
3. Contractor shall have at least one person fully trained in first Aid present at the site of work all the time.
4. Contractors must report to the Safety Officer (Mill) through their contracting Officers every accident involving.
--- Their personnel, UCIL property or personnel, ---Property or personnel of other contractors working on the site.
- 4.1 Contractors must report to the Safety Officer(Mill) immediately on becoming aware of any accident of Type-A(See Appendix-I) giving the following information:-
---Name of the informant, ---Nature and location of incident being reported, ---Name of supervisor/Engineer-in-charge, location and telephone number where he can be reached.
- 4.1.1 Contractors shall submit their investigation reports, through their contracting Officer, to the Safety Officer (Mill) immediately but not later than 3 working days after the occurrence of accident in the Form-A(See Appendix-2).
- 4.2 In the case of Type-B accidents (See Appendix-I), contractors shall submit their investigation reports, through their contracting officers, to the Safety Officer(Mill) immediately but not later than 3 working days after the occurrence of accident in the Form-A.
- 4.3 Monthly summary of accidents and cases of fire shall be prepared by each contractor in Form-B(See Appendix-3) and be sent to the Safety Officer(Mill) by the 7th of the next month.
- 4.3.1 Prime contractor reports shall include the mandays lost and occurrence of accidents under the jurisdiction of the sub-contractors.
- 4.3.2 Contractors shall submit a narrative on Safety activities and fire incidents for each month alongwith Form-B. The review should contain such items as personnel and programme chain, major project started and major problems.
- 4.3.3 Medical certificate of labourers are to be produced / given before start of the work.
- 4.3.4 Party have to deployed one experienced safety personnel to look after safety related issues at site.

APPENDIX – 1

CLASSIFICATION OF ACCIDENTS

Type-A

1. Fatal injuries
2. Serious injuries such as fracture, dislocation, severe burns necessitating hospitalization.
3. Any injury to five or more persons.
4. Accidents resulting in damage by fire, explosion etc.

Type-B

Minor injuries which result in laceration, abrasion, contusion etc.

Disabling injuries but not requiring hospitalization.

APPENDIX – 2

ACCIDENT INVESTIGATION REPORT

Name of the contractor and Project :

Nature of the contract :

Name of the Engineer-in-charge :

Name of the injured person :

Age :

Address :

Date and Time of accident :

Place where the accident occurred :

Nature of job :

What was the injured person doing at the time of accident ? :

Description of accident (in detail) :

Nature of injuries :

What was defective or in wrong condition that was responsible for the accident ? :

What was wrong with working methods instructions? :

What steps should be taken to prevent/recurrence of such accident? :

Name of the Witness :

Safety representative's remarks with signature and date :

APPENDIX – 3

(FORM – B)

SUMMARY OF ACCIDENT FOR THE MONTH OF.....

Name of the Contractor:

Name of the Project:

Name of the sub-contractor:

Name of the Safety representative
of the project:

Total no. of persons working
in the project:

Male

Female

Engineer:

Supervisors:

Labourers:

Total nos. of accidents(including type 'A' & 'B' accidents)

Disabling injuries

Non-disabling injuries

<u>Agency</u>	<u>No.</u>	<u>No. of days lost/changed</u>
Machine	:	
Handling Materials	:	
Full of persons	:	
Hand tools	:	
Fire/Explosive	:	
Collapse of excavation/structure	:	
Electric shock/burn	:	
Miscellaneous	:	

Remarks:

SCHEDULE OF WORKS

Notes :

1. Details of the items under this schedule shall be read in conjunction with the corresponding technical specifications, drawings and allied tender documents.
2. The work shall be carried out as per construction drawings, specifications, the description of each items in this schedule and/or instruction of the Engineer-in-charge.
3. Items of work provided in this schedule but not covered in the specification shall be executed strictly as per instructions of the Engineer-in-charge.
4. Unless specifically mentioned otherwise in the contract, the tenderer shall quote for the finished items and shall provide for the complete cost of labour, T&P materials, erection and dismantling of necessary scaffolding, levies, taxes, transportation, storage, repairs, rectification, maintenance until handing over revenue expenses, contingencies, overhead profits and all incidental items not specifically mentioned but reasonably implies and necessary to complete the works according to the contract.
5. Rates shall be quoted both in figures and in words in clear legible writing. No over writing is allowed. All scoring and cancellations should be countersigned by the tenderer. In case of illegibility, the interpretations of the Engineer-in-charge shall be final. All entries shall be in the English language.
6. The decision of the Engineer-in-charge shall be final and binding on the contract regarding clarification of items in this schedule with respect to the other sections of contract.

In this schedule of items following shall apply:-

R.M.	:	shall mean running meter
M ²	:	shall mean square meter
M ³	:	shall mean cubic meter
CM ³	:	shall mean cubic centimeter
Tonne	:	shall mean metric tonne
Each	:	shall mean one
Kg	:	shall mean kilogram
T&P	:	shall mean tools and plants.

SCHEDULE – ‘B’

Annexure-1

<u>Sl. No.</u>	<u>Particulars</u>	
1.	Tor Steel Rebars (All dia)	-----
2.	Structural Steel (All section)	-----
		(N. A.)
3.	M.S. Plate (All thickness)	-----
4.	Cement	-----

Signature of Officer

Signature of Contractor

Date:

Date:

SCHEDULE – ‘D’

Sl.No.	Category of labourer	Wages per day (Rs.)	Remarks
1.	Un-skilled labourer	Contractor's are required to enquire from time to time from the govt. authorities the minimum wages rate payable and pay to the workman accordingly.	

Signature of Issuing Officer

Signature of Contractor

Date:

Date:

Note: It will be the responsibility of the Contractor to check-up time to time from the Government Authority the minimum wages rate payable and pay to the workmen accordingly.

SCHEDULE – (F)

GENERAL CONDITIONS OF CONTRACT

Accepting Authority	Chairman and Managing Director
Market rate percentage addition to cover overheads and profit	Ten percent
Retention Money	10 percent of the contract sum including earnest Money.
Time for completion of work	(12) Twelve Months
Agreed liquidated damage	Upto a maximum 10 percent of the contract sum.
Defects Liability period	(12) Twelve Months from the completion of the work.
On Account Payment	Bi-Monthly R.A. bills will be paid.
Security deposit returned after virtual completion	Fifty percent and remaining 50% after expiry of defect liability period
Insurance	As directed.
Authority for Appointing Arbitrator	Chairman and Managing Director.

**SCHEDULE OF QUANTITY
FOR**

ORIGINAL

LAYING HORIZONTAL FILTER AND COVERING WITH 1 MTR. ROCK FILL MATERIAL FOR 4TH STAGE TAILINGS DAM AT JADUGUDA (EAST SIDE).

Item No.	Description of the item	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
01.	<p>Stripping & Compacting dam base, including excavation, dressing of benches, and foundation, re-handling and removal of stripped material (unserviceable material only) from site including all leads and lifts and as per direction of Engg-in-charge.</p> <p>(All materials & Equipment to be arranged by the contractor).</p>	19518.00	M3		
02.	<p>Excavation for key trench in all types of soils / rocks including sheeting, trimming, making slope as per drawing including dewatering, and maintaining the works area dry etc. and disposal of excavated unserviceable material including all leads and lifts. (After excavation the slope and base of trenches must be neatly dressed and compacted by suitable means/compacting equipment) complete as per specification and direction of Engg-in-charge.</p> <p>In all types of soil, including soft rock and hard rock fragments in all lifts.</p> <p>(All material & Equipment arrange be the contractor).</p>	7805.00	M3		
03.	<p>Providing and laying suitable impervious clay material in designated zone of the dam including key trench in specified layer not exceeding 150 mm thickness after being rolled, sprinkling water, compacting to specified density at optimum moisture content including excavation and transportation of soil from the approved borrow areas to placement site, removing grits, pebbles, vegetation, stones, cobbles, rock fragments, breaking clods, dressing the side etc. complete as per specification, drawing and direction of the Engg-in-charge and including all leads and lifts.</p> <p>(All material to be arranged by the contractor).</p>	7805.00	M3		

Item No.	Description of the item	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
04.	<p>Providing and laying sand/Crushed stone aggregate filter of approved quality and grading as per technical specification of the contract in designated zone of the dam in specified layer, thickness (Thickness will be measured after compaction by roller), water and compacting to specified relative density, including collection from approved sources, transportation to site, loading, unloading, screening, washing, mixing and stockpiling etc. Including all leads and lifts complete as per specification and drawing, and direction of the Engg-in-charge. (Rate should be inclusive of exposing the existing filter for making connection with new filter as per drawing.</p> <p>(a) Sand filter (b) Crushed Stone Aggregate. (All material & Equipment to be arranged by the contractor).</p>	<p>35470.00 35470.00</p>	<p>M3 M3</p>		
05.	<p>Providing and laying 150 mm thick Rip_Rap pitching with west rock in designated zone of the dam, including sorting out, and breaking to make specified size as given in technical specification (rock fill articles) and transport handling, filling the voids with smaller pieces complete as per drawing and direction of the Engg-in-charge.</p> <p>(All material& Equipment arrange be the contractor).</p>	1800.00	M3		
06.	<p>Earth work in excavation in all work, in all lift at any elevation at anywhere for all kinds of soils, rock and hard rock including maintaining stable side slope, dressing of sides, trimming, shoring, halting, lifting, dewatering in all lifts, including disposal of excavated material in all leads and must be leveled and dressed at disposal area also maintaining the works area dry during the excavation by way of dewatering complete as per drawing, specification and direction of the Engg-in-charge.</p> <p>All kinds of soil , soft rock and hard rock fragments. (All material and equipment arranged by contractor).</p>	1406.00	M3		

ORIGINAL

07.	Laying rockfill material of approved quality and grading in designated zone of the dam and compacting to specified density, including sorting out, breaking to make specified size given in technical specification (rockfill articles) stock piling , loading, unloading and transporting to placement site, complete as per drawing, specification or as directed by Engg-in-charge. (All material and equipment arranged by contractor).	35147.00	M3		
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Total Rs :

(Rs :

Only).