

1. CONTRACTOR'S SCOPE OF WORK:

Raising the Height of Tailing Dam from 508 to 514 MRL at Dariba Mines

2. SCOPE OF WORK & QUANTITY : AS MENTIONED IN LINE ITEM AND AS PER ANNEXURE A.

3. POWER SUPPLY:

To be arranged by the Contractor. Party may visit site for understanding the site conditions

4. WATER SUPPLY:

For construction, water is to be arranged by the Contractor. Necessary water supply arrangement shall be provided by contractor at his own cost. All temporary distribution pipes, new work will have to be carried out by the contractor at his own cost. Such distribution pipe net work shall have the prior approval of Engineer Incharge so as not to interfere with the layout and progress of other construction works.

For drinking water, a specific point will be given at about 5 to 6 KM away from site, from where party to plan further arrangement.

5. LAND FOR CONTRACTOR'S FIELD OFFICE, GODOWN AND WORKSHOP:

The Owner will at his own discretion and convenience and only for the duration of the execution of the work make available near the site, land as available for construction of contractor's temporary field office, godowns, workshops and assembly yard required for the execution of the contract. The contractor shall at his own cost construct all these temporary buildings and provide suitable water supply and sanitary arrangements approved by the Engineer In charge. On completion of the works undertaken by the Contractor he shall remove all temporary works executed by him and have the site cleared as directed by Engineer in charge. If the contractor shall fail to comply with these requirements, the Engineer In charge may at the expenses of the contractor remove such surplus and rubbish material and dispose off the same as he deems fit and get the site cleared as aforesaid and the contractor shall forthwith pay the amount of all expenses so incurred and shall have no claim in respect of any such surplus material dispose off as aforesaid. But the Owner reserves the right to ask the contractor any time during the tenure of the contract to vacate the land by giving 7 days notice on security reasons or on national interest or otherwise. Final bill will be paid after vacation of land.

6. CO-ORDINATION OF WORK:

The Engineer In charge shall co-ordinate the works at various working places at site to ensure minimum disruption of work carried out at different places. It shall be the responsibility of the contractor to plan and execute the work strictly in accordance with site instructions to avoid hindrance to the work being executed in different reaches.

7. DRAWINGS ATTACHED WITH WORK ORDER:

Drawings attached with WORK ORDER shall be for the general guidance of the Contractor to enable him to visualize the type of work contemplated and scope of work involved. The contractor will be deemed to have studied the drawings and formed an idea about the work involved. Detailed construction drawings on the basis of which actual execution of work is to proceed will be furnished to the contractor progressively based on the detailed construction programs evolved after the award of the work.

8. MATERIALS AND JOB SPECIFICATIONS

SCOPE:

These specifications establish and define the material and constructional requirements for the construction of Tailing Dam.

Methods of measurements are indicated in these specifications. Where not so specified, latest version of IS: Code shall be applicable.

Providing and operating necessary measuring and testing devices and materials including all consumables are included in the scope of work. No separate measurement or payment for testing the work shall be made but rates quoted for various items shall be deemed to include the cost of such tests, which are required to ensure achievement of specified qualities. The contractor will establish at site, material/soil testing laboratory fully equipped for carrying out all required tests to ensure the quality of job executed as per relevant Indian Standards.

All materials which may be used in the work shall be of standard quality conforming to Indian Standards. The contractor shall get all materials approved by Engineer in charge prior to procurement and use. The Engineer In charge shall have the right to determine whether all or any of the materials are suitable. Any materials procured or brought to site and not conforming to specifications and satisfaction of the Engineer In charge shall be rejected and the contractor shall have to remove the same

immediately from site at his own expense and without any claim for compensation due to such rejection.

In addition to these specifications latest relevant specifications, codes of Practice and other standard publications of Indian Standard Institution shall be applicable unless otherwise specified.

9. Tests for Material/ Workmanship

All tests required for all bought out materials as desired by the HINDUSTAN ZINC LIMITED Engineer-in-Charge shall be carried out by the contractor at his own cost in the presence of authorized representative of the HINDUSTAN ZINC LIMITED

Engineer-in-Charge. Quality of workmanship shall be the best available to the satisfaction of the HINDUSTAN ZINC LIMITED Engineer-in-Charge.

10. Specifications

The specifications are intended for the general description of the work, quality and workmanship. The specifications are not, however intended to cover the minute details and the missing details shall be according to the relevant latest Indian

Standard Codes. In the absence of the latter, the missing details shall be executed according to the best prevailing local Public Works Department Practice, or to the recommendations of relevant American and British Standards, or to the instructions

of the HINDUSTAN ZINC LIMITED Engineer-in-Charge. These tender specifications shall have precedence in case anything contrary to what is contained herein or stated anywhere in the Tender Documents.

Wherever reference to the standard codes of practice etc. is made, they shall be taken as the latest edition of the same issued up to one month before the date of opening of the Tender.

11. Layout and Levels

The layout and levels of all structures Dam embankment etc., shall be made by the contractor at his own cost from the general grid of the plot and bench marks given by the HINDUSTAN ZINC LIMITED Engineer-in-Charge. He shall give all help in

instruments, materials and men to the HINDUSTAN ZINC LIMITED Engineer-in-Charge at no extra cost for checking the detailed layout and correctness of the layout and levels. But the Contractor shall be solely responsible for correctness of layout

and levels.

Permanent reference pillars shall be established by the contractor and under no circumstances shall the contractor remove or disturb any permanent benchmark without the approval of the HINDUSTAN ZINC LIMITED Engineer-in-Charge. The contractor shall carefully maintain and protect all benchmarks and reference points and shall layout all his work by accurate reference to the bench marks and references points.

12. Quality Assurance Check List & Site Laboratory

Quality Assurance checklist gives details of tests to be carried out on various materials and the agency that shall be responsible for carrying out such tests. The samples of all materials to be tested by the contractor shall be tested by him in presence of authorized representative of the HINDUSTAN ZINC LIMITED Engineer-in-Charge at the specified frequencies.

13. Site Laboratory

Contractor shall install and maintain a site laboratory under a qualified person for the testing of Constructions materials, embankment fill materials and workmanship. The site laboratory shall be fully operational before earthworks operations commence. The laboratory building shall be constructed and installed with the appropriate facilities. Temperature and humidity controls shall be available in the soil testing areas in order to facilitate the retention of correct soils moisture content etc. during the testing of samples.

All equipment shall be provided by the contractor so as to be compatible with the testing requirements specified in the Quality Assurance Check List for testing of soil samples. The contractor shall maintain the equipment in good working conditions for the duration of the contract. The Contractor shall provide approved quality personnel experienced in the testing of soils and materials to run the laboratory for the duration of the contract. The number of staff and equipment must at all times be sufficient to keep pace with the sampling and testing program as required by the HINDUSTAN ZINC LIMITED Engineer-in-Charge. The Contractor shall fully equip the site laboratory and shall supply everything necessary for its proper functioning; including all transport needed to move equipment and samples to and from sampling point on the site etc. The contractor shall re-calibrate all measuring devices whenever so required by the HINDUSTAN ZINC LIMITED Engineer-in-Charge and shall submit the result of such measurements without delay. However, such checklist shall in no way limit the liabilities and responsibilities of the contractor in regard to quality of work as detailed out in technical specifications and documents.

14. Approach/ Haul Roads

The Contractor shall make his own arrangement for approach to the work site (including, borrow and disposal area) and for movement of men, machinery, other equipment#s etc. required for carrying out the work included under this contract.

The Contractor shall widen and reinforce the existing route wherever available as necessary and shall maintain the surface in a condition acceptable to the HINDUSTAN ZINC LIMITED Engineer-in-Charge. Beyond the end of existing route, the roadways to the site (including borrow and disposal areas) shall be formed by the Contractor on routes approved by HINDUSTAN ZINC LIMITED Engineer-in-Charge. Part of the contract work is to be carried out during the monsoon period and the contractor

must, therefore, use appropriate hard/wearing materials of approved quality all to the satisfaction of the HINDUSTAN ZINC LIMITED Engineer-in-Charge for the formations of the roadways and the reinforcement of the existing routes.

The bidders prices entered against the item in the schedule of items shall be deemed to include cost of all necessary works associated with the approach roads.

Water tankers with suitable sprinkling system shall be deployed along the haulage roads and in the work sites. Water shall be sprinkled regularly all along the routes to suppress airborne dust from truck/ dumper movements particularly on unpaved roads. Actual frequency shall be decided by the Engineer in charge to suit site condition. All vehicles deployed for material haulage shall be spillage proof. Roads used for haulage shall be inspected at least once daily to clear any accidental spillage. In the event of any spoil, debris, waste or any deleterious substance from the site being deposited on any adjacent land. The contractor shall immediately remove all such material at no cost to the contract and restore the affected area to its original state to the satisfaction of the Engineer in charge.

15. Dealing with Water

The whole of the works shall be carried out in the dry condition. Water from any source shall be diverted or pumped as required, clear of the works. The contractor shall make all necessary arrangements whatsoever required for keeping the work area dried by diverting and pumping of water and also provision and operate all temporary works including pumps, motors, fuel, piping and for the formation of any sumps. Drainage channels, coffer dams and other protective works. No separate payment shall be made for de-watering of water.

16. Rainfall runoff

As part of the work may have to be carried out in wet season the contractor's program and methods must be capable of dealing with runoff from rainfall from the adjacent catchment area. The contractor shall supply install and operate his own temporary pumping installations wherever required.

The bidder shall make his own assessment of the risk of construction from flooding and shall plan the diversion protection arrangements including bunds and channels accordingly. No separate payment shall be made for protection work.

17. Prevention of pollution

Arrangement shall be made by the contractor to prevent pollution of the water in any streams, springs, nullahs and lakes. Arrangements for sprinkling of water in the construction and borrow area to prevent any dust blowing also shall be done by the contractor. The contractor shall be solely responsible and liable for all damage caused by any pollution that may take place during the execution of the works, and he shall

make arrangements as the HINDUSTAN ZINC LIMITED Engineer-in-Charge may approve for preventing pollution but notwithstanding such approval, the entire responsibility for any pollution shall rest with the contractor.

No separate payment shall be made for the pollution control measures and the quoted rates shall include the cost for all pollution control measures.

18. Safety Measures

The contractor shall ensure the safety of men, material and structure including existing embankment during execution of the contract. Safety measure shall be followed during operations of equipment/

machinery being used. No separate payment shall be made for the safety measures and the quoted rate shall include the cost for all safety measures.

19. Equipment & Machinery

The contractor shall have to use his own earth moving equipment such as Excavators/poiclains; Dozers; Dumpers etc. and any other machinery including crusher plant, Screens etc. required for the entire scope of work including the work of excavation and conveyance of earth from the borrow areas to embankment and also shall have to use his own compaction machinery to compact the fill material such as vibratory rollers/pneumatic rubber typed rollers, sheep foot rollers, slope compactors, water tankers etc.

20. Earthen / Tailing Embankment

The impervious layer shall be constructed to the lines and grades shown on the drawings. Placement of fill shall be performed in an orderly way and in an efficient and workman like manner, so as to produce fills having such quantities of density, strength and permeability as will ensure the highest practicable degree of stability and performance of the embankment. The maximum dry density for Tailing is more than 1.80 g/cc at optimum moisture content.

No bushes, roots, sods or other perishable or unsuitable materials shall be placed in the embankment. The suitability of each part of the foundation for placing embankment materials thereon and of all materials for use in embankment construction shall be determined by the HINDUSTAN ZINC LIMITED Engineer-in-Charge. The embankment may be constructed in separate portions, provided that:

Rock fill / River Boulder Embankment The Rock fill / River Boulder layer shall be constructed material to the lines and grades shown on the drawings. Placement of shall be performed in an orderly way and in an efficient and workman like manner, so as to produce fills having such quantities of as will ensure the height practicable degree of stability and performance of the embankment.

No bushes, roots, sods or other perishable or unsuitable materials shall be placed in the embankment. The suitability of each part of the foundation for placing embankment materials thereon and of all materials for use in embankment construction shall be determined by the HINDUSTAN ZINC LIMITED Engineer-in-Charge.

The quarry for river boulder material shall be approved by HZL. The material should be in between <300 mm and >75 mm micron. Below 75 micron should not more than 5%. Material above 20 mm size should be more than 60%.

21. SPECIAL CONDITIONS OF CONTRACT:

Special conditions of Contract shall be read in conjunction with the general conditions of Contracts, specifications of work, drawings and any other documents forming part of this contract wherever the context so requires. Notwithstanding the sub-division of the documents into these separate sections and volumes, every part of which shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the contract so far as it may be practicable to do so. Where any portion of the general conditions of the Contract is repugnant to or at variance with any provisions of the special conditions of Contract then unless a different information appears, the provision of the special conditions of Contract shall be deemed to over-ride the provision of the general conditions of Contract and shall to the extent of such repugnancy or variations prevail.

Wherever it is mentioned in the specifications that the Contractor shall perform certain work of operations or provide certain facilities, it is understood that the contractor shall do at his cost.

22. CO-ORDINATION OF WORK:

The Engineer In charge shall co-ordinate the works at various working places at site to ensure minimum disruption of work carried out at different places. It shall be the responsibility of the contractor to plan and execute the work strictly in accordance with site instructions to avoid hindrance to the work being executed in different reaches.

23. EXTENSION OF TIME:

If the contractor shall desire an extension of the time for completion of the work on the grounds of his having been unavoidably hindered in its execution or on any other grounds he shall apply in writing to the Engineer In charge within ten days of the date of the hindrance on account of which he desires such extension as aforesaid, and the Engineer In charge shall, if in his opinion (which shall be final)

reasonable grounds have been shown therefore, authorize such extension of time as may be, in his opinion be necessary or proper without any change in applicability of L/D. Decision on L/D waiver shall be taken by HZL - Management.

24. SUM PAYABLE BY WAY OF COMPENSATION TO BE CONSIDERED AS REASONABLE COMPENSATION WITHOUT REFERENCE TO ACTUAL LOSS:

All sums payable by way of compensation under any of the conditions shall be considered as reasonable compensation without reference to the actual loss or damage shall have been sustained and the Owner shall have a right to adjust the amount of compensation from any money that are payable by the Owner to the Contractor under the Contract.

25. RIGHT OF OWNER TO DETERMINE / TERMINATE CONTRACT:

The Owner shall at all time have the right to terminate the contract for the Contractor's default or failure to fulfil the obligations under the contract in whole or in part or if the contractor refuses or fails to comply with the provisions of The contract or fails to make progress as to endanger performance and does not Correct such failure or default after written notice within a reasonable time, or fails to perform the work within the time specified. In such an event the Owner may get the whole or residual part of the execution of A/T done from other contractors at the risk and cost of the Contractor.

26. CONTRACTOR REMAINS LIABLE TO PAY COMPENSATION IF ACTION NOT TAKEN UNDER CLAUSE 21.0:

If any case in which any of the powers conferred upon the Owner by clause 20.0 thereof shall have become exercisable and the same had not been exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any further case of default by the contractor for which by any clause or clause hereof he is declared liable to pay compensation amounting to the whole of his security deposit, and the liability of the contractor for past and future compensation amounting to the whole of his security deposit shall remain unaffected. In the event of the Owner putting in force the powers under sub-clause (a), (b) or (c) vested in him under the preceding clause may be, if he so desired, take possession of all or any tools, plants, materials and stores in or upon works or the site thereof belonging to the contractor or procured by him and intended to be used for the execution of the work or any part thereof paying or allowing for the same in account at the contract rates or in case of these not being applicable at current market rates to be certified by the Engineer In charge whose certificate thereof shall be final, otherwise the

Engineer In charge may give notice in writing to the contractor or his clerk of the works, foreman or other authorized agent, requiring him to remove such tools, plants, materials or stores from the premises (within a time to be specified in such notice), and in the event of the contractor failing to comply with any such requisition, the Engineer In charge may remove them at the contractor's expenses or sell them by auction or private sale on account of the contractor and at his risk in all respects without any further notice as to the date, time or place of sale and the certificate of the Engineer In charge as to the expense of any such removal and the amount of the proceeds and expense of any such sale shall be final and conclusive against the contractor.

27. NO COMPENSATION FOR ALTERATION IN OR RESTRICTION OF WORK:

If at any time from the commencement of the work the Owner shall for any reason whatsoever not require the whole work or part thereof as specified in the tender to be carried out, the Engineer In charge shall give notice in writing of the fact to the contractor, who shall have no claim to any payment or compensation whatsoever neither shall he have any claim for compensation by reason of any alterations having been made in the original specifications, drawings, designs and instructions which shall involve any curtailment of the works as originally contemplated.

28. IF THE CONTRACTOR DIES:

Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the owner shall have the option of terminating the contract without compensation to the contractor.

29. MEMBERS OF THE OWNER NOT INDIVIDUALLY LIABLE

No Director, or Official or employee of the Owner shall in any way be personally bound or liable for the acts or obligations of the owner under the contract or answerable for any default or omission in the observance or performance of any of the acts, matters, or things which are herein contained.

30. OWNER NOT BOUND BY PERSONAL REPRESENTATIONS

The contractor shall not be entitled to any increase on the quoted rates or any other right or claim whatsoever by reason of any representation, explanation or statement or alleged representation, promise or Guarantees given or alleged to have been given to him by any person.

31. CONTRACTORS SUBORDINATE STAFF AND THEIR CONDUCT:

The contractor, on or after award of the work shall name and depute a qualified engineer having sufficient experience in carrying out work of similar nature, to whom the materials, if any, shall be issued and instructions for work given. The contractor shall also provide to the satisfaction of the Engineer In charge sufficient and qualified staff to superintend the execution of the work, competent sub-agents, foremen and leading hands including these specially qualified by previous experience to supervise the types of works comprised in the contract in such manner as will ensure work of the best quality and expeditious working. Whenever in the opinion of the Engineer In charge additional properly qualified supervisory staff is considered necessary, they shall be employed by the contractor without additional charge on account thereof. The contractor shall ensure to the satisfaction

of the Engineer In charge that sub-contractor, if any, shall provide competent and efficient supervision over the work entrusted to them.

If and whenever any of the contractor's or sub-contractor's agents, sub-agents, assistants, foremen, or other employee shall in the opinion of Engineer -in-Charge be guilty of any misconduct or be incompetent or insufficiently qualified or negligent in the performance of their duties or that in the opinion of the owner or the Engineer In charge, it is undesirable for administrative or any other reason for such person or persons to be employed in the works, the contractor, if so directed by the

Engineer In charge, shall at once remove such person or persons from employment thereon. Any person or persons so removed from the works shall not again employ in connection with the works without the written permission of the Engineer in charge. Any person so removed from the works shall be immediately replaced at the expense of the contractor by a qualified and competent substitute should the contractor be requested to repatriate any person removed from the works he shall do so and shall bear all costs in connection herewith.

The contractor shall be responsible for the proper behavior of all the staff, foremen, workmen and others, and shall exercise a proper degree of control over them and in particular and without prejudice to the said generality, the contractor shall be bound to prohibit and prevent any employees from trespassing or acting in any way detrimental or prejudicial to the interest of the community or the properties or occupiers of land and properties in the neighborhood and in the event of such employee so trespassing, the contractor shall be responsible therefore and relieve the Owner of all consequent claims or actions for damages or injury or any other grounds whatsoever. The decision of the Engineer In charge upon any matter arising under this clause shall be final. If and when required by the Owner all contractors' personnel entering upon the Owner's premises shall be properly identified by badges of a type acceptable to the Owner which must be worn at all times on Owner's premises.

32. SUB-LETTING OF WORK:

i) No part of the contract nor any share or interest there in shall in any manner or degree be transferred, assigned or sublet by the contractor directly or indirectly to any person, firms, or corporation

33. POWER OF ENTRY:

If the contractor shall not commence the work in the manner previously described in the contract documents or if he shall at any time in the opinion of the Engineer In charge.

- i) Fail to carry on the works in conformity with the contract documents, or
- ii) Fail to carry on the works in accordance with the schedule, or
- iii) Subsequently suspend work or the works for a period of fourteen days without authority from the Engineer In charge, or
- iv) Fail to carry on and execute the works to the satisfaction of the Engineer In charge, or carry out the instructions issued by Engineer in charge or his representative.
- v) Fail to supply sufficient or suitable constructional plant, temporary works, labour, materials of things, or
- vi) Commit or suffer, or permit any other breach of any of the provisions of the contract on his part to be performed or observed or persist in any of the above mentioned breaches of the contract for fourteen days, after notice in writing shall have been given to the contractor by the Engineer In charge requiring such breach to be remedied, or
- vii) If the contractor shall abandon the works, or
- viii) If the contractor during the continuance of the contract shall become bankrupt, make any arrangement or composition with his creditors, or permit any execution to be levied or go into liquidation whether compulsory or voluntary not being merely a voluntary liquidation for the purpose of the amalgamation or reconstruction.
- ix) Then in any such case, the Owner shall have the power to enter upon the works and take possession whereof and of the materials, temporary works, constructional plant, and stock thereon, and to revoke the contractor's license to use the same, and to complete the works by his agents, other contractors or workmen, or to relate the same upon any terms and to such other persons, firms or corporation as the Owner in his absolute discretion may think proper to complete and for

the purpose aforesaid to use or authorize the use of any materials, temporary works, constructional plant, and stock as aforesaid, without making payment or allowance to the contractor for the said materials other than such as may be certified in writing by the Engineer In charge to be reasonable, and without making any payment or allowance to the contractor for the use of temporary sheds work constructional plant and stock or being liable for any loss or damage thereto, and if the Owner shall by reason of his taking possession of the works or of the works being completed by other contractor (due account being taken of any such extra work or works which may be omitted) then the amount of such excess as certified by the Engineer In charge shall be deducted from any money which may be due for work done by the contractor under the contract not paid for. Any deficiency shall forthwith be made good and paid to the Owner by the contractor and owner shall have power to sell in such manner and for such price as he may think fit, all or any of the constructional plant, materials, etc. constructed by or belonging to the contractor and to recoup and retain the said deficiency or any part thereof out of the proceeds of the sale.

34. CONTRACTOR#S RESPONSIBILITY WITH OTHER AGENCIES WORKING AT SITE:

Without repugnance to any other condition, it shall be the responsibility of the contractor to work in close co-operation and co-ordinate the works with other agencies or their authorized representatives. No claim shall be entertained on account of the above.

If HSD required more than Mention quantity than the extra quantity of HSD will be in account of Party only, owner will not have any liability for the extra HSD quantity.

The contractor shall confirm in all respects with the provisions any statutory regulations, ordinances or byelaws of any local or duly constituted authorities or public bodies which may be applicable from time to time to the works or any temporary works. The contractor shall keep the owner indemnified against all penalties & liabilities of every kind, arising out of non-adherence to such statutes, ordinances, laws, rules, regulations etc.

35. OTHER AGENCIES AT SITE:

The contractor shall have to execute the work in such place and condition where other agencies will also be engaged for other works such as site grading, filling and leveling, air conditioning, electrical and mechanical engineering works, etc. No claim shall be entertained due to work being executed in the above circumstances.

36. NOTICES:

Any notice hereunder may be served on the contractor or his duly authorized representative at the job site or may be served by registered mail direct to the address furnished by the contractor. Proof of issue of any such notice could be conclusive of the contractor having been duly informed of all contacts therein.

37. RIGHT TO VARIOUS INTERESTS:

i) The owner reserves the right to distribute the work between more than one contractor. The contractor shall cooperate and afford other contractors reasonable opportunity for access to the works for the carriage and storage of materials and execution of their works.

ii) Wherever the work being done by any department of the owner or by other contractors employed by the owner is contingent upon work covered by this contract, the respective rights of the various interests involved shall be determined by the Engineer In charge to secure the completion of the various portions of the work in general harmony.

38. PATENT, COPY RIGHT AND TRADEMARK:

The contractor, if licensed under any patent covering equipment, machinery, materials or compositions of material to be used or supplied or methods and process to be practiced or employed in the performance of this contract or for copy right, trade marks or trade names or brands relating to any of the equipment#s and materials described in the contract, agrees to pay all royalties and license fees which may be due with respect thereto. If any equipment, machinery, materials,

composition of matters to be used or supplies or methods and processes to be practices or employed in the performance of this contract, is covered by a patent under which the contractor is not licensed, then the contractor before supplying or using the equipment, machinery, materials, composition, method of processes, shall obtain such licenses and pay such royalties and license fee as may be necessary for performance of this contract. In the event of contractor fails to pay any such royalty or obtain any such license, any suit for infringement of such patents or copy right or trade marks or trade names, or brands relating to any of the equipment#s and materials described in the contract, which is brought against the contractor or the owner as a result of such failure, will be defended by the contractor at his own expense and the contractor will pay any damages and costs awarded in such suit. The contractor shall promptly notify the owner if the contractor has acquired knowledge of any plant under which a suit for infringement could be reasonably brought because of the use by the owner of any equipment, machinery, materials, process, and methods to be supplied hereunder. The contractor agrees to and does hereby grant to owner, together with the right to extend the same to any of the subsidiaries of the owner as irrevocable, royalty free license to use in any country, any invention made by the contractor or his employee

or as a result of the performance of the work under the contract.

The contractor shall indemnify and save harmless the owner from any loss on account of claims against owner for the contributory infringement of patent rights arising out and based upon the claim that the use by the contractor of the process included in the design prepared by the owner and used in the operation of plant infringes on patent right. With respect to any sub-contract entered into by the

contractor pursued and to the provisions of the relevant paras hereof, the contractor shall obtain from the sub-contractor and undertaking to provide the owner with the same patent protection that contractor is required to provide under the provisions of this para.

NOTE: ALL ROYALTIES SHALL BE PAYABLE BY CONTRACTOR EXCEPT ROYALTY PAYABLE ON FREE ISSUE MATERIAL BY HZL AND SOIL/STONE/HSD PROCURED BY CONTRACTOR FROM ITS BORROW AREA.

39. LIENS

If, at any time, there should be evidence or any lien or claims for which the owner might have become liable and which is chargeable to the contractor, the owner shall have the right to retain out of any payment then due or thereafter to become due an amount sufficient to completely indemnify the owner against such lien or claim and if such lien or claim be valid, the owner may pay and discharge the same and deduct the amount so paid from any money which may be or may become due and payable to the contractor. If any lien or claim remain unsatisfied after all payments are made, the contractor shall refund or pay to the owner all money that the later may be compelled to pay in discharging such lien or claim including all costs and reasonable expenses.

40. EXECUTION OF WORKS:

All the work shall be executed in strict conformity with the provisions of the contract documents and with such explanatory detailed drawings, specifications and instructions as may be required from time to time whether mentioned in the contract or not. The contractor shall be responsible for ensuring that works throughout is executed in the most substantial, proper and workmanlike

manner with the quality of material and workmanship in strict accordance with the specifications and to the entire satisfaction of the Engineer In charge.

41. CO-ORDINATION AND INSPECTION OF WORK:

The co-ordination and inspection of the day-to-day work under the contract shall be the responsibility of the Engineer In charge. The written instructions regarding any particular job will normally be passed by the Engineer In charge or authorized representative. A work order book will be maintained by the contractor for each sector in which the aforesaid written instructions will be entered. These will be signed by the contractor or his authorized representative by way of acknowledgment within 12 hours.

42. WORK IN MONSOON AND DEWATERING:

(i) The construction works may entail working in the monsoon also. The contractor must maintain a minimum labour force as may be required for the job and plan and execute the construction and erection according to the prescribed schedule. No extra rate will be considered for such work in monsoon. During monsoon and other period, it shall be the responsibility of the contractor to keep the construction work site free from water at his own cost. Contractor should protect his work from any damages due to floods; rains or any other reason whatsoever.

43. GENERAL CONDITIONS FOR CONSTRUCTION WORK:

43.1 The Contractor must arrange for the placement of workers in such a way that the delayed completion of the work or any part thereof for any reasons whatsoever will not affect their proper employment. The Owner will not entertain any for idle time payment whatsoever.

43.2 The Contractor shall submit to the Owner reports at regular intervals regarding the state and progress of work. The details Time Schedule indicating various activities in the form of BAR CHART with definable milestones taking into account the Scope of work and proforma of the report will mutually be agreed after the award of contract.

44. DRAWINGS ATTACHED WITH WORK ORDER:

Drawings attached with WORK ORDER shall be for the general guidance of the Contractor to enable him to visualize the type of work contemplated and scope of work involved. The contractor will be deemed to have studied the drawings and formed an idea about the work involved. Detailed construction drawings on the basis of which actual execution of work is to proceed will be furnished to the contractor progressively based on the detailed construction programs evolved after the award of the work.

45. ISSUE OF DRAWING FOR CONSTRUCTION:

All final drawings shall bear the certification stamp as indicated below duly signed by both the Contractors and the Engineer In-charge.

46. SETTING OUT WORKS:

46.1 The Engineer In charge shall furnish the contractor with only the four corners of the work site and a level bench mark and the contractor shall set out the works and shall provide an efficient staff for the purpose and shall be solely responsible for the accuracy of such setting out.

46.2 The contractor shall provide, fix and be responsible for the maintenance of all stakes, templates, level marks profiles and other similar things and shall take all necessary precautions to prevent their removal or disturbance and shall be responsible for the consequence of such removal

or disturbance should the same take place and for their efficient and timely reinstatement. The contractor shall also be responsible for the maintenance of all-existing survey marks, boundary marks, distance marks and centerline marks, either existing or supplied and fixed by the contractor. The work shall be set out to the satisfaction of the Engineer In charge. The approval thereof or joining with the contractor by the Engineer In charge in setting out the work shall not relieve the contractor of any of his responsibilities.

46.3 Before beginning the works, the contractor shall at his own cost, provide all necessary reference and level posts, pegs, bamboo's, flags, ranging rods, stripping and other materials for proper layout of the work in accordance with the scheme for bearing marks acceptable to the Engineer In charge. The center, longitudinal or face lines and cross lines shall be marked by means of small masonry pillars. Each

pillar shall have distinct mark at the center to enable theodolite to be set over it. No work shall be started until all these points are checked and approved by the Engineer In charge in writing but such approval shall not relieve the contractor of any of his responsibilities. The Contractor shall also provide all labour, material and other facilities, as necessary, for the proper checking of layout and inspection of the points during construction.

46.4 Pillars bearing geodetic marks located at the sites of units of works under construction should be protected and fenced by the contractor.

46.5 On completion of works the contractor must submit the geodetic documents according to which the work was carried out.

47. RESPONSIBILITY FOR LEVEL AND ALIGNMENT:

The Contractor shall be entirely and exclusively responsible for the horizontal alignment, the levels and correctness or every part of the work and shall rectify effectually any errors or imperfections therein. Such rectification shall be carried out by the contractor, at his own cost, when instructions are issued to that effect by the Engineer In charge.

48. MATERIALS TO BE SUPPLIED BY CONTRACTOR:

48.1 The Contractor shall procure and provide the whole of the materials required for the construction viz. tools, tackles, construction plant and equipment for the completion and maintenance of the work, shall make his own arrangement for procuring such materials and for the transport thereof. The Owner may give necessary recommendation to the respective authority if so desired by the contractor but assumes no further responsibility of any nature. The Owner will insist on the procurement of materials conforming to relevant Indian Standard.

STEEL AND CEMENT:

All steel plate and sections and cement required for entire scope of work as per design requirement shall be supplied by the contractor at his cost and the same shall be inclusive in the prices.

All steel plate and sections shall be supplied by the contractor as per applicable IS standards and its latest revision.

Steel will be procured by the contractor from following prime manufacturers as per IS Specifications and will be accompanied by test certificates of manufacturers: SAIL, TISCO, VIZAG STEEL PLANT.

Ordinary Portland cement conforming to latest revision of IS shall be procured from the reputed agencies only not from mini cement plant and will be accompanied by Test Certificate of manufacturers. Owners reserve the right to reject / approve cement quality after getting the same tested in approved Government laboratories.

49. CONDITIONS FOR ISSUE OF MATERIALS:

Materials specified as to be issued by the owner will be supplied to the contractor by the owner from his owned area. It shall be the responsibility of the contractor to take of the materials and arrange for its loading, transport and unloading at the site of work at his own cost for which no claim shall be admissible. The materials shall be issued with maximum possible working period and as per the rules of the owner as framed from time to time. The contractor shall bear all incidental charges for the storage and shall take custody of materials at site after these have been issued to contractor with ensuring security of material. The contractor shall construct suitable storage facilities at the site of work for storing the material safe against damage by rain, dampness, fire, theft etc. He shall also employ necessary watch and ward establishment for the purpose. It shall be duty of the contractor to inspect the materials supplied to him at the time of taking delivery and satisfy him that they are in good condition. After the materials have been delivered by the owner, it shall be the responsibility of the contractor to keep them in good condition and if the materials are damaged or lost, at any time, they shall be repaired and/ or replaced by him at his own cost according to the directions of the Engineer In charge. The owner shall not be liable for delay in supply or non-supply of any materials which the owner have undertaken to supply where such failure or delay is due to natural calamities, act of enemies, transport and procurement difficulties and any circumstances beyond the control of the owner. In no case, the contractor shall be entitled to claim any compensation or loss suffered by him on this account. It shall be the responsibility of the contractor to arrange in time all materials required for the works other than those to be supplied by the owner. If, however, in the opinion of the Engineer In charge the execution of the work is likely to be delayed due to the contractor's inability to make arrangements for supply of materials which normally he has to arrange for, the Engineer In charge shall have the right at his own discretion to issue such materials if available with the owner or procure the materials from the market or elsewhere and the contractor will be bound to take

such materials at the rates decided by the Engineer In charge. This, however, does not in any way absolve the contractor from his responsibility of making arrangements for the supply of such materials in part or in full, should such a situation occur nor shall this constitute a reason for the delay in the execution of the work.

The contractor shall, if desired by the Engineer In charge be required to execute an indemnity bond in the prescribed form, for safe custody and accounting of all materials issued by the owner.

The contractor shall furnish to the Engineer In charge sufficiently in advance a statement showing his requirement of the quantities of the material to be supplied by the owner and the time when the same will be required by him for the works, so as to enable the Engineer In charge to make necessary arrangements for procurement and supply of the materials.

x) A day account of the materials issued by the owner shall be maintained by the contractor indicating the daily receipt, consumption and balance in hand. This account shall be maintained in a manner prescribed by the Engineer In charge along with all connected papers viz. requisitions issues etc and shall be always available for inspection in the contractor's office at site.

xi) The contractor should see that only the required quantities of materials are got issued. The contractor shall not be entitled to cartage and incidental charges for returning the surplus materials, if any, the stores wherefrom they were issued or to the Places directed by the Engineer In charge.

xii) Materials / equipment supplied by the owner shall not be utilized for any other purpose(s) than issued for.

50. Notwithstanding anything contained to the contrary in any or all the clauses of this contract where any material for the execution of the contract is procured with the assistance of the owner either by issue from owner's stock or purchases made under orders or permits or licenses issued by Government, the contractor shall hold the said materials as trustee for the owner and use such materials economically

and solely for the purpose of the contract and not dispose them off without the permission of the owner and if required by the Engineer In charge return all surplus or unserviceable materials that

may be left with him after the completion of the contract or at its termination for any reason whatsoever on his being paid or credited such price as the Engineer In charge shall determine having due regard to the condition of the material. The price allowed to the contractor, however, shall not exceed the amount charged to him excluding the storage charges if any. The decision of the Engineer In charge shall be final and conclusive in such matters. In the event of breach of the aforesaid condition, the contractor shall, in terms of the licenses or permits and or criminal breach of trust, be liable to compensate the Owner at double the issue rate.

51. MATERIALS OBTAINED FROM DISMANTLING

If the Contractor in the course of execution of the work is called upon to dismantle any part for reasons other than these stipulated in clause 62 and 64 hereunder, the materials obtained in the work of dismantling etc. will be considered as the Owner's property and will be disposed off to the best advantage of the Owner.

52. ARTICLES OF VALUE FOUND:

All gold, silver and other minerals of any description and all precious stones, coins, treasure, relic, antiquities and other similar thing which shall be found in, under or upon the site, shall be the Property of the Owner and the Contractor shall duly preserve the same to the satisfaction of the Engineer In charge and shall from time to time deliver the same to such person or persons indicated by the Owner.

53. DISCREPANCIES BETWEEN INSTRUCTIONS:

Should any discrepancy occur between various instructions furnished to the contractor, his agents or staff or any doubt arises as the meaning of any such instructions or should there be any misunderstanding between the contractor's staff and the Engineer In charge's staff, the contractor shall refer the matter immediately in writing to the Engineer In charge whose decision thereon shall be final, and conclusive and no claim for losses allowed to have been caused by such discrepancies between instructions, doubts or misunderstanding shall in any event be admissible.

54. ALTERATIONS IN SPECIFICATION AND DESIGNS AND EXTRA WORKS/SUPPLIES:

54.1 The Engineer-in-Charge appointed by the Owner shall have full power to make any alteration in or addition to the original specifications, drawings, designs or modifications thereof and to give instructions that may appear to him to be necessary or advisable during the progress of the work and the contractor shall be bound to carry out the work in accordance with any instruction which may be given to him by the Engineer In charge and such alteration shall not invalidate the contract.

54.2 Any additional work that the contractor may be directed to do in the manner specified above shall form the part of the main work and shall be carried out by the contractor under the same terms and conditions in all respects on which it has agreed to do the main work and at the same rates as are specified in the contract for the work. If the additional work includes item of work for no rate is specified in the contract, then such item shall be carried out on mutually agreed rates after discussion.

54.3 The labour rate shall be taken from the respective rates specified under the Minimum Wage Act. (Central. Govt.) As applicable on the date of order.

55. NOTICE OF CLAIMS FOR ADDITIONAL PAYMENT:

Should the Supplier consider that he is entitled to any extra payment or compensation or to make any claims whatsoever in respect of the supplies, he shall forthwith give notice in writing to the Engineer-in-Charge that he claims extra payment and/or compensation. Such notice shall be given to the Engineer-in-Charge within ten days from the ordering or happening of any event upon which the

Supplier bases such claims and such notice shall contain full particulars of the nature of such claims with full details and amount claimed. Failure on the part of the Supplier to put forward any claim with the necessary particulars as above within the time specified shall be an absolute waiver thereof. No omission to reject any such claim and no delay in dealing therewith by the Purchaser shall be waiver of any right in respect thereof.

56. ACTION WHERE NO SPECIFICATION IS ISSUED:

In case of any class of work for which there is no such specifications supplied by the Owner as is mentioned in the tender documents such work shall be carried out in accordance with Indian Standard Specifications in case the Indian Standard Specifications do not cover the same, the work shall be carried out as per Standard Engineering practice subject to the approval of the Engineer In charge.

57. INSPECTION OF WORKS:

57.1 The Engineer In charge will have full power and authority to inspect the works at any time wherever in progress either on the site or at the contractor's premises/workshops wherever situated, premises/workshop of any person, firm or corporation where work in connection with the contract may be in hand or where materials are being or are to be supplied, and the contractor shall afford or procure

for the Engineer In charge every facility and assistance to carry out such inspection.

The Contractor shall, at all time during the usual working hours and at all other times at which reasonable notice of the intention of the Engineer In charge or his representative to visit the work shall have been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing present for the purpose. 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. The Contractor shall give not less than seven days' notice in writing to the Engineer In charge before covering up or otherwise placing beyond reach of inspection and measurement any work in order that the same may be inspected and measured. In the event of breach of above, the same shall be uncovered at contractor's expenses for carrying out such measurement or inspection.

58 No material issued by the Owner or brought by the contractor for work will be taken away from the site of work without obtaining approval of Engineer In charge in writing.

58.3 The Contractor is to provide at all times during the progress of the work and the maintenance period proper means of access with ladders gangways, etc. and the necessary attendance to move and adopt as directed for inspection or measurement of the works by the Engineer In charge.

59. ASSISTANCE TO THE ENGINEERS:

The contractor shall make available to the Engineer In charge free of cost all necessary instruments and assistance in checking of setting out of the works and in the checking of any works made by the contractor for the purpose of setting out and taking measurements of works.

60. TESTS FOR QUALITY OF WORKS:

60.1 All workmanship shall be of the respective kinds described in the contract documents and in accordance with the instructions of the Engineer In charge and shall be subjected from time to time to such test at contractor's cost to the Engineer In charge may direct at the place of manufacture or fabrication or on the site or at all such places. The contractor shall provide assistance, instruments, labour and materials as are normally required for examining, measuring and testing any workmanship as may be selected and required by the Engineer In charge.

60.2 All the tests will be necessary in connection with the execution of the work decided by the Engineer In charge shall be carried out at the field-testing laboratory of the contractor. In case of non-availability of testing facility with the contractor, the required test shall be carried out at the cost of contractor at Government or any other testing laboratory as directed by Engineer in charge.

60.3 If tests are required to be carried out in connection with the work or materials or workmanship not supplied by the contractor, such tests shall be carried by the contractor as per the instructions of Engineer In charge and cost of such tests shall be reimbursed by the owner.

60.4 SAMPLES:

The contractor shall furnish to the Engineer In charge for approval when requested or if required by the specifications, adequate samples of all materials and finishes to be used in the work. Such samples shall be submitted before the work is commenced and in ample time to permit tests and examinations thereof. All materials furnished and finished applied in actual work shall be fully equal to the approved samples.

61. ACTION AND COMPENSATION IN CASE OF BAD WORK:

If it shall appear to the Engineer In charge that any work executed with unsound, imperfect or unskilled workmanship or with materials of any inferior description or that any materials or articles provided by the contractor for the execution of the work are unsound or of a quality inferior to that contracted for, or otherwise not in accordance with the contract, the contractor shall on demand in writing from the

Engineer In charge or his authorized representative specifying the work, materials or articles complained of, notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify or remove and construct the work so specified and provide other proper and suitable materials or articles at his own charge and cost, and in the event of failure to do so within a period to be specified by the Engineer In charge in his demand aforesaid, for every week limited to a maximum of 5 percent of the value of the whole work, while his failure to do so shall continue and in the case of any such failure the Engineer In charge may on expiry of notice period rectify or remove and re-executed the work or remove and replace with others, the materials or articles complained of as the case may be at the risk and expense in all respects of the contractor.

The decision

of the Engineer In charge as to any question arising under this clause shall be final and conclusive.

62. SUSPENSION OF WORK:

62.1 Of this clause, the contractor shall if ordered in writing by Engineer In charge or his representative, temporarily suspend the works or any part thereof for such period and such time as so ordered and shall not, after receiving such written order, proceed with the work therein ordered to be suspended until he shall have received a written order to proceed therewith. The Contractor shall not be entitled to claim compensation for any loss or damage sustained by him by reason of temporary suspension of the works as aforesaid. An extension of time for completion, corresponding with the delay caused by any such suspension of the work as aforesaid will be granted to the contractor should apply for the same provided that suspension was not consequent to any default or failure on the part of the contractor.

62.2 In case of suspension of entire work ordered in writing by the Engineer In charge for a period of more than Four Months, the contractor shall have the option to terminate the contract.

63. OWNER MAY DO PART OF WORK:

Upon failure of the contractor to comply with any instructions given in accordance with the provision of this contract the Owner has the alternative right, instead of assuming charge of entire work, to place additional labour force, tools, equipment#s and materials on such parts of the work,

as the Owner may designate or also engage another to carry out the work. In such case, the Owner shall deduct from the amount which otherwise might become due to the contractor, the cost of such work and materials with ten percent added to cover all departmental charges and should the total amount thereof exceed the amount due to the contractor, the contractor shall pay the difference to the Owner, falling which the same will be recovered from security deposit.

64. POSSESSION PRIOR TO COMPLETION:

The Engineer In charge shall have the right to take possession of or use any completed or partially completed or part of the work. Such possession or use shall not be deemed to be an acceptance of any work not completed in accordance with the contract agreement. If such possession or use by the Engineer In charge delays the of work, equitable adjustment in the time of completion will be made and the contract agreement shall be deemed to be modified accordingly.

65. TWELVE MONTHS PERIOD OF LIABILITY FROM THE DATE OF ISSUE OF PHASE WISE COMPLETION CERTIFICATE:

65.1 The contractor shall ensure the Engineering know-how, all material / equipment, and / or work including erection done by it shall conform to the Owner's requirements and specifications. The contractor shall guarantee the material, equipment and/or work including erection done free from all defects for a period of 12 months from the date of issue of certificate of taking over of each phase or one rainy season whichever is later.

65.2 Any damage or defect that may arise or lie undiscovered at the time of issue of phase completion certificate connected in any way with the work as per contract carried out by him and if at any time during the guarantee period, the material / equipment / workmanship including erection is found not in conformity with the Owner's requirement and specifications and / or do not meet the desired performance, the contractor agrees to replace, revise, rectify or recondition the material, equipment and work in a manner calculated by the Contractor to correct the unsatisfactory performance at the Contractor's own expenses within a minimum time to be specified. The guarantee

period for the replacement parts shall be the same as remaining period from overall guarantee period of 12 months from the date of issue of phase wise certificate. In the event the Owner may award the job to third party and all cost incurred by the Owner shall over and above, the security deposit it shall forthwith be reimbursed by the contractor. The 10% guarantee shall be valid for a period of three months in excess from the Defect Liability Period.

65.3 If the contractor feels that any variation in work or in quality of materials or proportions would be beneficial or necessary to fulfill the guarantees called for, he shall bring this to in writing to the notice of the Engineer In charge.

65.4 The owner shall at its discretion, have recourse to the Performance Bank Guarantee submitted by the contractor, for recovery of any or all money due from the contractor in connection with the ontract inclusive of the guarantee obligations and such recovery shall not prejudice owner's right under any other provisions of the contract.

66. CARE OF WORKS:

66.1 From the commencement to completion of the works, the contractor shall take full responsibility for the care for all works including all temporary works and in case any damage, loss or injury shall happen to the works or to any part thereof or to any temporary works from any cause whatsoever, shall at his own cost repair and make good the same so that at completion, the work shall be in good order and in conformity in every respect with the requirements of the contract and the Engineer In charge's instructions.

66.2 Contractor shall be responsible for making good to the satisfaction of the Owner any loss or any damage to all structures and properties belonging to the Owner or being not executed or procured or being procured By the Owner or of other agencies Within the premises of all work of the Owner, if

such loss or damages is due to fault and/or the negligence or willful acts or omission of the contractor, his employees, agents, Representative or sub-contractors.

66.3 The contractor shall indemnify and keep the Owner harmless of all claims for damage to property other than Owner's property arising under or by reason of this agreement if such claims result from the fault and/or negligence or willful acts or omission of the contractor, his employees, agents, representatives or sub-contractors.

67. DEFECTS PRIOR TO TAKING OVER:

67.1 If at any time before the work is taken over, the Engineer In charge shall:

(a) Decide that any work done or materials used by the contractor or any sub-contractor is defective or not in accordance with the contract, or that the works or any portions thereof are defective, or do not fulfill the requirements of contract (all such matters being herein after, called 'Defects' in this clause), and

(b) As soon as reasonably practicable gives to the contractor notice in writing of the said decision, specifying particulars of the defects alleged to exist or to have occurred, then the contractor shall at his own expense and with all speed make good the defects so specified.

In case contractor shall fail to do so, the Owner may take, at the cost of the Contractor, such steps as may in all circumstances be reasonable to make good such defects. The expenditure so incurred by the Owner will be recovered from the amount due to the contractor. The decision of the Engineer In charge with regard to the amount to be recovered from the contractor will be final and binding on the contractor.

As soon as the works have been completed in accordance with the contract (except in minor respects as decided by Engineer In charge) that do not affect their use for the purpose for which they are intended and except for maintenance thereof provided in contract clause and have passed the tests on completion, the Engineer In charge shall issue a certificate (herein after called completion certificate) in which he shall certify the date on which works have been so completed and have passed the said tests and the Owner shall be deemed to have taken over the works on the date so certified. If the works have been divided into various groups in the contract, the Owner shall be entitled to take over any group or groups before the other or others and there-upon the Engineer In charge shall issue a completion certificate which will, however, be for such group or groups so taken over only.

67.2 DEFECTS AFTER TAKING OVER:

In order that the contractor could obtain a completion certificate he shall make good with all possible speed any defect arising from the defective material supplied by the contractor or workmanship or any act of omission of the contractor that may have been noticed or developed, after the works or group of the works has been taken over, the period allowed for carrying out such work will be normally one month. If any defect be not remedied within a reasonable time as specified in notice

served by Engineer In charge to the contractor for the same, the Owner may proceed to do the work at contractor's risk and expense and deduct from the final bill such amount as may be decided by the Owner.

If by reason of any default on the part of the contractor a completion certificate has not been issued in respect of every portion of the works within one month after the date fixed by the contract for the completion of the works, the Owner shall be at liberty /to use the works or any portion thereof in respect of which a completion certificate has not been issued, provided that the works or the portion thereof so used as aforesaid shall be afforded reasonable opportunity for completion of these works for the issue of completion certificate.

CERTIFICATES AND PAYMENT.

68. CONTRACTOR'S REMUNERATION:

The price to be paid by the Owner to contractor for the whole of the work to be done and for the performance of all the obligations undertaken by the contractor under the contract documents shall be as retained by the application of the respective quoted rates (the inclusive nature of which is more particularly defined by way of application but not of limitation, with the succeeding sub-clause of this clause) and payment to be made accordingly or the work actually executed and approved by the Engineer In charge. The sum so ascertained shall (exception only as and to the extent expressly provided herein) constitute the sole and inclusive emuneration of the contractor under the contract and no further or other payment whatsoever shall be or become due or payable to the contractor under the contract. However works deined under clause 59 shall be paid for.

68.1 PRICES TO BE INCLUSIVE:

The prices quoted by the contractor shall remain firm till the issue of final certificate and shall not be subject to escalation. Prices shall be deemed to include and cover all costs, expenses and liabilities of every description and all risk of every kind to be taken in executing, completing and handling over the work to the Owner by the contractor. The contractor shall be deemed to have known the nature, scope, magnitude and the extent of the works and materials required through the contract document might not fully and precisely furnish them. He shall make such provision in the offer, as he may consider necessary to cover the cost of such items of work and materials as may be reasonable and necessary to complete the work. The opinion of the Engineer In charge as to the items of work which are necessary and reasonable for completion of work shall be final and binding on the contractor, although the same may not be shown on or described specifically in contract documents. Generality of this present provision shall not be deemed to cut down or limited in any way because in certain cases it may and in other cases it may not be expressly stated that the contractor shall do or perform a work or supply articles or perform services at his own cost or without addition of payment or without extra charge or works to the same effect or that it may be stated or not stated that the same are included in and covered by the quoted rates.

68.2 PRICES TO COVER CONSTRUCTIONAL PLANT MATERIALS, LABOUR ETC.

Without in any way limiting the provisions of the proceeding sub-clause the offer shall be deemed to include and cover the cost of all constructional plant, temporary works (except as provided for herein), pumps materials, labour, insurance, fuel, stores, and appliances to be supplied by the contractor and all other matters in connection with the execution of the work or any portion thereof, complete in every respect and maintained as shown or described in the contract documents or as may be ordered in writing during the continuance of the contract.

68.3 PRICES TO COVER RENTS AND CLAUSES:

The prices are deemed to include and cover the cost of all fees for the articles, processes, protected by letters, patent or otherwise incorporated in or used in connection with the works, also all royalties, rents and other payments in connection with obtaining materials of whatsoever kind for the works and shall include an indemnity to the actions, proceedings, claims damages costs and expenses arising from the incorporation in or use on the works of any such articles, processes or materials. Octroi or other municipal or local Board charges if levied on materials, equipment or machinery#s to be brought to site for use on work shall be borne by the contractor.

68.4 OFFER TO COVER TAXES AND DUTIES:

No exemption or reduction of custom duties, excise duties, sales tax, quarry or any port duties, transport charges, stamp duties or Central or State Government or local body or Municipal Taxes or Duties, taxes or charges (from or of any other body), whatsoever, will be granted or obtained, all of which expenses shall be deemed to be included in and covered by the offer. The contractor Shall also obtain and pay for all permits or other privileges necessary to complete the work.

68.5 OFFER TO COVER RISKS OF DELAY:

The offer shall be deemed to include and cover the risks of all possibilities of delay and interference with the contractor's conduct of work which may occur from any cause including orders of the Owner in the exercise of his powers and on account of extension of time granted due to various reasons and for all other possible or probable causes of delay.

69. COMPLETION CERTIFICATE:

69.1 APPLICATION FOR COMPLETION CERTIFICATE

When the contractor fulfills his obligations under schedule III & IV, he shall be eligible to apply for completion certificate. The contractor may apply for separate completion certificates in respect of each such portion of the work by submitting the completion documents along with such application for completion certificate. The Engineer In charge shall normally issue to the contractor the completion certificates within one month after receiving an application therefore from the contractor after verifying from the completion documents and satisfying himself that the work has been completed in accordance with and as set out in the construction and erection drawings, and the contract documents. The effective date of completion shall be date when Engineer certifies that contractor has completed obligation as per Clause 54, 55 & 56. The contractor, after obtaining the completion certificates, is eligible to present the final bill for the work executed by him under the terms of contract. No completion certificate shall be given nor shall the work be deemed to have been completed neither until all scaffolding, surplus materials and rubbish are leaned off the site nor until the work shall have been measured by the Engineer-in-Charge. The work will not be considered completed and as taken over by the Owner, until all the temporary work, labour and staff colonies etc. constructed are removed and work site clean to the satisfaction of Engineer in Charge. If the contractor shall fail to comply with the requirements of this clause on or before the date fixed for the completion of work, the Engineer-in-charge may at the expenses of the contractor remove such scaffolding, surplus materials and rubbish and disposes off the same as he thinks fit and clean of such dirt as aforesaid, and the contractor shall forthwith pay the amount of all expenses so incurred and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid, except for any sum actually realized by the sale of material thereof. The effective date of completion shall be shifted and shall be considered after completion of above activities.

COMPLETION CERTIFICATE DOCUMENTS:

For the purpose of issue of completion certificate the following documents will be deemed to form the completion documents:

1. Technical documents according to which the work was carried out.
2. A set of construction drawing showing therein the modifications and corrections made during the course of execution and signed by Engineer-in- Charge
3. Completion certificate for "embedded" and "covered" up works.
4. Certificate of final level as set out for various works.
5. Certificate of test performed for various works.
6. Materials appropriation statement for the materials issued by the Owner for the works and list of surplus materials returned to the Owner's store duly supported by necessary documents.
7. Certificate of letter of discharge, as enclosed as Annexure III.

70. FINAL CERTIFICATE:

Upon the expiration of the period of liability and subject to the Engineer In charge being satisfied that all defects have been fully rectified by the contractor during a period of 12 months from Completion Certificate and that the contractor has in all respect duly made up any subsidence and performed all his obligations under the contract, the Engineer In charge shall (without prejudice to the right of the owner to retain the provisions of relevant paras hereof) give a certificate herein referred to as the final acceptance certificate to that effect and the contractor shall not be considered to have fulfilled the whole of his obligations under the contract unit this

final certificate shall have been given by the Engineer In charge notwithstanding any previous entry upon the work and taking possession, working or using of the same any part thereof by the owner.

71. CERTIFICATE AND PAYMENTS ON EVIDENCE OF COMPLETION:

Except the final certificate, no other certificates or payments against a certificate or on general account shall be taken to be an admission by the Owner of the due performance of the contract or any part thereof or of occupancy or validity of any claim by the contractor.

73. INSURANCE:

Contractor shall at his own expenses carry and maintain insurance with reputable insurance companies to the satisfaction of the Owner as applicable in the area as follows: -

i) EMPLOYEES STATE INSURANCE ACT:

The contractor agrees to and does hereby accept full and exclusive liability for the compliance with all obligations imposed by the Employees State Insurance Act, 1948, and the contractor further agrees to defend, indemnify and hold Owner harmless from any liability or penalty which may be imposed by the Central, State or Local authority by reasons of any assorted violation by contractor sub-contractor of the Employees.

State Insurance Act, 1948, and also from all claimed suits or proceeding that may be brought against the Owner arising under, growing out of or by reasons of the work provided for by this contract whether brought by employees of the contractor, by third parties or by Central or State Government authority or any political sub-division thereof. The contractor agrees to fill in with the Employees State Insurance Corporation, the declaration forms and all form which may be required in respect of the contractors or sub-contractor's employees, who are employed in the work provided for or those covered by ESI from time to time under the agreement.

The contractor shall deduct and secure that the agreement of the sub-contractors, also deduct the employee's contribution as per the first schedule of the employee's state insurance act from wages and employees contribution cards at wages payment intervals. The contractor shall remit and secure the agreement of the sub-contractor to remit to the State Bank of India, Employees State Insurance Corporation Account, and the Employees contribution as required by the Act. The contractor agrees to maintain all cards and records as required under the Act. In

respect of employees and payments and the contractor shall secure the agreement of the sub-contractor to maintain such records. Any expenses incurred for the contractor making contributions or maintaining records shall be to the contractor or sub-contractor's account.

The Owner shall retain such sum as may be necessary from the total contract value until the contractor shall furnish satisfactory proof that all contributions as required by the Employees State Insurance Act, 1948 have been paid.

OR

ii) Workman's compensation and Employer's liability Insurance:

a) Insurance shall be affected for all the contractor's employees engaged in the performance of this contract. If any of the work is sublet, the contractor shall require the sub-contractor to provide Workman's Compensation and employer's liability insurance for the latter's employees if such employees are not covered under the contractor's insurance.

b) The contractor shall be responsible for and shall pay, any compensation to his workmen which would be payable for injuries under the Workmen's Compensation Act hereinafter called the said Act. If such compensation is paid by the Company as principal employer under sub-section (2) of the said section, such compensation shall be recovered in the manner laid down in clause 83(i) of the conditions of contract.

c) The contractor shall not be allowed to commence the work unless he produces documentary evidence that he has obtained a policy under Workmen's Compensation Act from Insurance Company.

iii) Any other Insurance required under law or regulations or by Owner:

Contractor shall also carry and maintain any and all other insurance, which he may be required under any law or regulation from time to time. He shall also carry and maintain any other insurance, which may be required by the Owner.

(iv) Accident for Injury to Workman:

The owner shall not be liable for in respect of any demand or compensation payable at law in respect or in consequence of accident or injury to any workman or other person in the employment of the contractor or any sub-contractor save except accident or injury resulting from any act or default of the Owner, his agents or servants and the contractor, shall indemnify the Owner against all damages and compensations (save and except is aforesaid) and against all claims demands proceedings, costs, charges and expenses, whatsoever in respect or in relation thereto.

(v) Insurance till Commissioning:

In respect of all items to be transported by the contractor to the site of work erected at site the cost of insurance till commissioning should be borne by the contractor and the quoted price shall be inclusive of this cost.

(vi) Insurance for Materials:

All equipment#s / materials shall be handled carefully to prevent any damage or loss. The contractor shall provide the insurance covering risks on account of transit, theft, and breakage due to accident, damage due to fire, burglary and malicious action for all the equipment#s/materials till the plant/work is handed over to the owner.

In case of need of extra HSD i.e. more than mentioned quantity than the same shall be in account of party only and owner shall not provide and kind of liability for the extra HSD quantity

LABOUR LAWS AND SAFETY REGULATIONS

74. LABOUR LAWS:

i) No labour below the age of eighteen years shall be employed on the work.

ii) The contractor shall not pay less than what is provided under law to laborers engaged by him on the work with minimum wages act of the State Government or Government of India whichever is higher.

iii) The contractor shall at his expense comply with all labour law#s and keep the Owner indemnified in respect thereof.

(vi) The contractor shall pay equal wages for man and women in accordance with applicable labour laws.

75. IMPLEMENTATION OF APPRENTICES ACT 1961:

The contractor shall comply with the provisions of the Apprentices Act 1961 and the Rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the Engineer- in-Charge may, at his discretion, cancel the contract. The contractor shall also be liable for any pecuniary liability

arising on account of any violation by him of the provision of the Act.

76. CONTRACTOR TO INDEMNIFY THE OWNER:

i) The contractor shall indemnify the Owner and every member, officer and employee of the Owner, also the Engineer In charge and his staff against all actions, proceedings, claims, demands, costs and expenses whatsoever arising out of or in connection with the matters referred to in clause 85 and elsewhere and all actions, proceedings, claims, demands, costs and expenses which may be made against the Owner for or in respect of or arising out of any failure by the contractor in the performance shall not be liable of his obligations under the contract documents. The Owner shall not be liable for or in respect of any demand or compensation payable by law in respect or in consequence of any accident or injury to any workmen or other person in the employment of the contractor or his sub-contractor and contractor shall indemnify and keep indemnified the Owner against all such damages and compensations and against all claims, damages, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

ii) Payment of claims and damages:

Should the Owner have to pay any money in respect of such claims or demands as aforesaid the amount so paid and the cost incurred by the owner shall be charged to and paid by the contractor and the contractor shall not be at liberty to dispute or question the right of the Owner to make such payments notwithstanding the same may have been made without his consent or authority or in law or otherwise to the contrary.

iii) In every case in which by virtue of the provisions of section 12, sub section (i) of Workmen's Compensation Act, 1923 or their applicable provisions of Workmen's Compensation Act or any other Act, the Owner is obliged to pay compensation to a workmen employed by the contractor in execution of the works, the Owner will recover from the contractor the amount of the compensation so paid, and without prejudice to the rights of Owner under section 12, sub-section (2) of the said Act, Owner shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due to the contractor whether under this contract or otherwise. The Owner shall not be bound to contest any claim made under section 12, sub-section (1) of the said act, except on the written request of the contractor and upon his giving to the Owner full security for all costs for which the Owner might become liable in consequence of contesting such claim.

77. HEALTH AND SANITARY ARRANGEMENT FOR WORKERS:

In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this agreement, the contractor shall comply with or cause to be complied with all the rules and regulations of the local sanitary and other authorities or as framed by the Owner from time to time for the protection of health and sanitary arrangements for all workers

78.SAFETY REGULATIONS:

i) In respect of all labour, directly or indirectly employed in the work for the performance of contractor's part of this agreement, the contractor shall at his own expense arrange for all the safety provisions as per safety codes of CPWD and Indian Standards Institution. The Electricity Act, the Mines Act and such other act as applicable.

ii) The contractor shall observe and abide by all fire and safety regulations of the Owner. Before starting construction work contractor shall consult with Owner's

safety Engineer or Engineer In charge and must make good to the satisfaction of the Owner any loss or damage due to fire to any portion of the work done or to be done under this agreement or to any of the Owner's existing property.

79.0 SAFETY CODE:

A. GENERAL:

Contractor shall adhere to safe construction practice and guard against hazardous and unsafe working conditions and comply with Owner's safety rules as set forth 34

herein. Prior to start of construction, contractor will be furnished copy of Owner's "Safety Code" for information and guidance, if it has been prepared.

B. FIRST AID AND INDUSTRIAL INJURIES:

1. Contractor shall maintain first aid facilities for his employees and those of these sub-contractors.
2. Contractor shall make outside arrangements for ambulance service and for the treatment of industrial injuries. Name of those providing these services shall be furnished to Owner prior to start of construction and their telephone numbers shall be prominently posted in contractor's field office.
3. All critical industrial injuries shall be reported promptly to Owner, and a copy of contractor's report covering each personal injury requiring the attention of a physician shall be furnished to the Owner.

C. GENERAL RULES:

Smoking within the battery area is strictly prohibited. Violators of the no smoking rules shall be discharged immediately.

D. CONTRACTOR'S BARRICADES:

1. Contractor shall erect and maintain barricade required in connection with his operation to guard or protect.
 - a) Excavations
 - b) Hoisting areas
 - c) Areas adjudged hazardous by Contractor or Owner's inspectors.
 - d) Owner's existing property subject to damage by Contractor's operations.
 - e) Rail road-unloading spots.
2. Contractor's employees and those of his sub-contractors shall become acquainted with Owner's barricading practice and shall respect the provisions thereof.
3. Barricades and hazardous areas adjacent to but not located in normal routes of travel shall be marked by red flasher lanterns at night.

E. SCAFFOLDING:

- i) Suitable scaffoldings should be provided for workmen for all works that cannot safely be done from the ground or from solid construction except such short period work as can be done safely from ladders. When a ladder is used an extra Mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, suitable footholds and hand holds shall be provided on the ladder and the ladder shall be given an inclination not steeper than 1 in 4 (1 horizontal and 4 vertical).
- ii) Scaffolding or staging more than 4 meters above the ground or floor, swing suspended from an overhead support or erected with stationary support shall have a guard rail properly attached, bolted, braced and otherwise provided with at least 3' high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials, such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.

iii) Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 1 meter.

iv) Working platform, gangways and stairways should be so constructed that they should not sag unduly or unequally and if the height of the platform of the gangway or the stairway is more than 4 meters above ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as described in (ii) above.

v) Safe means of access shall be provided to all working platforms and other working Places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 meters in length while the width between the side rails in rung ladder shall in no case be less than 30 cms, for ladder up to and including 3 meters in length. For longer ladders this width should be increased at least 5 mm for each additional foot of length. Uniform steps spacing shall not exceed 30 cms. Adequate precautions shall be taken to prevent danger sites from electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or public. The contractor shall also provide all necessary fencing and lights to protect the workers and staff from accidents, and shall be found to bear the expenses of defense of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and costs which may be awarded in any such suit or action or proceedings to any such person or which may with the consent of the contractor be paid to compromise any claim by any such person.

F. EXCAVATION IN FOUNDATION:

All foundations 1.2 meters or more in depth shall at all times be supplied with at least one ladder for each 50 meters length or fraction thereof. Ladder shall be extended from bottom of the foundations to at least 1 meter above the surface of the ground. The sides of the foundations which are 1.5 meters in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides to collapse. The excavated materials shall not be placed within 5.0 meters of the edge of the foundations or half of the foundation width whichever is more. Cutting shall be done from top to bottom. Under no circumstances undermining or undercutting shall be done.

G. DEMOLITION:

i) Before any demolition work is commenced and also during the process of the work:

a) All roads and open areas adjacent to the work site shall either be closed or suitably protected.

b) No electric cable or apparatus, which is liable to be a source of danger, shall remain electrically charged.

c) All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding.

ii) All necessary personal safety equipment as considered adequate by the Engineer In charge, should be kept available for the use of the persons employed on the site and maintained in condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned.

a) Workers employed on mixing asphalt materials, cement and lime mortars shall be provided with protective, footwear and protective gloves.

b) Those engaged in mixing or stacking of cement bags or any materials, which are injurious to the eyes, shall be provided with protective goggles.

c) Those engaged in welding and cutting works shall be provided with protective

face and eye-shields, hand gloves etc.

d) Stonebreakers shall be provided with protective goggles and protective clothing and seated at safe intervals.

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

iv) Use of hoisting machines and tackles including their attachments, anchorage and supports shall conform to the following standards or conditions:

a) These shall be of good mechanical construction, sound materials and adequate strength and free from patent defect and shall be kept in good working order.

b) Every rope used in hoisting or lowering materials or as of suspension shall be of durable quality and adequate strength and free from patent defects.

c) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine any scaffolding winch or give signals to the operator.

d) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or lowering or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gears referred to above shall be plainly marked with the safe working load of the conditions under which it is applicable which shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.

e) Regarding contractor's machines, the contractor shall notify the safe working load of the machine to the Engineer In charge, wherever, he brings any machinery to site of work and get it verified by the Engineer concerned.

v) Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided efficient safe guards, hoisting appliances should be provided with such means as to reduce to the minimum the accidental descent of the load, adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations, which are already, energized insulating mats, wearing apparel such as gloves, sleeves, and boots as may be necessary should be provided. The workers shall not wear any rings, watches and carry keys or other materials, which are good conductors of electricity.

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

vii) These safety provisions should be brought to the notice board at a prominent place at the work spot. The person responsible for compliance of the safety code shall be named therein by the contractor.

viii) To ensure effective enforcement of the rules and regulations relating to safety precautions, the arrangements made by the contractor shall be open to inspection by the officer, Engineer In charge or Safety Engineer or their representative.

ix) Notwithstanding the above clauses there is nothing in these to exempt the contractor from the operations of any other Act or rules in force in the Republic of India. The works throughout including any temporary works shall be carried on in such a manner as not to interfere in any way whatsoever with the traffic on any roads or footpaths at the site or in the vicinity thereto or any existing works whether the

property of the Owner or of a third party.

In addition to the above, the contractor shall abide by the safety code provision as per CPWD Safety Code and Indian Standard Safety Code framed from time to time.

80. ARBITRATION:

i) In the event of any dispute or difference arising out of relating to, under or in respect of this contract between the parties the same shall be referred at the written request of either party to the arbitrate Tribunal constituted for the adjudication of the dispute or difference as provided here under:

Where the claim is up to Rs. 50 lacs # to a sole arbitrator to be nominated by the Managing Director of Hindustan Zinc Limited, Udaipur (Rajasthan).

Where the claim exceeds Rs. 50 lacs # to a Board of three Arbitrators comprising one nominee each of the Owner and the Contractor and the Third to be appointed by the two arbitrators by mutual agreement in writing before entering upon the reference. The party while making request for referring the dispute for arbitration shall appoint his Arbitrator nominee and request the other party to appoint his Arbitrator nominee.

ii) The Arbitration shall be subject to and in accordance with the provisions of The Indian Arbitration and Conciliation Act 1996 (No. 26 of 1996) and the Rules if any made there under and any statutory modification or re-enactment thereof.

iii) The venue of arbitration proceedings shall be Udaipur, Rajasthan, India. The Arbitrators shall give a speaking, reasoned and claim-wise award. Any Arbitration award made in such arbitration proceedings shall be final and binding on the parties and shall be enforceable in any court of competent jurisdiction.

iv) During the course of arbitration proceedings, the parties hereto shall continue to execute their respective obligations.

v) The requirement of appointing Arbitrator to settle the dispute is not binding on the insurance company and insurance company is free to take legal proceedings for realization of its claim against the carrier, if any.

vi) Both parties agree that any ex-employee of HZL or the Contractor shall not be nominated as Arbitrator.

vii) The above arbitration provision will stand terminated / determined as soon as #Letter of Discharge# as per Annexure-II is submitted by the contractor.

viii) Contractor shall submit the final bill covering all his claims, on any account whatsoever, including the extra work arising out of or relating to or under the contract. Once the final bill has been submitted, it shall be deemed that contractor has no other claims of any kind or nature whatsoever under or arising out of or relating to the contract or the work or extra work done pursuant thereto, and that the contract including the arbitration agreement contained therein stands terminated and determined by mutual agreement of the parties. Claims and disputes, if any, after the date of discharge letter (Annexure - II) shall only be settled by suit in court of law and not through arbitration.

81.0 JURISDICTION:

The contract shall be governed by the construed according to the laws in force in India. The Contractor and the Owner hereby agree to submit to the jurisdiction of the courts situated at Udaipur for the purpose of actions and proceedings arising out of the contract and the courts at Udaipur only will have the jurisdiction to hear and decide such actions and proceedings.

If, at any time, there should be evidence or any lien or claims for which the owner might have become liable and which is chargeable to the contractor, the owner shall have the right to retain out of any payment then due or thereafter to become due an amount sufficient to completely indemnify the owner against such lien or claim and if such lien or claim be valid, the owner may pay and discharge the same and deduct the amount so paid from any money which may be or may become due and payable to the contractor. If any lien or claim remain unsatisfied after all payments are made, the contractor shall refund or pay to the owner all money that the later may be compelled to pay in discharging such lien or claim including all costs and reasonable expenses.

ANNEXURE A

Height raising of tailing dam from 508 to RL 514 S K mine

Sl. No.	Item Description	UOM	Qty
1	Surface dressing including uprooting of trunk vegetation, bush woods,trees up to girth dia of 15 cm, removal of rubbish etc complete	Sqm	250000
2	Felling, uprooting & Removing trees having girth dia. More then 150 mm & up to 300 mm (Girth shall be measured at 1.0 mtr above ground level including cutting of trunk and branches, removing of roots, making good the pit and stacking of serviceable & disposal of un-serceable material.	Nos.	300
3	Excavation in loose moist or water logged soil/slush with mechanical means upto good soil levels as per direction of Engineer in charge including disposal of soil up to lead of 100meter with all tools tackles and dewatering of area.	Cum	20000
4	surface preparation for construction of embankment with removal of top layer of soil up to 300mm depth and compaction of surface by rolling with vibro roller of 8-10 ton capacity including watering etc complete as per direction of Engineer in charge	Sqm	150000

5	Construction of embankment and toe wall of tailing dam with mine waste transported from approved mine waste dumping yard with all leads & lifts including loading, transportation, unloading, and spreading in layers not exceeding 0.50 mtr in height, levelling by track mounted dozer & compaction by vibratory roller of 8-10 ton capacity in required profile as per drawing including watering of surface, making necessary approaches wherever required complete in all respect. (All required equipments, labour, fuel & other consumables shall be under the scope of contractor). The rate shall be inclusive of making approaches for lifting of mine muck at waste rock yards and making approach ramps wherever required to reach up to the top of embankment.	Cum	
(a)	From SK Mine (Lead approx 10 KM and lift approx 34 M)	Cum	100000
(b)	From RD Mine (Lead approx 6 Km and lift approx 34M)	Cum	50000
(c)	From Zero fix dump yard (Lead approx. 5 KM and lift approx 34 M)	Cum	500000
(d)	Construction of embankment and toe wall of tailing dam with mine waste transported from approved mine waste dumping yard with all leads & lifts including excavation of muck using PC/rock breakers etc (No blasting shall be allowed) including loading, transportation of same to Tailing dam site, unloading, and spreading in layers not exceeding 0.50 mtr in height, levelling by track mounted dozer & compaction by vibratory roller of 8-10 ton capacity in required profile as per drawing including watering of surface, making necessary approaches wherever required complete in all respect. (All required equipments, labour, fuel & other consumables shall be under the scope of contractor). The rate shall be inclusive of making approaches for lifting of mine muck at waste rock yards and making approach ramps. Lead approx. 10 KM and lift approx. 33M) wherever required to reach up to the top of embankment.	Cum	1100000

6	<p>Construction of embankment D/S side using wet/ submerged tailings as sandwiched layer as per drawing including making all arrangements to extract submerged tailing such as tailing extraction machines from filled up area, dewatering from extracted tailings to achieve required moisture content , laying in uniform layers of 300mm to 500mm thickness as per required profile .dressing, compaction in layer by mechanical means (vibratory roller) to obtain minimum dry density of 95% of MDD (Maximum dry density) . The rate should be inclusive of extraction of tailing from filled up area with deployment of required man and machines to extract tailing from waterlogged area , shifting it to location of work front by suitable means , loading, unloading, laying in required profile (lip cutting and disposal of surplus quantity back to dam etc) as per drawing with all leads and lifts and making approaches to tailing dam using tailing and mine waste complete in all respect.</p>	cum	50000
7	<p>Construction of embankment D/S side using settled dry or moist tailings as sandwiched layer as per drawing including spraying and laying of the crushed bentonite (max 4% by weight of the tailings being used) of approved grade & of quality in uniform layers. Tailings would be laid in 300mm to 400mm thickness as per required profile breaking of clods, sorting & removing organic material if any, stone pieces above 50mm size etc.dressing, compaction in layer by mechanical means (vibratory roller) including watering to obtain minimum dry density of 95% of MDD (Maximum dry density) . The rate should be inclusive of excavation of tailing from existing tailing dam, transportation to location of work front, loading, unloading, laying in required profile (lip cutting and disposal of surplus quantity back to dam etc) as per drawing with all leads and lifts and making approaches to tailing dam using tailing and mine waste complete in all respect.</p>	Cum	600000
8	<p>Providing and laying plain cement concrete 1:3:6 grade at all levels including material ,labour,equipments,handling transportation,curing .testing of concrete as per specifications ,drawings and as per instructions of Engineer in charge but exculding shuttering work .</p>	cum	20

9	Providing and laying reinforced cement concrete using M25 grade at all levels including material ,labour,equipments,handling transportation,curing .testing of concrete as per specifications ,drawings and as per instructions of Engineer in charge but exculding shuttering work .	Cum	30
10	Providing and placing reinforcement in RCC work at all levels including supply , transportation, cleaning ,cutting,bending binding ,with annealed binding wire , incuding providing concrete cover blocks, seperators,chairs etc. complete incuding preparation of bar bending schedule . Tor steel shall confirm to IS 1786 and shall be of SAIL, TATA or RINL make.	MT	3
11	Providing and fixing form work of ply wood shuttering of approved make for all kind of concrete work including labour, material , equipments, wastage of form , shoring strutting ,scaffolding ,staging and removal of form work and staging etc complete as per drawing, specifications, etc complete.	Sqm	200
12	Providing random rubble stone masonry in foundation / superstructure on inclined faces straight walls , pillars etc with broken hard stone in cement mortar 1:6 (1 cement : 6 coarse sand) at all levels including curing ,cost of material ,labour,scaffolding ,equipments etc complete from available salected stone from muck	Cum	50
13	Providing and laying plain cement concrete using M20 grade at all levels including material ,labour,equipments,handling transportation,curing .testing of concrete as per specifications ,drawings and as per instructions of Engineer in charge but exculding shuttering work .	Cum	20
14	Providing and laying 20mm thick plaster with cement mortar 1:6 (1 cement : 6 fine sand) on all surfaces including labour , material, equipments with all leads and lifts as per specifications and instructions of Engineer in charge.	sqm	320
15	Providing ,fixing and jonting 300 mm dia MS pipes on the d/s of embankment , MS pipes confirming to Schedule 20, with flanges,gaskets. Nuts and bolts etc complete. Flange joints to be provided at every 12 m length as per drawing and instruction of engineer in charge	RM	500
16	Supply and placing of Geo cells of approved qulaity as per instruction of Engineer Incharge	Sqm	15000

17	Supply and placing of approved quality 20KN Biaxial Geo grid cells as per drawing and section approved by Engineer Incharge	Sqm	15000
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Part-B Lining of tailing dam between RL 508 MRL to 514MRL

Sl.No	Description	Uom	Qty
1	Earth work for embankment for lining of dam using settled tailings dry or moist including laying in uniform layers of 300MM TO 500MM thickness as per required profile (refer attached drawing) breaking of clods, sorting & removing organic material if any, stone pieces above 50mm size etc.dressing, compaction in layer by mechanical means (vibratory roller) including watering to obtain minimum dry density of 95% of MDD (Maximum dry density) with +/- 2% of OMC including watering of borrow area/designated site if required to obtain optimum moisture content. The rate should be inclusive of excavation of tailing from existing tailing dam, transportation to location of work front, loading, unloading, laying in required profile (lip cutting and disposal of surplus quantity etc) as per drawing with all leads and lifts and making approaches to borrow area/worksite complete in all respect.	CUM	160000
2	Labour charges for Laying of 1.0 mm thick textured HDPE geo-membrane (Both side roughened) in required profile as per drawing, jointing the same & anchoring at top & bottom i.e. at MRL 508 & 514 MRL respectively as per specifications including testing complete in all respect. The installation should be carried out by approved manufacture agency . The rate should include installation, loading ,unloading stacking, jointing, overlapping, wastage etc. complete in all respect and as per direction of Engineer in charge. The payment shall be made of actual plan area laid. (The Material will be issued from HZL store)	SQM	85000

3	Earth work for embankment for U/S impervious layer in dry or moist soil incl. Laying in uniform layers of 15cm thickness as per required profile (refer attached drawing) breaking of clods, sorting of grass, organic material, stone pieces above 50mm size etc. if any and dressing, compaction in layer by mechanical means (vibratory roller) including watering to obtain minimum dry density of 95% of MDD (Maximum dry density) with +/- 2% of OMC including watering of borrow area/designated site if required to obtain optimum moisture content. The rate should be inclusive of excavation of earth, transportation from borrow area to location of work front, loading, unloading, laying in required profile (lip cutting and disposal of surplus soil etc) as per drawing with all leads and lifts and making approaches to borrow area/worksite etc. complete in all respect.		
	a) Soil from out side borrow area to be arranged by contractor at his own cost (Lead assumed 5Km)	CUM	50000
	b) Soil from HZL area borrow earth site (lead assumed 2 KM)	cum	100000
4	Supply and laying of stone aggregate of required size of 4.75 to 80 mm for graded transition filter conforming to attached technical specification in required profile as detailed in attached drawing including packing of voids etc. The rate shall be inclusive of collection of stone aggregate, transportation of the same from crusher/quarry to work site, loading, unloading, laying in layers with all leads & lifts complete in all respect.	CUM	100
5	Supply & laying including loading, transportation, unloading and laying of broken hard stones around 300mm size including breaking of stone if required, laying the same in required profile and packing of voids/wedging etc complete for rip rap work with all leads & lifts complete as per drawing & specifications.	CUM	0
	supplied by party with all lead and lifts		19000

6	Supply & laying of river sand and filling below geo-textile in layer and compaction complete as per design and direction of engineer incharge	CUM	6500
7	Labour charges and installation of nonwoven geotextile as per detailed specifications provided including jointing of seams as per method given in specifications. The installation should be carried out by approved manufacture agency . The rate should include installation, loading ,unloading stacking, jointing, overlapping, wastage etc. complete in all respectand as per direction of E in C. The payment shall be made of actual plan area laid (The Material will be issued from HZL store)	sqm	130000

Part -C GARLAND DRAIN

Sl. No.	Description	UOM	Qty
1	Earth work Excavation in for making garland drain/nallah in all type of soil/ loose moist or water logged soil/slush /hard soil/soft rock with mechanical means upto good soil levels as per direction of Engineer in charge including disposal of soil up to lead of 100meter with all tools tackles and dewatering if required. Rolling and making good surface for disposed earth or for subsequent embankment work	Cum	20000
2	Hard stone pitching and voids filled with selected earth /moorum for making garland drain as per drawing and direction of EIC	cum	3400
3	Providing and laying reinforced cement concrete using M25 grade at all levels including material ,labour,equipments,handling transportation,curing .testing of concrete as per specifications ,drawings and as per instructions of Engineer in charge but excuding shuttering work .	Cum	25
4	Providing and placing reinforcement in RCC work at all levels including supply , transportation, cleaning ,cutting,bending binding ,with annealed binding wire , including providing concrete cover blocks, seperators,chairs etc. complete including preparation of bar bending schedule . Tor steel shall confirm to IS 1786 and shall be of SAIL, TATA or RINL make.	MT	3

5	Providing and fixing form work of ply wood shuttering of approved make for all kind of concrete work including labour, material , equipments, wastage of form , shoring strutting ,scaffolding ,staging and removal of form work and staging etc complete as per drawing, specifications, etc complete.	Sqm	150
6	Providing random rubble stone masonry in foundation / superstructure on inclined faces straight walls , pillars etc with broken hard stone in cement mortar 1:6 (1 cement : 6 coarse sand) at all levels including curing ,cost of material ,labour,scaffolding ,equipments etc complete	Cum	20
7	Supply laying and jointing HDPE fabric laminated with HDPE on both sides weight 500 GSM with center joint hot air welding as per IS specification and jointing shall be tested for leaks etc complete in all respects including levelling of sump bottom by spreading of soft soil at sump bottom with compaction as per the instruction of engineer-in-charge payment shall be made as per actual lining area.	Sqm	25000
8	Providing and laying cement concrete including curing compaction etc complete over 500 micron thick HDPE liner on ground floor as well on slant face of pond including the cost of centering and shuttering in cement concrete (1:2:4),with graded stone aggregate 20mm nominal size.	Cum	2250
9	Providing and laying 20mm thick plaster with cement mortar 1:6 (1 cement : 6 fine sand) on all surfaces including labour , material, equipments with all leads and lifts as per specifications and instructions of Engineer in charge.	sqm	200
10	Filling & making profile of available filter sandy media at Tailing dam bellow stone pitching garland drain as per drawing and instruction of EIC	cum	5400
11	Supply and laying of stone aggregate of required size of 4.75 to 80 mm for graded transition filter confirming to attached technical specification in required profile as detailed in attached drawing including packing of voids etc. The rate shall be inclusive of collection of stone aggregate, transportation of the same from crusher/quarry to work site, loading, unloading, laying in layers with all leads & lifts complete in all respect.	cum	5400
12	Providing and fixing RCC hume pipe 600mm dia. Of NP3 grade	RM	60

Part (D) : Supply of Geo text material

S no	Particular of Items	Unit	Quantity
1	Supply of Geo Textile of 250GSM , Tencate make TS 60	Sqm	130000
2	Supply of HDPE Geo membrane 1mm thick , Both side textured as per specificatios (Internation standard)	Sqm	85000

Part E : Construction of water collection reservoir (125000 cum capacity)

Sr. No.	Description of Item	UNIT	Qty
1	Surface dressing of ground including removing & scrapping vegetation, grass bushes and inqualities by application of Phawarah & Disposal of grass & bushes rubbish etc.	m2	60000
2	Earth work in excavation overareas for construction of reservoir in all kind of soil/strata including disposal of excavated earth/decomposed rock at designated location within a lead of 3 KM and lift of approximately 5 Mtr below & 2 mtr above ground level including deatering as per requirement. Disposed earth to be levelled and neatly dressed. Earth work in excavation for the reservoir is to be done by track mounted excavator or appropriate machinery capable to excavate decomposed rock upto 5 M depth including making the required ramps also. Disposal to be done by dumpers facilitated with hydraulic systems including dressing of sump bottom and side slope in required profile complete as directed by engineer-in-charge.	m3	125000
3	Making desired profile of existing earthen dola of height 2.0 mtr above the normal ground level with all lifts, including filling of earth excavated in item no.1 to desired profile/level, ramming & compaction with vsuitable roller .	RM	750
4	Lip cutting and final dresing as per designed section including rehandling and disposal of excavated earth in 15cm or embankments etc.	m2	7000

5	Supply laying and jointing HDPE fabric laminated with HDPE on both sides weight 500 GSM with center joint hot air welding as per IS specification and jointing shall be tested for leaks etc complete in all respects including levelling of sump bottom by spreading of soft soil at sump bottom with compaction as per the instruction of engineer-in-charge payment shall be made as per actual lining area.	m2	32500
6	Providing and laying cement concrete including curing compaction etc complete over 500 micron thick HDPE liner on ground floor as well on slant face of pond including the cost of centering and shuttering in cement concrete (1:2:4),with graded stone aggregate 20mm nominal size.	m3	3250
7	Supplying, fabricating, fixing in position during concrete including transportation of MS welded wire fabric (WWF) of wire gauge 4.00mm thick and having mesh of 100mm for reinforcement in RCC works as per instruction of EIC .	MT	85
8	Providing, mixing, placing in position RCC of grade M20 using 20 mm down coarse aggregate as per IS:456 for concrete elements in water retaining structures , walls, retaining walls,underground pits, base rafts below ground upto 4.5 M depth upto finished floor level including using water proofing admixture of approved make and in designed quantity compaction, vibration, curing and finishing but excluding form work and reinforcement. complete as per the instructions of Engineer-in-charge.Rate includes pressure grouting of joints to make structure water tight.	Cum	60
9	Providing and fixing smooth form work for concrete elements like rafts, footing, pedestals,colms , plinth beams ,slabs,walls and beams below at various levels and at required slopes as per drawing and specifications including materials, making, fixing, supporting maintaining and after concreting stripping at appropriate time, .From all levels below ground up to finish floor level	Sqmt	500

10	Supplying, fabricating, fixing in position at all heights & depths including transportation, reinforcement steel in RCC works as per drawing and specifications including preparation and obtaining approval of bar bending schedule, straightening, decoiling, removing milscales and rust, cutting, bending to required shape, binding in position, supply of approved type of binding wire etc. for Tor Steel reinforcement bars as per IS 1786	Kg	4500
11	Supply, Fabrication & Erection of steel for columns, trusses, rafters, monitors, monorails, staircases, platforms, purlins, plate tanks, monkey ladder, cage etc. applying one coat of red oxide and two coats of enamel paint of approved in plant area including cutting, welding, grinding etc. with all consumables, tools & tackles .	Kg	15500

Part F : Construction of approach road around the Tailing dam

Sr. No.	Description of Item	UNIT	Qty
1	Each work in excavation in all type of soil in foundations as well as over areas, including dewatering with own pump if required, including disposal of excavated earth lead up to 50 m and lift upto 1.5 mtr disposed earth to be levelled and neatly dressed.	Cum	20000
2	Disposal of surplus excavated material, rubbish as applicable . The rate shall be inclusive of loading, unloading, transporting & stacking and levelling the material beyond 50 m and up to 2 km from the site of excavation	Cum	20000
3	Constuction of gravel/Soil-Aggregate Base by providing well graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with three wheel 80-100 kN static roller to achieve the desired density, complete as per Technical Specifications Clause 402 .Gravel/Soil-Aggregate Base(Table 400.2) Grading A	Cum	13000

4	<p>Providing, laying, spreading and compacting stone aggregate of specific size to water bound macadam specification as per clause 404 of MoRTH specification for road and bridge works (forth revision) incl. cost of material, spreading in uniform thickness, hand pacing, rolling with road roller 8-10 tonnes in stages to proper grade & camber applying & brooming requisite type of screening/binding material to fill up the interspaces of coarse aggregate, watering and rolling making necessary earthen bond to protect edges, lighting, guarding barricadings, and maint. of diversions incl. lead of ballast upto 20 Kms and all leads of screening, binding material & water.(Compacted thickness as specified to be measured) 53-22.4mm grading-III (crusher broken with screening material of grade "B" (MoRTH specification table 400.8</p>	Cum	10000
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Part G : Construction of compound wall around the Tailing dam

Sr. No.	Description of Item	UNIT	Qty
1	Each work in excavation in all type of soil in foundations as well as over areas, including dewatering with own pump if required, including disposal of excavated earth lead up to 50 m and lift upto 1.5 mtr disposed earth to be levelled and neatly dressed.	m3	3000
2	Providing & laying cement concreting including curing, compaction etc. complete using stone aggregate 40mm nominal size(hand broken) in foundation and plinth,excluding cost of shutering,using. 1 cement : 5 sand :10 aggregate mix.	m3	450
3	Random Rubble stone masonry for foundation and plinth for all thickness in Cement sand mortar 1:6 (1 Cement : 6 sand)	m3	5000
4	Providing and laying DPC of 50mm thick Cement concrete 1:2:4, 50MM thick .	m2	2700
5	Supply, Fabrication & Erection of steel for columns, trusses, rafters, monitors, monorails, staircases, platforms, purlins,plate tanks,monkey ladder, cage etc.applying one coat of red oxide and two coats of enamel paint of approved in plant area including cutting, welding, grinding etc. with all consumables, tools & tackles .	Kg	1500

6	Providing and fixing standard concertina coil fencing with MS Y angle post of 50x50x6mm section embedded in masonry wall by grouting of post in PCC 1:2:4(size 150x150x150mm)@ 3m c/c as per approved drawing including stretching of supporting barbed wire,stable clamping of coil with longitudinal barbed wire,one coat of steel primer and two coats of approved enamel paint on MS angle post etc. complete as per instruction of Engineer-in-charge.	RM	6000
7	Providing, mixing, placing in position RCC of grade M20 using 20 mm down coarse aggregate as per IS:456 for concrete elements in water retaining structures , walls, retaining walls,underground pits, base rafts below ground upto 4.5 M depth upto finished floor level including using water proofing admixture of approved make and in designed quantity compaction, vibration, curing and finishing but excluding form work and reinforcement. complete as per the instructions of Engineer-in-charge.Rate includes pressure grouting of joints to make structure water tight.	Cum	15
8	Providing and fixing smooth form work for concrete elements like rafts, footing, pedestals,colms , plinth beams ,slabs,walls and beams below at various levels and at required slopes as per drawing and specifications including materials, making, fixing, supporting maintaining and after concreting stripping at appropriate time, .From all levels below ground up to finish floor level	Sqmt	100
9	Supplying, fabricating, fixing inposition at all heights & depths including transportation, reinforcement steel in RCC works as per drawing and specifications including preparation and obtaining approval of bar bending schedule, straightening, decoiling, removing milscales and rust, cutting, bending to required shape, binding in position, supply of approved type of binding wire etc. for Tor Steel reinforcement bars as per IS 1786	Kg	1500

Part H : Pipeline laying, electrical works etc

Sr. No.	Description of Item	UNIT	Qty
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1	<p>Supply, fabrication, alignment & laying of 250 mm dia MS pipeline as per land availability (Below and above NGL) in desired line & levels including fabrication & erection of specials & fittings such as bends, reducer etc including welding of supports wherever needed. Laid pipeline is to be painted with one coat of red oxide primer (Above ground wherever laid) and wrapping coating (Two layer of 2 mm thick each) wherever below ground level laid including required sand blasting, primer application etc in all respect. Transportation of pipes/fittings to work site including setting of stores, storing/stacking of material, straining along proposed route/alignment, clearing, grubbing, welding , dewatering wherever required etc are included in contractor's scope of work.</p>	MTR	500.00
2	<p>Supply, Installation & commissioning of submersible pump with motor of reputed make (WILLO/Kirloskar/Texmo/CRI) of rated discharge of approx 300 cum / hr , Head range (6-30M) including supply of flexible cable from pump to starter, including levelling, alignment complete in all respect. Scope shall also include, supply & fixing/laying of suitable electric panels, starter, JB, gate valve, digital flowmeter etc. complete in all respect as per instruction of EIC for operation of pump being installed at site.</p>	Each	2.00