

## List of Sponsored Research Projects

S. No.	Project Details	Status
1	<p><b>Project Title:</b> Technical &amp; Feasibility study of overburden rock of Dongri Buzurg &amp; Kandri Mine for consolidated stowing in underground mines-Phase-I</p> <p><b>Funding Agency:</b> MOIL</p> <p><b>Funding Amount:</b> INR 39.25 Lakhs</p> <p><b>PI:</b> Prof. I. L Muthreja &amp; Prof. R. R. Yerpude</p> <p><b>Duration:</b> 3 Years</p>	Completed
2	<p><b>Project Title:</b> Removal of metal ions contamination from mine water at deposit- 14/11C and deposit 11 B mines of BIOM, Kirandul complex</p> <p><b>Funding Agency:</b> NMDC, Hyderabad</p> <p><b>Funding Amount:</b> INR 7.08 Lakhs</p> <p><b>PI:</b> Dr.A K Agarwal and Dr. R. D. Lokhande</p> <p><b>Co-PI:</b> Dr. Ishwardas L. Muthreja Dr. Rajendra R. Yerpude Dr. Sangesh P. Zodape</p> <p><b>Duration:</b> 1.5 Years</p>	Ongoing
3	<p><b>Project Title:</b> Physico-mechanical response of rocks under varied thermal environments</p> <p><b>Funding Agency:</b> Science and Engineering Research Board (SERB), DST</p> <p><b>Scheme:</b> Start-Up Research Grant (SRG)</p> <p><b>Funding Amount:</b> INR 33 Lakhs</p> <p><b>PI:</b> Dr. Nikhil Ninad Sirdesai</p> <p><b>Co-PI:</b> Not Applicable (Individual Fund)</p> <p><b>Duration:</b> 2 Years (starts once the funds are received by VNIT)</p>	Ongoing
4	<p><b>Project Title:</b> Risk investigations for slope failure of benches and dumps using geo-technical characteristics of rocks and their monitoring mechanism in Jayant opencast mine of Northern Coalfields Limited, (NCL)</p> <p><b>Funding Agency:</b> NCL</p> <p><b>Funding Amount:</b> INR 47.64 Lakhs</p> <p><b>PI:</b> Prof. Prof. R. R. Yerpude &amp; I. L Muthreja</p> <p><b>CO PI:</b> Dr.A K Agarwal and Dr. R. D. Lokhande</p> <p><b>Duration:</b> 2 Years</p>	Ongoing
5	<p><b>Project Title:</b> Risk investigations for slope failure of benches and dumps using geo-technical characteristics of rocks and their monitoring mechanism in Dudhichua</p>	Ongoing

	<p>opencast mine of Northern Coalfields Limited, (NCL)  <b>Funding Agency:</b> NCL  <b>Funding Amount:</b> INR 43.56 Lakhs  <b>PI:</b> Prof. R. R. Yerpude &amp; I. L Muthreja  <b>CO PI:</b> Dr.A K Agarwal and Dr. R. D. Lokhande  <b>Duration:</b> 2 Years</p>		
6	<p><b>Project Title:</b> Blasting and its effect on environment, buffer zone and protective measures of MOIL ltd. Mines  <b>Funding Agency:</b> MOIL  Funding Amount: 4.51 lac  <b>PI:</b> Prof. N. R. Thote</p>	Ongoing	
7	<p><b>Project Title:</b> Feasibility study on Flyash filling of open cast mine at Manikpur, Korba  <b>Funding Agency:</b> Bharat Aluminum Company Limited  <b>Funding Amount:</b> INR 69.45 Lakhs  <b>PI:</b> Dr. Swapnil Wanjari  <b>CO PI:</b> Dr. D. Z. Shende, Dr. K. I. Wasewar, Dr.A K Agarwal and Dr. A. A. Kher  <b>Duration:</b> 2 Years</p>	Ongoing	
8	<p><b>Project Title:</b> Risk Assessment Of Sinkhole Subsidence And Investigations Of Its Potential Parameters  <b>Funding Agency:</b> CMPDIL (Coal S &amp; T)  <b>Funding Amount:</b> INR 17425780 Lakhs  <b>Name of Project Leader:</b> Dr Ritesh D Lokhande  <b>Name of the project Co-ordinator:</b> Dr. A K Agarwal  <b>Team Members:</b> Dr. R R Yerpude, Dr. A A Kher  <b>Duration:</b> 3 Years</p>	Submitted and Approval awaited	



**MOIL LIMITED**  
(A Government Undertaking)  
MOIL Bhawan, A-1 Katol Road,  
NAGPUR - 440 013.

P.R.I.: 0712 - 2806100 FAX: 0712 2592073, 2590033, 2590641, 2592360

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SDGM(Tech)/Research/VNIT/10-11/ 1026

Date: 7.3.2011

The Director,  
Visvesvaraya National Institute of Technology,  
NAGPUR - 440 011

Kind Att.:~ Prof. I.L. Muthreja, Department of Mining Engineering, VNIT, Nagpur

Sub: Research Proposal for Technical & Feasibility study of overburden rock of Dongri Buzurg & Kandri Mine for consolidated hydraulic stowing in underground mines

Ref:~ Your offer letter No. MNG/C-22/MOIL/11/222 dated January 24, 2011 & MNG/C-22/MOIL/11/942 dated February 11, 2011.

Dear Sir,

This is with reference to your above offer letters; we are pleased to award the work of research for Technical & Feasibility study of overburden rock of Dongri Buzurg & Kandri Mine for consolidated hydraulic stowing in underground mines

The scope of work and other term and conditions are as follows:

I. Scope of work:

1. Determination of physico-mechanical and other relevant properties of over burden material for assessment of its suitability as stowing material.
2. Experimentation on stowing material at VNIT laboratory
3. Experimentation & assessment of flow characteristics of over burden material
4. Assessment of packing/consolidation properties of overburden material.
5. Field experimentation with optimum material quality.
6. Techno-economic feasibility study of the stowing system
7. Preparation of report
8. Dissemination of information by organizing a workshop
9. Study of present sand stowing operation & suggestions for optimum utilization.

II. Time Schedule: 24 Months - 2 Years

Cont-2

III. Cost of Study:

Rs. 3925000.00 /- only (Rupees thirty nine lakh twenty five thousand only)  
This is research proposal hence no service tax is applicable.

IV. Payment Terms:

Approx about 60% advance payment at start of the project	Rs.23.50 Lakh
Approx about 30% payment after submission of the 1 <sup>st</sup> year's report	Rs.11.75 Lakh
Approx about 10% payment at the time of final report	Rs 4.00 Lakh

VNIT this is National Institute of Technology and is exempted from income tax, hence no deduction of income tax shall be made by MOIL Limited. VNIT will submit letter for exception of income tax at the time of final payment.

V. Transport:

Transport will be provided by MOIL Limited from VNIT to the mines of MOIL Limited during this study for visiting MOIL Mines with local hospitality logging & boarding

VI. Other terms & conditions:

Responsibility of Visvesvaraya National Institute of Technology (VNIT), Nagpur  
Department of Mining Engineering will be involved in the study.

VNIT will provide following resources for undertaking the study

Scientific manpower for the investigations

Technical Staff for field and laboratory tests

Laboratory facilities available at Mining Department required for the purpose

Institute library facilities

Computing facilities

Responsibility of MOIL Limited

Field assistance and local hospitality including lodging and boarding for the  
research team during field studies

Over burden material will be supplied by MOIL Limited as per availability at the  
mine sites.

Investigators:

From VNIT

1. Coordinator: Prof I.L. Muthreja
2. Co-coordinator: Dr. Rajendra Yerpude
3. Co-coordinator: Dr. A. D. Ghare

From MOIL Limited

1. Coordinator: G.G. Manekar from HO, MOIL Limited, Nagpur
2. Co-coordinator: Mine Manager, Kandri Mine or his representative
3. Co-coordinator: Mine Manager, Dongri Buzurg Mine or his representative

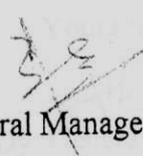
VNIT research team will submit:

- a) Yearly expenditure report of the R & D Fund
- b) Report of suitability of the overburden material for hydraulic stowing & lab experimentation
- b) Techno economic evaluation of proposed methods
- c) Complete research report in 4 (four) copies
- d) VNIT will assist MOIL Limited for technical discussions with statutory body regarding this research work

If the above terms and conditions are accepted kindly communicate, so that approx 60% advance payment (Rs. 23.50 Lakh) shall be made by the company.

Thanking you,

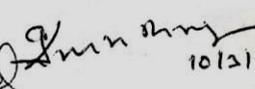
Yours faithfully

  
Sr. Dy. General Manager (Tech)

Copy to:

1. Prof. I.L. Muthreja, Department of Mining Engineering, VNIT, Nagpur - 440 011
2. Mine Manager, MOIL Limited, Kandri Mine
3. Mine Manager, MOIL Limited, Dongri Buzurg Mine
4. Agent & DGM (Mines), Gr.III, MOIL Limited, Munsar Mine
5. Agent & DGM (Mines), Gr.II, MOIL Limited, Chikla Mine
6. Sr.DGM (Mines), Gr.II, MOIL Limited, Nagpur
7. Sr.DGM (Mines), Gr.III, MOIL Limited, Nagpur
8. Sr.DGM (Finance), MOIL Limited, Nagpur
9. General Manager (S&E), MOIL Limited, Nagpur
10. Director (Prod & Plng), MOIL Limited, Nagpur.

*The conditions as mentioned in letter may please be accepted and a letter may please be sent to MOIL for further action (letter enclosed for ~~reference~~ approval & signature)*

*Through HO (Mining) Forwarded and recommended  10/12/03*

*Submitted to  
The Director, VNIT, Nagpur 10/03*



# एन एम डी सी लिमिटेड NMDC Limited

(भारत सरकार का उद्यम) (A GOVT. OF INDIA ENTERPRISE)

पंजीकृत कार्यालय : 'खनिज भवन', 10-3-311/ए, कैसल हिल्स, मासाब टैंक, हैदराबाद - 500 028.  
Regd. Office : 'Khanij Bhavan' 10-3-311/A, Castle Hills, Masab Tank, Hyderabad - 500 028.

**NMDC**

NMDC/ ENV/ KRDL/ VNIT/ 2019/ 1545

नैगम पहचान संख्या / Corporate Identity Number : L13100AP1958 GOI 001674

Dated: 01.07.2019

The Director,  
Visvesvaraya National Institute of Technology,  
Nagpur- 440010  
Maharashtra, India

**Sub: Removal of metal ions contamination from mine water at Deposit- 14/11C & Deposit 11 B mines of BIOM, Kirandul Complex.**

Ref:

1. Your Proposal dated 09.04.2019
2. Our mail dated 07.05.2019
3. E-mail dated 20.05.2019 from your office

Sir,

With reference to your proposal cited above at reference (1), we are pleased to award the research work on "Removal of metal ions contamination from mine water" at Bailadila Iron Ore Mine Kirandul Complex Deposit 14/11C & Deposit 11B at a total cost of Rs. 7,08,000/- (inclusive of 18 % GST). The detailed price schedule is given at Annexure-1 for reference.

## 1. SCOPE OF THE WORK

The detailed scope of work is given below:

- a) Determination of mine water characteristics
- b) Selection of perspective absorbent for the removal of toxic elements from mine water based on mine water characteristics.
- c) To identify best suited absorbent for the mine effluents and to investigate its efficiency and other characteristics responsible for removal of toxic metal ions from mine water.

## 2. TIME PERIOD

The research work shall be completed within 18 months from the date of receipt of the work order.

To  
The Coordinator of  
the Proposal for me.

### 3. TERMS OF PAYMENTS

The payment shall be released in electronic form and following are payment terms:

- No advance amount is payable.
- 50% of value of work order after field visit and submission of interim report.
- 25 % of value of work order after completion of collection of water samples.
- 25% of value of work order submission of final report.
- Income tax at source shall be deducted.

### 4. TERMS AND CONDITIONS

- a) The work shall be carried out by making site visits and report to be prepared by collecting necessary information.
- b) You should make all arrangements for the safety of the workers engaged by you on the work and provide all safety appliances at your own cost and risk. You will be solely responsible for any compensation to the persons engaged by you.
- c) You shall comply with the provisions of all local, state and other Government Rules and Regulations, Bye-laws and orders etc for the time being in force during the execution of the work.
- d) You shall also comply with the provisions of Mines Act 1952, Mines Rules 1955 and Metalliferrous Mines Regulations 1961.
- e) Lodging and boarding facilities shall be provided by NMDC Ltd at project Guest- House.
- f) Local transport (Jeep) shall be provided to your team during the time of conducting field sampling.

### 5. PAYING AUTHORITY

General Manager (Finance), NMDC Limited, Hyderabad will be the paying authority after satisfactory completion of the work and recommendation by Sr. Manager (Mining)/GM(Env)

### 6. NMDC GSTIN

36AAACN7325A2ZV



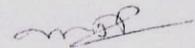
## 7. ARBITRATION

All disputes or differences which may arise between the owner and Contractor in connection with this rate contract (other than those in respect of which the decision of any person is expressed in the Contract to be final and binding) shall, after written notice by either party to the other and to the Chairman of the National Mineral Development Corporation Limited (who will be the appointing authority), be referred for adjudication to the sole Arbitrator to be appointed as hereinafter provided.

The appointing authority will send within ninety days of the receipt of the notice of claims, a panel of three names of persons not directly connected with the work, to the Contractor who will select any one out of the said names of persons to be appointed as a sole Arbitrator within 30 days of receipt of the names. If the appointing authority fails to send to the Contractor the panel of three names as aforesaid within the period specified, the Contractor shall send to the appointing authority a panel of three names of persons who shall also be unconnected with the organization by which the work is executed. The appointing authority shall on receipt of the names as aforesaid select any one of the persons named and appoint him as the sole Arbitrator. If the appointing authority fails to select the persons, appoint him as the sole Arbitrator within 30 days of receipt of the panel, and inform the Contractor accordingly, the Contractor shall be entitled to invoke the provisions of the Arbitration and Conciliation Act, 1996. Settlement of disputes between two Public Sector Enterprises and between a Public Sector Enterprise and a Government of India Agency/Department shall be settled amicably, failing which the arbitration proceedings shall be in accordance with procedure/guidelines (Office Memo.No.15/9/86-BPE (Fin) dated 30.3.1989) laid down by the Department of Public Enterprises, Ministry of Industry, Govt. of India, from time to time.

The Courts at Hyderabad only shall have Jurisdiction to entertain and adjudicate any disputes.

The venue of the Arbitration will be at Hyderabad, and the Arbitration law relating to State of Andhra Pradesh, India shall only apply.



Arbitrator shall decide the costs of Arbitration also. The arbitration award shall, in addition to dealing with the merits of the case, decide which of the parties shall bear the costs of arbitration or in what proportions the costs shall be borne by the parties.

The parties shall continue to perform their obligations under this Contract during the arbitration proceedings.

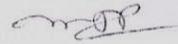
No payment due to or payable by the Contractor shall be withheld or delayed except as regards any particular obligation or any particular payment which itself is or forms a direct part of the subject matter of the arbitration proceedings.

#### **8. FORCE MAJURE**

If, at any time, during the pendency of the contract, the performance in whole or in part by either party of any obligation under this contract, is prevented or delayed by reason of any act of God, War, insurrection, riot, civil commotion, earthquake, tide, storm, tidal wave, sabotage, cyclones, flood, lightning, explosion, fire, hostility, acts of public enemy, epidemics, quarantine restrictions, Government Regulations, Law & order and other proclamation etc or any other happening including judicial, executive or administrative orders of any competent authority, which are beyond the control of either party (hereinafter referred to as 'eventualities') then provided notice of the happening of any such eventuality is given by either party to the other within 15 days from the date of occurrence thereof, neither party shall by reason of such eventuality be entitled to terminate this contract nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance and work under this contract shall be resumed as soon as practicable after such eventuality has come to an end or ceased to exist and the decision of the Owner as to when the work has to be resumed shall be final and conclusive. The time of completion shall then be extended by a period equal to the period during which the eventuality was prevailing.

#### **9. TERMINATION OF CONTRACT**

Corporation reserves the right to withdraw that part of the work which is delayed, after giving notice in writing to the contractor to fulfill that task failing

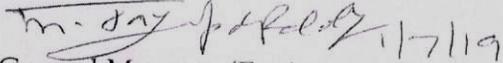


which they can get the same done by some other agency at the "risk & cost" of the contractor without prejudice to any other right and remedies available to corporation under the contract.

Two copies of the work order are issued. You are requested to kindly return duly signed one copy of the work order as token of acceptance.

Yours faithfully,

Encl: a/a

  
General Manager (Environment)

Copy for kind information to:

General Manager, BIOM, Kirandul Complex

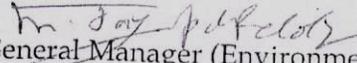
**NMDC Limited**  
(RP& S Department)  
Khanij Bhavan, 10-3-311/A, Castle Hills, Masab Tank,  
Hyderabad-530028, Telangana

Annexure-1

**PRICE SCHEDULE**

**Name of work:** Research work on removal of metal ion contamination from mine water at BIOM, Kirandul Complex Deposit -14/ 11C & Deposit-11B  
**Name of the firm:** Visvesvaraya National Institute of Technology, Nagpur, Maharashtra, India

S.No.	Description	Amount (in Rs. Figures)	Amount (in Rs.)
1	Sample collection and field visits	One Lakh only	1,00,000/-
2	Laboratory test analysis	Two Lakhs only	2,00,000/-
3	Dissipation of Knowledge	Fifty Thousand only	50,000/-
4	Misc./ Contingencies and consumables	One Lakh Fifty Thousand only	1,50,000/-
5	Overhead expenses of VNIT, Nagpur (20 % of project cost)	One Lakh only	1,00,000/-
6	GST @18% extra	One Lakh Eight Thousand only	1,08,000/-
	<b>Total cost</b>	<b>(Seven Lakh Eight Thousand only)</b>	<b>7,08,000/-</b>

  
General Manager (Environment)

**DEPARTMENT OF MINING ENGINEERING, VNIT**

**REF: MNG/C13/2019/**

Date: 9<sup>th</sup> January 2020,

*MNG/486*

**NOTE:**

**SUBJECT:** Received Sanction Letter (INR 3146000/-)

**Ref:** Order, Dated: 10-12-2020, File Number: SRG/2018/000642 (copy attached)

Dear Sir,

I would like to inform that I have received the sanction letter from SERB-DST, New Delhi, Govt. of India, for the project entitled "Physico-mechanical response of rocks under varied thermal environments". The total project duration is 2 years.

Out of the total sanctioned budget of INR 3146000 (manpower, equipment, consumables, travel cost, contingencies and overhead), VNIT has received INR 2703000 for the first year.

This is only for your kind information.

Yours Sincerely,

*Nikhil Ninad Sirdesai*

✓ (Dr. Nikhil Ninad Sirdesai)

Asst. Professor, Dept. of Mining Engineering, VNIT

**Through:**

*with congratulations*

*Sumit*  
10/1/2020  
HOD (Mining)

*VS*  
Dean (R&C)

*G. S. Singh*  
13/1/2020  
Dean (P&D)

To,

- The Director, VNIT, Nagpur



*Dr. Sirdesai*  
*Sumit*  
31/1/2020

FILE NO. SRG/2019/000642

**SCIENCE & ENGINEERING RESEARCH BOARD(SERB)**

(A statutory body of the Department of Science &amp; Technology, Government of India)

5 & 5A, Lower Ground Floor  
Vasant Square Mall  
Plot No. A, Community Centre  
Sector-B, Pocket-5, Vasant Kunj  
New Delhi-110070

Dated: 10-Dec-2019

**ORDER**

Subject: Financial Sanction of the research project titled "**Physico-mechanical response of rocks under varied thermal environments**" under the guidance of Dr. NIKHIL NINAD SIRDESAI, Department of Mining Engineering, Visvesvaraya National Institute of Technology, South ambazari road, nagpur, Nagpur, Maharashtra-440010 - Release of 1st grant.

Sanction of **Science and Engineering Research Board (SERB)** is hereby accorded to the above mentioned project at a total cost of **Rs. 3146000/- (Rs. Thirty One Lakh Forty Six Thousand Only)** with break-up of **Rs. 2250000/- under Capital (Non-recurring) head** and **Rs. 896000/- under General (Recurring) head** for a duration of 24 months. The items of expenditure for which the total allocation of **Rs. 3146000/-** has been approved are given below:

S. No	Head	Total (in Rs.)
<b>A</b>	<b>Non-recurring</b>	
1	Equipment -> High-Performance Computer -> Ultrasonic Pulse Velocity meter -> Computerised compression testing machine -> Digital Muffle Furnace -> Sample Preparation Equipment for coring, cutting and grinding of rocks	2250000
A'	Total (Non-Recurring)	2250000
<b>B</b>	<b>Recurring Items</b>	
1	Recurring - I : (Manpower) Recurring - II : ( Consumables, Travel, Contingencies) Recurring - III : Scientific Social Responsibility	0 600000 10000
2	Recurring - IV : (Overhead Charges)	286000
B'	Total (Recurring)	896000
<b>C</b>	<b>Total cost of the project (A' + B')</b>	<b>3146000</b>

2. Sanction of the **SERB** is also accorded to the payment of **Rs. 2250000/-** (Rupees Twenty Two Lakh Fifty Thousand only) under 'Grants for creation of capital assets' and **Rs. 453000/-** (Rupees Four Lakh Fifty Three Thousand only) under 'Grants-in-aid General' to **DIRECTOR, Visvesvaraya National Institute Of Technology, South Ambazari Road, Nagpur** being the first installment of the grant for the year 2019-2020 for implementation of the said research project.

3. The expenditure involved is debitable to **Fund for Science & Engineering Research (FSER)**  
**This release is being made under Start-up Research Grant. (EC Engineering Sciences)**

4. The Sanction has been issued to Visvesvaraya National Institute Of Technology, South Ambazari Road, Nagpur with the approval of the competent authority under delegated powers on **09 December, 2019** and vide Diary No. **SERB/F/7474/2019-2020** dated **10 December, 2019**

5. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at website ([www.serb.gov.in](http://www.serb.gov.in)).

6. Overhead expenses are meant for the host Institute towards the cost for providing infrastructural facilities and general administrative support etc. including benefits to the staff employed in the project.

7. While providing operational flexibility among various subheads under head Recurring-II, it should be ensured that not more than Rs. 1 lakh each should be spent for travel and contingency.

8. Budget sanctioned under Scientific Social Responsibility (SSR) is meant only for activities enlisted under SSR norms and under no circumstances it can be reappropriated.

9. As per rule 211 of GFR, the accounts of project shall be open to inspection by sanctioning authority/audit whenever the institute is called upon to do so.

10. The sanctioned equipment would be procured as per GFR and its disposal of the same would be done with prior approval of SERB.

11. The release amount of **Rs. 2703000/-** (Rupees Twenty Seven Lakh Three Thousand only) will be drawn by the Under Secretary of the SERB and will be disbursed by means of RTGS transaction as per their Bank details

given below:

PFMS Unique Code	VNIT
Account Name	VISVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY NAGPUR
Account Number	3124101005638
Bank Name & Branch	CANARA BANK V.R.C.E BRANCH, SOUTH AMBAZARI ROAD, V.N.I.T NAGPUR, MAHARASHTRA, INDIA 440010
IFSC/RTGS Code	CNRB0003124
Email id of A/C Holder	dr_acct@vnit.ac.in
Email id of PI	nikhil.sirdesai@gmail.com

12. The institute will furnish to the SERB, separate Utilization certificate(UCs) financial year wise to the SERB for Recurring (Grants-in-aid General) & Non-Recurring (Grants for creation of capital assets) and an audited statement of accounts pertaining to the grant immediately after the end of each financial year.

13. The institute will maintain separate audited accounts for the project. A part or whole of the grant must be kept in an interest earning bank account which is to be reported to SERB. The interest thus earned will be treated as credit to the institute to be adjusted towards further installment of the grant.

14. The project File no. SRG/2019/000642 may also be mentioned in all research communications arising from the above project with due acknowledgement of SERB.

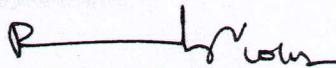
15. The manpower sanctioned in the project, if any is co-terminus with the duration of the project and SERB will have no liability to meet the fellowship and salary of supporting staff if any. beyond the duration of the project

16. As this is the first grant being released for the project, no previous U/C is required.

17. The institute may refund any unspent balance to SERB by means of a Demand Draft favoring "FUND FOR SCIENCE AND ENGINEERING RESEARCH" payable at New Delhi.

18. The organization/institute/university should ensure that the technical support/financial assistance provided to them by the Science & Engineering Research Board should invariably be highlighted/acknowledged in their media releases as well as in bold letters in the opening paragraphs of their Annual Report.

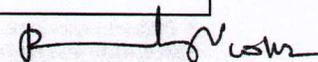
19. In addition, the investigator/host institute must also acknowledge the support provided to them in all publications, patents and any other output emanating out of the project/program funded by the Science & Engineering Research Board.

  
(Dr. Ramesh Vijayan)  
SCIENTIST-C  
drvramesh@serb.gov.in

To,  
Under Secretary  
SERB, New Delhi

Copy forwarded for information and necessary action to: -

1.	The Principal Director of Audit, A.G.C.R. Building, IIIrd Floor I.P. Estate, Delhi-110002
2.	Sanction Folder, SERB, New Delhi.
3.	File Copy
4.	Dr. NIKHIL NINAD SIRDESAI Department of Mining Engineering Visvesvaraya National Institute of Technology, South ambazari road, nagpur, Nagpur, Maharashtra-440010 Email: nikhil.sirdesai@gmail.com Mobile: 919594972974 (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit <a href="http://www.serb.gov.in">www.serb.gov.in</a> .)
5.	DIRECTOR, Visvesvaraya National Institute Of Technology, South Ambazari Road, Nagpur (Receipt of Grant may be intimated by name to the undersigned)

  
(Dr. Ramesh Vijayan)  
SCIENTIST-C  
drvramesh@serb.gov.in

अनुसंधान एवं विकास (सारस)/ R&D (SARAS)



CIN- U10102MP1985GOI003160

An ISO: 9001, ISO: 14001 & OHSAS: 18001 Certified Company

पोस्ट- सिंगरौली कोलियरी, जिला- सिंगरौली, म. प्र., पिन 486889/ Post- Singrauli Colliery, Distt- Singrauli, M.P. PIN-486889  
Phone: 07805- 266674, (FAX) 266674 email: hord.ncl@coalindia.in website : www.nclcil.in

Revised/Corrected

Ref. No. NCL/R&D/2021/61

Date: 08.02.2021

To  
Dr. I.L.Muthreja/ Dr. R. R. Yerpude  
Professor(s) of Mining Engineering  
VNIT Nagpur - 440020

**Sub: Request for Commencement of Project on Collaborative Scientific Research Study : "Risk investigations for slope failure of benches and dumps using geo-technical characteristics of rocks and their monitoring mechanism in Jayant opencast mine of Northern Coalfields Limited, Singrauli, Madhya Pradesh" as approved by NCL Board in its 259<sup>th</sup> meeting held on 19.12.2020.**

Dear Sir,

With reference to this letter you are being informed that the subject proposal having Project duration of 2 years with an estimated cost of Rs. 56.215 lakhs (including 18% GST) has been approved by NCL board in its 259<sup>th</sup> meeting held on 19.12.2020.

You are requested to commence the study as per the proposed methodology and terms and conditions as well as following points which were agreed upon during various meetings with you.

- 1) Slope Monitoring and mitigation technique to be experimented in the risk area of slope instability as per the Reg. 106 of CMR 2017 and DGMS guidelines vide DGMS (tech) Circular No 2 of 2020.
- 2) Development of Trigger Action response plan (TARP) and Warning system for Jayant mine of NCL.
- 3) Risk analysis software purchased/developed for the study will be retained by the NCL after the study.
- 4) Supports towards establishing Geo-technical cell at NCL.
- 5) Training Programmes, workshops and seminars to be organized for NCL officials towards monitoring and mechanism of slope stability/slope failures.

The Project code No. in respect of this proposal is R&D/SARAS/NCL/VNIT/2021/01. You are requested to please submit the requirement of 1<sup>st</sup> year in the attached **Form-II** alongwith the **Endorsement Certificates (Form 1-A)** as well as **Certificate under section 197 of Income Tax Act for exemption from TDS deduction**. If the required TDS exemption certificate is not submitted alongwith Form-II, then the fund will be released to VNIT Nagpur after the deduction of TDS.

The Project will become operative with effect from the first of the month, following the month of release of fund for 1<sup>st</sup> Year as per received Form-II.

Thanking You.

Yours Sincerely,

  
P. D. Rathi

General Manager (S&R/R&D/NI)  
Northern Coalfields Limited,  
Singrauli

**Copy for kind information:**

- 1) Director (Tech/Oprn), NCL / Director (Tech/P&P), NCL
- 2) Director, VNIT Nagpur
- 3) GM(M)/TS to CMD, NCL
- 4) GM (S&R), GM (CP), GM (Envnt/Forest), GM (Finance), GM(System), GM (E&T), GM (Excvt)/GM (E&M)/GM(C)/ GM(Jayant), RD-RI-(VI), AFM, NCL HQ

अनुसंधान एवं विकास (सारस)/ R&D (SARAS)



CIN- U10102MP1985GOI003160

An ISO: 9001, ISO: 14001 & OHSAS: 18001 Certified Company

पोस्ट- सिंगरौली कोलियरी, जिला- सिंगरौली, म. प्र., पिन 486889/ Post- Singrauli Colliery, Distt- Singrauli, M.P. PIN-486889

Phone: 07805- 266674, (FAX) 266674 email: hord.ncl@coalindia.in website : www.nclcil.in

Revised/Corrected

Ref. No. NCL/R&D/2021/60

Date: 08.02.2021

To  
Dr. R. R. Yerpude/ Dr. I. L. Muthreja  
Professor(s) of Mining Engineering  
VNIT Nagpur - 440020

**Sub: Request for Commencement of Project on Collaborative Scientific Research Study: "Risk investigations for slope failure of benches and dumps using geo-technical characteristics of rocks and their monitoring mechanism in Dudhichua opencast mine of Northern Coalfields Limited, Singrauli, Madhya Pradesh" as approved by NCL Board in its 259<sup>th</sup> meeting held on 19.12.2020.**

Dear Sir,

With reference to this letter you are being informed that the subject proposal having Project duration of 2 years with an estimated cost of Rs. 51.401 lakhs (including 18% GST) has been approved by NCL board in its 259<sup>th</sup> meeting held on 19.12.2020.

You are requested to commence the study as per the proposed methodology and terms and conditions as well as following below mentioned points which were agreed upon during various meetings with you.

- 1) Slope Monitoring and mitigation technique to be experimented in the risk area of slope instability as per the Reg 106 of CMR 2017 and DGMS guidelines vide DGMS (tech) Circular No 2 of 2020.
- 2) Development of Trigger Action response plan (TARP) and Warning system for Dudhichua mine of NCL.
- 3) Risk analysis software purchased/developed for the study will be retained by the NCL after the study.
- 4) Supports towards establishing Geo-technical cell at NCL.
- 5) Training Programmes, workshops and seminars to be organized for NCL officials towards monitoring and mechanism of slope stability/slope failures.

The Project code No. in respect of this proposal is R&D/SARAS/NCL/VNIT/2021/02. You are requested to please submit the requirement of 1<sup>st</sup> year in the attached **Form-II** alongwith the **Endorsement Certificates (Form 1-A)** as well as **Certificate under section 197 of Income tax Act for exemption from TDS deduction**. If the required TDS exemption certificate is not submitted alongwith Form-II, then the fund will be released to VNIT Nagpur after the deduction of TDS.

The Project will become operative with effect from the first of the month, following the month of release of fund for 1<sup>st</sup> Year as per received Form-II.

Thanking You.

Yours Sincerely,

F. D. Rathi

General Manager (S&R/R&D/NI)  
Northern Coalfields Limited,  
Singrauli

**Copy for kind information:**

- 1) Director (Tech/Oprn), NCL / Director (Tech/P&P), NCL
- 2) Director, VNIT Nagpur
- 3) GM(M)/TS to CMD, NCL
- 4) GM (S&R), GM (CP), GM (Envnt/Forest), GM (Finance), GM(System), GM (E&T), GM (Excv), GM (E&M), GM(C), GM(Dudhichua), RD-RI-(VI), AFM, NCL HQ



VISVESVARAYA NATIONAL INSTITUTE OF  
TECHNOLOGY, NAGPUR – 440 010 ( INDIA)

Tel. : Director: 2223969  
PABX : 223710/231636  
222828/226331  
Direct : 2801350, 2801286  
Fax : +91-712-223230  
Email : [thote1999@gmail.com](mailto:thote1999@gmail.com)

DEPARTMENT OF MINING ENGINEERING

VNIT/ MNG / 64  
Date: 28.09.2021

To  
The Executive Director (Technical)  
MOIL Limited, MOIL Bhavan 1A,  
Katol Road, Nagpur 440013

**Sub:** R&D project 'Blasting and its effect on environment, buffer zone and protective measures of MOIL Ltd mines.'

**Dear Sir**

With reference to your letter No. 9100002387 dated 30.08.2021, please find enclosed herewith a sign and stamped duplicate copy of work order for your kind confirmation.

Thanking you,

(Dr. N. R. Thote),  
Coordinator,  
Professor & Asso. Dean (I.I.I.A.)

c.c. to : G.M. (Plang.), MOIL Limited for kind information please.

KAD com



'हर एक काम, देश के नाम'

**MOIL Limited**  
(Formerly Managanese Ore(India)Ltd.)  
(A GOVERNMENT OF INDIA ENTERPRISE)  
**Head office Nagpur**  
MOIL Bhawan, I-A, Katol Road,  
Nagpur-440013, Maharashtra

REVENUE

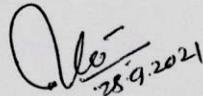
Ref no: 9100002387

Date:30.08.2021

**Schedule of Work**

Work Order No. : 9100002387  
Name of Work : Blasting and its effect on environment, buffer zone and protective measures of MOIL Ltd. Mines – at Dongri Buzurg Mine.  
Work Site : Dongri Buzurg Mine  
Security Deposit : NA  
Tender Enquiry and Date :  
Sanction Value of work : 451,200.00 Rs. (Including GST)  
Work Order in Favour of : VISVESVARAYA NATIONAL INSTITUTE (300859)  
Address of Contractor : SOUTH AMBAZARI ROAD NAGPUR  
Maharashtra  
Date of Commencement of work : 01.09.2021  
Schedule Date of Completion : 29.02.2024

Name of work (10)	Blasting and its effect on envir.-Dongri	IISN/SAC Code - 998112			
S. No	Description	Unit	Qty	Rate(Rs.)	Amount(Rs.)
1	Blasting and its effect on environment, buffer zone and protective measures of MOIL Ltd. Mines – at Dongri Buzurg Mine.	JOB	1.000	451,200.00	451,200.00
Total					451,200.00
Grand Total					451,200.00

  
28/9/2021

Dr. N. R. THOTE  
Professor  
Department of Mining Engineering  
Visvesvaraya National Institute  
of Technology, Nagpur - 440010



**MOIL Limited**  
(Formerly Managanes Ore(India)Ltd.)  
(A GOVERNMENT OF INDIA ENTERPRISE)  
Head office Nagpur  
MOIL Bhawan, 1-A, Katol Road,  
Nagpur-440013, Maharashtra

REVENUE

हर एक काम, देश के नाम'

A) Scope of work:

1. Effect of blasting on dumps sites in mine.
2. Effect of blasting in the structures belonging to owner and not belonging to owner in core and buffer zone area.
3. Effect of ground vibration; noise etc. on wildlife and human settlement in core and buffer zone in ecological segment.

B) Time period- 30 months after the award of work.

C) Payment terms:

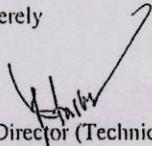
1. First year: Rs. 1,80,480.00 i.e. 40% of total value along with work order.
2. Second year: Rs. 1,80,480.00 i.e. 40% of total value after submission of report.
3. Third year - Rs. 90,240.00 i.e. 20% of total value after submission of final report.

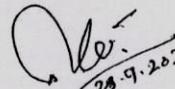
D) The total value of the work order shall be 451200.00 without GST. As VNIT, Nagpur has confirmed that As this being R & D project and does not come under purview of GST as such GST is not added to the total cost of the project.

Kindly return seal & signed duplicate copy of the work order confirming acceptance of the work order.

Thanking You

Yours Sincerely

  
Executive Director (Technical)

  
28.9.2021  
Dr. N. R. THOTE  
Professor  
Department of Mining Engineering  
Visvesvaraya National Institute  
of Technology, Nagpur - 440610

विश्वेश्वरय्या राष्ट्रीय प्रौद्योगिकी संस्थान, नागपूर-१०  
VISVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY, NAGPUR  
Department of Civil Engineering

Date : 26/10/2021

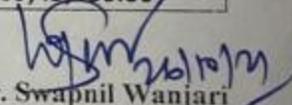
Note:

Sub : Research Project on " Feasibility study on Flyash Filling of Open Cast mine at Manikpur, Korba" from Bharat Aluminium Company Limited

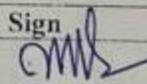
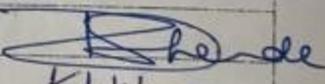
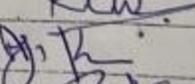
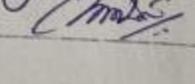
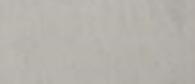
We would like to take research on Feasibility study on Flyash filling of open cast at Manikpur , Dist Korba.

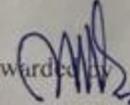
The summary of scope of work are as follow

	Scope of Work		Amount
1	Feasibility study on Flyash disposal in mine		2215000.00
2	Environmental Monitoring During Ash Disposal (Part-A) For One year		670000.00
3	Environmental Monitoring After Reclamation (Part-B) For One year		520000.00
4	Various test to be conducted at site location		1000000.00
5	Report preparation and Presentation		500000.00
		Sub total	49,05,000.00
	20% College Over head for study	Overhead 20%	9,81,000.00
		Total Project cost	58,86,000.00
		IGST 18%	10,59,480.00
		Total Value	69,45,480.00

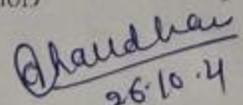
  
Dr. Swapnil Wanjari  
Principal Investigator

Co PI

Sr No	Co Principal Investigators	Departments	Sign
1	Dr. Y.B. Katpatal	Civil Engg	
2	Dr. D.Z Shende	Chemical Department	
3	Dr K.I Wasewar	Chemical Department	
4	Dr. A K. Agarwal	Mining department	
5	Dr A A Kher	Mining Department	

  
Forwarded by  
26.10.21  
Dr. Y.B. Katpatal  
Professor and HoD

Through  
Dean ( R&C)

  
26.10.21

To  
The Director  
(Approved / Not Approved)





**BHARAT ALUMINIUM COMPANY LIMITED**  
 BHARAT ALUMINIUM CO. LTD-CPP-III - BALCONAGAR PO, KORBA, CHHATTISGARH-495684,  
 INDIA  
 GSTIN: 22AAACB1290N1ZU



0000157732 VISVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY NAGPUR

PO Number : 8500005425

Vendor Details	Purchase Order Details	Buyer Details
<b>Vendor Code</b> : 157732 <b>Vendor Name</b> : VISVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY <b>Email</b> : swapnil_wanjari@yahoo.co.in <b>Address</b> : VNIT CAMPUS, SOUTH AMBAZARI ROAD, ABHYANKAR NAGAR, NAGPUR, MAHARASHTRA-440010, INDIA <b>GSTIN Number</b> : 27AAATV9885C1ZZ	<b>Order No.</b> : 8500005425 <b>Date</b> : 23-Oct-21 <b>Order Type</b> : Service <b>Version</b> : 0 <b>Priority</b> : Normal <b>Version Date</b> : 08-Jan-20	<b>Buyer</b> : Durgesh Kashyap <b>Contact</b> : 8349201185 <b>Mail ID</b> : durgesh.kashyap@vedanta.co.in

**Header Text:**

WORK DESCRIPTION: SERVICE CONTRACT FOR FEASIBILITY STUDY TO BE CONDUCTED FOR ASH FILLING IN MANIKPUR OPNE CAST MINES

ARIBA INFA NO.- WS3209050455

ORDER CREATED BY DURGESH KASHYAP

ENGINEER IN-CHARGE: DR. ASP MISHRA

COMMERCIAL CONTACT: - MR. BRIJ YADAV

BALCO HAS A STRONG COMMITMENT TO PROVIDING A SAFE AND HEALTHY WORKPLACE AND PROTECTING THE ENVIRONMENT, NATURAL RESOURCES. ALL YOUR EMPLOYEES SHOULD DEMONSTRATE A COMMITMENT TO BALCO'S ZERO ACCIDENT PHILOSOPHY. THE EMPLOYEE DEPLOYED BY YOU FOR CARRYING OUT THE JOB AS PER THE SCOPE OF WORK SHOULD WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (E.G.,SAFETY HELMET, SAFETY GLASSES AND OTHER SAFETY PPES) AS PER OUR SAFETY DEPARTMENT LIST AND TOOLS TO ALLOW THEM TO PERFORM THEIR WORK SAFELY, MAINTAIN EQUIPMENT IN GOOD WORKING CONDITION, AND OPERATE EQUIPMENT IN ACCORDANCE WITH THE BALCO'S SOP; GOOD HOUSEKEEPING WILL BE MAINTAINED AT ALL TIMES.

YOU HAVE ALSO TO FOLLOW BALCO SAFETY RULE & REGULARIZATION

Item No	Material	HSN Code	Material Description	Order Qty	UOM	Delivery Date	Gross Price	Gross Value	
00010			FEASIBILITY STUDIES ASH FILL MANIKPUR	1	AU	22-Oct-22	58,86,000	58,86,000	
							Discount %	0	0
							P & F %	0	0
							CGST %	0	0
							SGST %	0	0
							IGST %	18	10,59,480
							Other Taxes :		0
							Total With Tax :		69,45,480

**For internal reference**  
 PR: 2000051459/00010  
 Department : BOP