

THRIVENI SAINIK MINING PRIVATE LIMITED

Project Office: C/o: NTPC Ltd., Langatu,
PO: Barkagaon, Dist.: Hazaribag, 825311, Jharkhand, India
Phone: 06546-223115, Email: info@thrivenisainik.com



SERVICE ORDER

TSMPL/ENV/WO/2021-22/08

Date: 01.03.2022

To,
Department of Forestry, Wildlife & Environmental Sciences

Kind. Attn.- Dr. Ajay Kumar Singh, Assistant Professor

Guru Ghasidas VishwaVidyalaya (A Central university)

Bilaspur-495009, Chhattisgarh

Mob: 7879721224, 7000591141

Sub: Service Order for Scientific Study (Satellite Image & digitization for Land use Land Cover Pre and Post Mining for year 2019 & 2022) at Pakri Barwadih Coal Mining Project NTPC (PBCMP) situated at Barkagaon, Hazaribagh, Jharkhand

Ref: Your mail dated 25.01.2022 @ 3:58 PM.

Dear Sir,

With reference to the above, we are pleased to entrust this formal order on the subject to you with the scope, deliverables, and conditions as stipulated hereunder. Henceforth **Guru Ghasidas VishwaVidyalaya** is called as 'Consultant' and M/s Thriveni Sainik Mining Pvt. Ltd. is called 'TSMPL'.

A. SCOPE OF WORK

1. The scope of services for carrying out the "Scientific Study (Satellite Image & digitization for Land use Land Cover Pre and Post Mining for year 2019 & 2022) as per **Environmental clearance Specific Condition No.- xxi** of PBCMP (For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series) the "Agency for Pakri Barwadih Coal Mining Project, NTPC LTD

- Compilation of spectral bands to generate composite satellite image, extraction of subset image and analysis of satellite data.
- Generation of LULC maps of 10 Km and 2 Km radial buffer using recent satellite data for two periods - April / May 2019 and April / May 2022.
- Extraction of land use information within the Core Zone for both periods.
- NDVI analysis of 2 Km buffer area using 2019 and 2022 temporal satellite data to identify changes in vegetative pattern.
- Transformation of interpreted LULC maps. Area computation and Compilation of report.
- Comparative Temporal analysis of LULC for 2022 (2Km and CZ).

2. Scope of TSMPL:

- Lodging and Boarding for visiting the Department of Forestry, Wildlife & Environmental Sciences, Guru Ghasidas VishwaVidyalaya team.
 - One competent person to accompany the visiting team and providing workmen to help the visiting team in handling the instruments during the measurement.
3. The Consultant shall perform the Services as described under the scope of works abiding by the terms as defined in this Agreement.

4. The Consultant shall ensure that the above mentioned Services to be rendered as per this agreement are performed:
- To the degree of skill, care and diligence normally exercised by consultants in similar circumstances
 - strictly as per the agreed time schedule
 - in accordance with the terms of this Agreement
 - In accordance with best industry practice
 - In coordination with Environment Dept. PBCMP for above services
 - At all stages of report - formal developments shall be intimated to TSMPL
5. Time is the essence of the contract and the consultant shall adhere to the timelines mentioned/agreed upon
6. **Quality.** The Consultant shall ensure that its Services/work shall be carried out in line with highest professional standards.
- The Consultant shall take note of the observations and suggestions made by TSMPL & NTPC and ensure corrections of suggestions / recommendations in the work pointed out by TSMPL & NTPC at any time while providing the services
 - The Consultant shall take responsible of any quarry raised by any Govt. Authority at any time
7. **Report Submission.** The Consultant shall ensure that final report (soft copy) need to be submitted approximately within 90 (Ninety) days from the date of payment of the first installment

B. RATE/ORDER VALUE

- Prices: (NR 2,00,000/- (Indian Rupees Two Lakhs Rupees) + GST extra) as applicable
- The Prices are Firm & binding and no other payment will be made in respect of this Service order (including any submission of reports in format(s) as applicable. No escalation is tenable throughout the Contract duration except for clause B. Change in Law

C. VALIDITY & TERMINATION

- Effective Date of Contract: 01/03/2022
- Contract Validity period: 01/03/2022 to 30/05/2022
 - The Contract can be foreclosed/terminated with a notice of 67 days for
 - Statutory Non-compliance
 - Willful default/breach of Contractual obligations
 - Upon such foreclosure, the Consultant shall be paid the fees for the Work completed till such date and all the study reports/documentation in this regard, shall be duly handed over to TSMPL; the same shall remain the property of TSMPL and cannot be reproduced without prior written consent of TSMPL.

D. PAYMENT TERMS

- The payment shall be released as follows:
 - 50% along with Work Order.
 - 50% after submission of final report
- TDS as per Govt. Norms
- Address
Thrivem Samik Mining Private Ltd, Project Office, Langatu
Barkagaon, Hazaribag Dist, Jharkhand PIN: 825311

