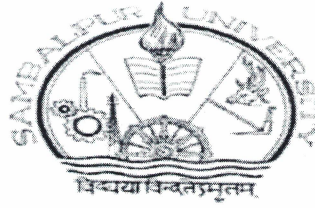


Dr. Tattwamasi Paltasingh
Professor & Head
Department of Sociology
Sambalpur University
Jyotivihar-768019, Odisha



Mobile No-9439582596
E-mail-tpaltasingh@gmail.com

Date:03/01/22

Declaration

This is to certify that the PG Department of Sociology, Sambalpur University in collaboration with Women and Child Development Department (WCD), Government of Odisha; has conducted two Gender Sensitization Training Programs on 16/10/2017 and 17/10/2017 respectively. In each program more than 100 participants from different PG Departments of Sambalpur University have successfully participated. The program was funded by Women and Child Development Department, Government of Odisha.

T. Paltasingh 03.01.22

Dr. Tattwamasi Paltasingh,
Professor and Head,
Dept. of Sociology
Sambalpur University

**HEAD
P.G. Deptt of Sociology
Sambalpur University**

Encl- One Sample copy of the certificate

GST No.-21AAACB9760D122

SERVICE ORDER

CIN-U27100DL1999PLC108350

Vendor Code: 100016705 (Old Code:5) SAMBALPUR UNIVERSITY,BURLA ,P.G.ENVIRONMENTAL SCIENCES 768019 JYOTI VIHAR,SAMBALPUR 768019 Odisha India Mob.No:9668220609 Cont. Per: SAHU SANJAT KUMAR GSTN:21BBNS00270E1DS Email: sahusanjat@rediffmail.com	PO No:	1421002850	DATED 16.11.2021
	PO Validity:	13.10.2021	TO 31.03.2022
	Qtn No.:	/	
	Qtn Dt.:		
	PO Raised By:	ASHUTOSH PANI	

Dear Sir(s),
We are pleased to place our order on you for the following item(s) as per the price, terms & conditions mentioned below :-

Line Item	Item Details						
	Service Code	Service Description	Quantity	UOM	Rate (INR)	Disc % (INR)	Net Price (INR)
00010	/	STUDIES ON SOLID WASTE DISPOSAL SITE Make: N/A	1.000	AU	2105500.00	0.00	2105500.00

Specs :

1. Broad Scope of the Study:

- i. The condition of fly ash pond including the dumped fly ash which may result in leaching of pollutants to soil and underground water.
- ii. Environmental degradation caused on account of any leaching from the ash dump site and also impact on flora and fauna etc.
- iii. Preparation of remedial measures to be taken in the solid waste dump site for reclamation of the site.
- iv. Detailed plantation studies with scope for three tire avenue plantation (This may be endorsed to the local forest department for acceptance).

Total Mound-1 to 7 and Total area=89 Acre

2. Details of Study

- i. Studies on i) Topographic ii) Soil profile iii) Geomorphic and iv) Hydrology for underground water flow direction.
- ii. Studies on Chemical analysis of soils and solid waste (fly ash)

1. Leachability studies (TCLP and Comparison)

Environmental Conditioning monitoring on account of any leaching from ash dump.

PAGE 1 OF 6

- Note :
1. For Standard Terms and Conditions, Please refer to annexure Documents, which forms a part of this order.
 2. We Prefer Environment Friendly Material
 3. Please ensure that the vehicle carrying our materials comply with the Pollution Norms and driver possesses a valid driving License.

GST No.-21AAACB9760D1Z2

SERVICE ORDER

CIN-U27100DL1999PLC108350

Vendor Code: 100016705 (Old Code:5) SAMBALPUR UNIVERSITY,BURLA ,P.G.ENVIRONMENTAL SCIENCES 768019 JYOTI VIHAR,SAMBALPUR 768019 Odisha India Mob.No:9668220609 Cont. Per: SAHU SANJAT KUMAR GSTN:21BBNS00270E1DS Email: sahusanjat@rediffmail.com	PO No:	1421002850	DATED 16.11.2021
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This would involve

- i) Collection of leachate and its chemical analysis
- ii) Experiments on leachate study

Mapping of surface geology and sub-surface geology, physiography and drainage pattern of the study area.

This would involve:

- i) Preparation of geological map
- ii) Preparation of Geological Cross section
- iii) Drainage map
- iv) Slope map

Collection and analysis of information on nature of the aquifers, occurrences, and movement of groundwater.

This would involve:

- i) Chemical analysis of water from tube wells
- # Preparation of groundwater contour map. This would involve:

i) Measurement of piezometric levels in tube wells and preparation of water table map.

Prediction of existing ground water table and its mixing zone

Part of it is covered in the previous section. The mixing aspect would arise when we are nearer to ocean or a large reservoir.

Analysis of groundwater samples collected from study area and interpretation of results to establish the relation between surface and groundwater, using well known tools like piper trilinear diagram etc.

This aspect involves: Suggestion for O3 tier plantation with species and plantation specification.

- i) Chemical analysis of ground and surface water.
- ii) Correlation between the two types of water.
- iii) Analysis using discriminant diagrams: The parameters to be analysed would be as per the requirement of the discriminant diagrams (for example Piper-trilinear diagram involves Ca, Mg, Na, K, Cl, SO₄, HCO₃ parameters)

Preparation of hydro-geochemical image contour illustrations to understand the spatial distribution of ionic constituents and their interrelation in the study area. This aspect involves:

- i) Preparation of element specific contour maps and their interpretation using ArcGIS Co-Kriging algorithm.

Groundwater samples exclusively from the study area and tested for the following parameters in addition to IS 2296 for detailed investigation:

Calcium

Magnesium

Sulphate

Chlorides

Total Dissolved Solids (TDS) and

Total Suspended Solids (TSS)

PAGE 2 OF 6

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This aspect involves:

i) Analysis of all these parameters and comparison with ID 2296 standards.

Groundwater monitoring and installation of Piezometer: This aspect involves:

i) Establishment of network of tube wells to monitor the piezometric level

2. Flora and Fauna Studies

To enlist the flora in the study area.

To enlist the fauna in the study area.

To conduct ecological enumeration of trees and herbaceous vegetation of forests in the study area (through measurement of frequency, density, dominance, and IVI).

To measure of the biodiversity indices of forests in the study area (through Index of diversity, Index of dominance, Index of richness). To measure the APTI (air pollution tolerance index) of tree species.

To enlist the species with different values.

To prepare the list of rare and endangered plant species.

To prepare the list of rare and endangered animal species.

5. Remedial measures to restore the area to its original characters.

Remedial measures for soil and groundwater contamination.

This aspect involves:

i) Assessment of the possible areas of soil and groundwater contamination.

ii) Providing site-specific management plan to abate soil and groundwater contamination if any.

iii) Suggestion of measures to control the pollutants from the mounds affecting different entities of the environment.

Remedial measures through Afforestation (plantation) programme.

The aspect will involve:

i) Rejuvenation of the area in terms of the forest cover.

ii) Selection of suitable species for plantation on the basis of APTI.

iii) Aspects for stabilization of vegetation cover on the solid waste surface.

PAGE 3 OF 6

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[Handwritten signature]

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Activity/ SAC Number	Activity Code	Activity Description	Quantity	UOM	Rate	Net Amount
0000000010/ 998312	1011498	CONSULTANCY CHARGES	1.000	AU	2,105,500.00	2105500.00
Line Item Sub Total						2,105,500.00
Amount in Words:		Rupees Twenty One Lakh Five Thousand Five Hundred only				
Grand Total(R/O):						2,105,500.00

DELIVERY :

Terms & Conditions:

1. Payment terms : WITHIN 30 DAYS AGAINST SUBMISSION OF R.A. BILL

2. Price Basis : OTH-SAMBALPUR SITE

3. Inspection :

4. Freight :

5. Guarantee :

6. Insurance :

7. Delay Cause :

8. Proposing Department : HOD ENVIORNMENT

9. Special Condition :-

Budget and Mode of Payment:

(i) Total Budget: Rs. 21,05,500.00 (Excluding Taxes and GSTIN)

(ii) Detailed Budget:

(i) Project Assistaits (three nos) Rs. 3,60,000.00

(minimum qualification M.Sc./M.Tech in Environ. Sc.)

@ Rs. 20,000/- P.m. x 06 months X 3)

(ii) Field manpower Rs 18,000.00

(Daily wage labourer @ Rs. 300/- per day for 60 man days)

(ii) Purchase Chemicals and Glasswares Rs. 5,00,000.00 (for analysis ✓
of soil, fly ash, water and Heavy metals)

(iii) Purchase of minor equipments. Rs. 5,00,000.00

(iv) Conveyance and DA during field work Rs. 1,57,500.00

(conveyance from University to site @ Rs. 5,000/-day

and DA @ Rs. 1,000/- day to scientists and @ RS. 500/- day

to Project Assistant for 15 field visit days.)

(v) Preparation Report. Rs. 50,000.00

(computation, typing, photographs, photo coping, binding)

(iv) Minor contingent expenditure Rs. 20,000.00

(including expenses for field, laboratory requirements)

(iiv) Honorarium to Scientists (Four nos.) Rs. 4,00,000.00 (@Rs.1,00

,000/- to each Scientist X 4- Amount is cover for entire job period that is 6 months)

(iiiv) Institutional (University) share Rs. 1,00,000.00 (@ Rs. 25% of
the honorarium of scientists)

Total Rs. 21,05,500/-

(Rs. Twenty one lakh five thousand five hundred only)

Mode of Payment:

PAGE 4 OF 6

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- i) 40% of advance with work order.
 - ii) 20% after completion of all field study with in 02 months of service order issue.
 - iii) 20% after submission of draft report.
 - iv) 20% after submission of final report.
- Entire study to be completed within 6 months of work order issue.

University has to attend meetings with OSPCB if any meeting called by OSPCB on this subject for discussion or presentation. If there is any suggestions from OSPCB of incorporation in report, University has to do that.


Other Terms and condition:

1. Engagement of project staff will be made by the Department through advertisement in the University website and walk in interview.
2. Project details, map showing the locations and related data may be provided as per requirements.
3. A local guide from our organization for guiding the scientists, Project Assistant at the time of survey.
4. Since it is a Government Organization (ie. Sambalpur University and Educational Institute) no tax shall be levied and no GSTIN be insisted upon.
5. Food will be provided in our guest house to senior staffs during study period.

Note: Please send original Invoice by Post/Courier, and Duplicate copy for transport, alongwith the Consignment. Please mention our Order Reference No. in all communication and dispatch documents.

Subject to New Delhi Jurisdiction only

For Bhushan Power & Steel Ltd.


Authorized Signatory

PAGE 5 OF 6

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