

Terms of Reference for carrying out study in District-Moradabad Uttar Pradesh for assessment of Environmental Problem due to unauthorised/unscientific recycling of E-Waste and disposal of Black powder generated from process of recycling through Low Cost In-Situ Technology for On-Site Treatment and Stabilization of Solid Waste (Black powder) bearing Metallic Contamination.

1- Need for Study :

In District-Moradabad of Uttar Pradesh, unauthorised/unscientific E-Waste processing without any environmental safeguards has led to environmental pollution and unsafe disposal of solid waste (Black powder) which is hazardous in nature on the banks of Ramganga river. The unscientific process being adopted involves dismantling, crude chemical leaching of Printed Circuit Boards, burning of wires/waste electrical & electronic components, grinding of residues and washing of metal rich residue (milled Black powder) in water to remove lighter non metallic fraction. The e-waste and metallurgical slag is burnt and ball milled to produce milled powder which is subject to washing for recovery of metallic fraction. As a result of such unscientific and unauthorised recycling of e-waste and metallurgical slag, the residual Black powder is dumped on the banks of Ramganga river at Dashwanghat, Barbalan, Nawabpura, Nagfani and Karula areas.

U.P. Pollution Control Board in coordination with district administration got the quantification and characterization done, of Black powder/waste lying dumped on the Bank of Ramganga river in Moradabad at Dashwanghat, Barbalan, Nawabpura, Nagfani and Karula areas. The estimated quantity is assessed at approximately 25000 to 26000 cubic meters and the specific gravity of Black powder has been found to be 0.7 to 0.97 in 04 samples. The Black powder contains metals like Chromium, Cadmium, Copper, Lead, Nickel, Manganese and Zinc in the Black powder. The concentration of metals in the Black powder is above the threshold limit as specified in schedule-II of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 thus rendering the dumped Black powder as Hazardous Waste.

The processing of e-waste is to be done as per the provisions of The E-waste (Management) Rules, 2016 and the disposal of Black powder of hazardous nature lying dumped on the banks of Ramganga river at Dashwanghat, Barbalan, Nawabpura, Nagfani and Karula areas is to be done as per the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

2- Objective of Study & Scope of Work :

Part-1

Survey of present scenario of e-waste recycling (Dismantling or/and Recycling) in Moradabad and proposed solution for e-waste recycling as per the provisions of The E-waste (Management) Rules, 2016.

1. Survey of E-waste recycling units in Moradabad for assessment of their E-waste handling capacity, operations carried out for E-waste recycling i.e only Dismantling or Dismantling followed by Recycling, extent of man power involved, power load etc.
2. Source of E-waste supply and its compliance status as per E-waste Rules 2016.
3. Assessment of suitability of Area for carrying out E-waste recycling operation.
4. Assessment of Pollution (Effluent/Emission/Solidwaste) in Recycling units in Moradabad and suggestions for pollution control.
5. Adequacy of E-waste Recycling process being carried out vis-a-vis E-waste Rules, 2016.
6. Possible solutions to the problem of E-waste Recycling in Moradabad.
7. Economic & Technical viability of setting up of integrated E-waste recycling facility with provision of skill development centre.

Part-2

Environmentally Safe disposal of Black powder of hazardous nature lying dumped on the banks of Ramganga river at Dashwanghat, Barbalan, Nawabpura, Nagfani and Karula areas as per the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

1. In-Situ study for assessment of quantity of residual Black powder dumped on the banks of Ramganga river at Dashwanghat, Barbalan, Nawabpura, Nagfani and Karula areas.
2. Monitoring of solid waste dumping areas i.e. Dashwanghat, Barbalan, Nawabpura, Nagfani and Karula areas on Ramganga river.

3. Characterization of Black powder/Waste lying dumped on the banks of Ramganga river in Moradabad at Dashwanghat, Barbalan, Nawabpura, Nagfani and Karula areas.
4. Monitoring of Ramganga river at up stream and down stream of the locations where Black powder is dumped.
5. Proposals for Safe disposal of Black powder (E-waste Recycling Residue) on banks of Ramganga river as per the provision of HW Rules, 2016 and E-waste Rules 2016.
6. Feasibility of low cost In-situ technology for on site treatment and stabilization of Black powder lying dumped on banks of Ramganga.

3- General Terms & Conditions

- I. The consultant shall submit three copies of draft final report and final report, after including comments of UPPCB and CPCB. Beside this, a soft copy of draft final report and final report in MS word format will also be submitted.
- II. Consultant shall make presentations on interim report, draft final report, etc as and when required.
- III. Consultant shall inform schedule of field study to UPPCB well in advance, so that the UPPCB officials may also participate.
- IV. All the information generated and collected by consultant during the execution of the project is strictly confidential and sole property of UPPCB.
- V. In case, UPPCB is not satisfied with the progress of project as planned, consultant may be asked to refund the instalments released.
- VI. In case of delay in execution of project, consultant shall provide reason for the same in writing.
- VII. In case of dispute during project execution and afterword, the matter shall be referred to Chairman, UPPCB to arbitrate. The decision of Chairman, UPPCB will be final and binding.

4- Time Schedule

Duration of study- 60 Days from release of Ist instalment

1	Inception Report	Within 10 days of payment
2	Draft Report	After in-depth study and monitoring - Within 30 days
4	Draft Final Report	After completion of study - 45 Days
5	Final Report	Within 60 Days after including

		comments of UPPCB and CPCB
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5- Terms of Payment

Estimated cost of project- Rs. 8.0 Lacs

1	Inception Report	10 % of project cost
2	Draft Report	25 % of project cost
3	Draft Final Report	25 % of project cost
4	Final Report	40 % of project cost (After Approval by UPPCB)

A bank guarantee equal to 10% of project cost will be submitted by consultant at the time of submission of inception report.

6- Facilities by UPPCB

- 1) Organizing meeting with stakeholders and District Administration, Moradabad
- 2) Deputing officer(s) to accompany consultant during field visits

7- Compensation for delay

The consultant shall strictly follow the time schedule for the project. The consultant shall pay an amount equal to ten percent of the total cost of the work as compensation, for every week's delay after the due period, provided that the entire amount of compensation to be paid under the provisions of this clause shall not exceed twenty five percent of the total cost of the work.

8- Arbitration clause/Dispute resolution

In case dispute arises, while work is in progress or after the completion, matter shall be referred to the Chairman, U.P. Pollution Control Board for decision. The decision of Chairman, UPPCB will be final and binding on the parties to the MoU. Arbitration shall be governed by The Arbitration and Conciliation Act, 1996.

9- Eligibility criteria/qualification

1. The agency should have at least 10 years of experience in executing environmental studies.
2. The agency should have ample National and International experience on Integrated e-waste processing solutions & Hazardous Waste disposal practices along with low cost In-Situ Treatment & Stabilization Techniques.

3. The agency should have worked with MoEF & CC, CPCB and other State Pollution Control Boards in the field of integrated e-waste processing solutions & Hazardous Waste disposal practices along with low cost In-Situ Treatment & Stabilization Techniques.
4. The agency should preferably have its own NABL/ Environment (Protection) Act accredited laboratory else, tie up with NABL/Environment(Protection) Act accredited laboratory for relevant emission, effluent and solid waste parameters. Also, it should have emission and effluent monitoring experience of at least 3 years.
5. The agency should have valid ISO 9001 certification.
6. The agency should have its own qualified technical & scientific staff.

The interested expert agencies are requested to submit following documents:

1. Profile of the agency with supporting documents for qualifications.
2. Brief of environmental projects completed during last three years, with one page summary, cost, duration and name & address of the client for each project.
3. Bio-data of technical & scientific personnel likely to be assigned with the project
4. Details of laboratory facilities available.

The interested parties are requested to submit technical & financial Expression of Interest proposal to "The Member Secretary, U.P. Pollution Control Board, TC-12V, Vibhuti Khand, Gomti Nagar, Lucknow and the last date of submissions is 21-08-2017 by 6.00 pm.