



CENTRAL POLLUTION CONTROL BOARD
(Ministry of Environment & Forests, Govt. of India)
`Parivesh Bhawan', East Arjun Nagar
Delhi-110 032

Expression Of Interest (EOI)

Central Pollution Control Board (CPCB) invites "expression of interest (EOI) from reputed institutes/Organizations for carrying out technical studies for control of environmental pollution in various sectors.

The details and downloading of Performa for Financial & Technical Bids, please visit CPCB website cpcb.nic.in. Bids (Financial & Technical) may be submitted in separate sealed envelopes to Assistant Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi – 110032 within 21 days from the release of advertisement (in case it falls on holiday, the next working day shall be the last date of submission).

Member Secretary

**CENTRAL POLLUTION CONTROL BOARD
DELHI**

Terms of reference for “Preparation of COINDS document and Development of Environmental Standard for Bauxite Mining”.

1.0 Background

National Environmental Policy (NEP) 2006 of India demands that Environmental Standards must reflect the economic and social development situation in which they apply. Standard adopted in one society or context may have unacceptable economic and social costs if applied without discrimination in another society or context. Setting Environmental Standards evolve several considerations i.e. risk to human health, risk to other environment entities, technical feasibility, cost of compliance, and strategic considerations. It is also understood that environmental standards cannot be universal, and each country should set standards in term of national priorities, policy objectives, and resources. These standards, may, of course, vary (in general, become more stringent) as a country develops, and has greater access to technologies and financial resource for environmental management. One of the mandates of Central Pollution Control Board is to lay down industry specific standards for discharge of effluent and emission so as to protect the recipient environment. Development of such standards essentially depends on the understanding of actual / realistic data / information for the concerned industries, which are located / operating in different parts of the country. Consequently, CPCB conceived preparation of Comprehensive Industry Documents (COINDS), which act as a base for developing environmental standards with reference to a particular industry sector.

Bauxite is a hydrated aluminium oxide (Alumina) which is used to produce Aluminium. Aluminium is extensively used in various sectors such as electrical (31%), transport (18%), durables (12%), building (13%), packaging (11%), machinery and equipment (6%).It is estimated that one tonne of alumina is produced from three tonne of Bauxite and one tonne of aluminium is produced from two tonne of alumina. Bauxite mining is being done by opencast mining methods. During mining, substantial quantity of dust emissions are generated which pose environmental problem in the region and affect health of the workers. It may also result in ground water pollution in the vicinity of mining area, particularly in terms of hardness and presence of heavy metals. Blasting is regularly practiced in mines which cause fear among the local people on one hand besides the blast-induced ground vibration threat the houses, buildings and properties of the peoples. As there is no published COINDS document nor any environmental standard notified for Bauxite Mining sector, therefore it is proposed to undertake a study on “Preparation of Comprehensive Industry document and Development of Environmental Standards for Bauxite Mining”. The study will generate the baseline emission data, effluent data and ambient air, water and noise data and recommend preventive measures for dust emission, effluent, noise and clean technology & propose environmental standards for Bauxite mining.

2.0 Objectives:

The objectives of the study are given below:

- To assess the deterioration of air, water, land and noise environment of bauxite mining area
- To classify the mines into small, medium and large category
- To study existing levels of Pollution control Technologies etc.
- To describe the clean technology for bauxite mining
- To develop the environmental standards for bauxite mining
- To assess the impact of blast induced ground vibrations due to bauxite mining in surrounding residential areas.

3.0 Scope of work

The activities to be undertaken are given below:

- Literature survey (including international practices) & information collection from various organizations, technology provider, Aluminum industries etc.
- Present and future bauxite mining production in the country and its growth
- Status of bauxite reserves in different parts of the country
- Description of various mining techniques being practiced in India, assessment of their pollution potential and pollution prevention & control measures taken
- To identify & collect information on the various sources of environmental pollution due to bauxite mining
- Assessment & performance of pollution control measures adopted by the bauxite mines.
- Collection of data through questionnaire survey, field visits and field monitoring with respect to air quality, water quality, solid waste and other environmental problems due to bauxite mining, noise pollution, vibration etc.
- Categorization of mines based on production capacities
- The status of environment management in various categories of mines
- Details of overburden management by individual mines.
- Preliminary visits to 24 units and In-depth study (12 Nos.) of the identified units based on mining practices, pollution control measures taken, location etc including monitoring. Monitoring shall be carried out covering all categories of mines. Units for in-depth study will be selected in consultation with CPCB.
- To monitor and analyze all types of pollution i.e. Emission, (Stack and fugitive Monitoring Studies for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, CO₂ and heavy metals (Al, Cu, Ag, Co, Ni, Fe, As, Zn, Mn, Mg, Ca, V, Ti), Ambient air Quality as per AAQM Standard notified in 2009, Noise, and Water & Waste water quantification and Characterization as per CPCB guidelines in samples taken from upward and downward direction of workplace.

- Development of environmental standards for Bauxite mining based on techno-economic feasibility of suggested pollution control measures
- Setting of Environmental Standards would involve several considerations i.e. Risk to Human Health, Risk to Other Environmental Entities, technical feasibility, cost of compliance and strategic considerations etc. The report shall cover the health and environment aspects based on detailed literature survey.
- The rationale for fixing of standards and scope of their achievability will also be described.
- International environmental standards followed in the bauxite mining
- Recommendations for utilization of low grade bauxite ore to conserve the natural resources
- To recommend the clean technology for bauxite mining to minimize the adverse impact of mining on environment
- Guidelines for prevention and control of pollution due to bauxite mining to achieve the standards

4.0 Schedule for completion of tasks

A maximum of two year time is allotted for the submission of final draft report to the Central Pollution Control Board from the date of receipt of first instalment. Agency has to adhere to time frame for completion of work. A penalty of 1% of project cost per month will be imposed after allotted duration, subject to maximum penalty of 10% of the project cost.

5.0 Support or inputs to be provided by the CPCB to facilitate the consultancy

- Organizing meeting for stakeholders and technical expert of mining sector
- Deputing officer(s) to accompany consultant during field visits
- Providing authorization letters for data collection and in depth studies

6.0 Final outputs that will be required of the consultant

The final report shall be accepted by the Peer and Core Expert committee of CPCB.

7.0 Arbitration clause/ dispute resolution

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

8.0 Eligibility Criteria:

The Expert agencies should fulfil the following criteria:

- (a) Knowledge experience of work in the field of Environmental Management in mining in India or abroad for at least 5 years.
- (b) Manpower of at least 5 persons on role of agency, having qualified in Environmental Engineering/ Science with more than 5 years' experience in the field of

Environmental Management in mining. Out of above 5 persons at least 2 should have more than 10 year experience.

- (c) Average annual earnings, in terms of net consultancy fees, during the last 3 financial years of not less than Rs 50 lakh and in last 2 year they should have dealt at least one project having financial outlay of more than Rs 20 lakh.
- (d) The agency should preferably have its own NABL/ E (P) A accredited laboratory else, tie up with NABL/ E (P) A accredited laboratory for relevant emission, effluent and solid waste parameters. Also, it should have emission and effluent monitoring experience of at least 3 years.
- (e) The agency should have valid ISO 9001 certification.
- (f) The agency should have its own qualified technical & scientific staff.

Submission of Technical and Financial Proposals

- A. Technical and Financial proposals shall be submitted, separately, in sealed envelopes.
- B. The first envelope marked 'Technical Proposal' shall include following documents:
 - 1. Profile of the agency with supporting documents for qualifications mentioned at S.no. (a) to (f).
 - 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.
 - 5. Undertaking of the scope of work, objective, short approach and comments
- C. The second envelope marked 'financial proposal' shall provide the cost of the project with allocation in various head.
- D. Both the sealed envelopes shall again be placed in a sealed cover marked "Preparation of Comprehensive Industry document and Development of Environmental Standards for Bauxite.
- E. In case a Consultant is selected to carry-out the work, an agreement will be required to be signed between CPCB and the Consultant. The format of the agreement is enclosed for perusal.

Bids (Financial & Technical) may be submitted in separate sealed envelopes to Assistant Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi – 110032 within 21 days from the release of advertisement (in case it falls on holiday, the next working day shall be the last date of submission).

9.0 Late submissions or submissions that do not conform to the above requirements will not be considered.

10.0 Based on the response received, suitable consultants will be short-listed and The short-listed consultants / institutes will be invited for making a presentation on the technical aspects of the project at CPCB Delhi. The expenses for the same will be borne by consultants /institutes.

11.0 Financial bids shall only be opened for technically qualified bids quoting the lowest bid will not be only criteria for award of the activity, thus Technical adequacy and capability will also be considered as selections criteria too.

Terms of Payment

I installment - 25% of project cost plus service charge on acceptance of work and signing of agreement/MOU

II installment – 25% of project cost plus service charge on submission of interim report

III installment – 25% of project cost plus service charge on submission of draft report

IV installment – 25% of project cost plus service charge after acceptance of the final report by the Peer and Core expert Committee of CPCB.

Mode of Evaluation/Screening

Technical evaluation shall be undertaken based on the following criteria.

1. Work Experience (past & on-going) – 40 marks
2. Technical capability (Adequacy of staff, technical team etc.) – 20 marks
3. Laboratory adequacy to undertake the work (Stack monitoring Kits, Laboratory facility etc. and scientific staff - 20 marks
4. Technical Interaction – 20 marks

AGREEMENT

An agreement is made on the day of (two thousand and nine) between the Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, CBD-cum-Office Complex, Shahdara, Delhi-110032 (hereinafter referred to as the 'Board' which expression shall unless repugnant to the context or meaning thereof be deemed to include their successors and/or assignee) of the one part and M/s (herein after referred to as the 'Consultant', which expression shall, unless repugnant to the context or meaning thereof be deemed to include their successors and / or assignee) of the other part.

WHEREAS the party of the first part is a statutory body, created and established under an act of the Parliament known as Water (Prevention & Control of Pollution) Act, 1974 and the Rules framed thereafter. The Member Secretary of the Board is the authorized person to sign the agreement on behalf of the Board.

AND WHEREAS the main objective of the Board is to control the pollution of water and air and at the same time take such measures as may be necessary to prevent pollution of water and air.

AND WHEREAS the Board in pursuance of its objects, has decided to undertake a study on "Development of Noise Limits for Off-road Vehicles and Construction Equipments" and therefore, requires the services of the Consultant to carry out this above said work amounting to Rs. /- (Rupeesonly).

AND WHEREAS the party of the second part is a Consultant having its registered office at

AND WHEREAS the Consultant was retained by the Board for the execution of the said work and have agreed to conduct and complete the work on the terms and conditions hereinafter.

AND NOW THEREFORE in consideration of the terms and mutual convenient hereinafter mentioned the parties hereby agree as follows:

I DEFINITIONS

- (1) 'Agreement' means this Agreement and all appendices, annexure attached, work orders and instructions issued in writing at the time of issuing the work order, and subsequent amendments, modifications and additions directed by the Board to be carried out, provided that such amendments, modifications and additions are incidental to the work at the point of time when such directions are given by the Board.
- (2) 'Work' means the total work to be conducted and completed by the Consultant as specified in detail in the work order. **(Annexure-I)**
- (3) The Board means the Central Pollution Control Board includes its Member Secretary and any other official authorized to act and on behalf of the Board by the Member Secretary.
- (4) The Consultant means the M/s

II OBLIGATIONS OF BOTH THE PARTIES

- (1) The Consultant shall carry out and complete the work in 18 months from the issue of the Work Order and subsequent release of first installment from CPCB, as detailed in it and as entrusted to them under the instructions of the Board and the Consultant further undertake to give full co-operation to the Board in this regard.
- (2) In case the Board wishes to associate any representative in the study it will be so arranged that they shall not interfere with the regular schedule for completing the work and all the expenses for such work shall be borne by the Board and there shall be no reduction in the fees payable to the Consultants in this regard.

The Board shall also have the right to depute its representative to work with the Consultants and at all times such representative shall have access to the premises where and whenever the work is in progress. The consultants shall provide all facilities to the representative of the Board for inspection and / or assessment of work.

- (3) The Board shall render all suitable assistance to the Consultant for the purpose obtaining permissions / approvals etc., from the Central and / or State Government as may be required under various acts, rules, regulations and / or notifications.
- (4) The Consultant shall receive fees in the manner prescribed in the mode of payment. Fees for any additional work, not included in the Work Order and which shall have to be carried out by the Consultant under this agreement being due to amendments, modifications or additions as per clause I. (1) of the agreement, will be decided amicably and will be paid.
- (5) These agreements comprise of detailed and definite enumeration of the rights and duties of the parties to the contract and cover all previous correspondence or negotiations etc. which may be contrary to this agreement in any way.
- (6) If one provision of this agreement should prove to be invalid or null, all remaining provisions shall remain effective without change. The contracting parties shall try to replace the invalid and null provision by an admissible provision aiming of the same economic and legal rights.
- (7) Dimensions / standards and units wherever referred shall conform to the Indian Regulations wherever obligatory and in all other cases the same will be as per prevailing practice. If, however, the Board specifies the dimensions and units of the work then same shall be final and the consultants undertake to adopt the same and to carry out the work in accordance with the instructions issued by the Board.
- (8) The Consultant shall not engage or employ any subcontractor for execution of the work under this Agreement without the prior consent in writing obtained

from the Board. Any possible sub-contracts which may be concluded by the consultant shall be so concluded on the sole and full responsibility of the Consultant. The fact of sub-contracting shall not absolve the Consultant from his obligations and responsibilities under this Agreement.

- (9) Subject to the provisions of this Agreement the Consultant shall not transfer or assign this Agreement without the Board's prior consent in writing. In any case transfer or assignment which may be affected by the Consultant shall not modify his liabilities under this Agreement. In the event of the assignment for transfer the assignees or transferee shall be responsible for the fulfillment of the conditions of this Agreement.

III SECRECACY AND COPYRIGHT

- (1) The Consultant hereby undertake to treat all the data, information, drawings and details etc., received by the Consultant during the execution of the work, directly or indirectly, as exclusive property of the Board.
- (2) No publication shall be affected or caused to be effected by the Consultant without the consent of the Board in writing. All the information and data received or collected by the Consultant during the execution of the work or at any other time in pursuance of this Agreement shall be strictly treated as confidential and shall not be divulged to any other party, person or organisation at any time.

IV EXTENSION AND TERMIANTION

- (1) It is agreed between the parties that the Board may grant extension of time to the Consultant for the completion of the work under this contract provided the Board is satisfied with the reasons for extension stated by the Consultant in his application in writing made to the Board, such extension would not entitle the Consultant for any additional payment whatever under clause II of this Agreement.
- (2) It is agreed by and between the parties that the Board shall have the right to terminate this Agreement without assigning any reason thereof, however to the condition that it shall give seven days' notice of termination in writing to the Consultant.
- (3) The Consultant shall upon receipt of termination notice from the Board cease all further work and shall deliver to the Board all data, details, plans, specifications and other documents prepared or information collected upto the date of notice of termination received thereof.
- (4) In the event of termination of the Agreement as provided herein, the Board shall reimburse to the Consultant a part of fees proportionate to the work carried out pursuant to this Agreement up to the date of notice of termination.
- (5) The Consultant hereby undertakes and agrees to hand over all the drawings, specifications plans, sketches, data and such other documents along with

complete information and report to the Board within 15 days of the completion of the work or the notice of termination of the contract as the case may be.

- (6) The Board has the right to terminate the contract with or without assigning any reason at any stage besides reserve its right for the damage or any claim that the Board may have against the Consultant.
- (7) In case of such termination by the Board, if any payment in excess has been paid to the Consultant, the Consultant shall repay the excess payment within 15 days of the termination of the contract.

V COMPENSATION FOR DELAY

The time allowed for carrying out the work as specified in the work order shall be strictly observed by the Consultant. The Consultant shall pay as compensation an Amount equal to one percent or such as the Member Secretary, Central Pollution Control Board may decide, on the total cost of the work, for every month that the work remains unfinished after the due dates, provided that the entire amount of compensation to be paid under the provisions of this clause shall not exceed ten percent on the total cost of the work as shown in the work order.