



(NO. B-29012/ESS/CPA/2014-15)  
**CENTRAL POLLUTION CONTROL BOARD**  
(Ministry of Environment & Forests)  
Parivesh Bhawan, East Arjun Nagar  
Delhi-110032

**“Notice inviting Expression of Interest (EOI)”**

**For**

**Project on ‘Monitoring, Sampling and Analysis for ambient air quality, surface water quality and ground water quality in the 78 Identified Polluted Industrial Areas (PIAs)’**

**Expression of Interest is invited from eligible Expert Agencies for the project on ‘Monitoring, Sampling and Analysis for ambient air quality, surface water quality and ground water quality in 78 Polluted Industrial Areas’ during 2014-15 for execution through engagement of outside Expert agency on MoU/Agreement basis.**

Expert Laboratories /Organizations should have the following qualifications / requisites:

1. The agency should have similar type of work experience. It should have been awarded and successfully completed at least 5 similar types of projects during last seven years each costing not less than Rs. 25.00 Lacs.
2. It should have its own laboratories and qualified technical & scientific personnel.
3. The laboratory of the agency should have valid certification/recognition under Environment (Protection) Act, 1986 from MoEF.
4. The laboratory of the agency should have valid NABL Accreditation. The agency should have valid ISO 9001 certification.

The interested Expert Agencies are requested to submit the EOI alongwith necessary documents related to profile of the agency (manpower, infrastructure ,list of field offices etc.), work experience, certification under Environment (Protection) Act, 1986 from MoEF, NABL Accreditation and ISO - 9001. The details of the project viz. Background, Objectives and Terms of Reference of the Project, are attached.

The interested expert agencies are requested to submit the EOI to **The Member Secretary, Central Pollution Control Board, ‘Parivesh Bhawan’, East Arjun Nagar, Delhi-110032** within 21 days from the date of publication of the this ‘Notice’ in the newspapers ( the date of advertisement is exclusive). For any kind of clarification, Shri N.K. Gupta, Scientist ‘D’ & Incharge - ESS, CPCB, New Delhi ( 011-43102306), may be contacted.

**Member Secretary  
Central Pollution Control Board**

**Project  
on  
'Monitoring, Sampling and Analysis for ambient air quality, surface water quality and  
ground water quality in the 78 Identified Polluted Industrial Areas (PIAs)'**

## **1. Background :**

Environmental pollution due to increasing industrialization and urbanization has reached to the alarming levels. Indiscriminate disposal of different categories of wastes into the environment at many places have resulted in damage to the natural resources (soil, water and air), flora & fauna, and health of human beings.

During 2009-10, Central Pollution Control Board (CPCB) in collaboration with Indian Institute of Technology (IIT), Delhi and 15 other reputed institutes formulated the criteria for Comprehensive Environmental Pollution Index (CEPI) and 88 prominent industrial clusters were selected in consultation with the Ministry of Environment & Forests for CEPI analysis. Out of these 88 prominent industrial clusters, 43 industrial clusters in 16 States having CEPI score of 70 and above are identified as Critically Polluted Areas (CPAs). Further, 32 industrial clusters with CEPI scores between 60 & 70 are categorized as severely polluted areas (SPAs).

As per the direction of MoEF, remedial Action Plans for the identified 43 critically polluted areas were prepared by concerned SPCBs/PCCs and are at various stages of implementation. The effective implementation of these remedial action plans would help in the pollution control and improvement of environmental quality.

To assess the status of environmental quality, monitoring is being carried out by CPCB through reputed Environmental laboratories periodically and CEPI is being assessed based on the recorded monitoring data in the 43 CPAs. The evaluated CEPI reflects the environmental quality of the 43 CPAs and also serves as a yardstick to assess the progress achieved in the implementation of action plans. So far, three rounds of monitoring have been undertaken by CPCB (2009, 2011, 2013) based on which CEPI assessment was done.

Further, MoEF vide O. M. dated September 17, 2013 directed CPCB to undertake environmental quality monitoring in CPAs through a third party on biennial basis (once in 2 years) for computing CEPI. Accordingly, environmental quality monitoring in 10 CPAs namely, Ankleshwar, Ghaziabad, Indore, Jharsuguda, Ludhiana, Panipat, Patancheru - Bollaram, Singrauli, Vatva and Vapi has been undertaken by CPCB during 2013-14 and monitoring in remaining 78 polluted industrial areas (33 CPAs + 32 SPAs + 13 polluted areas), will be undertaken by CPCB during 2014-15.

## 2. Objectives

**Monitoring of 78 identified Polluted industrial areas** in terms of air, surface water and ground water quality parameters which could be used for assessment of the environmental quality of the area and for further course of action.

## 3. Terms of Reference

### Clause 1. Name of the Project:

The name of the project is **“Monitoring, Sampling and Analysis for ambient air quality, surface water quality and ground water quality in the 78 Identified Polluted Industrial Areas (PIAs)”**.

### Clause 2. Sponsoring Agency:

The sponsoring agency is Central Pollution Control Board (CPCB), Delhi

### Clause 3. Terms and Conditions:

- i. The Expert Agency shall carry out the monitoring, sampling and analysis work for ambient air quality, Surface water quality and ground water quality monitoring in **the 78 Identified Polluted Industrial Areas (PIAs)** during May-June, 2014 or during the period as mutually agreed upon.
- ii. The list of 78 identified polluted industrial areas for which monitoring, sampling and analysis work shall be carried out by the laboratory, is placed at Annexure-1.
- iii. The Expert Agency may submit the proposal to cover either all the 78 PIAs or selected PIAs . However, in each of the proposed PIAs, complete monitoring (air quality, surface water quality and ground water quality) for all the designated parameters shall be performed.
- iv. It shall be at the sole discretion of the Competent Authority, CPCB to award the work either in parts or as a whole.
- v. The tentative list of the parameters for ambient air quality monitoring, surface water quality monitoring and ground water quality monitoring, is given in Annexure 2.
- vi. The rates for monitoring, sampling and analysis (including transportation & other miscellaneous charges) should be clearly quoted for the following items-
  - A. Charges per sample per location for ambient air quality monitoring.
  - B. Charges per sample per location for surface water monitoring.
  - C. Charges per sample per location for ground water quality monitoring
  - D. Charges per sample per location for bio-assay test. ) Bio-assay test will be conducted on selected samples (to be informed by CPCB).
- vii. Service tax shall be paid as per the applicable norms and TDS shall be made as per rules applicable.

viii. **Details of Project Team suitability & experience.** The offer should contain the details of the infrastructure / laboratory facilities available with the interested party and also provide a list of personnel proposed to be deployed for the assignment, outlining specifically the qualifications & experience of each person relevant to this project and each member's role and responsibility.

ix. **Evaluation Criteria**

The evaluation of the 'Expression of Interests' shall be undertaken based on the following criteria-

- Work Experience - 20 marks
- Nos. of technical / scientific staff & their qualifications - 20 marks
- Own laboratory and Certification of the laboratory under E(P) Act - 1986 and ISO - 9001 - 40 marks
- Nos. of parameters having NABL Accreditation - 20 marks

Total Marks - 100 marks

The shortlisting of agency to become eligible for submission of the 'Technical and Financial Bids' shall be based on the following criteria:

- Each of the subcategory score should be atleast 50% of the marks allotted for that sub-category and
- Over score of an agency should be more than 75 against a total score of 100.

- x. No EMD (earnest money deposit) is required at the time of submission of 'Expression of Interest'. However, the shortlisted & qualified bidders shall be requested to submit the proposal (technical & financial bids) accompanied with an EMD (earnest money deposit) of Rs. 10,00,000 (Rs. Ten Lacs only) in the form of Demand Draft in favour of Central Pollution Control Board, Delhi. That EMD should be valid for at least six months. The EMD of unsuccessful bidders shall be returned after award of work to successful bidder. The EMD of successful bidder shall be returned after completion of the project & submission of the satisfactory report, however no interest will be paid. Any proposal received without EMD will be rejected summarily.
- xi. The Executing agency shall carry out the monitoring, sampling and analysis works as per the procedure and norms stipulated in 'Standard Methods'.
- xii. At each of the PIAs, three rounds of monitoring shall be carried out at tentative of 8 locations. The exact no. of samples at each PIA will be finalized in consultation with Zonal offices of CPCB and concerned SPCB.
- xiii. At each of the PIAs, 24 hourly ambient air quality monitoring shall be carried out for parameters at Annexure-2. Also representative samples each for surface water quality and ground water quality shall be collected from prominent surface and ground water bodies located in and around the clusters/ areas.
- xiv. The Executing agency shall submit the complete monitoring, sampling and analysis reports including summary of the parameters exceeding the prescribed standards /

norms for each of CPAs within a period of 3 months from the commencement of the monitoring.

- xv. The Executing agency shall inform to CPCB about the constitution of the teams, names and contact nos. of team leaders and their visit schedule to the allocated PIAs for the monitoring and sampling works.
- xvi. The Executing agency shall co-ordinate with the concerned Zonal Offices of CPCB and local SPCBs officials for efficient monitoring and sampling works.
- xvii. The Executing Agency shall also provide the monitoring schedule to the concerned SPCBs /PCC and Zonal Offices of CPCB to ensure their participation in the monitoring & sampling works.
- xviii. Payment shall be made in 2 parts as follows-
  - a) First instalment shall be made after completion of the monitoring, sampling and analysis work and on submission of the satisfactory reports in respect of 50% of the PIAs allocated / covered. The amount to be paid shall commensurate the total number of samples analysed in the said PIAs.
  - b) Final instalment shall be made after completion of the monitoring, sampling and analysis work and on submission of the satisfactory reports in respect of remaining 50% of the PIAs allocated / covered. The amount to be paid shall commensurate the total number of samples analysed in the said PIAs.
- xix. All the information and data generated or collected during the execution of the work shall be treated as confidential and sole property of CPCB and the findings of the study shall not be published without prior permission of CPCB.
- xx. The Agreement between the selected Expert Agency and CPCB shall be operative until the completion of the project and acceptance of the final report by CPCB.
- xxi. The project shall be implemented as per the rates finalized and CPCB will not provide any additional fund on account of any further cost escalation due to delay in project implementation or due to any other reasons.
- xxii. CPCB shall not bear any responsibility for the personnel engaged under the project.
- xxiii. During the course of implementation of the project, the executing agency shall provide the information to the participating CPCB's officials regarding the methodologies/ techniques being adopted for implementation of the project.
- xxiv. The Executing Agency shall submit 3 copies of final draft report along with the CD (Soft copy) on completion of the project.
- xxv. It shall be at the sole discretion of the Competent Authority , CPCB either to differ the entire project or part of the project or reject any proposal without assigning reasons thereof.
- xxvi. Applicable Taxes shall be deducted at source.

- xxvii. Proposal being submitted must be signed by an authorized person representing the company/ firm.
- xxviii. The parties submitting the proposal, are requested not to erase or mutilate any word(s) or figures occurring in the quotation. The overwriting is not allowed.
- xxix. It may be noted that mere quoting the lowest rates will not entitle any firm to get the work order.
- xxx. The tenders shall be valid for a period of 06 months from the date of their opening.
- xxxi. In case of any dispute, the decision of the Chairman, CPCB will be final and binding to both the parties.
- xxxii. The work order shall be valid for a period of 01 year from the date of issue extendable further for a maximum period of 02 years and the monitoring agency shall undertake monitoring at the approved rates, in any of the PIAs to be assigned by CPCB at any later date.

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## State-wise distribution of 78 polluted industrial areas with CEPI Scores ( 2009)

Sr. No	Name of State	Clusters with CEPI >70 (33 Critically polluted areas)	Clusters with CEPI 60-70 (32 severely polluted areas)	Clusters with CEPI <60 (13 polluted areas)
1.	<b>Andhra Pradesh</b>	Vishakhapatnam (70.82),	Vijayawada (60.57)	Kathedan (57.73), Kukatpalli (56.56)
2.	<b>Assam</b>	--	--	Burnihat (46.26), Digboi (44.55)
3.	<b>Bihar</b>	--	West Singhbhum (67.30)	Hajipur (55.12)
4.	<b>Chhatisgarh</b>	Korba (83.00)	Raipur (65.45)	Bhillai- Durg (50.57),
5.	<b>Delhi</b>	Najafgarh-Drain basin (79.54) including Anand Parbat, Naraina, Okhla, Wazirpur	--	--
6.	<b>Gujarat</b>	Ahmedabad (75.28), Bhavnagar (70.99), Junagarh (70.82)	Vadodara (66.91), Rajkot (66.76)	Surat (57.90)
7.	<b>Haryana</b>	Faridabad (77.07),	--	--
8.	<b>Himachal Pradesh</b>	--	Baddi (69.07), Kala Amb (68.77), Parwanoo (63.83)	--
9.	<b>Jharkhand</b>	Dhanbad (78.63)	Jamshedpur (66.06), Saraikela (65.38), Ramgarh (65.11), Bada Jamtara (64.47)	--
10.	<b>Karnataka</b>	Mangalore (73.68), Bhadravati (72.33)	Raichur (68.07), Bidar (67.64), Pinya (65.11)	--
11.	<b>Kerala</b>	Greater Kochin (75.08)	--	--
12.	<b>Madhya Pradesh</b>		Dewas (68.77), Nagda -Ratlam (66.67), Pitampur (65.09)	Gwalior (54.63)
13.	<b>Maharashtra</b>	Chandrapur (83.88), Dombivalli (78.41), Aurangabad (77.44), Navi Mumbai (73.77), Tarapur	Nashik (69.25), Chembur (69.19), Pimpri-Chinchwad (66.06)	--

		(72.01)		
14.	Orissa	Angul Talchar (82.09), Ib-Valley (74.00)	Paradeep (69.26)	--
15.	Punjab	Mandi Govindgarh (75.08)	Batala (68.59), Jalandhar (64.98)	--
16.	Rajasthan	Bhiwadi (82.91), Jodhpur (75.19), Pali (73.73)	Jaipur (66.82)	--
17.	Tamil Nadu	Vellore -North Arcot (81.79) , Cuddalore (77.45), Manali (76.32), Coimbatore (72.38)	Tirupur (68.38), Mettur (66.98)	Erode (58.19)
18.	Uttar Pradesh	Noida (78.90), Kanpur (78.09), Agra (76.48), Varanasi-Mirjapur (73.79)	Moradabad (64.71), Aligarh (63.83), Ferozabad (60.51)	Mathura (59.98), Meerut (59.38), Bulandsahar-Khurza (49.09)
19.	Uttarakhand	--	Haridwar (61.01)	Udhamsingh Nagar (54.37)
20.	West Bengal	Haldia (75.43), Howrah (74.84), Asansole (70.20)	Durgapur (68.26)	--



**A. Ambient Air Quality Monitoring for following parameters:**

- i. SO<sub>2</sub> , NO<sub>2</sub> , PM<sub>10</sub> , PM<sub>2.5</sub>, Lead and Ammonia (for 24 hourly average monitoring values)
- ii. O<sub>3</sub> , CO (for 1 hrly average and 8 hrly average )
- iii. Benzene, Benzo(O) Pyrene, Arsenic & Nickel (for 24 hrly average value)

**B. Water Quality data of -**

- (a) **Prominent Surface Water bodies** such as outfalls of CETPs, ETPs, FETP, treated effluent drainage, river, canal, ponds, lakes and other such water supply resources flowing through the area or flowing adjoining the CPA.
- (b) **Ground Water** Quality data of prominent ground water resources such as observation wells of Central Ground Water Board, drinking water wells, hand pumps, bore wells and other such water supply resources located in the industrial cluster/ area under consideration or in the peripheral areas.

**Basic water quality requirements (for surface water and ground water both) are as follows-**

**(i) Simple Parameters -**

Sanitary Survey, General Appearance, Color, Smell, Transparency and Ecological\* (presence of animals like fish, insects etc. only in case of surface water bodies)

**(ii) Regular Monitoring Parameters -**

pH, O&G, Suspended Solids in mg/l, DO ( % saturation), COD in mg/l , BOD in mg/l, Electrical Conductivity in  $\mu$ mhos/cm, Nitrite-Nitrogen , Nitrate-Nitrogen, (NO<sub>2</sub>+NO<sub>3</sub>) total nitrogen in mg/l, Free Ammonia, Total residual chlorine, cyanide, fluoride, **chloride, sulphate**, sulphides, dissolved phosphates, SAR, Total coliforms, Fecal Coliform (MPN/100 ml),

**(iii) Special Parameters -**

Total phosphorous, TKN, Total Ammonia(NH<sub>4</sub>+NH<sub>3</sub>)-Nitrogen, Phenols, Surface Active Agents, Organo-chlorine pesticides, PAH, PCB and PCT, Zinc, Nickel, Copper, Hexa-valent chromium, Chromium (Total), Arsenic (Total), Lead, Cadmium, Mercury, , manganese, iron, vanadium, selenium, boron .

**(iv) Bio-assay (zebra Fish) Test - For specified samples only.**

Note :

- DO is not applicable in case of ground waters.
- DO in eutrophicated waters should include measurements for diurnal variations.
- SS limit is applicable only during non-monsoon period.
- Fecal Coliform values should meet for 90 % times.
- Static Bio-assay method may be adopted.