

AGENDA ITEM NO. 194.06

**REGARDING SOURCE
APPORTIONMENT AND EMISSION
INVENTORY STUDY ON THE LEVEL
AND SOURCE OF POLLUTION IN
SELECTED CITIES OF HARYANA I.E.
GURUGRAM, PANIPAT AND SONIPAT.**

Agenda Item No. 194.06

06/1
Regarding Source Apportionment and Emission Inventory study on the level and source of pollution in selected cities of Haryana i.e. Gurugram, Panipat and Sonipat.

An Original Application No. 21/2014 titled as Vardhman Kaushik Vs Union of India & Ors was filed before the Hon'ble National Green Tribunal (NGT).

As per decision taken in the 9th meeting of State Level Committee in the matter of Vardhman Kaushik Vs Union of India & Ors constituted by the Hon'ble NGT held on 16.03.2018 (**Annexure-1**) under the chairmanship of Chief secretary, Haryana, it was decided that the Board may conduct a specific study on the levels and sources of pollution in Haryana through a reputed university and Principal Secretary (Higher Education) was requested to coordinate the task.

The matter was placed before the Technical Advisory Committee (TAC) of the Board and it was decided in the meeting held on 30.07.2019 that expression of interest may be called from the reputed university for carrying out the study in first phase in the Districts adjoining to Delhi i.e. Gurugram Faridabad, Sonipat and Panipat as the cost of the study will be more than one lakh. Minutes of meeting dated 30.07.2019 is given at **Annexure-2**.

Accordingly, the expression of interest for the source apportionment and emission inventory study was sent to DGPR for publishing in the newspaper on 06.11.2019 (**Annexure-3**).

Only one institute namely, The Energy and Resources Institute (TERI) had submitted EOI on 09.12.2019 which was examined by the Committee and had recommended to float new EOI or tender after following due procedure. Copy of minutes is given at **Annexure-4**.

A new committee was formed for finalization of EOI document vide order dated 28.03.2022. The Committee has formulated a revised EoI in view guidelines issued by CPCB.

The EOI was published on etender site on 15.06.2022 after taking approval from Competent Authority.

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After publishing, it came to the notice that Source Apportionment Study of Faridabad is being done by TERI under XVth Finance Commission for Municipal Corporation, Faridabad. Accordingly, Faridabad was excluded from the four cities proposed earlier and corrigendum was issued on 13.07.2022, copy of which is given at **Annexure-5**.

Bids were received from two institutions, namely, TERI (New Delhi) & Automotive Research Association of India (ARAI) (Pune). A meeting was convened by the bid evaluation committee on 04-08-2022 to technically evaluate the received bids from two institutions. Upon evaluation, both the bidders were technically qualified as per the pre-qualification & scoring criteria. The technical bids were accepted on e-tender website after taking approval. The minutes of meeting is given at **Annexure-6**.

A Committee was constituted for opening of financial bid and the orders are given at **Annexure-7**.

The meeting was held on 06.09.2022 and in view of the bids received from only two institution, the committee observed to seek clarification on the evaluation procedure and to take necessary approval from competent authority before the opening of financial bids in view of the *"Even when only one bid is submitted, the process may be considered valid provided following conditions are satisfied:*

- i. *The procurement was satisfactorily advertised and sufficient time was given for submission of bids;*
- ii. *The qualification criteria were not unduly restrictive; and*

Prices are reasonable in comparison to market values."

Copy of minutes of the meeting is given at **Annexure-8**.

The order regarding approval of opening of financial bids issued on 17.10.2022 is given at **Annexure-9**.

The financial bids were opened on 28.10.2022 and the details are given as under:-

The Comparative Statement of Rates submitted by the institutes for source apportionment and emission inventory study on the level and source of pollution in selected cities of Haryana i.e. Gurugram, Panipat and Sonipat.

06/3

Name of District	TERI (L2) in (Rs.)	ARAI (L1) in (Rs.)
Gurugram	7500887	6250000
Panipat	7500887	4800000
Sonipat	7500887	4850000
Taxes	4050479	2862000
	26553140	18762000
Total	Rupees Two Crore Sixty-Five Lakhs Fifty-Three Thousand One Hundred and forty only	Rupees One Crore Eighty-Seven Lakhs Sixty-Two Thousand Only

The committee has recommended to accept the bid from the lowest quoting firm, L1 i.e., Automotive Research Association of India (ARAI) amounting to Rs 1,87,62,000/- including GST for Source Apportionment and Emission Inventory study on the level and source of pollution in selected cities of Haryana i.e. Gurugram, Panipat and Sonipat. The minutes of meeting is given at **Annexure-10**.

As per the above proposal, the study is for 18 months amounting to Rs. 1,87,62,000/-

The financial bid has been accepted on etender site on 09.12.2022. The Award of Contract is yet to be issued. The funds will be met through the HSPCB.

The proposal is placed before the Board for consideration and approval of awarding contract to Automotive Research Association of India, Pune for carrying out Source Apportionment Study in Gurugram, Sonipat and Panipat within a period of 18 months amounting to Rs. 1,87,62,000/-, please.



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Annexure - 1

HARYANA STATE POLLUTION CONTROL BOARD
C-11, SECTOR-6, PANCHKULA
Ph-2577870-73 E-mail: hspcb4@gmail.com

No. HSPCB/Sc-C/2018/73-88

Dated: 04/04/2018

To,

1. Additional Chief Secretary to Govt. Haryana, Home Department.
2. Additional Chief Secretary to Govt. Haryana, Food, Civil Supplies and Consumers Affairs Department, Haryana.
3. Additional Chief Secretary to Govt. Haryana, PWD (B&R) and Architecture Department.
4. Additional Chief Secretary to Govt. Haryana, Transport Department.
5. Additional Chief Secretary to Govt. Haryana, Environment Department.
6. Principal Secretary, Industry & Commerce Department, Haryana.
7. Principal Secretary, Haryana Renewable Energy Department, Haryana.
8. Principal Secretary, Urban Local Bodies Department, Haryana.
9. Principal Secretary, Agriculture & Farmer's Welfare Department, Haryana.
10. Principal Secretary, Town & Country Planning Department, Haryana.
11. Director, Environment Department, Haryana.
12. Director General, Health Department, Haryana, Panchkula.
13. Chief Administrator, HUDA, Panchkula.
14. The General Manager, National Highways Authority of India, G 5&6, Sector-10, Dwarka, New Delhi.
15. The General Manager, Indian Oil Corporation Ltd, 3079/3, JB Tito Marg, Sadiq Nagar, New Delhi-110049.
16. The General Manager, Bharat Petroleum ECE House, Post Box No. 7, Connaught Circus, New Delhi, (110049).

Sub:- Minutes of the 9th Meeting of the State Level Committee in the matter of Vardhimaan Kaushik Vs. Union of India & Ors constituted by the Hon'ble NGT held on 16.03.2018 at 03:30 PM under the Chairmanship of Chief Secretary, Govt. of Haryana.

Kindly refer to the subject cited above.

In this connection, I have been directed to enclose herewith the minutes of the 9th meeting of the State Level Committee meeting held on 16.03.2018 at 03:30 PM under the Chairmanship of Chief Secretary, Govt. of Haryana in Chief Secretary Committee Room, Civil Secretariat, Chandigarh, for further necessary action please.

DA/as above.

Scientist 'C' (HQ)
For Chairman

Endst No. HSPCB/Sc.C/2018/89-91

Dated: 04/04/18

A copy of the above is forwarded to the following for information:-

1. P.S. to Chief Secretary, Govt. of Haryana.
2. P.S to Chairman/P.A to Member Secretary.

DA/as above.

Scientist 'C' (HQ)
For Chairman

06/5

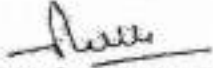

Endst No. HSPCB/Sc.C/2018/ 92-93

Dated:- 4.4.18

A copy of the above is forwarded to the following for information:-

1. Secretary MOEF -cum-Chairman, Central Monitoring Committee.
2. Chairman, CPCB.

DA/as above.


Scientist 'C' (HQ)
For Chairman


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Minutes of the 9th meeting of State Level Monitoring Committee (SMC) constituted by NGT, held under the Chairmanship of Shri. D. S. Dhesi, IAS, Chief Secretary, Government of Haryana at 1530 Hrs on 16.03.2018 at Haryana Civil Secretariat, Chandigarh.

The 9th meeting of State Level Monitoring Committee (SMC) constituted by Hon'ble National Green Tribunal (NGT) in the case of Vardhaman Kaushik Vs Union of India and Others in the matter of 'Control and Prevention of Air Pollution in Delhi and NCR Districts' was held under the Chairmanship of Shri. D. S. Dhesi, IAS, Chief Secretary, Government of Haryana at 1530 Hrs on 16.03.2018 in the Main Committee Room of Haryana Civil Secretariat Chandigarh. The list of participants is enclosed at Annexure 'A'. The minutes of the meeting are as below.

At the outset Principal Secretary, (Environment) welcomed the Chairman, Members of the Committee and other participants and briefed different directions of NGT in its different orders in the matter of Vardhaman Kaushik Vs Union of India & Ors. He further briefed the agenda items to be taken up during this meeting and Member Secretary, HSPCB made a brief presentation on the main agenda items for discussion.

Item 1: Confirmation of the minutes of the 8th meeting of the State Level Committee held on 15.01.2018.

The minutes of the 8th meeting of SMC held on 15.01.2018, which were circulated on 18.01.2018, were confirmed.

Item 2: Review of compliance status of the decisions taken during the 8th meeting of the State Level Committee.

A detailed discussion was held on the status of compliance of various decisions taken during the previous meetings including the 8th meeting and their compliance by respective departments along with the pending actions of each Department. The Committee was informed that no weekly report was every submitted by any of the stakeholder department, as decided during the last meeting and Chairman advised all Departments to send the details in the prescribed format at the earliest. It was further decided that the monthly report be taken from the Departments concerned, instead of the weekly report procedure, as decided earlier. Following are the other details discussed in the meeting.

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Chairman advised the Board to have a consultation with State counsel to finalize exact action plan to be followed in this case, as a number of directions have already been issued, superseding the previous ones. The matter be taken up by the State Pollution Control Board with AAG, Government of Haryana, it was decided.

Police Department

The Committee was informed that the reports from Police Department have been received. Representatives of Police Department required certain clarifications with reference to powers and procedures for imposing penalties in the form of environmental compensation, its deposition as well as utilization. PS (Env) assured that the Board will look into the issue and clarify the same after ascertaining the procedures adopted in other States too. Police Department also wanted a clarification on imposing of penalties / impounding of vehicles which are more than 10 years old, in violation of NGT directions. Member Secretary, HSPCB was asked to clarify the same within 15 days after studying best practices of other state.

Transport Department

ACS, Transport informed that the task of networking of PUCs is already assigned to NIC and likely to be completed within next 3 months. It was further informed that the study conducted on number of vehicles being diverted from Panipat has been shared with Chairman. Chairman desired that the Transport Department may segregate the total number of buses entering through the toll plazas, from trucks, both of which are classified as 'heavy category' vehicles thereby making it difficult to distinguish the number of trucks entering into Delhi, as all buses are anyway destined to Delhi. Transport Department agreed to take up the exercise to arrive at a logical figure of trucks.

While reviewing the progress on establishment of PUC centres in all petrol pumps, ACS, Food and Supply Department informed that directions have been issued to all Deputy Commissioners in this regard and progress is yet to be ascertained. Transport Department was requested to provide the details of total number of petrol pumps and those having PUC centres as of now so that the progress can be monitored. Chairman desired that Transport Department may study the PUC networking model adopted in Chandigarh and adopt the same, if feasible. Transport Department, while reviewing the progress on the proposed plan for phasing out the diesel autos in NCR

06/8

ULB Department

Director, Urban Local Body informed that Swachh Mobile App is being used for reporting the complaints against any air pollution violations too, by Municipal Corporation of Gurugram. Since all violations are reported in a similar manner, it is difficult to segregate the waste burning violations and other pollution related violations from others, he informed. He was advised to modify the app accordingly to suit to the requirement and to generate reports accordingly. Director, ULB further informed that one sweeping machine is operational in Faridabad, two in Gurugram and 23 machines are under the process of procurement. These are being introduced only in corporations in the first phase he clarified. He was requested to forward the details of district wise number of machines operating, planned to be procured and the time frame for the same, so that monitoring and review of progress can be done effectively by the committee.

While reviewing the progress of plantation activities and the proposal for the coming season by ULB Department, Chairman further desired that a special drive be conducted by HSPCB involving officials of ULB, Forest and any other Departments concerned, to check the compliance status of conditions imposed by the State Environment Impact Assessment Authority (SEIAA) while granting Environmental Clearance. He advised that 50 such projects which have become operational now be taken as target and the exercise be completed within 15 days. This will give an idea on how far the project proponents comply with the 'green plan' conditions imposed, he expressed. ULB Department was requested to forward the details of its plantation proposal for the forthcoming season.

ULB Department was again requested to forward the details of all teams constituted, inspections conducted, violations identified against garbage burning, construction site norms, transportation of construction material norms along with the challans issued and penal amount collected.

Agriculture and Farmers' Welfare Department

Agriculture Department was advised to share the details of plans prepared for tackling the problems of wheat stubble burning expected in April and May 2018. PS Agriculture was also requested to finalize the State's policy on crop residue management at the earliest and inform the Committee.

06/9

Food and Civil Supplies Department

Environment Pollution (Prevention and Control) Authority (EPCA) has informed that Brick Kilns which have not converted to zig-zag technology but have submitted affidavit to EPCA with an undertaking that they will convert to the zig-zag kiln in next season will be allowed to operate for one last season i.e. from 01.03.2018 to 30.06.2018. Further it was informed that no brick kiln without zig-zag technology will be allowed to operate in the winter season commencing from October-November.

HSVP, TCP & Forest Department.

A detailed discussion was held on the plantation activities undertaken and proposed to be undertaken under the jurisdiction of HUDA. It was informed that plantations and green strips in the sector dividing roads are being done and maintained by HUDA. Chairman observed that since GMDA has already been entrusted with the plantation activities in Gurugram, it may be advised to submit its overall plan as well as the immediate for the coming season. It was also decided to include GMDA as a Member of this Committee from the next meeting.

It was further decided that Forest Department may be requested to consider undertaking plantation activities in Kundli Maneswar Palwal (KMP) Express way and along the Gurugram-Faridabad Road.

Item 3: Compliance of NGT orders dated 18.12.2017.

A detailed discussion was held on the directions of NGT vide its order dated 18.12.2017. The Committee was informed that the Board has been monitoring the pollution levels in all NCR Districts of Haryana and since January 2018, there is considerable improvement in the quality of the air. The Board further informed that no compliance report has been received from any of the concerned Department, as decided in the earlier meeting. It was again reiterated to all departments that in the absence of these reports, it would be difficult for the State to file the quarterly reply in NGT, as mandated.

After detailed discussion it was decided that as earlier decided, the weekly action taken report be replaced with monthly report. Chairman directed all the Departments to submit the complete information on all actions taken as per the format circulated and also to inform the details of progress of action plans already circulated latest by 23.03.2018. In case

06/10

of any clarification, the Departments may contact the Board and no delay be advisable as the affidavit has to be filed before 31.03.2018.

The Committee was further apprised of EPCA's decision that the State of Haryana shall implement the measures under the 'Moderate to Poor' category of GRAP from 01.03.2018.

Item 4: Status regarding installation of CAAQMS Stations.

The Board is in the process of installation of 19 additional Continuous Ambient Air Quality Monitoring Station at Panipat, Sonapat, Rewari (Dharuhera), Bahadurgarh, Kaithal, Karnal, Yamuna Nagar, Gurgaon (Manesar), Faridabad (sector 55 & 56), Ambala, Bhiwani, Fatehabad, Hisar, Jind, Kurukshetra, Mahendragarh, Mewat, Palwal and Sirsa, out of which twelve are in the NCR region. It was informed that the case has been sent to the DGS & D for placing the case for purchase of CAAQMS in the High Power Purchase Committee. Chairman advised that the Board may take note that the stations are installed in representative places as has been done in Delhi.

Chairman advised the Environment Department to establish additional Monitoring Stations through the funds allotted by Government of India under the Global Environment Facility funds, allotted to the State. It was further decided that NHAI and PWD (B & R) be invited for the State level meetings to get their inputs as well.

Item 5: Status of Brick Kiln Units

It was Informed Food and Civil Supply Department that there are 1961 Brick kiln units in NCR Districts of Haryana, out of which 545 have already been converted to improved emission technology. The Committee was further apprised of the decision of EPCA to allow the brick kilns, which have not converted to improved emission technology yet, but have undertaken (through an affidavit) to complete the process before the next winter season, to operate from March 2018 to June 2018. It was further clarified that no unit shall be allowed to operate in NCR Districts of Haryana from 01.10.2018 if they have not been converted to improved emission technology, as decided by EPCA.

06/11

Item 6: Status regarding use of Pet coke and Furnace oil in compliance of Hon'ble Supreme Court order.

The Committee was apprised of the orders of Hon'ble Supreme Court on the use of Pet coke and furnace oil in Haryana and the recent notification of MoEF & CC prescribing the procedure for registration of industries producing and using pet coke. Chairman desired that the Board may take a stock of affairs through Regional Offices on the compliance of SC's orders.

It was further decided that the Board may conduct a specific study on the levels and sources of pollution in Haryana through a reputed university and PS (Higher Education) may be requested to coordinate the task. Chairman also desired to know the details of policy decision of Uttar Pradesh Government, on the compulsory use of certain quantity of briquettes as fuel in kilns and power plants and advised Agriculture Department to collect the same.

Meeting ended with thanks to all the participants.

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Annexure 'A'

List of participants of 9th State Level Monitoring Committee (SMC) constituted by NGT, held under the Chairmanship of Shri. D. S. Dhesi, IAS, Chief Secretary, Government of Haryana at 1530 Hrs on 16.03.2018.

Sr. No.	Name & Designation
1.	Sh. D.S. Dhesi, IAS, Chief Secretary, Haryana In Chair.
2.	Sh. Ram Niwas, IAS, ACS, Food & Supply Department.
3.	Sh. R.R. Jowel, IAS, ACS, Transport Department
4.	Sh. Devender Singh, IAS, PS, Environment Department
5.	Sh. Abilaksh Likhil, IAS, PS, Agriculture Department
6.	Sh. S. Narayanan, IFS, Member Secretary, HSPCB
7.	Sh. Nitin Yadav, IAS, Director, Urban Local Bodies.
8.	Sh. Vikas Gupta, Transport Commissioner, Transport Department.
9.	Sh. T.L. Sathya Prakash, IAS, Town & Country Planning Department.
10.	Sh. R.S. Kharab, IAS, Special Secretary, Home Department.
11.	Sh. J. Ganesan, IAS, Chief Administrator, HUDA.
12.	Sh. Ashok Bhardwaj, IPS, Traffic Highway, Karnal.
13.	Sh. Hira Singh, ACP, Traffic Police, Gurgaon.
14.	Sh. V.K. Kalra, Chief Engineer, HUDA.
15.	Sh. R.C. Datta Consultant O/o Industries & Commerce Department.
16.	Dr. Arun Joshi, DHS, Health Department.
17.	Sh. Anil Rana, AD, Agriculture Department.
18.	Sh. R.S. Chahal, Joint Director, Agriculture Department.
19.	Dr. R.K. Chauhan, Joint Director, Environment Department.
20.	Dr. S.K. Rohilla, Scientist C, HSPCB.
21.	Sh. J.P. Singh, EE, HSPCB.
22.	Sh. Rajiv Goyal, ADO, Agriculture Department.
23.	Sh. P.K. Yadav, Haryana Renewable Energy Department.
24.	Sh. Pardeep Kumar, Indian Oil Corporation Ltd.



HARYANA STATE POLLUTION CONTROL BOARD
C-11 Sector-6, Panchkula
Ph - 0172- 577870-73, Fax No. 2581201
E-mail- hspcbho@gmail.com
Website: hspcb.gov.in

Annexure - 2

06/13

No. HSPCB/PLG-TAC/2019/ 777-786

Dated 3/9/19

To

1. All the Branch Incharges, in Head Office.
2. Regional Officer Panchkula Region, Panchkula.

Sub: -Recommendation of Technical Advisory Committee (TAC) of HSPCB made in its meeting held on 30.07.2019.

Kindly refer to the subject noted above.

In this connection, it is intimated that the Recommendation of Technical Advisory Committee (TAC) of HSPCB made in its meeting held on 30.07.2019 has been approved by the Competent Authority, copy of which is enclosed for your information and necessary action.

You are requested to take further action on the subject matter related to your branch as per approval of the competent authority including approval from Board/Government where required, if any.
DA/as above.


AEE (HQ)
For Chairman


Endst. No. HSPCB/PLG-TAC/ 2019/ 787-88

Dated: 3/9/19

A copy of the above is forwarded to the following to kind information of the officer please:-

1. PS to Chairman.
2. PA to Member Secretary.

DA/as above.


AEE (HQ)
For Chairman

06/14

Recommendation of Technical Advisory Committee of HSPCB made in its meeting held on 30.07.2019 under the Chairmanship of Sh. S. Narayanan IFS, Member Secretary, HSPCB.

The meeting of TAC was held on 30.07.2019 under the Chairmanship of Sh. S. Narayanan, Member Secretary, HSPCB in conference room of Head Office and the following members of the committee and other officers attended the meeting:-

1. Sh. S.S. Rathi, Sr. Environment Engineer-I (HQ).
2. Sh. Rajesh Garhia, Sr. Scientist (HQ)
3. Sh. Satbir Singh, District Attorney (HQ).
4. Sh. J.P. Singh, Environment Engineer (HQ).
5. Sh. Rajinder Sharma, Regional Officer, Panchkula
6. Sh. Vinay Gautam, AEE (HQ)
7. Sh. Vikas Chand, AEE (HQ).

Sh. Bhupender Rajinwa, Sr.EE-II (HQ), Sh. Satinder Pal, EE (HQ) & also attended the meeting as special invitee.

At the outset of the meeting, Sr.EE-I welcomed all the officers in the meeting and thereafter, the agenda items circulated vide letter no. HSPCB/PLG-TAC/2019/644-650 dated 29.07.2019 was taken up and discussed in the meeting as detailed below:-

Agenda item No. 1

Study on level & sources of air pollution in Haryana.

The above said agenda item has been received from Air Cell regarding conducting a specific study on levels and sources of air pollution in Haryana through a reputed university as per decision taken in 9th meeting of State Level Committee in the matter of Vardhman Kaushik Vs Union of India & Others constituted by Hon'ble NGT. It has been informed during the meeting that the proposal for same was sent to State Government, Environment Department to get the study conducted through Directorate of Environment Department, Haryana from a reputed university conversant with such studies and expenses for the same will be beared by the Board.

It has also been informed during the meeting that Director, Environment Department, Haryana forwarded the proposal submitted by different universities detail of which are given as under:-

Sr. no.	Name of University	Time frame	Budget Estimate (Rs.)	Name of Cities
1.	Dr. Bhupender Singh, Assistant Professor of Environmental Studies, BPSMV, Khanpur Kalan, Sonapat	03 years	1.15 Crore	Panipat & Sonapat
2.	Coordinator & Principal Investigator, Department of Environmental Sciences, MDU, Rohtak	02 years	21.22 Lakhs	04 cities adjoining to Delhi
3.	Director, Institute of Environmental Studies, Kurukshetra University, Kurukshetra	06 months	9.16 Lakhs	Kurukshetra.

The matter was discussed and it has been observed that the financial matter is involved in the study and the cost/budget of the same will be more than one lakh which require the procedure/instructions issued by Government of Haryana in this regard through tender /EOI as the case may be, to be followed.

[Handwritten signature]

Satbir Singh 1

06/15

After detail deliberation, the committee suggested that the Branch dealing with the subject matter will prepare the modalities in this regard as per instruction of the Government and will put up the case before Board after preparing detailed project report.

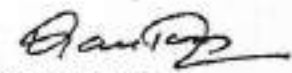
Agenda item No. 2

Efficacy/ Adequacy study for 15 Nos. of CETPs in the catchment area of River Yamuna.

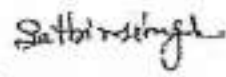
The above said agenda item has been received from Water Cell to conduct Efficacy/ Adequacy study of 15 Nos. of CETPs in the catchment area of river Yamuna. It has been informed during the meeting that River Yamuna Monitoring Committee (RYMC), Haryana has sent a communication that Board will conduct Efficacy/ Adequacy study of the existing CETPs as well as CETP under construction/up-gradation involving IIT Delhi/IIT Roorkee or any other reputed educational or research institute. RYMC has also sent list of 15 nos. CETPs existing and under up-gradation / construction and requested to submit the report within six months.


The matter was discussed and after detail deliberation, the committee suggested that Regional Officers of Board may be asked to conduct the component wise sampling with detailed assessment regarding adequate size/area of each component of STPs and CETPs corresponding to the treatment process and design of the same as per scheme feasibility report submitted by the project proponents at the time of obtaining CTE/CTO for the same and will submit the detailed report in this regard with comments and recommendation supported with analysis reports. Regional Officer will also initiate action against non complying CETP/STP projects for imposing Environmental compensation and for taking prosecution action.

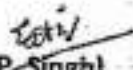

(Vikas Chand)
AEE (HQ)



(Vinay Gautam)
AEE (HQ)

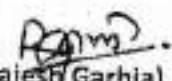

(Rajinder Sharma)
Regional Officer
Panchkula

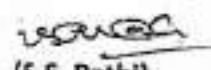

(Satbir Singh)
District Attorney


(Satinder Pal)
EE (HQ)
Special Invitee


(J.P. Singh)
EE (HQ)


(Bhupender Rinwa) Sr.EE-II
(HQ)
Special Invitee


(Rajesh Garhia)
Sr. Scientist (HQ)


(S.S. Rathi)
Sr. E.E.-I (HQ)

06/16



HARYANA STATE POLLUTION CONTROL BOARD
 C-11, SECTOR-6, PANCHKULA
 Ph-2577870-73 E-mail: hspcbstrscientist@gmail.com

No. HSPCB/Aircell/2019/

Dated:

INVITATION FOR EXPRESSION OF INTEREST (EOI) FOR SOURCE APPORTIONMENT AND EMISSION INVENTORY STUDY ON THE LEVELS AND SOURCES OF POLLUTION IN HARYANA

1. The Haryana State Pollution Control Board (HSPCB) intends to engage educational and research institutions of National and International repute, to carry out a Source Apportionment and emission Inventory Study on the level and Source of Pollution and prepare strategy for cost effective measures for abatement of air pollution in the areas of Gurugram, Faridabad, Sonapat and Panipat. The study will be for a period of one and half years.
2. The Board proposes to conduct the above study through reputed educational and research institutions and undertakings of the State / Central Government. Expression of Interest (Eoi) for carrying out the proposed study for the sites / indicating the interest in carrying out source apportionment and emission inventory study prescribing cost effective measures for abatement of air pollution in the above area from such institution are hereby invited.
3. The interested institutions may submit the Expression of Interest (Eoi) by providing required information as per the prescribed format, which may be downloaded from the Website of the State Pollution Control Board (www.hspcb.gov.in.)
4. The duly filled Eoi, supported with relevant documents, must reach the office of Member Secretary, State Pollution Control Board, Haryana, C-11, Sector-6, Panchkula on or before 10.12.2019, 03:00 PM. The envelope must be clearly superscripted as "EXPRESSION OF INTEREST FOR SOURCE APPORTIONMENT AND EMISSION INVENTORY STUDY ON THE LEVEL AND SOURCE OF POLLUTION"
5. The Eoi can be submitted through Registered Post / Speed Post. The HSPCB shall not be held responsible for any postal delay for non-receipt of Eoi within scheduled date and time.
6. Interested institutions are advised to visit the web site before submission of Eoi. Once Eoi received, it will be presumed that the institute is well aware of all procedure prescribed by the Board as indicated in the site.
7. The HSPCB reserves the right to reject any or all Eois without assigning any reasons thereof.

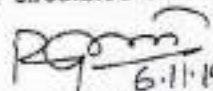
(S. Narayanan)
 Member Secretary,
 State Pollution Control Board, Haryana

06/17

Endst No.HSPCB/Aircell/2019/2639

dated 06.11.2019

A Copy of above is forwarded to the Director General Public Relations and Cultural
Affair Department for publishing in the National leading newspapers widely circulated on or
before 11.11.2019 and will submit bills as per DAVP Rates.



6.11.19
Senior Scientist,
For Member Secretary

Endst No.HSPCB/Aircell/2019/

dated

A Copy of above is forwarded to the following for kind information and necessary
action please:-

1. The Director, Environment and Climate Change department, Haryana, Chandigarh.
2. All the BIs in head Office and all the Regional Officers in the field.
3. The Nodal Officer IT branch for uploading the notice on website of the Board.
4. PS to Chairman/PA to Member Secretary.


Senior Scientist,
For Member Secretary

Annexure - 4
06/18

Proceeding of the meeting held 15.10.2020 at 01:00 PM for evaluation of Expression Of Interest (EOI) submitted by The Energy and Resources Institute (TERI) for Source apportionment and emission inventory study on the levels and sources of pollution in Haryana.

A committee of the following officers was constituted vide order Endst. No. HSPCB/SSC/2020/4578-4581 dated 21.07.2020 for evaluation of Expression Of Interest (EOI) submitted by "The Energy and Resources Institute" (TERI) for "Source Apportionment & Emission Inventory Study" on the levels and sources of pollution in Faridabad, Gurugram, Sonapat and Panipat Haryana:

1. Sh. S.S. Rathi, Technical Advisor (Special Member).
2. Dr. Jai Bhagwan, Sr. Scientist (HQ).
3. Sh. Nipun Gupta, Assistant Env. Engineer (HQ).
4. Dr. Pinki Jangra, Scientist B (HQ).

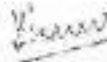
The meeting of the committee was held on 15.10.2020 at 01:00 PM regarding evaluation of Expression Of Interest (EOI) submitted by "The Energy and Resources Institute" (TERI) in reference to notice issued by Board in various newspapers for inviting EOI for "Source Apportionment And Emission Inventory Study" on the levels and sources of pollution in Faridabad, Gurugram, Sonapat and Panipat Haryana. At the outset of the meeting, Sr. Scientist, Incharge of Scientific Service Cell informed that the EOI for the said study project has been received only from the above mentioned one institute.

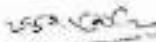
After detailed discussion and deliberations, it was observed that the published document of the EOI for the above said study project, is not proper correct as it contains the scoring methodology and qualifying criteria alongwith provisions for calling of the technical and financial bids from the parties qualifying the EOI which is against the tendering procedure and as such there should not be any provisions of scoring methodology and qualifying criteria for EOI as well as provisions for calling the technical and financial bids at this stage as provided in the said EOI.

Therefore, it was suggested by the committee that the EOI for above said study project may be floated / published again after correcting the document of EOI accordingly or Board may contact CPCB or any other Pollution Control Board / committee for providing their tender documents for the above said study or any similar type of study, if any conducted for their board by any institution through tendering process, so that HSPCB may prepare the tender document accordingly as per requirement of the above said project and float the same directly thereafter following the due procedure, without inviting EOI.


Dr. Pinki Jangra,
Scientist B


Sh. Nipun Gupta,
AEE


Dr. Jai Bhagwan
Sr. Scientist


Sh. S.S. Rathi,
Technical Advisor

Haryana State Pollution Control Board
C-11, Sector-06, Panchkula
Ph. 0172-2577870-73 Email:- hspcbaircell@gmail.com

Corrigendum in E-tender

Sub:- Expression of Interest (EOI) for Source Apportionment And Emission Inventory Study On The Levels And Sources Of Pollution In Faridabad, Gurugram, Sonapat and Panipat, Haryana.

Reference:- Online EOI tender released by Haryana State Pollution Control Board on the E-tender portal etenders.hry@nic.in, **Tender ID 2022_HBC_225877_1.**

This is for the information of all the interested bidders that as per the provisions of the above tender document, pre-bid meeting was held on 24.06.2022 at Head office of the Board, but no one has attended the meeting. Wherein the suggestions were received through email by the representatives of different firms was considered. The following amendments may be read in the above referred Eoi tender documents:-

Sr. No.	Reference	Original Clause	Revised Clause
1.	Clause B.3 & B.5	Scope of Work & Study Framework	The revised Scope of work and Study Framework is attached as Annexure-A (Model framework for conducting source apportionment studies) .
2.	Notice Inviting EOI	Due date for submission of EOI:-14.07.2022 Date of opening of EOI:-18.07.2022	Due date for submission of EOI:-22.07.2022 Date of opening of EOI :-26.07.2022
3.	Item Description	Source Apportionment and Emission Inventory Study For Faridabad, Gurugram, Sonipat and Panipat Cities of Haryana	Four District namely Faridabad, Sonapat, Gurugram and Panipat may be read as three Districts namely Sonapat, Gurugram and Panipat as District Faridabad is excluded from Source Apportionment Study as it has already been started in District Faridabad by Municipal Corporation, Faridabad.

Other terms and conditions will remain the same as per the original tender document.

Chairman
Haryana State Pollution Control Board

Model framework for conducting source apportionment studies

Ambient air quality monitoring carried out at various cities/towns in the country, provide air quality information that form the basis for identifying areas with high air pollution levels and subsequently, for planning the strategies for control and abatement of air pollution. Data generated over the years reveal that Particulate Matter (PM) exceed permissible levels at many locations, particularly in urban areas. Air pollution problem becomes complex due to multiplicity and complexity of air polluting source mix (e.g. industries, automobiles, generator sets, domestic fuel burning, road side dusts, construction activities, etc.). A cost-effective approach for improving air quality in polluted areas involves (i) identification of emission sources; (ii) assessment of extent of contribution of these sources to ambient air; (iii) prioritization of sources that need to be addressed; (iv) evaluation of various options for controlling the sources with regard to feasibility and economic viability; and (v) formulation and implementation of appropriate action plans. Source apportionment (SA) study, which is primarily based on measurements and tracking down the sources through dispersion and chemical mass balance models can help in identifying the sources and extent of their contribution to ambient air pollution.

As per the directions of Hon'ble NGT dated October 08, 2018 in the matter of O.A No 681 of 2018, all non-attainment cities are in process of firming up city-specific action plans targeting air polluting sources with defined timelines and responsible agencies to implement these plans. While current knowledge and available scientific evidence on the urban sources provide a basis to initiate action in different sectors, city-specific source apportionment studies are needed to refine air quality management plans for the city. National Clean air Programme (NCAP) also aims to carry out Source Apportionment studies for all 102 non-attainment cities.

Suggested framework to carry Source Apportionment study is given below:

Methodology & Scope of Work

- Central Pollution Control Board has already evolved a methodology for conducting SA studies, which is available at <https://cpcb.nic.in/displaypdf.php?id=c291cmNIYXBwb3J0aW9ubWVudH1N0dWRpZXMucGRm>) and the same may be followed. However, considering overall objectives of source contribution assessment, action planning and also available technical expertise and resources, revision in existing methodology is suggested, particularly with regard to detailed emission inventory; air quality monitoring - methodology, days, locations & seasons; and utilization of updated data sets for emission Factors (EF) and Source Profiles (SP).

06/21

Emission Inventory

- Development of detailed land-use map on a GIS platform and an updated (2 km x 2 km resolution) gridded GIS-based emission inventory for air pollutants (PM10, PM2.5, SO2, CO, NOx, volatile organic compounds (VOCs) and poly-aromatic hydrocarbons (PAHs) or any other pollutants specific to the city should be prepared duly accounting seasonal variations.
- Appropriate, updated Emission Factors may be used for developing Emission Inventory. Specific efforts should be made to identify and quantify non-point fugitive sources including unauthorized activities in non-conforming areas.
- Emission inventory of industrial and other sources shall be prepared through primary surveys including data collected using Online Continuous Emission Monitoring Systems.
- Emission inventory should be periodically reviewed and validated using appropriate techniques such as, mass balance technique as far as possible.

Monitoring

- Monitoring of air pollutants, PM10, PM2.5, SO2, NO2, Benzene, Toluene, and Xylene. Analyse collected PM10 and PM2.5 mass for elemental composition, ions, elemental carbon, organic carbon, PAHs (Benzo[a]pyrene, Fluorene, Acenaphthene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenz(a,h)anthracene, Indeno (1,2,3-c d) pyrene, and Benzo(ghi)perylene) and other source-specific molecular markers.
- Updated methodology with respect to selection of sampling equipment and measurement methods for the present study is enclosed as **Annexure I**.
- The ambient air quality monitoring should be carried out for pollutants specified in scope of work over a period covering **two critical seasons** (summer and winter) in a year, to get representative data on seasonal variations in meteorology as well as activities that have bearing on the air quality. The purpose of ambient air quality monitoring is not compliance verification.
- Air monitoring stations shall be installed at locations such as kerbside, residential, industrial and background. Minimum 05 locations for million plus cities and 04 locations for other cities. However, the number of monitoring stations can be increased depending upon the activity profile of a particular city.

- In order to capture the diurnal variations of sources as well as the typical meteorological changes, one should conduct monitoring using standard monitoring protocol spread over 60 - 100 sampling days (all sampling sites combined) of a season to cover the all days of week and get fair representation of the seasons. The number of days of sampling at each site for each season should be 15-20 days for million plus and 15 days for other cities. In case receptor modelling is carried out using PMF than monitoring of minimum 30 days at each site may be ensured.
- Monitoring of meteorological parameters should be carried out simultaneously preferably at each station or minimum at one location. Additional meteorological data for the study period shall be procured from IMD or other agencies or validated meteorological models.
- Appropriate, updated Source Profiles may be used. For a suitable model performance internationally developed profiles can also be used. Development of city specific $PM_{2.5}$ source profiles for other sources and molecular markers should be taken wherever required.
- With regard to dispersion modeling and intervention analysis, a suitable dispersion model and refined city-level emission inventory shall be used. All efforts should be made to validate the dispersion models against measured data.
- On completion of data collection, validation and interpretation of the assimilated information, a detailed road map shall be drawn considering all possible measures for air quality improvement. These measures shall be classified into short and long-term with due priority to low cost measures that give maximum benefits. Emission from sources in neighboring districts may also be considered during formulation of action plan to lower pollution levels.
- In view of limited source profiles and technical expertise for carrying out receptor modelling, source apportionment studies may be carried out in phases starting with detailed emission inventory and dispersion modelling. Subsequently, receptor modelling may be carried out in order to validate the dispersion modelling results.

References

06/23

ARAI 2018, emission factors for transport sector and DG sets.

CPCB. 2011. Air quality monitoring, emission inventory and source apportionment study for six cities, National Summary, Central Pollution Control Board, New Delhi.

IITK, 2015, Comprehensive study on air pollution and greenhouse gases (GHGs) in Delhi. Indian Institute of Technology, Kanpur.

SAFAR, 2018, SAFAR High Resolution Emission Inventory for Mega City Delhi, India, System of Air Quality and Weather Forecasting and Research (SAFAR).

TERI ARAI, 2018, Source Apportionment of PM2.5 & PM10 of Delhi NCR for Identification of Major Sources. The Energy and Resources Institute & The Automotive Research Association of India.

Modifications to Conceptual Guidelines and Common Methodology for Air Quality Monitoring, Emission Inventory Source Apportionment Studies for Indian Cities

CHAPTER – II

Guidelines for Ambient Air Monitoring Site Selection and Selection of Sampler

5.0 Options for Selection of Sampling Equipment in present study

As the target is to characterize both PM_{10} and $PM_{2.5}$ at same location simultaneously, each size class shall be collected in both PTFE and Quartz filter matrix. The ideal selection would be a four channel samplers accommodating two PM_{10} channels and two $PM_{2.5}$ channels. 37 mm or 47 mm two PTFE (for PM_{10} and $PM_{2.5}$ channel) and two tissue quartz filters (for PM_{10} and $PM_{2.5}$ channel) shall be used. Flow rates for PTFE channel is preferably set to 16.7 lpm and quartz channel may be set at 10 – 16.7 lpm.

Alternatively, either four low volume Airmetrics make samplers (two with PM_{10} head and two with $PM_{2.5}$ head) holding PTFE and Quartz filters for different size classes may be used

As a third alternative four low volume FRM samplers (two with PM_{10} down tube and two with $PM_{2.5}$ impactor or cyclone) holding PTFE and Quartz filters for different size classes may be used. The flow rates would be 16.7 lpm in this case. Use of four FRM samplers would be a costly proposal.

CHAPTER – III

General Guidelines on Ambient Air Quality Monitoring & QA/QC Field Sampling

Table 3 (b): Guidelines on Analytical Support/ Procedure for Gaseous Pollutants

Pollutants	Methods
SO ₂	Spectrophotometric measurement, Improved West & Gaeke Method
NO ₂	Spectrophotometric measurement, Jacobs & Hochheiser Method
CO	Automatic Analyser, NDIR Method
O ₃	Automatic Analyser, UV Photometric Method
Benzene	By Online BTEX Analyser or Active sampling in adsorption Tube, USEPA Method TO-1 or TO-2 GC-ATD Method
Alkanes	Selected alkanes, Alkenes, Aromatic / Cyclic Hydrocarbons more volatile than Ethane but less Volatile than C ₂₀ following USEPA Method TO-17, GC-ATD – FID Methods are recommended

06/25

2268830/2022/MinsdC8H Table 3 (c): Guidelines for Ambient Air Quality Sampling/ Analysis Methodology for Target Pollutants

Pollutants									
Particulates	PM10	PM 2.5	NOX	SO2	CO	O3/EC	Ions	VOC	O3
Sampling Instrument	Multichannel Sampler Or Two PM10 FRM sampler stationed at same location Or two low flow (5 lpm) Air Metrics Samplers	Multichannel Sampler Or Two FRM (PM2.5) sampler Or two low flow (5 lpm) Air Metrics Samplers	Impingers attached to HV/S or RDS Or Handy sampler at 1 lpm	Impingers attached to HV/S or RDS Or Handy sampler at 1 lpm	Automatic analyser	RM10 Sampler Particulate collected on Quartz filter	RM10 Sampler Particulate collected on Quartz filter	Low volume sampling pump connected to Adsorption Tube/ Tedlar bags Or Pressurized canister sampling	Automatic analyser
Sampling Principle	Filtration of aerodynamic sizes with a size cut by impaction	Filtration of aerodynamic sizes with a size cut by impaction followed by cyclone separation	Chemical absorption in suitable media	Chemical absorption in suitable media	Suction by Pump As per instrument specification	Filtration of aerodynamic sizes with a size cut by impaction	Filtration of aerodynamic sizes with a size cut by impaction	Active pressurized sampling / Adsorption	Suction by Pump Or Chemical Absorption
Flow rate	15.7 LPM Or 5 lpm (for low flow samplers) Or as per manufacturers manual	15.7 LPM Or 5 lpm (for low flow samplers) Or as per manufacturers manual	1.0 lpm	1.0 LPM	0.1 lpm	As per selected samplers	As per selected samplers	5 - 200 ml per minute	As per instrument specification
Sampling Period	24 hourly	24 hourly	24 hourly (4 hourly composite)	24 hourly (4 hourly composite)	17/7/24 hourly	24 hourly	24 hourly	Grab	8/24 hourly
Sampling frequency	20 Days in Month for three season	Once in week	20 Days in Month for three season	20 Days in Month for three season	Twice a week	20 Days in Month for three season	20 Days in Month for three season	Once in Month 8 hourly staggered sampling	Twice a week
Analytical Instrument	Electronic Micro Balance	Electronic Micro Balance	Spectrophotometer	Spectrophotometer	Automatic CO analyser	O3EC Analyser	Ion Chromatography	GC-ATD-FIDMS Or GC-FIDMS	Automatic analyser
Analytical method	Gravimetric	Gravimetric	Colorimetric Improved West & Gaeke Method	Colorimetric Jacobs & Hochreiter Modified method	NDR	TCR/TOT Method NIOSH 5040	Ion Chromatography	USEPA method TO-15/TO-14	UV-Photometry Or Colorimetric
Minimum Reportable value	5 µg/m ³	5 µg/m ³	9 µg/m ³	4 µg/m ³		0.2 µg/0.5 cm ² punch		0.1 ppb	2 ppb Or 10 µg/m ³

Notes: 1. Benzene and 1,3-butadiene and a flame ionizable phasane include in VOCs
2. Methodology for molecular markers has been provided separately

**Minutes of the meeting held on 04.08.2022 at 11:15 AM regarding
opening of bid for Source Apportionment Study**

A meeting to evaluate the bids received by closing date 22 July 2022 regarding source apportionment and emission inventory study on the level and source of pollution in selected cities of Haryana was held on 04.08.2022 at 12:30pm in the committee room. Following officers of the evaluation committee were present:-

1. Sh. Balraj Ahlawat, SEE (Training Cell).
2. Sh. Vinay Gautam, EE (Aircell).
3. Dr. Monika, Sc. 'B' (SWM).
4. Dr. Maninder Kaur, Consultant 'B'
5. Sh. Anil Kumar, Sc. 'B' (Aircell).

The EOI have been received from following prospective bidders who submitted their EOI on e-tender website.

1. The Energy and Resources Institute, New Delhi
2. Automotive Research Association of India, Pune.

The evaluation of bids as per Clause No. C of EOI is mandatory for all the Bidders for shortlisting purpose for them to be even considered for the Technical Evaluation Stage. The committee members examined the EOI to determine whether the documents are complete and duly signed. The received documents from two bidders were thoroughly checked. The forms received were found to be properly filled up and in order as per the guidelines issued in the invitation of EOI. The details on evaluation of the Bidders against the Eligibility/ pre-qualification Criteria as given in Annexure-I.

Comments from committee members on evaluation of bids were noted. In form 6, in EOI it is mentioned that minimum 5 project coordinators are required per city. However, both bidders have provided details of total 5 project coordinators. The same was later clarified from both the bidders telephonically. They have informed that under the project coordinators, they have adequate institutional research staff available that will assist in the study.

Further, the scores to the bidders were assigned based on the weightage already listed in EOI for criteria. The two bidders have obtained following scores :-

Name of Bidder	Score Obtained	Total Scores
The Energy and Resources Institute (TERI), New Delhi	73	100
The Automotive Research Foundation of India (ARAI), Pune	49	

SD/

Anil Kumar

Dr. Maninder Kaur

Monika

06/27

The detailed scores obtained by each bidder is attached at Annexure II. The final qualifying marks were decided to be 40 by the evaluation committee. Accordingly, both bidders are shortlisted for opening of financial bid and the committee recommends to accept the technical bid on e-tender site.

Anil Kumar
09.08.2022
Anil Kumar,
Sc. 'B' (Air cell)

Maninder Kaur
Dr. Maninder Kaur,
Consultant 'B'

Monika
Dr. Monika,
Sc. 'B' (SWM)

Vinay Gautam
Vinay Gautam,
EE (Air cell)

Balraj Ahlawat
Balraj Ahlawat,
SEE (Training Cell)

06/28

Annexure-1

Bid Evaluation for Engagement of Reputed Educational and Research Institutions of Central / State Government for Source apportionment and emission inventory study

As per Clause No. C of EOI the following Criteria as given below is Mandatory for the Bidders for Shortlisting Purpose for them to be even considered for the Technical Evaluation Stage.

The Evaluation of the Bidders against the same Eligibility/ prequalification Criteria is as given below:

Sl. No	Pre-qualification Criteria	The Automotive Research Foundation of India (ARAI)	The Energy and Resources Institute (TERI)
1	Central and State Educational or research institute like IIT, NIT or CSIR laboratory or any other similar institutions by Govt. of Haryana / Govt. of India.	Complied.	Complied.
2	The institution must have similar type of experience in conducting Source Apportionment & Emission Inventory (SA & EI) or other such Air Pollution Control related and meteorological studies.	Complied.	Complied.
3	The institution should have capacity to undertake all type of measurement on atmospheric phenomena, Climate and weather monitoring facility survey of area, modeling studies and other related measurement towards execution of the project.	Complied.	Complied.
4	The institutions should have qualified & experienced Environmental Engineers/ Meteorologists/ Atmospheric Experts, Surveyor etc. to conduct the field work as well as preparation of SA & EI. The educational qualification of functional experts, area of specialization and technical skill, experience and expertise in relevant field will be criteria for selection of institution	Complied. The Institute has provided details of well qualified and experienced Experts in the relevant filed for Environment Engineer/Meteorologist s/ Atmospheric Expert and Surveyor.	Complied. The Institute has provided details of well qualified and experienced Experts in the relevant field for Environment Engineer/Meteorologist/Atmospheric Expert and Surveyor.
5	Reputed educational and/or research institutions (hereinafter referred as institution) complying with all the below eligibility criteria shall be eligible	Complied (6 project coordinators for all the three cities)	Complied (5 project coordinators for all the three cities).
	a. Registration/Affiliation/Recognition	Yes	Yes
	b. Specialization(Department/Stream)	Yes	Yes
	c. Staff and Personnel	Yes	Yes

06/29

Annexure-2

Scoring of Technical Bids

The scoring criteria	S. No	Sub Criteria	Marks	TERI	ARAI
Past Experience of the Institute	1.	Past experience of studies of similar nature	36 (Upto 05 studies =12) (06 to 10yrs studies=24) (More than 10 studies=36)	24 (Details of 8 such studies have been submitted)	12 (Details of 4 such studies have been submitted)
	2.	Sector Past experience of studies in related sector	18 (Upto 05 studies = 6) (06 to 10yrs studies=12) (More than 10 studies =18)	18 (Details of 11 such studies have been submitted)	12 (Details of 7 such studies have been submitted)
	3.	Studies Carried outside India	06	06	0
Total				48	24
Experience of Key Personnel	1.	Qualification	07	07	07
	2.	Relevant Experience	18	18	18
Total				25	25
Facility available for conducting such studies	1.	Rating of the educational and research institution	15	0	0
	Total			0	0
Grand Total Marks				73	49

I/130639/2022

Annexure-7

06/30

HARYANA STATE POLLUTION CONTROL BOARD
C-11, SECTOR-6, PANCHKULA
Ph-2577870-73 E-mail: hspcbaircell@gmail.com

Office Order

Whereas, an EOI was uploaded on 15.06.2022 regarding e-tender site for inviting bids on Source Apportionment and Emission Inventory Study for districts of Gurugram, Sonipat and Panipat and;

Whereas, a committee comprising of following officers was constituted for opening and evaluation of technical bid and;

1. Sh. Balraj Ahlawat, SEE (Training Cell).
2. Sh. Vinay Gautam, EE (Aircell).
3. Dr. Monika, Sc. 'B' (SWM).
4. Dr. Maninder Kaur Sidhu, Consultant 'B'.
5. Sh. Anil Kumar, Sc. 'B' (Aircell).

Whereas, technical bid was opened on 26.07.2022 and two institutions, namely, TERI (New Delhi) & ARAI (Pune) have submitted their bids on the e-tender site. The technical bid was evaluated by the committee and recommended to accept their bids on e-tender site and;

Whereas, Competent Authority has accepted the recommendations of committee and constituted a committee comprising of following officers for opening of financial bid and for submitting recommendations.

1. Chief Accounts Officer, HSPCB
2. Sh. Balraj Ahlawat, SEE (Training Cell).
3. Sh. Vinay Gautam, EE (Aircell).
4. Dr. Monika, Sc. 'B' (SWM).
5. Dr. Maninder Kaur Sidhu, Consultant 'B'.
6. Sh. Anil Kumar, Sc. 'B' (Aircell).

Dated, Panchkula
(Retd.)

18th August, 2022

P. Raghavendra Rao, IAS

Chairman

A copy of the above is forwarded to the following for information and necessary action please.

1. Chief Accounts Officer, HSPCB.
2. Sh. Balraj Ahlawat, SEE (Training Cell).
3. Sh. Vinay Gautam, EE (Aircell).
4. Dr. Monika, Sc. 'B' (SWM).
5. Dr. Maninder Kaur Sidhu, Consultant 'B'.
6. Sh. Anil Kumar, Sc. 'B' (Aircell).
7. PS to Chairman, HSPCB.
8. PA to Member Secretary, HSPCB.

Signed by Vinay Gautam
 Date: 24-08-2022 15:28:29
 Reason: Approved

I/130639/2022

06/31

**Env. Engineer (Aircell)
for Chairman**

Minutes of the meeting for the opening of financial bid for source apportionment and emission inventory study on the level and source of pollution in selected cities of Haryana held on 06.09.2022.

A meeting for the opening of the financial bid was held on 06.09.2022 and the following members were present:-

1. Sh. Balraj Ahlawat, SEE.
2. Sh. Vinay Gautam, EE (Air Cell)
3. Sh. Mohan Singh, Sr. A.O.
4. Dr. Monika, Scientist 'B'.
5. Dr. Maninder Kaur, Consultant B.
6. Sh. Anil Kumar, Scientist 'B'.

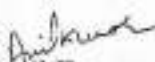
Before opening the financial bid, the committee raised concerns regarding the criteria to process the financial bids even if only two EOIs have been received. After much deliberation, the committee reached a unanimous decision to seek clarification on the evaluation procedure and necessary approval from competent authority may be taken before the opening of financial bids.

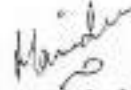
In this regard, the relevant part regarding the clarification on instructions for 'Evaluation of Bids and Award of Work' (Point 5.6.7. given on page no.80) as given in the Manual for Procurement of Works (by Government of India Ministry of Finance Department of Expenditure) has been circulated to all the committee members and is also reproduced as under:-

"Even when only one bid is submitted, the process may be considered valid provided following conditions are satisfied:

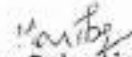
- i. *The procurement was satisfactorily advertised and sufficient time was given for submission of bids;*
- ii. *The qualification criteria were not unduly restrictive; and*
- iii. *Prices are reasonable in comparison to market values."*

In view of the above, the committee recommended that the Air Cell Branch may take approval from the Competent Authority to proceed with the opening of financial bids received from two bidders in view of instructions of Ministry of Finance Department of Expenditure, Govt. of India.

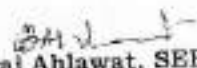

Anil Kumar,
Scientist 'B'


Dr. Maninder Kaur,
Consultant B

Mohan Singh, Sr. A.O


Dr. Monika Scientist-B


Vinay Gautam, EE


Balraj Ahlawat, SEE.

I/137928/2022

06/33

Annexure - 9

HARYANA STATE POLLUTION CONTROL BOARD
C-11, SECTOR-6, PANCHKULA
Ph-2577870-73 E-mail: hspcbaircell@gmail.com

Order

A meeting for opening of the financial bid for source apportionment and emission inventory study was held on 06.09.2022 in presence of all committee members. The committee has observed that only 02 bidders have submitted the bids.

Regarding this, the clarification on instructions for "Evaluation of Bids and Award of Work" (Point 5.6.7. given on page no.80) as given in the Manual for Procurement of Works (by Government of India Ministry of Finance Department of Expenditure) has been circulated to all the committee members and is also reproduced as under:-

"Even when only one bid is submitted, the process may be considered valid provided following conditions are satisfied:

- i. *The procurement was satisfactorily advertised and sufficient time was given for submission of bids;*
- ii. *The qualification criteria were not unduly restrictive; and*
- iii. *Prices are reasonable in comparison to market values."*

The committee recommended to seek clarification on the evaluation procedure and to take necessary approval from competent authority before the opening of financial bids received from 02 institutions only.

Accordingly, after consideration of the recommendations of the committee, approval is hereby accorded to the committee to open financial bids received from the two bidders in view of instructions of Ministry of Finance Department of Expenditure, Govt. of India.

Dated Panchkula, the
06th October, 2022

P. Raghavendra Rao,
Chairman

A copy of above is forwarded to the following for information and further necessary action please.

1. Chief Accounts Officer, HSPCB
2. Sh. Balraj Ahlawat, SEE (Training Cell).
3. Sh. Vinay Gautam, EE (Aircell)
4. Dr. Monika, Sc. 'B' (SWM).
5. Dr. Maninder Kaur Sidhu, Consultant 'B'.
6. Sh. Anil Kumar, Sc. 'B' (Aircell)

Signed by Vinay Gautam
Date: 17-10-2022 16:01:45
Reason: Approved
Env. Engineer (Aircell)
for Chairman

A copy of above is forwarded to the following for information, please

1137928/2022

06/34

1. PS to Chairman, HSPCB.
2. PA to Member Secretary, HSPCB.

06/35

Proceedings of the meeting held on 28.10.2022 at 12:30 PM for opening of financial bid for Source Apportionment and Emission Inventory study on the level and source of pollution in selected cities of Haryana i.e. Gurugram, Panipat and Sonipat.

A committee of the following officers was constituted vide order dated 28.09.2022 to finalize the sealed financial bids received from TERI and ARAI for source apportionment and emission inventory study on the level and source of pollution in selected cities of Haryana i.e. Gurugram, Panipat and Sonipat.

1. Sh. Balraj Ahlawat, SEE (Training Cell).
2. Chief Accounts Officer, HSPCB
3. Sh. Vinay Gautam, EE (Aircell)
4. Dr. Monika, Sc. 'B' (SWM).
5. Dr. Maninder Kaur Sidhu, Consultant 'B'.
6. Sh. Anil Kumar, Sc. 'B' (Aircell).

Meeting of the committee was held on 28.10.2022 to finalize (opening of sealed quotations and preparation of comparative chart) the sealed quotations received from TERI and ARAI and to submit recommendations. All members were present in the meeting.

At the outset, Sh. Anil Kumar, ScB informed the committee members regarding bids received from two bidders and approval accorded by Competent Authority issued vide orders dated 17.10.2022 to open the financial bids submitted by the following two bidders.

1. The Automotive Research Association of India, S. No. 102, Vetal Hill, Off Paud Road, Kothrud, Pune 411 038 (India).
2. The Energy and Resources Institute, Darbari Seth Block, IHC Complex, Lodhi Road, New Delhi - 110 003, INDIA.

Thereafter, the sealed quotations of above said two institutions were opened by the committee. The summary of comparative chart is as under:-

1. The Automotive Research Association of India, S. No. 102, Vetal Hill, Off Paud Road, Kothrud, Pune 411 038 (India) has quoted rate of ₹ 1,87,62,000.00 (Rupees One Crore Eighty-Seven Lakhs Sixty-Two Thousand Rupees Only) for 03 cities, Government Taxes Such as GST, which will be applicable at the time of billing. Presently the GST of 18% is applicable. (LI)



 The block contains four handwritten signatures in black ink, arranged horizontally. From left to right, they appear to be: a signature with a horizontal line underneath, a signature that looks like 'S. Ahlawat', a signature that looks like 'D. Maninder', and a signature that looks like 'M. Monika'.

06/36

Proceedings of the meeting held on 28.10.2022 at 12:30 PM for opening of financial bid for Source Apportionment and Emission Inventory study on the level and source of pollution in selected cities of Haryana i.e. Gurugram, Panipat and Sonipat.

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1. Sh. Balraj Ahlawat, SEI (Training Cell).
2. Chief Accounts Officer, HSPCB
3. Sh. Vinay Gautam, EE (Aircell)
4. Dr. Monika, Sc. 'B' (SWM).
5. Dr. Maninder Kaur Sidhu, Consultant 'B'.
6. Sh. Anil Kumar, Sc. 'B' (Aircell).

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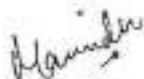



06/37

2. The Energy and Resources Institute, Darbari Seth Block, IHC Complex, Lodhi Road, New Delhi - 110 003, INDIA has quoted rate of ₹ 2,65,53,140.00 (Rupees Two Crore Sixty-Five Lakhs Fifty-Three Thousand One Hundred and forty only) for 03 cities. (L2)

On the basis of rates, the committee recommends that branch may issue work order for 03 locations to the Automotive Research Association of India, S. No. 102, Vetal Hill, Off Paud Road, Kothrud, Pune 411038 (India) regarding source apportionment and emission inventory study on the level and source of pollution in selected cities of Haryana i.e. Gurugram, Panipat and Sonipat as the rate of this ₹ 1,87,62,000.00 (Rupees One Crore Eighty-Seven Lakhs Sixty-Two Thousand Rupees Only) including taxes (L1).

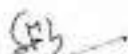
The report and recommendation of the committee may be placed before the Competent Authority for consideration and approval please.



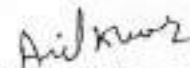
Dr. Maninder Kaur Sidhu,
Consultant 'B'



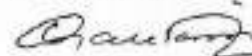
Dr. Monika,
Sc. 'B' (SWM)



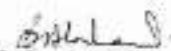
Mohan Singh
Chief Accounts Officer, HSPCB



Sh. Anil Kumar,
Sc. 'B' (Aircell)



Vinay Gautam,
EE (Aircell)



Balraj Ahlawat,
SEE (Training Cell).

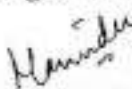
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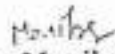
Comparative Chart of Rates


The Comparative Statement of Rates submitted by the institutes for source apportionment and emission inventory study on the level and source of pollution in selected cities of Haryana i.e. Gurugram, Panipat and Sonipat.

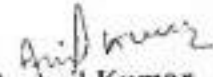
Name of City	TERI (L2) (in ₹)	ARAI (L1) (in ₹)
Gurugram	75,00,887	62,50,000
Panipat	75,00,887	48,00,000
Sonipat	75,00,887	48,50,000
Taxes	40,50,479	28,62,000
	2,65,53,140	1,87,62,000
Total	Rupees Two Crore Sixty-Five Lakhs Fifty-Three Thousand One Hundred and forty only	Rupees One Crore Eighty-Seven Lakhs Sixty-Two Thousand Only


Rate quoted by The Automotive Research Association of India, S. No. 102, Vetal Hill, Off Paud Road, Kothrud, Pune 411038 (India) amounting to ₹ 1,87,62,000.00 (Rupees One Crore Eighty-Seven Lakhs Sixty-Two Thousand Rupees Only) including GST for source apportionment and emission inventory study on the level and source of pollution in selected cities of Haryana i.e. Gurugram, Panipat and Sonipat is lowest.

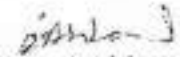

Dr. Maninder Kaur Sidhu,
Consultant 'B'


Dr. Monika,
Sc. 'B' (SWM)


Mohan Singh
Chief Accounts Officer, HSPCB


Sh. Anil Kumar,
Sc. 'B' (Aircell)


Vinay Gautam,
EE (Aircell)


Balraj Ahlawat,
SEE (Training Cell).

Attendance sheet for the Meeting held on 28.10.2022 at 12:30 PM for opening the financial bid for source apportionment & emission inventory study.

Sr. No.	Name & Designation	Signature
1.	Balraj Singh	Balraj Singh
2.	Moham Singh	Moham Singh
3.	Vinay Gautam CE	Vinay Gautam
4.	Sr. Monika	Monika
5.	MANINDER KAUR Consultant B	Maninder
6.	ANIL KUMAR Sc B	Anil Kumar
7.		