CENTRAL POLLUTION CONTROL BOARD
ZONAL OFFICE, (WEST)
PARIVESH BHAWAN
OPP. WARD NO. 10 VMC OFFICE
SUBHANPURA, VADODARA – 390 023
(GUJARAT)

Sub: Inviting quotations for VOC Monitoring at Naroda (Ahmedabad), Gujarat and Dombivali, Maharashtra

Volatile organic Compounds (VOCs) Monitoring at Naroda (Ahmedabad) Industrial Area in Gujarat, and Dombivali industrial area in Maharashtra are proposed as per approval in CPCB Annual Action Plan 2014-2015. The monitoring is proposed to be carried out in January/February 2015.

In this regard, quotations are invited for the sampling and analysis of VOCs for VOC Monitoring at two areas i.e. Naroda, Gujarat and Dombivali, Maharashtra. The quotation should reach on or before **19.12.2014 (03:00 PM)**. The Terms of Reference (TOR) is given below:

Terms of Reference (ToR)

Volatile Organic Compounds (VOCs) Monitoring at Naroda (Ahmedabad) Industrial Area in Gujarat, and Dombivali industrial area in Maharashtra are proposed as per approval in CPCB Annual Action Plan 2014-2015. The monitoring is proposed to be carried out in January/February-2015. The list of 60 VOCs is provided along with scope.

Scope of work:

- The tentative number of samples under VOC Monitoring per area will be as under:
  - Ambient Monitoring: Locations- @5, Samples-15,
  - Industrial Monitoring: (Fugitive, Effluent): @ 20
  - CETP, Other Water bodies: @ 10

    Total: @ 45

- Selection of ambient air quality monitoring locations primarily based on wind direction, proximity to residential/commercial area, safety, availability & accessibility of locations in presence of CPCB officials.
- The AAQM sampling shall comprise 3 samples of 8 hour duration each i.e. for 24 hrs, at one location. Fugitive Emission sampling comprise of 4 hours in each locations due to the high concentrations.
- USEPA TO – 17 method shall be used for AAQM and Fugitive emission monitoring of VOCs- sampling by multibed (tenax/Chromosorb) adsorbent tubes and analysis by thermal desorption (ATD) followed by GCMS.
- Water and Wastewater analysis as per USEPA 5030C using GCMS – Purge & Trap Method.
- After sampling, the identified samples are to be capped securely.
- Samples to be collected in adsorbent tubes should not be kept in warm places or exposed to direct sunlight. After sealed the samples are to be keep in a cold storage box.
- Samples are to be transported immediately after the sampling is over and stored under refrigeration until they are analysed. The samples should be analysed within 7 days.
- Data pertaining to the VOCs study are to be documented on a data sheet
- All instruments are to be operated in accordance with operating instructions as supplied by the manufacturer.
- Equipment check and calibration activities are to be carried out.
- Analysis results shall be provided within 3 week time after sampling along with chromatograms.
- Analysis results of the work/study shall not be produced/shared in any manner to any outside agency/person without prior written permission from CPCB.

Requirement:

- special rates per sample for:
  a) wastewater
  b) fugitive emission (for 1 sample: 4 hrs sampling)
  c) ambient air (8 hrs sampling, 3- samples/times, average 24 hrs),
  including transportation, accommodation, any other charges and any applicable taxes for the sampling and analysis of VOCs for VOC Monitoring at two areas i.e. Naroda (Ahmedabad), Gujarat and Dombivali, Maharashtra.

- The quotation with sampling & analysis methods other than specified shall be summarily rejected.
- The laboratory should have recognition under E (P) Act and NABL (for VOCs).

LIST OF 60 VOLATILE ORGANIC COMPOUNDS (VOCs)

S.NO	VOC	S.NO	VOC
1	Benzene	31	Trans-1,3-Dichloropropene
2	Bromobenzene	32	Ethyl Benzene
3	Bromochloromethane	33	Hexachloro-1,3-butadiene
4	Bromodichloromethane	34	Isopropylbenzene
5	Chloroform	35	Para-Isopropyltoluene
6	Bromoform	36	Methylenechloride
7	n-Butylbenzene	37	Naphthalene
8	Sec-Butylbenzene	38	2-Propylbenzene
9	Ter-Butylbenzene	39	Styrene
10	Carbon Tetra chloride	40	1,1,1,2-Tetrachloroethane
11	Chlorobenzene	41	1,1,2,2-Tetrachloroethane
12	2-Chlorotoluene	42	Tetrachloroethene
13	4-Chlorotoluene	43	Toluene
14	Dibromochloromethane	44	1,2,3-Trichlorobenzene
15	1,2-Dibromo-3-chloropropane	45	1,2,4-Trichlorobenzene
16	1,2-Dibromoethane	46	1,1,1-Trichloroethane
17	Dibromomethane	47	1,1,2-Trichloroethane
18	1,2-Dichlorobenzene	48	Trichloroethylene
19	1,3-Dichlorobenzene	49	1,2,3-Trichloropropane
20	1,4-Dichlorobenzene	50	1,2,4-Trimethylbenzene
21	1,1-Dichloroethane	51	1,3,5-Trimethylbenzene
22	1,2-Dichloroethane	52	Xylene
23	1,1-Dichloroethene	53	Meta-Xylene
24	Cis-1,2-Dichloroethene	54	Para-Xylene
25	Trians-1,2-Dichloroethene	55	Chloroethane
26	1,2-Dichloropropane	56	Chloromethane
27	1,3-Dichloropropane	57	Trichlorofluoromethane
28	2,2-Dichloropropane	58	Bromomethane
29	1,1-Dichloropropene	59	Vinyl Chloride
30	Cis-1,3-Dichloropropene	60	Dichlorofluoromethane

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