

# MAHARASHTRA POLLUTION CONTROL BOARD

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Opp. Sion Circle, Sion (East),  
Mumbai-400 022.

NO.MPCB/JD(APC)/B-5072

Date: 01/10/2013

To,

M/s. Ashwamedh Engineers & Consultants C.S.L.,  
Survey No.102, Plot No.26, Wadala Pathardi Road,  
Indira Nagar, Nashik – 422 009.

**Sub: Work Order for Project on Monitoring, Sampling, Analysis for Stack, Ambient Air Quality, Surface Water, Waste Water and Ground Water Quality in Critically Polluted areas in Maharashtra i.e. Chandrapur & Dombivali.**

**Ref: Work order No. MPCB/JD(APC)/B-1061/2013, dated 26/02/2013.**

Sir,

Earlier Board has awarded the work Monitoring, Sampling, Analysis for Stack, Ambient Air Quality, Surface Water, Waste Water and Ground Water Quality for identified 5 (five) Critically Polluted areas in Maharashtra i.e. Chandrapur, Dombivali, Aurangabad, Navi Mumbai, Tarapur to you as per above reference on approved rate basis (per sample per location). Further MPC Board is willing to award you same work for Chandrapur and Dombivli region.

## TERMS AND CONDITIONS:

- 1) The name of the work is "Monitoring, Sampling, Analysis for Stack, Ambient Air Quality, Surface Water, Waste Water and Ground Water Quality for identified Critically Polluted areas in Maharashtra i.e. Chandrapur & Dombivali".
- 2) The project awarding agency is Maharashtra Pollution Control Board, Mumbai.
- 3) The Project executing agency is M/s. M/s. Ashwamedh Engineers & Consultants C.S.L., Survey No.102, Plot No.26, Wadala Pathardi Road, Indira Nagar, Nashik – 422 009 is hereby referred as "Executing Agency".
- 4) The executing agency shall carry out the monitoring sampling and analysis work for Stack, Ambient Air Quality, Surface Water, Waste Water and Ground Water Quality for identified Critically Polluted areas in Maharashtra i.e. Chandrapur & Dombivali during period from 11<sup>th</sup> November, 2013 to 23<sup>rd</sup> November, 2013 as per schedule in Annexure –II.

...2/-

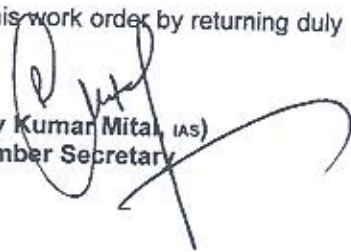
- 5) The approved rates for monitoring will be as follows:
- |                                                 |                       |
|-------------------------------------------------|-----------------------|
| i) 24 hours ambient air quality monitoring      | Rs.9,300 per location |
| ii) Stack monitoring                            | Rs.9,200 per location |
| iii) VOC                                        | Rs.3,800 per sample   |
| iv) Water, waste water and ground water quality | Rs.4,800 per sample   |
- These rates are inclusive of monitoring, sampling, analysis, transportation and any other miscellaneous charges. Service tax shall be paid as per the applicable norms.
- 6) The list of identified industrial clusters for which monitoring, sampling and analysis work shall be carried out by the Executing Agency, is placed at Annexure-II.
- 7) The executing Agency shall carry out the monitoring, sampling and analysis works as per Standard Methods and as per the norms. All the instruments / equipments / glass-wares etc. to be utilized in monitoring work and analysis of samples, should be properly calibrated and records of the calibration submitted to MPCB.
- 8) At above 2 CPAs, 24 hourly ambient air quality monitoring shall be carried out for parameters as listed at Annexure-I. Representative samples for surface water quality, waste water quality and ground water quality shall be collected from prominent surface and ground water bodies located in and around the clusters/areas. The location and parameters to be monitored in stack, ambient air including VOC's, waste water, surface water & ground water shall be finalized in consultation with respective RO/SRO.
- 9) The executing Agency shall not assign / outsource any component of the 'Work/ to any other Agency.
- 10) The executing Agency shall submit the complete monitoring, sampling and analysis reports including summary of the parameters exceeding the prescribed standards / norms for all the 2 CPAs before 23<sup>rd</sup> November, 2013.
- 11) The Executing Agency shall inform to MPCB HQ/RO/SRO about the constitution of the teams, names and contact nos. of team leaders and their visit schedule to the allocated CPAs for the monitoring and sampling works.
- 12) The Executing Agency shall co-ordinate with the concerned RO/SRO/Lab. For efficient monitoring and sampling works.
- 13) The executing Agency shall provide the monitoring schedule to the concerned RO/SRO to ensure their participation in the monitoring & sampling works.
- 14) Amendment of the Terms & Conditions of the Work Order: No amendment or modification of this Work Order shall be valid unless the same is made in writing by both the parties or their authorized representatives and specially stating the same to be an amendment of this Work Order. The amendment shall be effective from the date on which they are made/executed, unless otherwise agreed to.



: 3 :

- 15) All the information and data generated or collected during the execution of the work shall be treated as confidential and sole property of MPCB and the findings of the study shall not be published without prior & written permission of MPCB.
- 16) This work Order shall be operative until the completion of the project and acceptance of the final report by MPCB.
- 17) The project shall be implemented as per the approved rates as mentioned under the Clause "Terms and Conditions" and MPCB will not provide any additional fund on account of cost escalation due to delay in project implementation or due to any other reasons whatsoever.
- 18) MPCB shall not bear any responsibility for the personnel engaged under the project.
- 19) During the course of implementation of the project, the Executing Agency shall provide the information to the participating MPCB's officials regarding the methodologies/techniques being adopted for implementation of the project.
- 20) The Executing Agency shall submit 3 copies of final report with photographs at prominent locations & the CD (Soft copy) on completion of the project for every critically polluted area separately. The final report should be submitted latest by 15<sup>th</sup> December, 2013. For any delay in submission of the final report beyond the specified period, penalty @ 1% per week of the project cost shall be charged subject to maximum penalty of 15% of the project cost.
- 21) Taxes as applicable, shall be deducted at source.
- 22) You shall raise and submit, the invoice / Bill on the basis of actual monitoring carried out to respective Regional Officer, MPCB, Board.
- 23) In case of any dispute, the decision of Member Secretary, MPCB will be final.

It is requested to acknowledge the receipt and acceptance of this work order by returning duly signed copy of the same, on or before 11.11.2013.

  
(Rajeev Kumar Mital, IAS)  
Member Secretary

Copy for further necessary action to:

- 1) C.A.O., MPCB, Mumbai
- 2) PSO/SLO/JD(WPC)/JD(APC)/AS(T)/ RO(HQ), MPCB, Mumbai.
- 3) RO, MPCB, Chandrapur/ Kalyan )  
- They are directed to co-ordinate with Executing agency and report accordingly.
- 4) SRO, MPCB, Chandrapur/Kalyan.  
- They are directed to co-ordinate with Executing agency and report accordingly.

## Annexure-I

### **A. Ambient Air Quality Monitoring Parameters.**

- i. SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>25</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, 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, Colour, 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, 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.**

### **C. Stack monitoring/VOC monitoring Parameters**

Acid mist, Ammonia, Carbon Monoxide, Chlorine, Fluoride (gaseous), Fluoride (particulate), Hydrogen Chloride, Hydrogen Sulhide, Oxides of Nitrogen, Oxygen, Poly Aromatic Hydrocarbons (particulate), Suspended Particulate Matter, Sulphur Dioxide, Benzene Toluene Xylene (BTX), Volatile Organic Compounds (VOCs)

**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.


  
(Rajeev Kumar Mital, IAS)  
Member Secretary



## Annexure-II

### Scope of work & Time Schedule

Sr. No.	Location	Ind. Cluster	No. of Stack Monitoring	No. of Ambient Air Quality Monitoring	No of water/ waste water samples (SW)	No of Ground Water Samples	No. of VOC Samples	Date from	Date to	Duration
1	Chandrapur	Tadali	06	03	06	03	02	11.11.13	12.11.13	2 days
		MIDC Chandrapur	06	03	06	03	02	13.11.13	14.11.13	2 days
		MIDC Ghugus	06	03	06	03	02	15.11.13	16.11.13	2 days
		Ballarpur	06	03	06	03	02	17.11.13	18.11.13	2 days
2	Dombivli	MIDC Phase-I	06	06	06	03	02	20.11.13	21.11.13	2 days
		MIDC Phase-II	06	06	06	03	02	22.11.13	23.11.13	2 days

  
(Rajeev Kumar Mital, IAS)  
Member Secretary