

SPECIFICATION /REQUIREMENT OF CONTINEOUS AMBIENT AIR MONITORING STATION (CAAQMS)

REQUIREMENTS

- 1. CAAQMS- 2 Nos with the following items**
 - a. Porta Cabin- 2 Set (Each porta cabin has to have 2 Nos of AC, other details are mentioned below in description)**
 - b. SO₂ analyser-2Set**
 - c. Nox analyser-2 Set**
 - d. CO analyser- 2 Set**
 - e. Multi Point Calibrator (with inbuilt zero air generator)- 2 Sets**
 - f. PM10 analyser-2 set (Along with heads)**
 - g. PM2.5 analyser-2 set (Along with heads)**
 - h. Online Weather Monitoring system – 1 Set**
 - i. UPS - 2 sets**
 - j. Calibration gas cylinders of 10L each for CO, NO₂& SO₂.- 2 Sets each (Aluminim cylinders shall only be provided)**
 - k. Air purification system- 2 Sets**
 - l. Dual Bay analyser rack- 2 sets**
 - m. All required consumables for 1 year**

SPECIFICATIONS

1. Approval of Analysers: All the analysers (equipment) and its component to be US EPA approved only

2. Method of measurement:

- i. PM 10 & PM 2.5 # Beta attenuation
- ii. SO₂ # UV Fluorescence
- iii. NO_x- Chemiluminiscence
- iv. CO # Gas filter Correlation-NDIR

3. Range:

- i. PM 10 & PM 2.5 # 0-5000 ug/m³
- ii. SO₂ # 0-1 PPM (0-2620 ug/m³)
- iii. NO_x- 0-1880 ug/m³ (NO₂) -0-1230 ug/m³ (NO)
- iv. CO # 0-100 ppm (0-1150 ug/m³)

4. Multipoint calibrator with zero air generator: Online and automatic

5. Portacabin: Dimensions: Approximate to 4000mm L X 3000mm W X 2500mm H Wall material & thickness: Outer 1.5 mm SS sheet and inner 1.2mm GI.

Others Accessories: All required electrical fittings, lighting system, doors, windows, ACs, rack for consumable and spares, computer table and chair etc.

Other features: The portacabin should have internal thermal insulation (rock wool) with all required canopy to prevent entry of rain water. Separate chamber for storage of calibration gas cylinders. The roof should be strong enough to support weight of minimum two persons during maintenance activity. There

should be provisions of hook for loading and unloading of the portacabin. Ladder to be provided for each Portacabin (2 Nos) of adequate length for fixing of heads etc. Material should be of FRP.

6. Dual Bay analyser rack: Should have space for mounting at least 8 analysers

7. Air Purification System: Air purification system consisting of Heatless Air Dryer, Compressor, Scrubber Set, Catalytic converter for removal of CO or Hydrocarbons.

8. UPS: 5 KVA Power Bank UPS with 1 hr backup (Make: Emerson/Microtech preferable)

9. Air Conditioner: 5 star rated 1.5 ton split AC (Make: Carrier; Refrigerant : R-410A)

10. Weather Monitoring station :

Weather monitoring station consisting of the following sensors 1. Wind Speed 2. Wind Direction 3. Atmospheric Pressure 4. Rain gauge 5. Ambient temperature 6. Relative humidity (Preferably Metone make)

11. Local station PC Based Data logger: Dell make desk top with minimum 4 GB RAM and 1 TB hard disk. All software should be genuine and licensed.

12. Calibration Gas Cylinders: 10 L capacity of Aluminium make. Pressure vessel certificate and certificate for purity of gases will be provided by the party. The concentration of the gases will be as per requirement of the analysers.

13. Delivery Period: Maximum 3 months from the date of placement of order.

14. Installation & Commissioning: To be in vendor's scope Within 15 days