MAHARASHTRA POLLUTION CONTROL BOARD

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MAHARASHTRA

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No. MPCB/AS(T)/OM/TB-B/ B - 1 0 54   Date: 16 /03 /2019.

To,
All Industries
(17 Category and Grossly Polluting)

Sub: Direction for installation of Remote Calibration Performance Check/ Validation from MPCB Server.

Ref: 1. Guidelines for Remote Calibration issued by Central Pollution Control Board.
          2. CPCB D.O. letter vide C-12011/33/2017-18/Tech./471 dtd. April 13, 2018.

As per Central Pollution Control Board, New Delhi guidelines, the instrument/ analyzer system shall have provision of remote calibration, for verification of Online Continuous Emission Monitoring System (OCEMS) performance i.e. data verification/Validation by Maharashtra Pollution Control Board, whenever felt necessary.

Member Secretary, Central Pollution Control Board, New Delhi issued D.O. letter dated April 17, 2018 to all State Pollution Control Boards and directed to make Remote Calibration facility mandatory for 17 category and Grossly Polluting Industries in Maharashtra and that facility should be made available by 15 March 2019.

Therefore, you are directed to ensure the following
1. Calibration facility available at your end.
2. Instruments are periodically calibrated and calibration data is also entered automatically in to the system through the software install.
3. Remote calibration facility is available at each gaseous OCEMS.

Detail guidelines for Remote calibration of OCEMS may be referred as given on CPCB website (URL:-http://cpcb.nic.in/ocems3/)
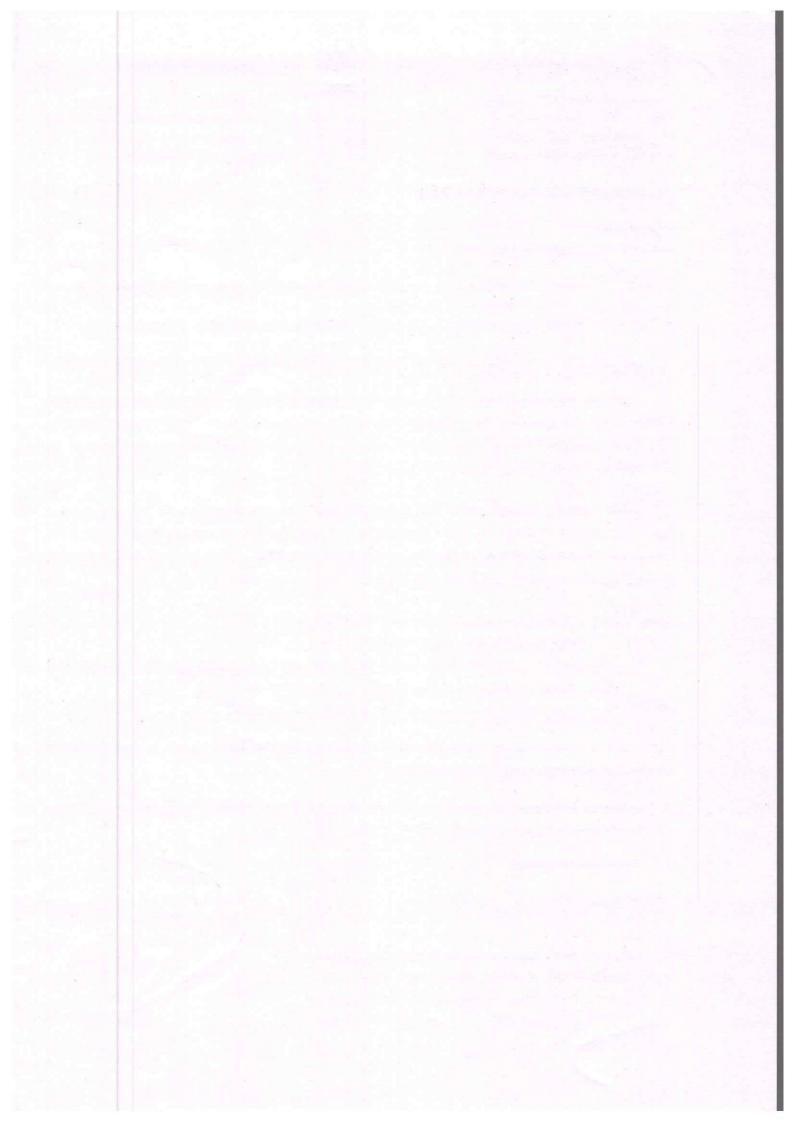
In view of the above, you all are directed to make Remote Calibration facility available and same should be confirmed to Board immediately.

Copy enclosed:- As above.

(E. Ravendiran, IAS)
Member Secretary

Copy to:
1. All HODs – For follow up and necessary compliance
2. All Regional Officer and Sub Regional Officer.
          - For necessary compliance of above direction.

CALIBRATION

A. Calibration of Air Analysers

Gaseous Parameter

a. The instruments/ analysers for real time monitoring of gaseous emissions shall be calibrated with respect to their functioning, drift, linearity detection limit, output, operating temperature and other relevant parameters before installation.

b. It is advised to mention that calibration for certified CEMS and full performance demonstration of uncertified CEMS (which involves calibration) must be performed while being installed.

c. After six months of operation, the system shall be rechecked for its health and data accuracy and reliability, following multi point calibration (at least 03 span concentrations) using standard methods and certified reference materials.

d. The data comparison and calibration verification shall be done once in 06 months by empanelled laboratories following standard procedures and using certified reference standards.

e. The health of the instruments/analysers shall be assessed on daily basis at fixed time (10.00 a.m.) by checking the zero drift. No adjustment is allowed.

f. In case the daily zero drift is more than the acceptable limit as specified in the catalogue/brochure of the instrument/analyser manufacturer and persists continuously for five days, the instrument/ analyser shall be recalibrated following procedure laid down at point (d) above.

g. The instruments/ analysers shall be rechecked for zero and span drift every Friday at fixed time (10:00 a.m.) using standard methods and standard reference materials. The drift needs to be recorded and suitably incorporated in the data collected over the period.

h. For Differential Optical Absorption Spectroscopy (DOAS), Non Dispersive Ultra Violet (NDUV)/Non Dispersive Infra-Red lamp based systems, the calibration shall be revalidated once in 03 months, and after replacement of lamp. In-situ based TDLS/ DOAS needs to be brought down to lab for calibration.

i. The values of NDUV / NDIR based system will be compared with the standard methods using Standard Reference Material every Friday at fixed time (10.00 am) and Zero drift checked daily at fixed time (10.00 am).

j. The instrument/ analyser shall be recalibrated after any major repair/replacement of parts/lamps or readjustment of the alignment using standard methods and certified reference materials.

k. The instrument/ analyser system shall have provision of remote calibration, for verification of the system performance by SPCBs/PCCs whenever, felt necessary.

l. The intensity of the lamp shall be checked once every fortnight.

m. Data capture rate of more than 85% shall be ensured.

n. For FTIR Spectroscopy calibration once a year checks are acceptable or when major over haul as change in Lazer / Spectrometer.

o. Using Air for Zero/Span calibration is not acceptable, Zero / Span Gas / Gas filled Cuvette to be used with required certifications.

Particulate Matter

The PM CEMS device is ready for calibration only after performing all of the required installation, registration, and configuration steps. Details of Particulate Matter CEMS calibration are given below.

a. The continuous Particulate Matter monitoring system (PM-CEMS) shall be calibrated at different operational loads against isokinetic sampling method (triplicate samples at each load) at the time of installation and thereafter, every six months of its operation.

b. The results from the Particulate Matter monitoring system shall be compared on fortnightly basis i.e. second Friday of the fortnight, at fixed time (replicate sample) starting 10.00 am. with standard isokinetic sampling method.

c. In case, deviation of the comparison values for 02 consecutive monitoring is more than 10%, the system shall be recalibrated at variable loads against isokinetic sampling method (replicate samples).

d. No adjustment of Calibrated Dust Factor (CDF) is allowed unless full-scale calibration is performed for PM CEMS. Change of CDF should be permitted only if it is approved by SPCB/ PCC.

e. After any major repair to the system, change of lamp, readjustment of the alignment, change in fuel quality, the system shall be recalibrated against isokinetic sampling method. (triplicate samples at each load)

f. The data capture rate of more than 85% shall be ensured.

g. The intensity of lamp shall be checked once every fortnight.

h. The data comparison/calibration verification shall be done by laboratories empanelled by CPCB using standard reference methods and at a frequency specified.

General parameters

The following parameters shall also be monitored:-

(i)   Carbon Dioxide (CO_2) (for normalising the values)

(ii)   Stack gas velocity

(iii)   Flue Gas Volumetric Flow Rate

(iv)   Flue Gas Temperature

(v)   Stack Gas Parameters(Flue gas pressure)

(vi)   Oxygen (O_2)

(vii)   Carbon Monoxide (CO)

(viii) H_2O/Moisture in in-situ/ Hot Water Measurement

B. Effluent Quality Monitoring

(i)   The instruments/analysers for real time monitoring of effluent discharges/ shall be calibrated with respect to their functioning, drift, linearity detection limit, output, response time, repeatability of temperature and other relevant parameters before installation.

(ii)   After six months of operation, the analysers/ instruments /sensors shall be checked for their health, data accuracy and reliability following multi point calibration (at least at 3 span concentrations) using standard laboratory methods and certified reference materials.

(iii)   Comparison of the values of pH, COD, BOD, TSS and TOC as recorded by the analysers/instruments/sensors shall be done on a fortnightly basis i.e, second Friday of the monthly, at fixed time, starting 10.00 am., using standard reference materials.

(iv)   In case deviation of the comparison values exceeds the target accuracy specified for the parameter, the analyser/instrument/sensor shall be rechecked for its accuracy again on the next day, following standard laboratory methods and standard reference materials.

(v)   In case the deviation of the comparison values is beyond the target accuracy for the specified parameters for 2 consecutive days, the system shall be recalibrated in the laboratory following multi point calibration (at least 03 span concentration) using standard laboratory methods and certified reference material.

(vi)   In case of any change in effluent matrix, the correlation between TOC: COD & TOC: BOD with laboratory reference method in case of TOC analyser and for COD and BOD with laboratory reference method in case of UV-Visible Spectroscopy shall be rechecked.

(vii) The data capture rate shall be more than 85%.

(viii) The data comparison/calibration verification shall be done by laboratories empanelled by CPCB using standard reference methods and certified reference standard material as specified and at a frequency specified.

Criteria for Empanelment of Laboratories

(i) Laboratories recognised under the Environmental (Protection) Act, shall only be considered for empanelment.

(ii) The EPA recognised Laboratory having achieved robust statistical Z score more than 70% in the laboratory proficiency testing shall only qualify for empanelment.

(iii) The empanelled Laboratory shall participate in the proficiency testing programmes organised by CPCB twice a year.

(iv) The empanelment of Laboratories, failing to achieve the required Z score in the proficiency testing shall be kept in abeyance, till their performance in the next round of proficiency testing meets the prescribed score.

(v) Laboratories failing consecutively twice in achieving the desired Z score in proficiency testing shall not be considered for empanelment and/or their empanelment withdrawn

(vi) CPCB shall arrange for Analytical Quality Control Proficiency Testing programmes for Air Pollutants along with the Water Quality parameters.

(vii) The Head Quarter/ Zonal Office laboratories of CPCB shall verify performance of atleast 2% of the installed real time monitoring systems every year.

(viii) The data comparison/calibration shall be done by empanelled laboratories at frequency specified under para-"Calibration".