11.06.2015

<u>Web Advertisement</u>

<u>(C-12011/33/2015-Tech)</u>

<u>ATTENTION FOR ONLINE MONITORING</u>

In continuation to CPCB's earlier Web-Advertisement, it is to further inform that All the a) Instrument manufacturers or 2) Suppliers of instruments or 3) Software firms having combination with instrument manufacturers, having capabilities to transmit Real Time Data from Continuous Emission and Effluent Monitoring systems, requesting to place their servers are permitted to install their servers either at CPCB or at Cloud as per their choice and software evaluation mechanism of protocol integration etc. will be followed after installation. Copy of Protocol Ver 1.2 attached at Annexure-I.

CENTRAL POLLUTION CONTROL BOARD

IT DIVISION

Protocol for Real Time (Emission & Effluent) Data Management from Industries

Version -1.2 (10.06.2015)

1. All the systems, used for Real-Time monitoring of emissions and effluents in the industry, should have certified instruments/analysers/equipments (each model individually certified) from institutions like TUV, MCERT, USEPA etc. as notified by CPCB (press advertisement copy attached).

2. The following categories of instrument manufacturers and software developing firms having capabilities of analysers/ equipment and software (Central software and other) are accepted as a part of CEMS (emission and effluent) monitoring system:

Category A: Instrument manufacturers or an authorised representative in the country having integrated operations for both hardware and software in Real Time Monitoring will be accepted.

Only one authorised representative of Instrument manufacturer will be responsible for data management in the country. For this purpose authorisation certificate from OEM (Original equipment manufacturer) certifying and authorising the firm for the data management is required. The central software with supporting hardware will be owned by this firm.

Category B: Manufacturers/suppliers having own software development teams with domain experts (environment) will be accepted. The software teams will continue to ensure total integration of instrument protocols, software updation, etc.

Category C: Instrument manufacturers having exclusive tie-up with any software firm for integrated operations, with responsibilities fixed for each party. In such cases, the manufacturer will have sole responsibility for efficacy of software deployed at specific locations and at CPCB/SPCBs. The software firm has to customise its software for the specific make and model analysers, by integrating total protocols. The manufacturer has to submit a copy of MoU/Agreement with software developer firm for a period of not less than five years.

3. The instrument manufacturers will be holding entire responsibility for data management related to the system installed by them. Any lapse due to instrument failure/ system failure/ data gaps arising due to connectivity/software/hardware failures will be taken seriously and will attract penal action including black-listing of firms.

4. The manufacturers will be supplying all the required software like central software, station software or any hardware device like data logger along with the Real Time Monitoring System.

5. The central software and other software will be evaluated by I.T. Division at CPCB for the following compliance:

   i. 100% Protocol Integration checks with the actual protocol of the instrument, of which data will be transmitted by the firm to SPCB & CPCB on Real Time Basis.
   ii. Data generation and transmission:
       a. The firm will be responsible for submission of the data exactly as generated at the monitoring station to regulatory authorities like CPCB, SPCBs, PCCs.

b. The firm will also ensure continuous data submission without delay.

c. No human intervention should be there in the system.

d. The firm will ensure online system based data correction request management

   iii. Health status alarms

      a. Diagnostics data transmission

      b. Real Time Alarm transmission

   iv. Quality check

      a. Automatic system based check codes implementation

      b. QA/QC data submission

   v. Remote calibration and configuration

      a. Remote calibration mechanism (except in case of PM, Effluent)

      b. Remote configuration

      c. Remote auditing

   vi. Automatic exceedance reports

   vii. Live feedback in terms of images and video

6. The manufacturer shall publish a technical document and an operating manual to the users. This information must also be made available to CPCB. On the behalf of manufacturer, the software developer/ supplier will ensure to comply with regulatory requirements, the methods and data used must be clearly stated and these are subjected for auditing. The data generated through secret calculations, assumptions and policies will not be accepted. The following issues will be addressed:

- o Data is stored and managed without getting corrupted

- o Appropriate calculations are implemented

- o Reports represent raw or processed data

- o Limitations are clearly stated

- o Appropriate manipulations of data such as smoothing/ filtering should be stated

- o Treatment of outliers as legitimate data or erroneous data

- o Architecture, OS, application software platforms should be stated

- o Rationale of the choice of software components incorporated

7. The customised central software proposed by the manufacturer should meet software quality standards. A Software Quality Plan (SQP) containing Software Configuration Management (SCM) should be prepared. A system for reporting, logging and software defects should be maintained. It shall backup all software and documentation, by laying down procedures for regular on-site/off-site back-ups, for restoring files and for regularly testing and backup arrangements.

8. Two or more manufacturers can use software application or product developed by one agency. However, there should be separate agreements with each agency and the software has to be fully integrated with the protocols for integrated data management.

9. The manufacturers falling in any one of the three categories may host the central software on cloud or datacenter and provide access to all authorised persons. If these firms choose, a physical server with supporting hardware, may be installed for data management through central software and other support software at CPCB, Delhi.

On evaluation, the status of each manufacturer will be published on CPCB website. The list will be updated every month. Each firm will ensure that all the requirements

mentioned in this document are met and will be ready to demonstrate the capabilities.

10. Process of Software Evaluation

Once, the Instrument Supplier/Manufacturer/Software Company installs its server at WEB CLOUD/Datacenter (Datacenter in India having redundancy with minimum 99.7% uptime)/CPCB, it may proceed for process of software validation as below:

A. Instrument supplier will submit request at asudhakar.cpcb@nic.in & aditya.cpcb@nic.in along with the following information:

(1) S.No	(2) Name of Proponent Manufacturer/Rep of firm	(3) Name of the manufacturer represented by the firm	(4) Category in which proponent falls as per this document	(5) Server Address along with User ID and Password	(6) Parameters for which instrument supplied	(7) Make	(8) Model

(9) Technology certification like TUV/MCERT/ USEPA etc.	(10) Complete protocol details (attach certified copy)	(11) Number of firms where instruments supplied (attach parameter wise list of industries)	(12) Parameter wise technology used	(13) Name of software proposed to be installed at server	(14) Version of the software with year

B. Requests received during a week till Thursday will be intimated for live demonstration of central software on following Thursday at 3:00 p.m. A written communication will be sent to this effect on Friday. If the number of request are

more than two then meeting will also be conducting on Friday at 3:00 p.m. In case of any holiday declared on Thursday, the Meeting will be held on Friday.

C. Each firm will be given 40 minutes duration for the demonstration. It is expected that the environment domain expert from the firm will make presentation and demonstrate all the features of the central software. A 20-minute question-answer interactive session will be held to discuss related issues. Based on the meeting, the minutes will be prepared and will be provided containing the outcome. If the central software has any limitations on technical issues, these will be mentioned in specific.

D. In case of non-compliance with respect to CPCB criteria, the firm may address all these issues of non-conformities and return back with a request for a meeting, after a period of one month.

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The industries and other waste managing facilities who have been directed by the State Pollution Control Boards and Pollution Control Committees to install on-line effluent and emission monitoring devices are hereby informed to note the following:

(i) The systems installed or to be installed which may include sensors/electrodes/data communicating devices or other related devices, should have the certification of Institutions like US-EPA, MCERTS and TUV, till Indian certification is established.

(ii) In case of Indian manufacturers/assemblers intending to provide such system, should also have either:

    a. Certification from USEPA, MCERTS, TUV/or

    b. Indigenous/assembled system be installed where already certified sensors are in place and such indigenous be matched with certified one by way of collateral installation for a period of not less than 30 days. For such installation, accredited laboratory will cross check with results by carrying out manual testing and monitoring.

(iii) The data from installed location should seamlessly be transmitted to CPCB and SPCBs and mere placing of server by individual vendor at CPCB/SPCBs will not lead to any claim for his recognition by CPCB/SPCBs.

(iv) Every system supplier will comply with testing/calibration protocol as per International Standards and of the CPCB.

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