

CSS Workshop-cum-Review Meet on

**Post Implementation of Real-time Monitoring Programme
in Madhya Pradesh State**

December 11th, 2019

Venue - Auditorium, Lake Conservation Authority, Bhopal

Preamble :

The Real-time continuous monitoring has a significant role in environmental management. Availability of data on real-time basis helps in quick analysis and instant follow up action for better control over possible impacts on the environment. The National Environment Policy 2006 envisaged to strengthen the testing infrastructure and network for monitoring ambient environmental quality and progressively ensure real-time and on-line availability of the monitoring data. As per GoI's policy the Central pollution control board initiated a scheme of 'self monitoring of compliance' for industries which requires monitoring using real-time monitoring systems.

The Environment Surveillance Centre, M.P. Pollution Control Board (MPPCB), organised a one-day Central Server Software Workshop-cum-Review Meet on 'Post Implementation of Real-time Monitoring Programme in Madhya Pradesh State' at Bhopal on 11.12.2019. The workshop was aimed to develop a better understanding in industry people about the real-time monitoring (RTM) technology and provide a platform to them to interact with the technology experts and regulators of apex regulatory body to resolve the problems and challenges being confronted by them. Making industry people aware about current technology and latest guidelines for better implementation of 'self-monitoring of compliance' programme was also prime aim of the workshop. A sector-wise review was also done to assess the progress of RTM programme in Madhya Pradesh State. The workshop was attended by 145 participants representing industries of 17 categories and common treatment facilities.

Proceedings :

The workshop started with the floral welcome of dignitaries and guests. Shri P.K. Behera, Regional Director, Central Pollution Control Board was the special guest and Shri Aditya Sharma, Scientist 'D', Central Pollution Control Board Delhi & Shri Sanjeev Kumar Kanchan, Associate member, BIS, UNEP, iCED and CEM-India were the expert guest faculty on the occasion.



H'ble Member Secretary, MPPCB being greeted on the occasion



Welcome of Dignitaries during Inaugural Session of Workshop



Floral Welcome of Expert Guest Faculty on the occasion

This was followed by welcome address by Dr. Rajendra Chaturvedi, Scientist, Environment Surveillance Centre (ESC), M.P. Pollution Control Board (MPPCB) with warm words of welcome to the dignitaries and the participants. In his opening remarks he made the participants aware about the present status and progress of Real-Time Monitoring (RTM) programme implementation in the State. While making a point on the importance of this workshop he also underlined the challenges being faced by the industries and the lackings from their end which require attention on priority to fulfil the compliance provisions.



Opening remarks by Scientist, ESC



Address by Regional Director, CPCB

Shri P.K. Behera, Regional Director, Central Pollution Control Board in his brief but captivating speech attracted the attention of participants to importance of real-time monitoring tool which is the demand of present time in controlling the industrial processes and emissions for the betterment of environment.

He also appreciated the efforts of M.P. Pollution Control Board in pursuing the industries for proper implementation of RTM programme. He also hailed the move of MPPCB to bring the red category and other pollution prone industries under the scanner of RTM. He complimented by stating that the MPPCB has excelled and surpassed the other State Pollution Control Boards in the central zone. He made an appeal to the industries for continuous efforts and to ensure that the RTM system established by them should function incessantly and uninterruptedly to meet the basic objectives.

Shri R.S. Kori, Member Secretary, MPPCB praised the idea of organising workshop on real-time monitoring technology and quoted it as prime demand of the present time. He cited the National Environment Policy 2006 which envisaged the need of the real-

time and online monitoring for better environmental quality. He asserted the need to take up the task of implementation of real-time monitoring programme in the State on priority and take advantage of this state-of-the-art technology in quick decision support for better environmental management. He stated that all the three stakeholders, viz. regulatory authority, industries and the service providers/vendors, share the equal responsibility and they all need to put-in joint efforts to make this real-time monitoring programme a success in the State of Madhya Pradesh.



Shri R.S. Kori, Member Secretary, MPPCB addressing the Participants

The Member Secretary also appreciated the spirit shown by the industries in quick adoption of this new technology with positive intent. He urged the participants to extract most out of this workshop and take benefit of knowledge of eminent resource persons who kindly agreed to be a part of this workshop for the better cause of environment.

A total of 155 participants representing industries of different sectors from across the State attended the workshop. Among the resource persons Shri Aditya Sharma, Scientist 'D', Central Pollution Control Board Delhi and Shri Sanjeev Kumar Kanchan, Associate member, BIS, UNEP, iCED and CEM-India New Delhi, participated in the workshop.



Vote of Thanks by Shri Pracheer Dixit, ESC, MPPCB

The vote of thanks was extended by Shri Pracheer Dixit. He thanked the dignitaries, all the expert resource persons and the participants present on the occasion. He also assured the authorities to lead the RTM activities and take this to new heights. He also made certain to follow the path shown by them in their addresses to attain the goals.

Proceedings of Technical Sessions

The workshop was scheduled for one day and was divided into two technical sessions covering various aspects related with real-time monitoring technology. This included challenges in RTM and post-installation protocols and operation & functions of Central Server Application developed by MPPCB to bring all the industries on single platform and manage data scientifically in a structured way.

The first technical session was opened with the deliberation by Shri Pracheer Dixit, ESC, MPPCB who spoke on Operation and Work Flow of Central Server Application from industry perspective. He stated the advantages of newly developed CSS platform over the earlier system and made elaboration on various features as how they work and can be used in routine work and how it is useful in management of voluminous RTM data for quick action and decision support.



Presentation on CSS by Shri Pracheer Dixit, ESC, MPPCB

He also explained as how the challenges being faced by industries earlier have been taken care and the connectivity of CAAQMS, CEMS, CWQMS, FM, IP-Camera etc and data flow has become easier and simpler. Enhanced data security and encryption, data validation on real-time basis etc features were elaborated to the broader understanding of participants. Industries Reporting Module was demonstrated in detail alongwith alert messages service and work-flow reporting.



Dignitaries and Participants engrossed in workshop presentations

The next speaker of the day **Shri Aditya Sharma, Scientist 'D', Central Pollution Control Board, Delhi** spoke on Existing Procedures, Protocols and Challenges in real-time monitoring of industries. After introductory information and chronological background about real-time monitoring programme he spoke about CPCB policies on RTM data, challenges in technology selection for RTM parameters, selection of location for installation of RTMS and methodology for various parameters, quarterly Compliance Reporting Protocol etc. during his absorbing deliberation. He also briefed about parameters and standard limits and various technologies, viz. Tribo flo, electrodynamic, scatter light, Beta radiation, wet-extractive, gravimetric measurement etc used for particulate matter measurement and NDIR, FTIR, Spectroscopy etc methods for gaseous CEMS. Need of calibration and how it is done was also explained by him nicely in simplistic way.



Deliberation by Shri Aditya Sharma Scientist 'D', CPCB, Delhi

Shri Sharma also talked on policy perspective for implementation of CEMS, various issues involved in implementation of this technology, concerned statutory provisions, current development in this area etc. for the knowledge of participants.



Data policy for regulators as well as industries, challenges being faced by industries under RTM programme and their remedial measures were also discussed during the address. The information on various portals in operation by CPCB for OCEMS was also shared with the participants. The participants raised several queries pertaining to regulatory aspects and operation of real-time monitoring programme. Thirst of participants was quenched with satisfactory reply to all the questions raised by them. All were also made aware about the Support service created by CPCB as part of query-response service for online assistance at any point of time.

Shri Sanjeev Kumar Kanchan, new Delhi deliberated on Sector Specific approach and Post-installation Assessment of CEMS. While justifying the need of real-time monitoring and its multifold advantages in the current scenario he discussed the challenges being confronted by the industries and the regulators, specially pertaining to system calibration, reliability of data etc.



A talk by Shri Sanjeev Kumar Kanchan during the workshop

The current challenges and the roadmap required to be followed to achieve the objectives was briefed by him during the deliberation. The solution suggested by him calls for responsibilities of both industries as well as the regulators.



The components of CEMS audit, PM and gaseous CEMS installation, selection of various technologies and methodologies based on the sector and specific processes, DAHS etc. were also discussed during the talk. Standardization of RTM data was another important area which was discussed in detail for most of the parameters. The influence of moisture, temperature, pressure etc on the CEMS parameters and their reporting protocols were explained thoroughly which are fairly responsible for the reliability of data. A detailed check-list was also presented by Shri Kanchan to the participants for CEMS audit and assessment. The importance of each point in ensuring data reliability was quite absorbing and informative and was explained for the better understanding to the participants.

He detailed about data integrity issues and the techniques to be applied to verify the real-time monitoring data for its reliability. He narrated few graphical presentations giving examples of tampered and suspected data. He also focussed on data flow mechanism and sources where data tampering is possible.

Dr. Rajendra Chaturvedi, Scientist, ESC, MPPCB, while reviewing the status of implementation of real-time monitoring programme by industries in the State, informed the participants about temporary relaxation in condition pertaining to MCERTS and TUV certifications for the installation of continuous emission monitoring systems. Information was also shared with the participants regarding progress on establishment of indigenous certification agency by GoI. Remote calibration facility, periodic calibration of RTMS, uptime of data transfer, i.e. data capture rate, CEMS selection criteria, monitoring of Mercury parameters by thermal power plants etc. were also highlighted in his talk.



Dr. Rajendra Chaturvedi, Scientist making his point to the Participants

He emphasized the need and urged the industry representatives to exploit the features of CSS and derive most out of it for speedy actions and effective implementation of RTM programme in the State.

Queries and Suggestions by Participants

During the session the participants raised their queries which were responded by the experts faculty. Few common inputs received from the participants are stated as follows which would be given due attention, based on their merits, for further improvement in implementation of RTM programme :

1. The participants showed concern about services of internet service providers and poor post-installation response by them to maintain the uptime of data connectivity. This leads to problem in achieving the required data capture rate of >85% and transmission of the same on real-time basis.
2. A point was raised that the Guidelines on CEMS require Certification of CEMS but as on date there is no agency in the country for equipment certification. This needs to be pushed up on priority to resolve the issue. Accreditation of laboratories and empanelment of agencies was also voiced by the participants.
3. The participants had a common view against the frequent changes in RTM guidelines and varied directions. They were of the opinion that there should be consistency in the policy and guidelines as frequent changes cost hefty amount in replacing the existing instrument, which are not old and have sufficient running life too, and adopting the new technology. This amounts to a economic loss not only to the industry but to the nation as a whole. Technology/instrument once recommended should be valid atleast for five years.
4. Query was also raised about the provision to install the Black box or IoT device by industry for communication of real-time data and whether it is mandatory for all the industries or it is only for sector specific industries.
5. Some participants were of the opinion that there should be a mandatory provision for dedicated environment cell in industry so that environment issues can be attended in true spirit by the designated dedicated staff .
6. Feeling of disquiet and deep concern was shown by participants on lack of services by their vendors/service providers. Monopoly of companies also add to the distress and trouble of industries.
7. A suggestion was received from some participants to hold a joint meet of industries and the vendors to discuss and resolve the common problems being faced by them in implementation of RTM programme.

8. The participants expressed views for alteration in existing data communication process which requires the industry to transmit same data to the Central as well as State agency on different platforms. They urged to have a common platform where data can be pushed by the industries which can be accessed by any regulatory agency. This would help in avoiding duplicity of work and save time and infra cost too.

At the end, the sincere contribution made by all the expert resource persons was acknowledged. The role of participants was also acknowledged for keeping the entire session live and energised by interaction and raising relevant queries on the subject. All the participants were assured that their suggestions and remarks given in the feedback form would be looked into and attended on their merits for onward action.

The relevant literature on real-time monitoring, guidelines on CEMS, CAAQMS, CEQMS, relevant protocols, Compliance reporting protocol, CSS info etc was provided to all the participants for better understanding on the subject and future reference.

The programme was concluded with words of thank to the expert resource persons and ended with thanks to the Chair, dignitaries and the participants.
