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Department of Environment and Natural Resources  
**ENVIRONMENTAL MANAGEMENT BUREAU**  
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**EMB MEMORANDUM CIRCULAR**

No. 2020 **003**

**SUBJECT : MANDATING ALL EMB REGIONAL OFFICES (EMB - ROs) TO ESTABLISH AN AIR QUALITY NETWORK CENTER USING A UNIFORM DATA ACQUISITION AND HANDLING SYSTEM (DAHS) WHICH SHALL ACT AS REPOSITORY OF INDUSTRIAL EMISSION OF FIRMS REQUIRED TO INSTALL CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS) / CONTINUOUS OPACITY MONITORING SYSTEM (COMS)**

**DATE : JAN 27 2020**

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**SECTION 1. LEGAL BASIS**

Pursuant to Section 38 of the Philippine Clean Air Act of 1999 (RA 8749), Record-keeping, Inspection, Monitoring and Entry by the Department, the Department shall require any person who owns or operates any emission source to: (a) establish and maintain relevant records; (b) make relevant reports; (c) install, use and maintain monitoring equipment or methods. In relation to this, Continuous Emission Monitoring Systems / Continuous Opacity Monitoring System (CEMS/COMS) are those monitoring equipment used by major sources defined under Rule XXV of Department Administrative Order No. 2000-81 and those required under Department Administrative Order No. 2007-22.

This also clarifies pertinent provisions of DAO 2004-26 otherwise known as "Amending Rule XIX of DENR Administrative Order No. 2000-81 (*Implementing Rules and Regulations of RA 8749*)" and DAO 2017-14 "Online Transmission of Data from Continuous Emission Monitoring System (CEMS) and Closed Circuit Television (CCTV) of Major Industries".

**SECTION 2. OBJECTIVE**

To establish a system which shall act as a central repository of all data and information related to industrial emissions of firms required to install CEMS/COMS in compliance with Section 19 of RA 8749.

### SECTION 3. DEFINITION OF TERMS

**Excess Emission** - the emission concentration recorded by CEMS/COMS which exceeds any applicable emission limits or standards pursuant to Section 19 of RA 8749 shall be considered as actual exceedance under Section 45 thereof.

**Data Acquisition and Handling System (DAHS)** - the CEMS hardware and software components that take the output from the analyzers, combine it with other information, and compute emissions.<sup>1</sup>

**Startup** - the setting-in of operation of an affected facility for any purpose<sup>1</sup>. The end of the startup period shall begin upon the return to the normal operating condition of an air pollution source equipment/installation (APSEs/APSIs) from a shutdown and/or malfunction state, such as but not limited to the following: return of power supply to the Grid or In-house, or return to normal operation or manufacturing condition.

**Shutdown** - the cessation of operation of an affected facility for any purpose<sup>1</sup>.

**Malfunction** - any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.<sup>2</sup>

### SECTION 4. INTEGRATION OF THE BUREAU'S DATA ACQUISITION HANDLING SYSTEM (DAHS)

All EMB-ROs shall establish a secure infrastructure to receive and store CEMS/COMS data and shall be responsible in ensuring that their respective DAHS, as well as the firm/proponent's DAHS are compatible with the existing DAHS used by the EMB-Central Office (EMB-CO). The DAHS of each RO shall be accessed in the central DAHS of the EMB-CO.

Furthermore, each EMB-RO shall ensure that tampered or altered CEMS/COMS data sent by the firm/proponent in their respective jurisdiction shall be issued Notice of Violation (NOV).

### SECTION 5. MODE OF TRANSMISSION OF DATA

In order to effectively monitor the compliance of industries, the EMB-ROs are instructed to require all firms operating CEMS/COMS to transmit (in real-time) data based on the following:

<sup>1</sup> US Environmental Protection Agency Part 75 CEMS Field Audit Manual

<sup>2</sup> 40 CFR Part 60



Parameter	Required Data Readings Recorded	1-hour equivalent based on DAO 2017-14
Gases and PM	Once every fifteen (15) minutes	Average of four (4) 15-minute readings
Opacity	Once every five (5) minutes	60 x 5-minute rolling average

The EMB - ROs through their Planning and Information System Management Unit (PISMU) shall coordinate with the firms and facilitate the secured internet connection of the CEMS/COMS to the EMB - DAHS.

## SECTION 6. EXCESS EMISSION AVERAGING TIME

The following excess emission averaging time shall be the basis of comparison of each Regional Office with the applicable standards as set forth below:

- (1) Opacity: Excess emissions are defined as **any rolling five-minute period during which the average opacity of emissions exceeds 20 percent opacity**, subject to the exceptions stated in Section 2 (b) of Rule XXV of DAO 2000-81;
- (2) Sulfur dioxide: Excess emissions for facilities using a CEMS are defined as **any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods)** of SO<sub>2</sub> exceed the applicable standards;
- (3) Nitrogen oxides: Excess emissions for facilities using a CEMS are defined as **any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods)** exceed the applicable NO<sub>2</sub> standards;
- (4) Particulate Matter: Excess emissions for facilities using CEMS measuring PM are defined as any operating day period during which the **average emissions (arithmetic average of all operating one-hour period)** exceed the applicable standards;
- (5) Carbon Monoxide (CO): Excess emissions for facilities using a CEMS are defined as any during which the average emissions **4 -hour period during which the average emissions (arithmetic average of four contiguous one-hour periods)** exceed the applicable standards<sup>3</sup>.

Provided, that the emission exceedance shall not apply during periods of **start-up, shutdown, and malfunction**.

Provided lastly, that in any event of malfunction, the concerned Pollution Control Officer (PCO) shall solve the problem and prevent its recurrence in accordance with the provisions of Section 11 of DAO 2004-26.

## SECTION 7. RECORD-KEEPING

The EMB-ROs shall ensure that all firms operating a CEMS/COMS to provide a permanent record of emissions and process parameters. The EMB-ROs shall require the owners or operators subject to the provisions of DAO 2000-81 at least five (5) years of their record for

<sup>3</sup> USEPA 40 CFR Part 60

EMB inspection. The record shall be made available upon EMB validation and shall include the following:

1. Occurrence and duration of any start-up, shut-down or malfunction in the operation of any source or control facility;
2. Audits, performance testing, evaluations, calibration checks, adjustments and maintenance of any continuous emission monitors that have been installed pursuant to Rule X Section 5 of DAO 2000-81 and other applicable provisions under 40 CFR Part 60 Appendix B; and
3. The measurements shall comply with at least 75% data capture rate to become valid subject to the audits (RATA, RAA, CGA, etc.) as per Quality Assurance and Quality Control Plan of the CEMS/COMS.

In the event that an exceedance is detected by the DAHS (based on the Excess Emission Averaging Time), the system will automatically prompt a notification directly to the firm through email.

## **SECTION 8. PERIOD OF COMPLIANCE**

All EMB Regional Offices are given one (1) year from the issuance of this Memorandum Circular to establish a system and integrate it with the EMB Central Office DAHS. Failure to comply with this Memorandum Circular shall result in poor performance rating of the Regional Office.

## **SECTION 9. SEPARABILITY CLAUSE**

If any provision of this Circular is declared unconstitutional or invalid, the same shall not affect the validity and effectivity of the other provisions hereof.

## **SECTION 10. EFFECTIVITY**

This circular shall take effect immediately.

  
**ENGR. WILLIAM P. CUÑADO**

