



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU

DENR Compound, Visayas Avenue, Diliman, Quezon City 1116
Telephone Nos.: 927-15-17, 928-37-42
Email : emb@emb.gov.ph
Visit us at <http://www.emb.gov.ph>

EMB MEMORANDUM CIRCULAR
NO. 2016-008

TO : ALL EMB REGIONAL DIRECTORS

**SUBJECT : CLARIFICATORY GUIDELINES ON THE CONDUCT OF
STACK EMISSION TESTS BY DENR-EMB AND ITS
ACCREDITED THIRD PARTY SOURCE EMISSION TESTING
FIRMS (TPSETF)**

DATE : JUN 08 2016

In order to provide uniform procedures in the conduct of stack emission testing by DENR-EMB and its accredited TPSETFs, the following guidelines shall be complied with:

- 1. Method 4—Determination of moisture content in stack gases specifically Item 2, Summary of Method, Clause 2.2, Appendix B, of the Code of Federal Regulation (CFR) 40 part 60:**
 - a. For initial test run (Run1): You may use one of the following methods:
 - (1) Approximate Method defined under Section 2.2.1, Method4 alternative means for approximating the moisture content (e.g., *drying tubes, wet bulb-dry bulb techniques, condensation techniques, stoichiometric calculations, previous experience/data etc.*);
 - (2.) Alternative Method defined under Section 4.1Method4 (ex. use of Psychrometric Charts and saturation vapor pressures)
 - (3) Reference Method using a complete moisture run as per Section 11.1 of said method;
 - b. For the succeeding runs (Runs 2 and 3), only the use of the Reference Method is allowed.

NOTE: For sources installed with wet scrubbers, only the use of the Reference Method is allowed for the three (3) test runs.

2. Operating Capacity of Air Pollution Source Equipment (APSE) for Compliance Purposes

- a. **For Stand-by combustion sources (eg. Gensets, Boilers etc.):**

Protect the environment... Protect life...

Department of Environment and
Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
Office of the Director

EMB MC 2016-008
16.06.08*16:46:52*0123

The minimum required load/operating capacity at the time of stack sampling test shall be 30%. In case that the proponent cannot meet the minimum 30% load capacity, the proponent shall declare the realistic operating capacity with a justification and to be incorporated in the test plan/report.

If in case, at the time of emission test, the proponent fails to comply with the declared operating capacity or the minimum 30%, the actual emission test shall be discontinued or the emission test results/report shall be declared invalid whichever is applicable. Likewise, if the fuel type as indicated in the Permit to Operate (PTO)/Test Plan is not followed or lower fuel quality is used (ex. higher sulfur content) during stack testing, said emission testing results/report shall be void.

b. Operating Capacity for combustion sources operating continuously (eg. Boilers, Gensets etc.):

The minimum required capacity during stack sampling test is 90% or the normal operating capacity as indicated in the valid PTO. The proponent shall declare the operating capacity in the test plan. In case that the proponent cannot meet the minimum 90% load capacity or the normal operating capacity as indicated in the valid PTO, the PTO to be issued shall be based on the operating capacity during the conduct of stack testing. For example, if the facility passes the stack sampling test at 50% operating capacity, then the PTO will require the facility to operate at or below 50% operating capacity during the life of the PTO.

3. Signatories of Test Plan

The Test Plan shall be signed by the following parties: (1) Authorized Representative of the Proponent or the Pollution Control Officer (PCO); and (2) DENR Accredited QA/QC Manager/Team Leader or Authorized Representative of the DENR Accredited Third Party Stack Testing Firm. The Test Plan shall be submitted to the EMB Regional Director where the subject source is located, for approval prior to the conduct of actual stack sampling test.

4. Air Pollution Source Equipments (APSE) with single source and dual stack (eg. V-type engines) :

- a. Two (2) stacks combined into one (1) stack. Stack sampling shall be conducted in three (3) runs for combined single stack.
- b. Two (2) stacks to be tested individually. Results of three (3) runs for each of the two (2) stacks shall be averaged and treated as single source.

5. Source specific air pollutants/parameters (SSAP) for fuel combustion sources for permitting purposes:

The source specific air pollutants/parameters to be measured at the stack shall be based on the type of Air Pollution Source Equipment (APSE) and the associated fuel

and process raw materials. Unless otherwise specified in the Environmental Monitoring Plan (EMoP) or PTO conditions of companies, the following are recommended parameters for stack sampling test purposes:

APSE	FREQUENCY OF OPERATION	FUEL TYPE	SSAP
Internal Combustion Engine (Generator sets/ Gas Turbine, etc.)	Stand-by with / > or <12" stack diameter	Diesel / Natural Gas/ LPG/ BioGas etc.	CO, NOx
	Continuous with / > or <12" stack diameter*	Bunker Fuel Oil (BFO) or Mixed Fuel (BFO,Used Oil, LSFO, DFO)	PM, CO NOx. SOx
External Combustion (eg. Boilers, Fuel burning Steel Mill Furnace)		Liquid Fuel Oil: eg. Bunker Fuel Oil (BFO) or Mixed Fuel (BFO, LSFO, DFO)	PM, CO, NOx. SOx ***
		Solid Fuel eg. Coal	PM, CO, NOx. SOx ***, Metals****
		Wood, Rice Hulls, Biomass, Baggasse, etc.	PM, CO,
		Textile Waste	PM, CO, Metals ****
Cement Kiln ****		Solid Fuel eg. Coal, AFRs including liquid fuel for start up.	PM, CO NOx. SOx , Metals*****
Other sources (Waste to Energy, Pyrolysis, etc.)		Fuel specified in the ECC	Refer to EMoP / PTO condition

NOTE:

- * < 12" stack are required to use Method 1-A for PM
- ** > 12" Stack diameter is required
- *** Moratorium on SOx sampling for source using BFO still applies unless otherwise repealed.
- **** regulated metals under NESSSAP as determined in the Certificate of fuel analysis

6. Clarifications of Guideline for Accreditation of Third Party Source Emission Stack Testers under DAO 2013-26.

a. Minimum Requirement of Stack Test Conducted

The minimum requirement for the number of stack testing/source emission test conducted in Section 5.2.2 (Qualifications for the QA/QC Manager and Team Lear) specifically a(2) and b(2) under DAO 2013-26, shall be based on air

pollutants/parameters being applied for. (eg. Applicant applying four (4) parameters shall include PM, CO, NOx and SOx)

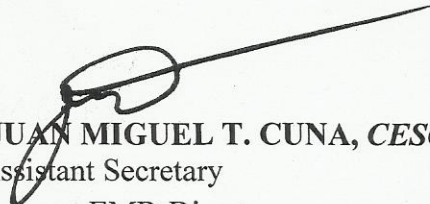
b. Resignation of Team Leader and QA/QC Manager during the validity of the Accreditation Certificate:

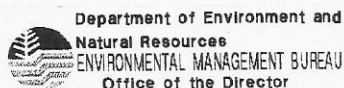
When an accredited Team Leader and/or QA/QC Manager resigns during the validity of the Certificate of Accreditation, application for accreditation for purposes of transfer of said personnel to another firm shall only be allowed if a clearance from his/her former employer/accredited firm shall be submitted to EMB.

7. Clarification on MC 2007-003 for existing sources which do not require stack testing for permitting purposes:

- a. Boilers rated equal and less than 50 HP;
- b. Diesel generator set equal to and less than 300 KW; and
- c. Other sources that has the potential to emit equal to and less than 10 tons /year of any regulated air pollutant under the RA8749 and DAO 2000-81

This circular takes effect immediately and supersedes previous issuances inconsistent herewith.


ATTY. JUAN MIGUEL T. CUNA, CESO IV
DENR Assistant Secretary
and Concurrent EMB-Director



EMB MC 2016-008



16.06.08*16:46:52*0123