



**APPLICATION FORM FOR THE
INSTALLATION OF CONTINUOUS EMISSION
MONITORING SYSTEM (CEMS) AT INDUSTRIAL
PREMISES**



A) INDUSTRIAL DETAILS

1. Industrial Name

2. Address

3. Plant Location

4. Telephone No. Fax No.

5. Plant ID

6. Plant Sector

7. Reasons of CEMS Installation

EIA Approval Condition EQ (Clean Air) Regulations 2014

DOE Directive Others (Please specify: _____)

8. Type of Application

Existing installation Upgrading/Changes of Plant Operation

New Installation Changes of CEMS Equipment

Others (Please Specify: _____)

9. Total Stack At Plant

10. Contact Person

11. Job Position

12. Mobile Phone Number

13. Email

**B) SOURCE OF STACK EMISSIONS
(FOR THE PURPOSE OF CEMS INSTALLATION)**

14. Type of Activity / Process:

15. Description of Industrial Process:
(Attach as Appendix, if required)

16. Details of Specified Equipment Related to the Specified Chimney:

a) Type of Equipment:
(e.g. Boiler, Waste Incinerator, Furnace, Thermal Heater, Turbine etc.)

b) Capacity (if applicable): MWe or kg/hr

c) Type of fuel (gas / solid / liquid)

- Main fuel
- *Alternative fuel (if any):

*Explanation about the alternative fuel usage:

d) Fuel Quantity / Fuel load:

- Main fuel kg/hr
- Alternative fuel kg/hr

17. Type of Air Pollutant Monitored

Gases Total Particulates Matters (TPM) Opacity

18. Parameters To Be Monitored From the Specified Chimney:

Applicable Limit Value
 (e.g. : Activity A1: Boilers of EQ (Clean Air) Regulations 2014)

NO.	PARAMETERS	CONCENTRATION (mg/m ³)	LIMIT VALUE (mg/m ³)

Notes:

- a. Pollutant concentration is based on the stack monitoring result or based on the approved design of plant operation and stack release
- b. Emission limit value for each parameter may subject to the values mentioned in the EQ (Clean Air) Regulations 2014 / Environmental Management Plan (for EIA project)/ EIA Approval Condition /DOE Directive

19. Stack Information

- a) Type of stack Round Square/ Rectangular
 - b) Stack Number
 - c) Stack Height mm/m
 - d) Outer Stack Diameter mm/m
 - e) Inner Stack Diameter mm/m
- Downstream: mm/m Upstream: mm/m
 (From the gas inlet duct to port) (From port to chimney outlet)

20. Stack Flue Gas Information (During Normal Plant Operation)

- a) Temperature
- b) Moisture Content
- c) Oxygen Content
- d) Air Flow Rate
- e) Pressure
- f) Stack Velocity

21. Written Approval / Notification Status of Fuel Burning Equipment (FBE)

- a) FBE Serial/Ref/Model Number:
(Please attach the relevant document)
- b) DOE Letter Reference Number & Date:
(Please attach the relevant document)

22. Written Approval / Notification of Air Pollution Control System Information (APCS)
(eg Cyclone, Scrubber, Bag Filter etc):

- a) APCS Serial/Ref/Model Number :
(Please attach the relevant document)
- b) DOE Letter Reference Number & Date :
(Please attach the relevant document)

C) INFORMATION OF CEMS EQUIPMENT

23. Description of CEMS

(Please specify the information of CEMS equipment with the relevant catalog or product reference)

a) Type:

- Extractive System
 - Source Level
 - Dilution

In Situ System

Point

Path

Single Pass

Double Pass

b) Technique/Principal of Detection
 (e.g.: UV Fluorescence, GFC, NDIR, FTIR, DOAS etc.)

c) Model

d) Certification
 (MCERT/TUV (QAL1) - (EN: 14181, EN:15267-1, EN :15267-2, EN:15267-3))

e) Certificate Renewal Date

24. Brand and model of relevant components in the CEMS Sampling System used for installation.

COMPONENT	BRAND AND MODEL
Probe	
Heated sampling line	
Heated filter	
Gas conditioning system	
NOx Converter	
Oxygen sensor	
Dryer	
Others (Please Specify)	

Notes: Attach the relevant documents if the brand and model of the components are difference from the AMS (QAL1) that mentioned in the MCERTS/TUV (QAL1) certification. Please provide comparison information between the 2 brands and models of the CEMS component.

25. Quality Assurance Plan (QAP) of CEMS for dust and gas

a) Ongoing Quality Assurance

(e.g. QAL3)

Description	Yes/ No	Automatic/Manually	Frequency of checks
Zero Check			
Span Check			
DIS & DAS connection status			
Maintenance interval			

b) Annual Quality Assurance

(e. g. QAL2, AST)

i. Functionality Test

Description	Remarks
Alignment and cleanliness	
Sampling system	
NOx converter efficiency	
Documentation and records	
Serviceability	
Leak test	
Zero and span check	
Linearity	
Interferences	
Zero & span drift (audit)	
Response time	

ii. Comparison measurements against Standard Reference Method

Description	Yes/ No
Calibration gas cylinder	
Iso-kinetic sampling test	
Other surrogates (Please specify)	

26. CEMS Installation and Operation Planning Schedule
*Please attach the proposed schedule

D) INFORMATION OF CEMS DATA COMMUNICATION

27. Connectivity Type	<input type="text"/>
28. Domain Name / I.P No.	<input type="text"/>
29. TCP Port No.	<input type="text"/>
30. Phone Number	<input type="text"/>
31. User ID	<input type="text"/>
32. Password	<input type="text"/>

E) INFORMATION OF IN-HOUSE CEMS PERSONEL

33. Name	<input type="text"/>
34. Position	<input type="text"/>
35. Email	<input type="text"/>
36. Certification	<input type="text"/>
37. CEMS Relevant Training Information	<input type="text"/>

F) INFORMATION OF CEMS SUPPLIER / PROVIDER

38. Name of Company

39. Address & Email

40. Person In charge & Mobile Phone No.

41. PIC Email and Mobile Phone No.

42. DOE CEMS Registration Status

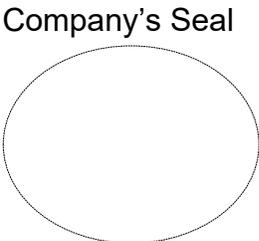
43. Date of Registration

44. Supplier Type: Sole/Main supplier Distributor/Appointed Agent

G) DECLARATION

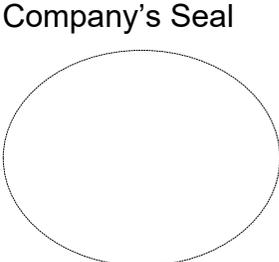
45. I the authorized CEMS consultant of the owner/occupier who is given rights to install the CEMS, hereby declare that I will be responsible on the proposed complete CEMS system that is submitted for this application and to ensure the system is meeting all requirements set by the DOE Malaysia .

 Signature
 Name :
 NRIC No. :
 Position :
 Date :



46. Ithe owner/occupier, hereby declare that all the information given in this application is to the best of my knowledge and belief true and correct.

 Signature
 Name :
 NRIC No. :
 Position :
 Date :



APPENDIX 1

Relevant information and technical drawings need to be attached during submission:

- a. Cover letter from the company for the application of CEMS Installation;
- b. **Process flow chart** - overall industrial process flow chart that showing the sequence of each process including all fuel burning equipment, all air pollution control and all stack location;
- c. **Layout plan of industrial premises** showing CEMS location;
- d. **Technical drawing of stack and CEMS measurement location.** The drawing must contain information below:
 - i. Approved stack drawing during written approval /Notification of FBE/APCS stage.
 - ii. Overall stack design (side view & top view from downstream to upstream);
 - iii. Stack height;
 - iv. Stack downstream height (from inlet flue gas ducting to sampling port);
 - v. Stack upstream height (from sampling port to flue gas discharge point);
 - vi. Flue gas ducting to stack height;
 - vii. Sampling platform height from ground level;
 - viii. Sampling port height for dust & gas;
 - ix. Reference method sampling port height for dust & gas;
 - x. Internal stack diameter & thickness;
 - xi. Sample probe insertion length;
 - xii. Flange length;
 - xiii. Sampling port point diagram that showing the side view and top view sampling location for (dust & gas) and reference method.

Important Notes:

- All dimension unit reported in meter or millimeter
- Recycling old drawing from any previous project are not allowed
- Only relevant information to be provided in order to justify the suitability of the measurement location

- e. **Piping and Instruments Diagram (P&ID) of CEMS equipment installation for Extractive Sampling Method** [stack location - heated sample probe - heated line - heated pump - temperature controller - gas conditioning - flow meter - analyzer - zero & span calibration gas (mention the specific gases are required and also the technique required for the certain gases, e.g HCL, HF) - Purging/blow back & purge air unit/instrument air tubing line for dust/gas - Data Acquisition System - Data Information System] etc.
- f. **Diagram of CEMS equipment installation for In-Situ Sampling Method** (stack location - analyzer - zero & span calibration - Purging/blow back & purge air unit/instrument air tubing line for dust/gas - Data Acquisition System - Data Information System) etc.
- g. CEMS Consultants/Suppliers or applicants should provide evidence of data obtained from CEMS equipment in compliance with these valid averages.

Important Notes:

- All technical drawings must have reference number, title and endorsement by the applicant and CEMS Consultant.
- All drawings must be submitted in A1/A2/A3 (whichever that is appropriate) paper size.
- Please ensure a complete application document is provided and submitted to :

Pengarah Bahagian Udara
Aras 4, Jabatan Alam Sekitar
Precint 4, 62574 Putrajaya

IMPORTANT NOTICE FOR ALL INDUSTRIAL PREMISES

1. All CEMS data need to be sent to DOE via iREMOTE system. The applicant is required to ensure the procedure of CEMS registration in the iREMOTE system is completed once CEMS approval letter issued for this application is received.
2. CEMS audit need to be carried out once CEMS system is completely installed and operated.
3. All requirements as stipulated in the Volume 1: Guideline for the Installation and Maintenance of CEMS for Industrial Premises or Facilities, Version 7.0, June 2019 and Volume 2: Guideline for the Continuous Emission Monitoring Systems – Data Interface System (CEMS-DIS) (Version 7.0) Mac 2014 must be executed and complied.