



CHECKLIST FOR THE APPLICATION OF CEMS INSTALLATION

NO.	DETAILS	YES/NO	REMARK
1.	2 copies of application document; and Cover letter from the plant owner/ premise for the application of CEMS installation.		
2.	Type of activity/process for the purpose of CEMS installation.		
3.	Overall industrial process flow chart and explanation connected to the specified chimney for CEMS installation.		
4.	Current concentration of pollutants emitted at the stack. Values based on periodic monitoring/ in-house monitoring record is accepted.		
5.	Pollutant parameters and the limit values of the gas and dust concentration according to the EQ (Clean Air) Regulations 2014, EIA Approval Condition, DOE Directive, License Condition etc.		
6.	Copy of EIA approval condition /License condition/ DOE Directive pertaining to CEMS requirement and pollutants to be monitored (if any).		
7.	Serial/Ref/Model Number of Fuel Burning Equipment, Air Pollution Control System, Equipment & Stack Number related to CEMS installation – Refer to the written approval or written notification document submitted to DOE.		

NO.	DETAILS	YES/NO	REMARK
8.	The suitability of sampling measurement techniques for CEMS equipment according to the flue gas properties and the monitored parameters.		
9.	Information of the CEMS equipment with relevant catalogs or product reference.		
10.	NOx converter installation for the Extractive Sampling System (Attachment of Brand and model catalog & NOx Converter Working principle).		
11.	Copy of CEMS certificate (MCERTS/TUV) Certification validity date to be stated in the form		
12.	Brand and model for relevant components in the CEMS installation		
13.	Additional components to the CEMS system (if it is mentioned in the MCERT/TUV)		
14.	Comparison of specification and performance of components' brand and model if differ from the ones tested and certified by the TUV and MCERT		
15.	Lag Time Calculation for 'Extractive System'		
16.	The specified gases and concentration that are used for zero & span calibration for In situ & Extractive Sampling System		
17.	Copy of zero and span calibration gas certificate		

NO.	DETAILS	YES/NO	REMARK
18.	Specification on the sources and the specified equipment if industrial/instrument air is used for zero calibration etc.		
19.	<p>The complete QAP for the CEMS System based on the interval specified in the MCERT/TUV.</p> <p>If there is a need for the CEMS to be frequently calibrated and maintained other than what has been specified in the MCERT/TUV, please specify the reason and frequency needed.</p>		
20.	CEMS Installation and operation planning schedule		
21.	DOE approved stratification test report (if applicable)		
22.	Calculation showing estimated dust value emitted from the chimney		
23.	Layout plan of industrial premises showing CEMS location		
24.	Information on the technical drawing of stack and CEMS measurement location		
25.	Schematic Diagram of stack information:		
i.	Total stack design (front view & top view from downstream to upstream)		
ii.	Total stack height (mm/m)		

NO.	DETAILS	YES/NO	REMARK
iii.	Stack downstream height (mm/m) from inlet flue gas ducting to the sampling port		
iv.	Stack upstream height (m/mm)-from sampling port to flue gas discharge point		
v.	Sampling platform height (mm/m) and width (mm/m)		
vi.	Location of sampling port height for dust & gas (mm/m)		
vii.	Location of reference method sampling port height for dust & gas (mm/m)		
viii.	Stack outer diameter & stack wall thickness (mm/m)		
ix.	Sample probe insertion length (mm/m)		
x.	Flange length (mm/m)		
xi.	Front view and top view diagram of sampling port for (dust & gas) and reference method		
xii.	Overall CEMS setup diagram including calibration gases, zero gas, industrial air and all components installed at site		
26.	Piping and instruments Diagram (P&ID) of CEMS equipment installation for Extractive Sampling Method.		

NO.	DETAILS	YES/NO	REMARK
	Calibration gas injection line must be clearly indicated including for the QAL3 requirement (gas injected at sample probe)		
27.	Diagram of CEMS equipment installation for In-Situ Sampling Method		
28.	The person responsible for QAL3 operation -plant operator or CEMS consultant		

Note :

- a. Items listed in this checklist are subject to any changes

Declaration :

I the owner/ occupier/ the authorized CEMS consultant of the owner/occupier hereby confirm that all information has been completed and submitted based on the requirements in the checklist above. It is understood that this application will be rejected should the information provided in the document is incomplete.

Submitted By :

Company's Seal

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Name :
Company :
Date :

