

GUIDELINES AND CONDITIONS

- 1 Directive 2003/87/EC (the "ETS Directive") requires operators of installations which are included in the Union Emission Trading Scheme (the EU ETS) to hold a valid GHG emission permit issued by the relevant Competent Authority and to monitor and report their emissions, and have the reports verified by an independent and accredited verifier.

The Directive can be downloaded from:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2003L0087:20090625:EN:PDF>

- 2 The Monitoring and Reporting Regulation (Commission Regulation (EU) No 601/2012 of 21 June 2012, hereinafter the "MRR"), defines further requirements for monitoring and reporting. The MRR can be downloaded from:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:181:0030:0104:EN:PDF>

Article 12 of the MRR sets out specific requirements for the content and submission of the monitoring plan and its updates. Article 12 outlines the importance of the Monitoring plan as follows:

The monitoring plan shall consist of a detailed, complete and transparent documentation of the monitoring methodology of a specific installation [or aircraft operator] and shall contain at least the elements laid down in Annex I.

The Commission has provided further Guidance Documents on Monitoring and Reporting which can be downloaded from:

http://ec.europa.eu/clima/policies/ets/monitoring/documentation_en.htm

- 3 It is the responsibility of competent authorities to approve the Monitoring plans (after appropriate review).
This checklist is intended to support competent authorities in this task. However, it does not replace or duplicate other guidance already provided.

4 Status of this file:

This checklist is **not** binding to the competent authority, but it should be adjusted to the CA's need as appropriate.

This checklist is provided by Umweltbundesamt GmbH on behalf of DG CLIMA.

This is the final version of an example Checklist, dated 29 May 2013.

5 Before you use this file, please carry out the following steps:

To finalise this checklist the following steps have to be carried out prior to use:

- Review the sections of the checklist. If not all of them are relevant (e.g. measurement-based monitoring methodology is not applied) those sections may be deleted or hidden.
- Complete or change Section 2 - "Consistency" by changing consistency checks or adding additional checks that are relevant in your country/region.

6 How to use this file:

The first column on the left side (not available in section 1 and 2) indicates for each question to which section of the Commission's Monitoring Plan Template it is related.

Additional checks can easily be entered by simple copy & paste of other rows. This will also copy all checkboxes.

This checklist may either be used directly in excel or be printed out and used in hardcopy format.

If rows are added or removed, please check if the printing area is still appropriate before printing.

Types of entries

Checkboxes:

Yes/No: Yes: No:

Completed?

For each topic this checkbox should be activated after the assessment to indicate that this topic has been revised and no further action is due.

Comment/notes fields

This fields provide opportunity to enter further comments on each topic. In most cases those fields will be used in case a requirement is not completely satisfied, i.e. the "No:" is selected.

CHECKLIST FOR ASSESSING EU ETS MONITORING PLANS FOR INSTALLATIONS

Section 1 - Overview

Site Reference:

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Inst. Name:

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Unique ID:

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Site Name:

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Operator:

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Category:

A	B	C
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Low emitter:

Yes: No:

included

Yes: No:

before:

Yes: No:

Opt-out:

Task	Notes	Completed?
Operator & Installation Details		<input type="checkbox"/>
Description of Installation and its activities		<input type="checkbox"/>
Details of Annex 1 activities		<input type="checkbox"/>
Consistency with previous MP		<input type="checkbox"/>
Monitoring Approaches	Calculation Approach Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
	Measurement Approach Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
	Fall Back Approach Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
	N20 Measurement Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
	PFC Measurement Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
	Transferred/Inherent CO ₂ Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
Source Streams		<input type="checkbox"/>
Emission Points		<input type="checkbox"/>
Emission Sources		<input type="checkbox"/>
Uncertainty assessment(s)		<input type="checkbox"/>
Risk assessment		<input type="checkbox"/>
Management Procedures		<input type="checkbox"/>

Assessor:

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Peer Reviewer:

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Completed on:

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Additional Notes:

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CHECKLIST FOR ASSESSING EU ETS MONITORING PLANS FOR INSTALLATIONS

Section 2 - Consistency

Task	Notes	Completed?
Are the installation's boundaries consistent with those of previous monitoring plans?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If No:	<input type="checkbox"/>
Are the installation's boundaries consistent with those in other permits (e.g. IPPC, EPRTR,...)?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If No:	<input type="checkbox"/>
Is the installation's category consistent with previous monitoring plans?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If No:	<input type="checkbox"/>
Is the monitoring methodology of all source streams (incl. tiers) consistent with those of previous monitoring plans?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If No:	<input type="checkbox"/>
Is the monitoring methodology of all emission sources (incl. tiers) consistent with those of previous monitoring plans?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If No:	<input type="checkbox"/>
Are activities excluded from the permit really eligible not to be taken into account? (e.g. combustion of hazardous waste, fuel/material transfer to other installations, mobile sources)	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If No:	<input type="checkbox"/>
<i>Space for additional national-specific or CA-specific consistency checks</i>	Yes: No: If No:	
<i>Space for additional national-specific or CA-specific consistency checks</i>	Yes: No: If No:	
<i>Space for additional national-specific or CA-specific consistency checks</i>	Yes: No: If No:	
<i>Space for additional national-specific or CA-specific consistency checks</i>	Yes: No: If No:	
<i>Space for additional national-specific or CA-specific consistency checks</i>	Yes: No: If No:	
<i>Space for additional national-specific or CA-specific consistency checks</i>	Yes: No: If No:	

CHECKLIST FOR ASSESSING EU ETS MONITORING PLANS FOR INSTALLATIONS

Section 3 - Calculation-Based (1/2) - General and Source Streams

		Number of:	Major	Minor	de-minimis
What type of source streams are relevant?	Standard combustion?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>			
	Process emissions?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>			
	Mass balances?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>			
	PFC emissions?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>			

Task	Yes/No	Notes	Completed?								
D.7.a	Does the description mention all source streams, calculation factors, formulae, etc.?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> if No:	<input type="checkbox"/>								
D.7.b	Are all meters for all source streams included in Measurement Devices Table?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> if No:	<input type="checkbox"/>								
D.7.b	Are all parameters (uncertainty, used range,...) for all meters provided?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> if No:	<input type="checkbox"/>								
C.6.f	Are sum of minor and de-minimis emissions below thresholds?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> if No:	<input type="checkbox"/>								
E.8	Are all required tiers for all source streams applied?	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">major source streams</td> <td style="width: 25%;">minor source streams</td> <td style="width: 25%;">estimation for de-minimis source streams OK?</td> <td style="width: 25%;"></td> </tr> <tr> <td>Yes: <input type="checkbox"/> No: <input type="checkbox"/></td> <td>Yes: <input type="checkbox"/> No: <input type="checkbox"/></td> <td>Yes: <input type="checkbox"/> No: <input type="checkbox"/></td> <td></td> </tr> </table>	major source streams	minor source streams	estimation for de-minimis source streams OK?		Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Yes: <input type="checkbox"/> No: <input type="checkbox"/>		<input type="checkbox"/>
major source streams	minor source streams	estimation for de-minimis source streams OK?									
Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Yes: <input type="checkbox"/> No: <input type="checkbox"/>									
D.7.b / E.8 / Uncertainty assessment	Relevant parameters for uncertainty	National legal metrological control (Route 1)	<input type="checkbox"/>								
		MPES from suitable sources (Route 2a)	<input type="checkbox"/>								
		Uncertainty from cal. x adjustment factor (Route 2b)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">calibration:</td> <td style="width: 50%;">cons. adj. factor:</td> </tr> <tr> <td style="height: 20px;"></td> <td style="height: 20px;"></td> </tr> </table>	calibration:	cons. adj. factor:			<input type="checkbox"/>			
		calibration:	cons. adj. factor:								
Full uncertainty assessment (Route 3)	<input type="checkbox"/>										
D.7.b	Are all back up documents (calibration certs,...) for individual meter attached?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> if No:	<input type="checkbox"/>								
D.7.j	Is there a procedure how to track instruments installed and used for determining AD?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> if No:	<input type="checkbox"/>								
E.8.a.i	Where AD is determined in batches, are relevant procedures for stock changes attached?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> if No:	<input type="checkbox"/>								
E.8.a.ii	Where MI are under the control of a trade partner, are all conditions of Article 29(1) satisfied?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If yes, how, or if no:	<input type="checkbox"/>								
F.14/15	Where PFC emissions are relevant, are all required additional information provided?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> if No:	<input type="checkbox"/>								

CHECKLIST FOR ASSESSING EU ETS MONITORING PLANS FOR INSTALLATIONS

Section 4 - Calculated-Based (2/2) - Default values and Sampling & Analysis

Default values relevant for source streams? Yes: No:

	Task	Yes/No	Notes	Completed?
E.8.f	Are values available in the national inventory (Tier 2a) chosen over Annex VI values?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	if No:	<input type="checkbox"/>
E.8.g	Are all default values consistent with Annex VI or the national inventory, where relevant?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	if No:	<input type="checkbox"/>
D.7.d	Are all information sources provided complete and comprehensible?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	if No:	<input type="checkbox"/>

Sampling and Analysis relevant for source streams? Yes: No:

	Task	Yes/No	Notes	Completed?
E.8.g	Are all relevant major (and minor) source streams selected in the analysis table?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	if No:	<input type="checkbox"/>
D.7.e	Are correct EN standards used or, if they are not available, ISO or national standards (Art. 32 hierarchy)?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	if No:	<input type="checkbox"/>
D.7.e	Are online gas chromatographs or extractive or non- extractive gas analysers used?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	if Yes:	<input type="checkbox"/>
D.7.f	Does MP contain a list of analysis methods, written procedures for those analyses and are they appropriate?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	if No:	<input type="checkbox"/>
D.7.g	Has a Sampling Plan as required by Article 33 of the MRR been attached to the MP?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Agreed with laboratory? Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
	Is the summary of the procedure describing the sampling plan contained in the MP?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	if No:	<input type="checkbox"/>
D.7.h	Is the summary of procedure for reviewing the appropriateness of the sampling plan contained?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	if No:	<input type="checkbox"/>
D.7.e	Are all laboratories used accredited to EN ISO/IEC 17025?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If no, equivalence demonstrated? Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
E.8.g	Do frequencies of analyses at least meet Annex VII?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If no, deviations correct? Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>

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Section 5 - Fall-Backs and Measurement-Based

Are Fall-back approaches relevant? Yes: No:

	Task	Yes/No	Notes	Completed?
G.12.b	Did the operator demonstrate to your satisfaction that applying at least tier 1 is not possible?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	if No:	<input type="checkbox"/>
G.12.c	Uncertainty has been assessed (GUM,..) and does not exceed the Art. 22(3) thresholds?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	if No:	<input type="checkbox"/>

Type of measurement relevant: CEMS(CO2) N2O CCS

F.10.d	Are all tier requirements for all measurement-based emissions sources satisfied?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
F.9.c	Is there a list of all relevant equipment, indicating its measurement freq., op. range and uncertainty?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
F.9.e	Is there a list of applied standards (EN 14181, QAL 1-3 & AST, EN 15259) and a description of any deviations?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
F.9.e	Are all laboratories used for measurement, calibration,.. accredited to EN ISO/IEC 17025?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If no, equivalence demonstrated? Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
F.10.a	Is there a list of all emission points during typical/restrictive/ transition phases, supplied by a process diagram?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
F.10.g	Any calculation formulae for data aggregation used to determine the annual emissions of each emission source provided?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
F.10.g	Can valid hours for each parameter be calculated, including substitution of missing data?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
F.10.g	Where flue gas flow is derived by calculation, is there a description for each emission source monitored using CEMS?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
F.9.c	Where flue gas flow is measured, is information about equipment, representativeness, homogenous gas flow, etc. OK?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
F.10.g	Is there a description of corroborating calculations (not required for N2O and CCS)?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
F.10.g	Where applicable, is there a description of how CO2 stemming from biomass is to be determined and subtracted?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
H.13	N2O: Is all required additional information provided and is it sufficient?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
J.17	CCS: Is all required additional information provided and is it sufficient?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>

CHECKLIST FOR ASSESSING EU ETS MONITORING PLANS FOR INSTALLATIONS

Section 6 - Management

Are summaries of the following procedures available and appropriate?

	Procedure	Notes		Completed?
K.20.b	Assignment of Responsibilities (training and reviews should be referenced or mentioned)	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
K.20.c	Monitoring Plan Appropriateness	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
K.21.a	Data Flow Activities	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
K.21.a	Has Data Flow Diagram or Procedure been attached? Does it cover all aspects of data flow for this installation?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
K.22.a	Assessing Inherent and Control Risks	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
K.22.b	Quality Assurance of Metering/Measuring Equipment (Maintenance, calibration,...)	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
K.22.c	Quality Assurance of IT used for Data Flow Activities	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
K.22.d	Review and Validation of Data	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
K.22.e	Corrections and Corrective Actions	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
K.22.f	Control of outsourced activities (calibration of meters by contractors reviewed? Is lab accreditation routinely checked? Are lab results reviewed? Is outsourced sampling reviewed?)	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
K.22.g	Record Keeping and Documentation (Annex IX of the MRR)	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>
K.25.a	Changes in operation (only applicable to installations receiving allowances allocated free of charge) - Check against Commission example.	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	If No:	<input type="checkbox"/>