



EUROPEAN COMMISSION
DIRECTORATE-GENERAL
ENVIRONMENT
Quality of Life
Industrial Emissions & Safety

TO IED Article 13 Forum Members

Subject: Article 15a of the IED 2.0 - establishment of a method to assess compliance with Emission Limit Values.

Dear Members of the IED Article 13 Forum,

The IED was revised in July 2024 through the amendments in Directive 2024/1785¹. The revised Industrial and Livestock Rearing Emissions Directive (or IED 2.0) introduces new provisions in Article 15a to address disparity in compliance assessment approaches for installations covered by Chapter II of that Directive. In particular it lays down that:

- corrections made to measurements to determine the validated average emission values for compliance assessment under normal operating conditions shall not exceed the measurement uncertainty of the measuring method;
- by 1 September 2026, the Commission shall adopt an implementing act establishing the method for assessing compliance under normal operating conditions with ELVs set out in the permit with regard to emissions to air and water; and
- where an installation falling within the scope of Chapter II also falls within the scope of Chapter III or IV, if compliance with the ELVs established under Chapter II is demonstrated, the installation shall be deemed to also comply with the ELVs set in accordance with Chapter III or IV for the pollutants concerned under normal operating conditions.

The method mentioned above shall address, as a minimum, the determination of validated average emission values and shall set out how measurement uncertainty and the frequency of exceedance of emission limit values are to be taken into account in the compliance assessment.

This letter is to inform you that the Commission is launching the work to develop the above-mentioned method and is kindly requesting your support to achieve the best possible result in the timeline set by the legislation.

¹ OJ L, 2024/1785, 15.7.2024

In practical terms, DG Environment has contracted Logika Group to support the development of the method for assessing compliance, based *inter alia* on the information collected during a [previous project carried out in 2022](#).

With this letter, an initial stage of consultation is being undertaken to obtain views on an appropriate scope for the method and to allow you to provide any examples of best practice you would wish to share in the context of compliance assessment.

The responses from this initial round of consultation will be used to inform the content of, and approaches considered, within the method. Please be aware that an additional round of consultation will be undertaken in Q2 2025 once an initial draft of the method has been developed to obtain further feedback on the method itself. This will include targeted interviews and a workshop.

The annex to this letter describes aspects proposed to be included within the scope of the method, and aspects proposed to be excluded, including a justification for their exclusion. Therefore, you are kindly requested to:

1. Confirm agreement, or otherwise, with the proposed scope of the method. Where there is disagreement, please feedback which specific area(s) and kindly provide justification for your position.
2. Specify any additional areas for potential inclusion that you believe have not been considered when developing the proposed scope.
3. Share any examples which you consider to represent best practice with respect to approaches for compliance assessment.

Please provide your feedback **by 08/12/2024** to Marko Ristic-Smith (markoristicsmith@logikagroup.com). We would also be grateful if you could provide support to our contractor in case of any further questions from its side.

For any further information, please contact Michal Chedozko (Commission's Project Officer, michal.chedozko@ec.europa.eu) and Marko Ristic-Smith (Logika Group), (markoristicsmith@logikagroup.com).

Yours sincerely,

(e-signed)

Stefan LEINER
Head of Unit

Annex

I. Aspects to be included in the method:

1. Key definitions related to compliance assessment in normal operating conditions (NOC), e.g. measurement uncertainty, including standard uncertainty, combined standard uncertainty, expanded uncertainty, short-term average concentration, validated short-term average values, long-term average values etc.
2. Clarification that the approach to the calculation of a validated average emission level for compliance assessment is derived on the basis of subtraction of the expanded measurement uncertainty of the measured value (expressed at a 95% confidence interval), rather than a maximum permissible measurement uncertainty.
3. Explanation of the role of the maximum permissible uncertainty in the context of compliance assessment i.e., to verify that the measurement uncertainty is within a specified value such that the validity of the measurement can be considered acceptable.
4. References to sources providing the maximum permissible uncertainty for different methods and pollutants, e.g. as found in EN standards, IED Annexes etc. However, the maximum permissible uncertainty itself will not be specified in the method. This is to allow for future developments in EN standards which may change the specified maximum permissible uncertainty;
5. Clarify compliance outcomes in scenarios where:
 - a) Monitoring results both with/without subtraction of the measurement uncertainty are less than the ELV;
 - b) Monitoring results that exceed the ELV without subtraction of the measurement uncertainty, but are less than the ELV with subtraction of the measurement uncertainty;
 - c) Monitoring results that exceed the ELV both with and without subtraction of the measurement uncertainty; and
 - d) The measurement uncertainty is more than the maximum permissible measurement uncertainty.
6. For continuous measurements:
 - a) Procedure to determine validated short-term averages and long-term averages from standardised short-term averages.
 - b) Until such a time that an EN standard or other technical specification is developed that allows the calculation of the “actual” measurement uncertainty, i.e. expanded measurement uncertainty of the value (expressed at a 95% confidence interval) measured by an Automated Measuring System (AMS), as identified in the JRC Reference Report on Monitoring of Emissions to Air and

Water from IED Installations (ROM), the measurement uncertainty for continuously measured emissions to air is to be derived from the result of the EN 14181 Quality Assurance Level 2 (QAL2) variability test i.e., the standard deviation of the differences of the parallel measurements between the AMS and standard reference method².

7. For periodic measurements:
 - a) Requirements for the minimum number of samples and minimum sampling time (only where this is not already defined in the BAT Conclusions);
 - b) Procedure for assessing compliance based on the average of individual sample values after subtraction of measurement uncertainty;
 - c) Approach for accounting for individual sample values less than the limit of detection (LoD) in the averaging process; and
 - d) Principles for establishing a potential outlier from multiple sample results and how that should be treated in the compliance assessment accounting for existing guidance in the ROM.
8. Clarification/approaches to be taken where a Chapter II installation falls within the scope of Chapter III or Chapter IV for compliance assessment, accounting for point 3 of Article 15a.
9. Details of how the frequency of exceedance should be considered in the compliance assessment.

II. Aspects to be excluded in the method:

Table below describes aspects which are proposed to be excluded from the development of the compliance assessment method, and the associated justification.

Excluded aspect	Justification
1. Definition for normal operating conditions (NOC) and other than normal operating conditions (OTNOC)	Scenarios constituting NOC and other than normal operating conditions (OTNOC) are highly sector-specific and it is impossible to account for all scenarios within the context of the implementing act. Such scenario definition is more appropriate within the context of BREF development. Some principles for accounting for NOC and OTNOC in the context of measurement data and compliance with ELVs are established in Section 3.5 of the JRC Reference report on monitoring of emissions to air and water from IED installations (ROM) and are included in the IED.

² It is recognised that this approach does not provide a true measurement of the “actual” uncertainty of an AMS. However, there is no standard that currently provides a complete calculation of measurement uncertainty for continuous measurements. As such, the QAL2 variability test is likely to represent the most pragmatic option for providing a consistent framework. When/if an EN standard is introduced, or EN 14181 updated to provide a method for calculation of the actual expanded measurement uncertainty of an AMS, it is proposed this should form the basis of the compliance assessment in preference to the results from the QAL2 variability test.

Excluded aspect	Justification
	Some general principles will, however, be described e.g., calculation of validated short-term average for continuous measurements shall exclude periods when the AMS is undergoing maintenance, functional tests, or QAL2, QAL3 and Annual Surveillance Tests (ASTs) etc.
2. Methods/calculations for calculating measurement uncertainty	<p>Methodologies for calculating measurement uncertainty for periodic measurements are already established through e.g., Guide to the Expression of Uncertainty in Measurement (GUM), ISO 20988, Eurachem/CITAC guide etc. For each EN standard dealing with measurement methods, there is a requirement to address the measurement uncertainty. Every laboratory accredited to EN ISO/IEC 17025 applying these standards needs to define a procedure describing how uncertainty is addressed and should always apply this procedure to the expression of measurement results. Therefore, every accredited laboratory should already be able to state the estimated uncertainty for each measurement they report according to the related standards.</p> <p>The proposed method for calculating measurement uncertainty for continuous emissions to air measurements is based on the result of the standard deviation of the differences of the parallel measurements between the AMS and standard reference method from the QAL2 variability test. The calculation method for this is already described in EN 14181.</p>
3. Approaches to account for measurement uncertainty at low emission concentrations	<p>This is considered to be an area more appropriate to the ongoing development of standards and technical specifications by the CEN working groups than the compliance assessment method.</p> <p>It is accepted the challenge of meeting a relative maximum permissible uncertainty value in percentage terms increases as the emission concentration decreases due to fixed components of the expanded measurement uncertainty budget. For low concentrations where the measurement uncertainty exceeds the maximum permissible uncertainty, it is proposed that this is reported in the compliance assessment report so Member State competent authorities may, if they so decide, factor this into their consideration of the monitored result.</p>
4. Minimum requirements for limit of detection (LoD) and limit of quantification (LoQ)	Monitoring methods and standards are specified in the sectoral BATC with LoDs defined within the monitoring standards. For continuous measurements, the suitability of the monitoring instrumentation is assessed during the QAL1 and QAL2 processes.
5. The minimum number of samples and duration of sampling for periodic monitoring	The required number of samples and sampling duration are typically made in the respective BAT Conclusions and/or monitoring standards.