Phase III Workshop
Radisson Blu Hotel
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Rory Devlin
Intern
Climate Change Unit

Talk outline

- Introduction to the Monitoring Plan
- Summary of new requirements for Phase III
- Changes and similarities to Phase III MP vs Phase II

Introduction

- The content of this presentation is based on information required in the EU Commission Annual Emissions Monitoring Plan template for Phase III
- Not showing you the template itself as will be completing online using ETSWAP instead
- Presentation is designed to be of use to you as a reference document after the workshop

Note: this presentation is intended to provide guidance only. The information within is not legally binding, and it should be remembered that rules for monitoring and reporting for Phase III are laid down in the EU Monitoring and Reporting Regulation

Introduction: Monitoring Plan

- Serves as a manual for the operator's tasks
- Should be written in a way that allows all, particularly new staff, to immediately follow instructions
- Must allow the competent authority to understand quickly the operator's monitoring activities
- Acts as the guide for the verifier against which the AIER is judged

Introduction: Monitoring Plan

- Since the MP has to be approved by the EPA then any changes must also be approved by the EPA

- Monitoring activities which are not crucial in every detail, and which by their nature tend to be frequently amended as found necessary, may be put into “written procedures” which are described briefly in the MP but which are not considered part of the MP

New requirements for Phase III

- History of changes to monitoring plan
- Additional information about the installation
- Changes to tiers for activity data and calculation factors and related information
- Supplementary documents required to be submitted
  - Uncertainty assessment
  - Sampling plan (where calculation factors determined by analysis)
  - Risk assessment for data flow
- More prescriptive approach to and greater emphasis on procedures which supplement the MP
  - Sampling and analysis
  - Management
  - Data flow and control

Contents of a Monitoring Plan

About the Operator

Installation Activities

Emissions Details

Monitoring Approaches

- Calculation Approach

Management

Changes in Operation

About the Operator

- Similar to information required on page 1 of EPA Phase II M&R template
  - Operator name,
  - GHG Permit Number
  - Installation Name
  - E-PRTR number (if applicable)
  - Etc.

- Grid reference (map co-ordinates) of site

New!

Installation Activities

- Description of the installation and its activities
  - Description of the site and the installation
  - Include a non-technical summary of the activities carried out at the installation
- Source Stream Diagram
  - Simple diagram showing emission sources, source streams, sampling points and metering equipment
- Total activity capacity
  - Total capacity of each Annex I activity at the installation
  - Rated thermal input (MW th)/Production capacity (tonnes/day)

New!

New!

Emissions Details

- Includes technical details that are familiar from Phase II:
  - Annex I activities (e.g. combustion of fuels, production of cement clinker)
  - Emission sources
  - Emission points
  - Source streams (fuels/materials)
  - Excluded activities
- Estimated annual emissions to be based on the average verified annual emissions of the previous trading period data
- Low Emissions Eligibility

Monitoring Approaches

New!

- Choose which of the following approaches you propose to apply:
  - Calculation approach for CO2
  - Measurement approach for CO2
  - Fall-back approach (Article 22)
  - Monitoring of N2O emissions
  - Monitoring of PFC emissions
  - Monitoring of transferred/inherent CO2 and CCS

- Can use any combination of approaches if can demonstrate that neither double counting nor data gaps will occur

Calculation Approach

Calculation of emissions by means of activity data (e.g. amount of fuel or process input material consumed) times an emission factor (and other factors)

- Combustion

Emissions = Activity Data x Emission Factor x Oxidation Factor

- Process

Emissions = Activity Data x Emission Factor x Conversion Factor

Note: Emission factors may be reported in t CO_2/t or t CO_2/Nm^3 rather than t CO_2/TJ where unreasonable cost or not technically feasible

New!

Calculation Approach

- Description of the calculation based approach (as in Phase II)
- Specification and location of measurement systems for determining activity data
- Uncertainty calculations assessment document
- Information (including tiers applied) associated with each source stream
- List of information sources for default values
- Laboratories and methods used for analysis
- Procedures related to calculation based approach

Calculation Approach

Description of calculation approach

- As in Phase II: concise description of calculation approach, including formulae, used to determine annual CO_2 emissions

Calculation Approach

- Specification and location of measurement systems to be used for determining activity data
  - Measurement device ref (requested to use a consistent format) New!
  - Type of measuring instrument (e.g. rotary meter, weighbridge)
  - Location (internal ID): Where the meter is located and how it is identified in the process flow chart New!

    Note: not the same as the unique reference number (e.g. serial number). This should be documented separately (e.g. in procedures) so that replacing a meter does not constitute a change to the monitoring plan.
  - Specified uncertainty (from manufacturer)
  - Measurement range (to which uncertainty relates) New!
  - Typical use range (at your facility) New!
- Uncertainty calculations assessment document New!

Calculation Approach

For each source stream must describe:

- Associated emission sources
- Overall measurement uncertainty
- Approach applied (standard, mass balance or fall-back)
- Tiers applied for calculation factors
- Estimated annual $CO_{2(e)}$ emissions
- % of total fossil $CO_{2(e)}$ emissions
- Source stream category
- If highest tier applied
  - If not, justification for applied tier

Calculation Approach

For activity data must also describe:

New!

- Determination method: continual/batch
  - If batch: reference to procedure used for determining stock piles
- If instrument under control of operator or trade partner

New!

  - If trade partner:
    - Article 29(1) conditions satisfied?
    - Invoices used?
    - Trade partner and operator independent?
- Measurement instruments used
  - Description of approach if several instruments used

Calculation Approach

New!

For each source stream where default values are to be used for calculation factors must detail:

- Associated emission sources
- Parameter (e.g. NCV, EF, OxF)
- Reference source:
  - E.g. ‘National GHG Inventory, annually updated’, ‘Handbook of Chemistry and Physics, 92nd edition’
- Default value applied (where appropriate)

Calculation Approach

Where calculation factors determined by analysis must describe:

- Parameter (e.g. Calorific Value, Carbon Content, Biomass Fraction)
- Method of analysis
  - Including procedure reference and brief description of method
- Frequency of analysis
- Name of laboratory
- Is lab EN ISO/IEC 17025 accredited for this analysis?
- If no, reference the evidence to be submitted

New!

Calculation Approach

New!

Where calculation factors are to be determined using laboratory analyses there is a requirement to have a dedicated sampling plan (in the form of a written procedure) approved by the EPA

Also required to establish and maintain written procedures for:

- revising the appropriateness of the sampling plan
- estimating stocks at the beginning /end of the reporting year (if applicable)
- keeping track of instruments installed in the installation used for determining activity data

Calculation Approach

These procedures are described briefly in the MP but are not considered part of the MP

Each procedure description must contain the following:

New!

- Title of procedure
- Reference for procedure
- Diagram reference (where applicable)
- Brief description of procedure
- Post or department responsible for the procedure and for any data generated
- Location where records are kept
- Name of IT system used (where applicable)
- List of EN or other standards applied (where relevant)

Management

Must identify the responsibilities for monitoring and reporting

- Job title/post
- Responsibilities

Required to establish and maintain written procedures relating to:

New!

- Managing the responsibilities for monitoring and reporting
- Regular evaluation of the monitoring plan's appropriateness
- Managing data flow activities

Management

New!

Required to establish and maintain written procedures related to control activities for at least:

- Quality assurance of measuring equipment
- Quality assurance of the information technology system used for data flow activities
- Segregation of duties in the data flow activities and control activities as well as management of necessary competencies
- Internal reviews and validation of data
- Corrections and corrective actions
- Control of out-sourced processes
- Keeping records and documentation including the management of document versions

Management

- Need to provide documented results of a risk assessment that demonstrates that control activities and procedures described above are commensurate with the risks identified
  - Requirement to submit the risk assessment to the CA does not apply to installations with low emissions

New!

- Does organisation have a documented environmental management system?
  - Specify to which standard EMS is certified

- List of definitions and abbreviations
- Additional information

Management

New!

- Required to detail the procedure used to ensure regular reviews are carried out to identify any planned or effective changes to the capacity, activity level and operation of the installation that have an impact on the installation's allocation

Recap

- Introduction to the Monitoring Plan
- Summary of new requirements for Phase III
- Looked at changes and similarities of some relevant sections of a Phase III Monitoring Plan compared to Phase II

- Following three slides included for information:
  - Exemptions for small emitters
  - List of supplementary documents required for MP submission
  - Useful information sources

Small Emitters (<25,000t $CO_{2(e)}$)

Exemptions for small emitters:

- Simplified monitoring plan
- Apply minimum tier 1 activity data and calculation factors
- Determine fuel use using invoices and stock changes without uncertainty assessment
- Not required to submit uncertainty assessment
- Not required to submit risk assessment
- Simplified evidence regarding competence where non-accredited laboratory used

Supplementary documents

Required to be submitted with any new or updated monitoring plan:

- Uncertainty assessment
- Sampling plan (if calculation factors determined by analysis)
- Risk assessment (relating to data flow activities)

Optional unless specifically requested by EPA:

- Site diagram
- Organisational chart
- Data flow diagram
- Any additional information

Useful information sources:

EPA website Phase III homepage

http://www.epa.ie/whatwedo/climate/emissionstrading/etscheme/phase/

EU Commission Phase III homepage

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

EU Commission Phase III documentation

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

- Directive
- MRR
- MRR Guidance Document 1 – General guidance for installations
- EU Commission Phase III Monitoring Plan Template

Thank you for your attention

Rory Devlin
Emissions Trading Intern
Climate Change and Environmental Research Unit
Office of Climate Licensing, Research and Resource Use
Environmental Protection Agency
(053) 9160600
R.Devlin2@epa.ie