Briefing Document: IMPEL Practical Tools for Waste Incineration IED Implementation

Source: Excerpts from "2022-24(III)WG5 WMCE Waste Incineration Practical tools Report.pdf"

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Purpose: This briefing document provides a summary of the key themes, ideas, and facts presented in the IMPEL report on practical tools for implementing the Best Available Techniques (BAT) Conclusions for Waste Incineration (WI) under the Industrial Emissions Directive (IED). It highlights the challenges faced by regulators and the tools developed to address them.

Key Themes:

- **Need for Practical Guidance:** The report emphasizes the widespread need for practical guidance for permit writers and inspectors to effectively implement BAT Conclusions for waste incineration. The application of these conclusions in IED permits presents a significant challenge for regulators.
- **Development of Practical Tools:** The IMPEL Waste Incineration subgroup has developed two key practical tools: a Self-Monitoring Plan (with an associated Report template) and a Checklist for Inspectors. These tools aim to assist regulators in setting monitoring provisions and preparing for inspections focused on BAT implementation.
- **Standardization and Data Collection:** The report promotes standardization in monitoring and reporting by providing detailed templates and referencing relevant EN and ISO standards. The Self-Monitoring Report aims to synthesize operator data for easy comparison across different WI plants.
- **Importance of Environmental Management Systems (EMS):** The report highlights that a robust EMS is a preliminary condition for operators to comply with monitoring plan requirements. This EMS should include programs for monitoring, emission management, waste stream management, residue management, and evaluation of non-compliances.
- **BAT Implementation Focus:** The developed tools and the inspector checklist are directly based on the WI BAT Conclusions, covering various aspects of environmental performance, including monitoring, general performance, energy efficiency, emissions to air and water, material efficiency, and noise.

Most Important Ideas and Facts:

- **IMPEL's Role:** IMPEL (European Union Network for the Implementation and Enforcement of Environmental Law) is an international non-profit association that facilitates cooperation and exchange among environmental authorities to ensure effective application of environmental legislation. IMPEL's expertise is crucial in developing practical tools for implementing complex legislation like the IED and its BAT Conclusions. The report notes that IMPEL "is an international non-profit association of the environmental authorities of the European Union (EU) Member States, and of other European authorities... The Network's objective is to create the necessary impetus in the European Community to make progress on ensuring a more effective application of environmental legislation."
- **Target Audience:** The practical tools are specifically designed for "inspectors and permit writers" to aid them in "setting monitoring provisions according to BATc and in the preparation phase of an inspection focussed on BAT proper implementation."
- **Structure of the Tools:Self-Monitoring Plan:** This document provides guidelines for operators, outlining "what the operator must do" based on WI BAT or permit provisions for various parameters like plant information, incoming waste, energy, raw materials, water usage, emissions to air and water, waste management, and noise.
- **Self-Monitoring Report:** This serves as a template "synthesizing all data gathered by the operator during the 'reference year' in compliance with BATc and permit requirements." It uses a datasheet format with tables corresponding to the monitoring plan elements, facilitating data submission and comparison.
- **Checklist for Inspectors:** This document provides guidelines for inspectors, listing the specific BAT Conclusions to be verified for each item. It includes a customizable on-site inspection template.
- **Preliminary Conditions for Operators:** Operators must implement an EMS that includes key elements such as:
- A monitoring and measurement program.
- A Continuous Emission Monitoring System (CEMS) Management Manual.
- Waste stream management.
- A residues management plan.

- Evaluation and correction of non-compliances. The EMS is an "internal document describing operations" for data collection, monitoring campaigns, and sample handling/analysis.
- **Operator Responsibility:** The plant operator is ultimately responsible for implementing the Monitoring Plan provisions, even if external parties perform monitoring activities.
- **Inspector's Preliminary Activities:** Before an on-site inspection, inspectors should perform crucial preliminary activities:
- Analyze the permit, especially "tailored permits."
- Review the operator's EMS, including waste stream management, CEMS Manual, and corrective actions.
- Identify critical points in the plant. These steps "enhance inspection effectiveness and focus."
- **Detailed Monitoring Parameters:** The report provides detailed tables outlining parameters to be monitored for air emissions, water emissions, and residues, along with suggested frequencies and standards. For example, Table 8 lists parameters for air emissions including CO, CO2, NH3, TOC, NOX, N2O, SOX, HCl, HF, Dust, Metals (Sb, As, Tl, Cd, Cr, Cu, Ni, Pb, Co, Se, Sn, Zn, V, Mn), Dioxins/Furans (PCDD/F), PAHs, PCBs, and Mercury (Hg). Table 13 does the same for water emissions.
- **BAT Implementation Checklist Sections:** The inspector checklist is structured around the BAT Conclusions, covering key areas: Environmental management systems (BAT 1), Monitoring (BATs 2-8), General environmental and combustion performance (BATs 9-18), Energy efficiency (BATs 19-20), Emissions to air (BATs 21-31), Emissions to water (BATs 32-34), Material efficiency (BATs 35-36), and Noise (BAT 37).
- **Non-Compliance Reporting:** The report explicitly states that "Non compliances and other communications related to non-compliance fall outside the scope of this document. Operators must notify authorities separately when such issues arise." However, the Self-Monitoring Report template includes sections to record the "Number or % of breaches" for continuous air emissions and water emissions, and a "Table of breaches" to document details like date, measured concentration, and actions taken.

Conclusion:

The IMPEL report "BATc on Waste Incineration: practical tools" highlights the challenges in implementing the IED's BAT Conclusions for waste incineration. The report addresses this by providing concrete, practical tools – a Self-Monitoring Plan/Report and an Inspector Checklist – to assist regulators and operators. These tools emphasize standardized monitoring, comprehensive data collection, and a strong focus on verifying the implementation of specific BATs across various environmental aspects of waste incineration plants. The report underscores the importance of an effective EMS as a foundation for successful monitoring and compliance.