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BAT conclusions structure

For the

REFERENCE DOCUMENT ON BEST AVAILABLE TECHNIQUES FOR WASTE TREATMENT

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DISCLAIMER

This document should not be considered as representative of the Commission's official position. Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use which might be made of the following information.

Acronyms used in this document

BAT: Best Available Technique
BAT-AEL: BAT-Associated Emission Level
BAT-AEPL: BAT-Associated Environmental Performance Level
BREF: Best Available Techniques Reference Document
CLM: Production of Cement, Lime and Magnesium Oxide
CWW: Common Waste Water and Waste Gas Treatment/Management Systems in the Chemical Sector
ECM: Economic and Cross-Media Effects
EFS: Emissions from Storage
EIPPCB: European IPPC Bureau
ENE: Energy Efficiency
EoLV: End-of-Life Vehicles
FMP: Ferrous Metals Processing Industry
IED: Industrial Emissions Directive 2010/75/EU
IS: Iron and Steel Production
KoM: Kick-off Meeting
LCP: Large Combustion Plants
LVIC-AAF: Large Volume Inorganic Chemicals - Ammonia, Acids and Fertilisers
MTWR: Management of Tailings and Waste-Rock in Mining Activities
MBT: Mechanical Biological Treatment
NFM: Non-Ferrous Metals Industries
NOCs: Normal Operating Conditions
OTNOCs: Other Than Normal Operating Conditions
POPs: Persistent Organic Pollutants
PCB/PCT: Polychlorinated Biphenyls and Polychlorinated Terphenyls
ROM: JRC Reference Report on Monitoring for IED installations
SA: Slaughterhouses and Animal By-products Industries
SF: Smitheries and Foundries Industry
UWWTP: Urban Waste Water Treatment Plant
WFD: Waste Framework Directive
WI: Waste Incineration
WT: Waste Treatment
WEEE: Waste Electrical and Electronic Equipment

UPDATED PROPOSAL FOR THE STRUCTURE OF THE BAT CONCLUSIONS OF THE REVISED WT BREF

(BAT-AELs may be given either in the general section and/or in a section related to a specific treatment, depending on the information arising from the data collection. Additional parameters (e.g. pollutants) can be introduced or removed based on the information collected.

The data collection will steer the identification of different categories (broader or more specific) of treatment plants (on the basis of e.g. age, size, input waste (e.g. hazardous/non-hazardous), treated dispatched material, and process options). Additionally, some sections could be suppressed on the basis of evidence shown in the data collection.

Links between sections, the creation of specific subcategories and applicability restrictions in specific cases are possible.)

1 BEST AVAILABLE TECHNIQUES

Scope
Definitions
General considerations
Reference conditions

1.1 General BAT conclusions

(*Applicable to all installations in combination with the specific BAT conclusions, but applicability restrictions may apply in specific cases, for example for storage-only activities. This section may include general techniques and associated performance levels if the evidence from the data collection shows performances not correlated with the sector.*
Conclusions on general management of hazardous waste may be given here when they are independent from the treatment process.)

1.1.1 Overall environmental performance

1.1.1.1 Environmental management systems
1.1.1.2 Monitoring

1.1.2 Waste treatment performance
1.1.2.1 Reception, handling and storage
1.1.2.2 Compatibility to mix or blend
1.1.2.3 Input pre-treatment and output finalisation
1.1.2.4 Washing of waste containers

(The BAT conclusions below apply in addition to the general BAT conclusions. If supported by evidence from the data collection a differentiation in specific cases or a generalisation of conclusions could be done.)

1.1.3 Emissions to air

(This section may include general techniques and associated performance levels if the evidence from the data collection shows performances not correlated with the sector.)

1.1.4 Emissions to water and water consumption

(This section may include general techniques and associated performance levels if the evidence from the data collection shows performances not correlated with the sector.)

(Include general techniques on biological treatment of waste water.)

1.1.5 Consumption of raw materials and chemicals

1.1.6 Energy consumption

1.1.7 Noise and vibrations

1.1.8 Prevention of soil and groundwater contamination

1.1.9 Decommissioning

1.2 BAT conclusions for mechanical treatments

(*Covering common issues for the mechanical treatment of solid waste, including the common directly associated activities dealing with only mechanical treatment of solid waste such as sorting activities.*
Specific conclusions for hazardous waste may be proposed depending on evidence shown in the data collection.)

1.2.1 General environmental performance

(*This section may include conclusions for OTNOC.)*

1.2.2 BAT conclusions for mechanical treatments of high calorific waste

(e.g. covering preparation/pre-treatment of dusty waste, wood waste or plastic waste to be used as a fuel in (co-)incineration; cross-references to MBT of mixed solid waste are made whenever useful, for example for sorting.)

1.2.2.1 Monitoring
1.2.2.2 Input pre-treatment and output finalisation
1.2.2.3 Emissions to air
1.2.2.4 Emissions to water and water consumption
1.2.2.5 Noise and vibrations

1.2.3 BAT conclusions for mechanical treatments of metals waste from EoLV and/or WEEE

(Shredding of metals waste from EoLV/WEEE, including common directly associated activities, e.g. dismantling [to be checked via data collection].
Different sections or common sections will be adopted for different waste streams depending on evidence shown by the data collection.)

1.2.3.1 Monitoring
1.2.3.2 Input pre-treatment and output finalisation
1.2.3.3 Emissions to air
1.2.3.4 Emissions to water and water consumption
1.2.3.5 Noise and vibrations

1.3 BAT conclusions for biological treatments

(*Covering common issues for the biological treatment of solid waste, including the common directly associated activities dealing with only mechanical treatment of solid waste such as sorting activities.*
Specific conclusions for hazardous waste may be proposed depending on evidence shown in the data collection.)

1.3.1 General environmental performance

(*This section may include conclusions for OTNOC.)*

1.3.2 Odour

1.3.3 BAT conclusions for mechanical-biological treatment (MBT) of mixed solid waste containing bio-waste and source-separated bio-waste

(Mechanical-biological treatment of mixed solid waste containing bio-waste (typically mixed municipal waste) and source-separated bio-waste – different sections or common sections will be adopted for different waste streams depending on evidence shown by the data collection. This section also covers the preparation/pre-treatment of mixed solid waste to be:

- *used in other IED installations (as a raw material, as a fuel in (co-)incineration),*
- *landfilled,*
- *used in backfilling.*)

Cross-references to the mechanical treatment section are made whenever useful, for example for sorting.
Cross-references to the aerobic treatment section are made whenever useful.)

1.3.3.1 Monitoring
1.3.3.2 Input pre-treatment and output finalisation
1.3.3.3 Emissions to air
1.3.3.4 Emissions to water and water consumption
1.3.3.5 Energy efficiency
1.3.3.6 Noise and vibrations

1.3.4 BAT conclusions for aerobic treatment of source-separated bio-waste

(Cross-references to the mechanical-biological treatment section are made whenever useful.)

1.3.4.1 Monitoring
1.3.4.2 Input pre-treatment and output finalisation
1.3.4.3 Emissions to air
1.3.4.4 Emissions to water and water consumption
1.3.4.5 Energy efficiency

1.3.5 BAT conclusions for anaerobic treatment of source-separated bio-waste and mechanically-separated bio-waste

(Anaerobic digestion of source-separated bio-waste; sludge and specific bio-waste types may be covered on the basis of the evidence shown in the data collection, with specific and/or common conclusions under this chapter.)

1.3.5.1 Monitoring
1.3.5.2 Input pre-treatment and output finalisation
1.3.5.3 Emissions to air
1.3.5.4 Emissions to water and water consumption
1.3.5.5 Energy efficiency

1.4 BAT conclusions for physico-chemical treatments

(*Covering common issues for the physico-chemical treatment of waste, including the common directly associated activities. Some process steps are covered by the general conclusions (e.g. mixing/blending, homogenisation, and agglomeration/pelletisation.)*
Specific conclusions for hazardous waste may be proposed depending on evidence shown in the data collection.
Some of these sections cover also the preparation/pre-treatment of waste to be:

- *used in other IED installations (as a raw material, as a fuel in (co-)incineration),*
- *landfilled,*
- *used in backfilling.*)

1.4.1 General environmental performance

(*This section may include conclusions for OTNOC.)*

1.4.2 BAT conclusions for the physico-chemical treatment of water-based liquid waste

(*Covering operations such as filtration, sedimentation, extraction, neutralisation, emulsion breaking, precipitation, flocculation.*)

1.4.2.1 General environmental performance
1.4.2.2 Monitoring
1.4.2.3 Input pre-treatment and output finalisation
1.4.2.4 Emissions to air
1.4.2.5 Emissions to water and water consumption

1.4.3 BAT conclusions for re-refining and/or other preparations for reuse of waste oils

1.4.3.1 General environmental performance
1.4.3.2 Monitoring
1.4.3.3 Input pre-treatment and output finalisation
1.4.3.4 Emissions to air
1.4.3.5 Emissions to water and water consumption

1.4.4 BAT conclusions for regeneration of spent solvents

(Different sections or common sections will be adopted for different waste streams depending on evidence shown by the data collection.)

1.4.4.1 General environmental performance
1.4.4.2 Monitoring
1.4.4.3 Input pre-treatment and output finalisation
1.4.4.4 Emissions to air
1.4.4.5 Emissions to water and water consumption

1.4.5 BAT conclusions for dewatering and thermal drying of sludge

1.4.5.1 General environmental performance
1.4.5.2 Monitoring
1.4.5.3 Input pre-treatment and output finalisation
1.4.5.4 Emissions to air
1.4.5.5 Emissions to water and water consumption

1.4.6 BAT conclusions for recovery of excavated contaminated soil

(*Covering operations such as washing, thermal desorption and pollutant extraction.*)

1.4.6.1 General environmental performance
1.4.6.2 Monitoring
1.4.6.3 Input pre-treatment and output finalisation
1.4.6.4 Emissions to air
1.4.6.5 Emissions to water and water consumption

1.4.7 BAT conclusions for immobilisation of fly ash and materials containing asbestos

1.4.7.1 General environmental performance
1.4.7.2 Monitoring
1.4.7.3 Input pre-treatment and output finalisation
1.4.7.4 Emissions to air
1.4.7.5 Emissions to water and water consumption

1.4.8 BAT conclusions for regeneration of pollution abatement components and catalysts

(*Covering operations such as thermal desorption and pollutant extraction.*)

1.4.8.1 General environmental performance
1.4.8.2 Monitoring
1.4.8.3 Input pre-treatment and output finalisation
1.4.8.4 Emissions to air
1.4.8.5 Emissions to water and water consumption

1.4.9 BAT conclusions for mercury removal from waste containing mercury

(*Covering operations not covered in previous chapters such as thermal desorption and pollutant extraction.*)

1.4.9.1 General environmental performance
1.4.9.2 Monitoring
1.4.9.3 Input pre-treatment and output finalisation
1.4.9.4 Emissions to air
1.4.9.5 Emissions to water and water consumption

1.5 Description of techniques